



**DeKalb County Department of Planning & Sustainability**

**330 Ponce De Leon Avenue, Suite 300**

**Decatur, GA 30030**

**(404) 371-2155 / plandev@dekalbcountyga.gov**

**Planning Commission Hearing Date: July 10, 2018, 6:30 P.M.**

**Board of Commissioners Hearing Date: July 24, 2018, 6:30 P.M.**

**STAFF ANALYSIS**

**Case No.:** 2018-2157/ Z-18-22285      **Agenda #:** N.6

**Location/Address:** The east side of Memorial Drive, approximately 207 feet south of Kensington Road at 4213 Memorial Drive, Decatur, Georgia.      **Commission District:** 4      **Super District:** 6

**Parcel ID:** 15-230-01-005

**Request:** To rezone property from R-75 (Residential Medium Lot) District to HR-3 (High Density Residential-3) to build ground level retail in combination with 220 apartment units within two - 7 seven-story buildings.

**Property Owners:** John & Shirley Spinelli

**Applicant/Agent:** Sam Artopoulos & R. Kyle Williams

**Acreage:** 2.3 Acres

**Existing Land Use:** Undeveloped

**Surrounding Properties:** Oak Tree Villas Apartments; Kenridge Apartment Homes; Office uses Kensington MARTA Station; Kensington Office Plaza;

**Adjacent & Surrounding Zoning:** North & South: O-I (Office-Institutional) District  
East: MR-2 (Medium Density-Residential-2) District  
Northeast & West: R-75 (Residential Medium Lot) District`

**Comprehensive Plan:** Regional Center      Consistent X

<b>Proposed Units:</b> 220 <b>Retail:</b> 2,474 Square Feet	<b>Existing:</b> N/A
<b>Proposed Lot Coverage:</b> 81.60%	<b>Existing Lot Coverage:</b> N/A

## **SUBJECT PROPERTY & ZONING HISTORY:**

The 2.3-acre undeveloped site is located on the east side of Memorial Drive (a four-lane major arterial with a turn lane) and just south of Kensington Road (a minor arterial) at 4213 Memorial Drive, Decatur, Georgia. With approximately 196-feet of frontage along Memorial Drive, the site is long and rectangular. The site is heavily wooded with dense mature trees and shrubbery. The property frontage is currently developed with existing concrete curb, brick stripe and concrete sidewalk. Adjacent to the site along Memorial Drive is a chiropractor's office and the entrance to Oak Tree Villas Apartments. Further south along Memorial Drive is Father's Children Daycare and Kensington Office Park. Northwest of the subject site is the Kensington MARTA Station. Across the street from the site is a MARTA parking lot and the State Juvenile Center Department offices. DeKalb County records indicate that the property was zoned R-75 (Residential Medium Lot) with the establishment of the 1956 Zoning Ordinance.

## **PROJECT ANALYSIS:**

Per the submitted application and site plan, the applicant is requesting to rezone the property from R-75 (Residential Medium Lot) District to the HR-3 (High Density Residential-3) District to develop 220 apartment units at a density of 95 units per acre in combination with 1,908 square feet of retail space. The apartments will be developed within two (2)-seven (7) story buildings with a retail component on the ground floor. The proposed development would consist of an apartment unit mix of fifty-nine (59) one-bedroom apartments, one-hundred eight (108) two-bedroom apartments and fifth-three (53) three-bedroom apartments. The elevation of the subject property allows a parking garage underneath the apartment units. Bicycle racks are provided to accommodate 20 bicycles. Residents and potential customers will also be able to access the retail component from the sidewalk on Memorial Drive. The site plan depicts one (1) point of street access from Memorial Drive for residents, guests and/or retail customers. A second access on Memorial Drive will be limited to waste removal and delivery services. Amenity areas for the apartment residents include a pool, playground, picnic area. Additionally, the project includes a community center/day care facility consisting of 2,385 square feet, bringing the total non-residential uses to 4,293 square feet. The applicant submitted a Traffic Impact Study dated July 2018 prepared by Kimley -Horn and Associates, Inc. to address traffic concerns. General recommendations from the traffic study included one (1) westbound shared left-turn/through/right-turn lane exiting the site onto Memorial Drive (SR 154/ SR 10) and one (1) ingress lane entering the site.

## **ZONING ANALYSIS:**

The R-75 (Residential Medium Lot) District allows single-family detached residences on minimum 10,000 square foot lots. The HR-3 (High Density Residential-3) District allows high density, high-rise residential with accessory retail, office and commercial uses.

Adjacent and nearby MR-2 (Medium Density Residential-2) zoned and developed properties along Kensington and Memorial Drive support the proposed HR-3 (High-Density Residential) zoning district on the site. The current zoning at that location is not consistent and compatible with adjacent zoning districts. The subject site is a stand-alone R-75 (Residential) zoned lot between and adjacent two (Office-Institutional) zoned properties on Memorial Drive. It is unlikely that the site would be developed as single-family residences given the existing office and commercial zoned properties and uses along Memorial Drive. The proximity to the Kensington MARTA station also make this a suitable site for apartment and retail uses

adjacent to a designated Transit Oriented Development (TOD) node. Therefore, the zoning analysis concludes that the proposed HR-3 District would be appropriate for the subject site.

**IMPACT ANALYSIS:**

**Section 27-7.3.4 of the DeKalb County Code states that the following standards and factors shall govern the review of all proposed amendments to the Official Zoning Map.**

**A. Whether the zoning proposal is in conformity with the policy and intent of the comprehensive plan:**

The 2035 Comprehensive Plan designates the subject site within a Regional Center. Also, the site adjacent to the adopted Kensington LCI 2012 (Livable Centers Initiative) study area. The LCI is a Small Area Plan that develops comprehensive recommendations for future land use patterns, transportation and circulation options, zoning improvements and implementation strategies for a defined area (See Attachment 1). While the subject parcel is not located within the 2012 LCI area, the vision of the plan still speaks to the project, as part of the extended TOD (Transit Oriented Development) area and as a project that would add market rate, high density housing to an area with a concentration of naturally occurring affordable housing. Specifically, the project supports major goals stated in the LCI, including to generate mixed income, high density development near the station. Additional retail for this development would make it more mixed use and activate street and therefore more consistent with the intent of the Kensington LCI. The original LCI identifies the parcel as greenspace. However, the site was never included in a project list; as such, this is not an appropriate option for private development.

**B. 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 rezoning to the HR-3 (High Density Residential-3) District for apartments given the adjacent Oak Tree Villas apartment homes and nearby Kenridge apartments east of the site. The proposed non-residential use for commercial and retail development is compatible with office and commercial uses south of the site along Memorial Drive (Chiropractor Office, Father’s Children Daycare & Kensington Office Park).

**C. Whether the property to be affected by the zoning proposal has a reasonable economic use as currently zoned:**

Given that the site is located within a Regional Center Character Area for high density development, the property may not have a reasonable economic use as currently zoned R-75 (Residential Medium Lot) District for single-family detached residences. The proposed rezoning to the HR-3 District allows more options for greater economic value.

**D. Whether the zoning proposal will adversely affect the existing use or usability of adjacent or nearby property:**

The rezoning request to the HR-3 (High Density Residential-3) District should not adversely affect the use or usability of adjacent and nearby office, commercial and apartment properties along Memorial Drive and Kensington Road.

**E. Whether there are other existing or changing conditions affecting the use and development of the property, which give supporting grounds for either approval or disapproval of the zoning proposal:**

The Kensington Livable Centers Initiative (LCI) Study Area includes the following goals: encourage diversity of mixed income neighborhoods, employment and recreational choices; and provide access to a wide range of travel modes, including transit, walking and biking. The day care facility for the residents on site provides important services and will reduce vehicular trips. The proposed use for apartments above retail along the Memorial Drive Corridor near the Kensington MARTA Station allows accomplishment of these goals consistent with the Regional Center Character Area.

**F. Whether the zoning proposal will adversely affect historic buildings, sites, districts, or archaeological resources:**

There are no known historic buildings, sites, districts or archeological resources that would be adversely affected by the rezoning request to the HR-3 District.

**G. Whether the zoning proposal will result in a use which will or could cause an excessive or burdensome use of existing streets, transportation facilities, utilities, or schools:**

Although Memorial Drive is a four-lane major arterial with a middle turn-lane, the request for 220 apartment units with a retail component would have an impact on vehicle and pedestrian traffic in the area. Access points and road improvements are critical to development. A traffic study is necessary to determine required improvements to mitigate impacts. The proposed development may generate new school students. When fully constructed, this development would be expected to house 23 students: 5 at Peachcrest ES, 3 at Bethune MS, 7 at Towers HS, and 8 at other DCSD schools. All three neighborhood schools have capacity for additional students.

**H. Whether the zoning proposal adversely impacts the environment or surrounding natural resources.**

The request for HR-3 zoning on the site should not adversely impact the environment or surrounding natural resources. However, the Land Disturbance Permit (LDP) process would require approval to establish tree preservation standards, storm water management and emergency vehicle access.

**COMPLIANCE WITH HR-3 (HIGH DENSITY RESIDENTIAL-3) DISTRICT STANDARDS PER TABLE 2.4: Medium and High Density-Residential Zoning Districts**

STANDARD	REQUIREMENT	PROPOSED	COMPLIANCE
DWELLING UNITS PER ACRE	60-120 Units Per Acre	95 Units Per Acre	Yes
STREET FRONTAGE	100 Feet	196 Feet	Yes
LOT COVERAGE	Max. 85%	81.60%	Yes
FRONT SETBACKS	Min. 10 Feet Max. 20 Feet	16 Feet	Yes
REAR SETBACKS	Min. 15 Feet	30 Feet	Yes
TRANSITIONAL BUFFER Table 5.2(a)	30 Feet adjacent to MR-2 zoned District	30-Foot undisturbed buffer	Yes
HEIGHT-Table 2.15 HR-3 60 to 20 Units Per Acre With Accessory Non-Res Uses	Max: 10 Stories	7-Stories	Yes
LOT COVERAGE	Max. 85%	81.60 %	Yes
OPEN SPACE	Min. 15%	18.4% + 8,308 SF Open Area Plaza Level	Yes
PARKING – ARTICLE 6 Min. (1.5) space per dwelling unit, plus (3) spaces for each 1,000 square feet of floor area for retail use.	1.5 x 220 UNITS = 330 spaces. 2,474 square feet of retail = 7.4 spaces Total: 338 spaces	348 Parking Spaces	Yes

**STAFF RECOMMENDATION: APPROVAL WITH CONDITIONS**

The proposed rezoning request from R-75 (Medium Lot Residential) District to HR-3 (High Density Residential-3) District is compatible with apartment zoning MR-2 (Medium Density Residential -2) District adjacent to the site along Kensington Road and with the intent to diversify multi-family options near a MARTA station. The Oak Tree Villa apartments west of the site support multi-family residential zoning in the area. The proposed retail component is compatible with existing non-residential uses along Memorial Drive. However, the request for 220 apartment units with a retail component would have an impact on vehicle and pedestrian traffic in the area. Given that Memorial Drive is a state route, access points and road improvements to facilitate speed entering and existing the site are critical to the safety of the community and residents utilizing this development. The applicant submitted a Traffic Impact Study dated July 2018 prepared by Kimley -Horn and Associates, Inc. General recommendations from the traffic study included one (1) westbound shared left-

turn/through/right-turn lane exiting the site onto Memorial Drive (SR 154/ SR 10) and one (1) ingress lane entering the site. Planning Staff has not fully completed a review of the traffic study to make a recommendation on the proposed development. Therefore, the Planning and Sustainability Department recommends that the application be **“Deferred”** to complete a review of the submitted traffic study to determine the impact of the proposed development on surrounding and adjacent properties. However, should the Board of Commissioners choose to move forward with this petition, Planning Staff offers the following conditions for consideration.

1. The property shall be developed for no more than 220 apartment units at a density of 95 units per acre with the non-residential services and a minimum of 1,908 square feet of retail uses on the ground floor identified in the site plan submitted to the Planning and Sustainability Department on June 11, 2018. Site plan is conceptual and layout and building design shall be subject to approval of the Director of Planning and Sustainability Department.
2. Not more than two (2) curb cuts on Memorial Drive. Vehicular ingress and egress and any operational improvements shall be subject to approval by Georgia Department of Transportation (GDOT) and the DeKalb County Transportation Division of the Department of Public Works.
3. All building facades visible from Memorial Drive shall consist of a minimum of 40% stone and/or brick. No vinyl or exposed concrete block is allowed.
4. Provide street lamps consistent with existing lamps on Memorial Drive frontage. Provide courtyard lighting interior to the development and surrounding the amenities area.

**Attachments:**

1. Kensington LCI Study
2. Department and Division Comments
3. Application
4. Site Plan
5. Zoning Map
6. Land Use Plan Map
7. Aerial Photograph

## NEXT STEPS

*Following an approval of this modification action, one or several of the following may be required:*

-  **Land Disturbance Permit** *(Required for of new building construction on non-residential properties, or land disturbance/improvement such as storm water detention, paving, digging, or landscaping.)*
-  **Building Permit** *(New construction or renovation of a building (interior or exterior) may require full plan submittal or other documentation. Zoning, site development, watershed and health department standards will be checked for compliance.)*
-  **Certificate of Occupancy** *(Required prior to occupation of a commercial space and for use of property for any business type. The issuance follows the review of submitted plans if required based on the type occupancy.)*
- **Plat Approval** *(Required if any parcel is being subdivided, re-parceled, or combined. Issued “administratively”; no public hearing required.)*
- **Sketch Plat & Final Plat Approval** *(Required for the subdivision of property into three lots or more. Requires a public hearing by the Planning Commission.)*
- **Overlay Review** *(Required review of development and building plans for all new construction or exterior modification of building(s) located within a designated overlay district.)*
- **Historic Preservation** *(A Certificate of Appropriateness is required for any proposed changes to building exteriors or improvements to land when located within the Druid Hills or the Soapstone Geological Historic Districts. Historic Preservation Committee public hearing may be required.)*
-  **Variance** *(Required to seek relief from any development standards of the Zoning Ordinance. A public hearing and action by the Board of Appeals are required for most variances.)*
- **Minor Modification** *(Required if there are any proposed minor changes to zoning conditions that were approved by the Board of Commissioners. The review is administrative if the changes are determined to be minor as described by Zoning Code.)*
- **Major Modification** *(Required submittal of a complete zoning application for a public hearing if there are any proposed major changes to zoning conditions that were approved by the Board of Commissioner for a prior rezoning.)*
- **Business License** *(Required for any business or non-residential enterprise operating in Unincorporated DeKalb County, including in-home occupations).*
- **Alcohol License** *(Required permit to sell alcohol for consumption on-site or packaged for off-site consumption. Signed and sealed distance survey is required. Background checks will be performed.)*

**Each of the approvals and permits listed above requires submittal of application and supporting documents, and payment of fees. Please consult with the appropriate department/division.**

**DeKalb County Supplemental Land Use Report for Small Area Plans (SAPs)  
Kensington Station Livable Centers Initiative (LCI)**

Case # Z 18 22285 Project Name:	Existing FLU: Regional Center Proposed FLU: Regional Center	<b>Staff Recommendation: Analysis in Progress</b>
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**Kensington LCI Overview**

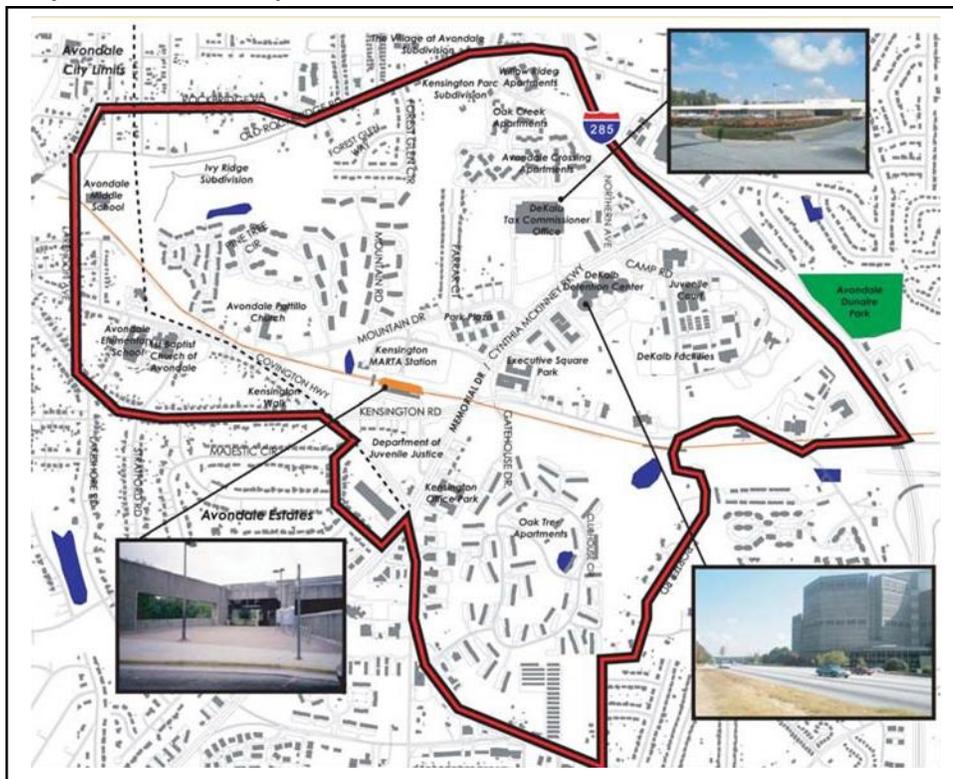
DeKalb County, in conjunction with the Atlanta Regional Commission (ARC), is working to spur development, encourage economic growth and enhance urban design and mobility in and around the Kensington MARTA Station. In an effort to revitalize the Memorial Drive corridor, DeKalb County was awarded one of ten Atlanta Regional Commission (ARC) Livable Centers Initiative (LCI) planning grants that focuses on developing comprehensive recommendations for future land use patterns, transportation and circulation options, zoning improvements and implementation strategies for a defined area. The pursuit of the LCI grant came as a result of the Memorial Drive Economic Development Strategic Action Plan that concluded in spring 2002. This previous planning effort focused on revitalizing potentially sustainable mixed-use activity centers. Through urban design and market analysis, the area surrounding the Kensington MARTA Station was selected as the mixed use activity center with the greatest opportunity for redevelopment due to its location, market opportunities, and property ownership development interests.

**Study Area Context**

The Kensington Station LCI study area is comprised of the Kensington MARTA Station, a large DeKalb County governmental core, the I-285/Memorial Drive interchange, numerous multi-family apartments, office parks and surrounding single-family neighborhoods. For the purpose of this study, the boundary line is defined as follows: I-285 on the east, MARTA rail easement to Kensington Road to Porter Road on the south-east, Covington Highway to Kensington Road on the south-west, Clarendon Avenue on the east, and Old Rockbridge Road on the north (the study area is illustrated on the Study Area Context map below).

Memorial Drive and Covington Highway bisect the study area. Memorial Drive extends east-west from Stone Mountain through the study area and continues all the way to East Point. Covington Highway extends north-south and changes to Avondale Road as it enters Avondale Estates. The study area straddles the City of Avondale line but is completely contained within DeKalb County. Within this study area boundary are a series of DeKalb County facilities including the Detention Center, Juvenile Court, Sanitation, Public Safety and the Tax Commissioner’s Office. There are no public parks within the study area although Avondale Dunwoody Park is in close proximity to the east.

**Study Area Context Map**





## DEKALB COUNTY GOVERNMENT PLANNING DEPARTMENT DISTRIBUTION FORM

The following areas below may warrant comments from the Development Division. Please respond accordingly as the issues relate to the proposed request and the site plan enclosed as it relates to Chapter 14. You may address applicable disciplines.

### DEVELOPMENT ANALYSIS:

- **Transportation/Access/Row**

Consult the Georgia DOT as well as the DeKalb County Transportation Department prior to land development permit. Verify widths from the centerline of the roadways to the property line for possible right-of-way dedication. Improvements within the right-of-way may be required as a condition for land development application review approval. Safe vehicular circulation is required. Paved off-street parking is required.

- **Storm Water Management**

Compliance with the Georgia Stormwater Management Manual, DeKalb County Code of Ordinances 14-40 for Stormwater Management and 14-42 for Storm Water Quality Control, to include Runoff Reduction Volume where applicable is required as a condition of land development permit approval. Use Volume Three of the G.S.M.M. for best maintenance practices. Use the NOAA Atlas 14 Point Precipitation Data set specific to the site. The site is a stormwater hotspot.

- **Flood Hazard Area/Wetlands**

The presence of FEMA Flood Hazard Area was indicated in the County G.I.S. mapping records for the site; and should be noted in the plans at the time of any land development permit application. Encroachment of flood hazard areas require compliance with Article IV of Chapter 14 and FEMA floodplain regulations.

- **Landscaping/Tree Preservation**

Landscaping and tree preservation plans for any building, or parking lot must comply with DeKalb County Code of Ordinances 14-39 and are subject to approval from the County Arborist.

- **Tributary Buffer**

State water and consequently, State water buffer was reflected in the G.I.S. records for the site. Typical state waters buffer have a 75' undisturbed stream buffer and land development within the undisturbed creek buffer is prohibited without a variance per DeKalb County Code of Ordinances 14-44.1.

- **Fire Safety**

Plans for land development permit must comply with Chapter 12 DeKalb County Code for fire protection and prevention.

- **Retaining Wall**

Any proposed retaining wall must comply with DeKalb County Code of Ordinances Chapter 27-5.4.7

## TRANSPORTATION COMMENTS – JULY 2018 REZONE AGENDA

N1. Alton Road is classified as a local road. See Chapter 5 of the zoning code Table 5.1 and Chapter 14, Section 190 of the Land Development Code for permit requirements. Street lights are required. New road to be private. Add sidewalks on the existing county right of way between new road and Chamblee Tucker Road. Sight Triangles for access point will be required at Land Development Permit submittal.

N2. Lawrenceville Hwy (SR 8) and North Druid Hills Road are both major arterials and both are on the Bike Network as Second Tier Priority. See Chapter 5 of the zoning code Table 5.1 and Chapter 14, Section 190 of the Land Development Code for permit requirements. Street lights required. Request to comment at a future date when the traffic GRTA/ARC DRI required traffic study is complete and a Notice of Decision is given. Transportation is requesting a deferral, as any action taken by the county prior to NOD may jeopardize federal transportation funding. At a minimum, we want a PATH connection along the southern property line as part of the South Fork Peachtree Creek Trail and a direct, buffered ped/bike connection between the PATH and the neighborhood, crossing at the signal at Mistletoe Road. In addition, the access point on Lawrenceville Hwy just south of NDH will be restricted to right in/right out/left in. Sight Triangles for access point will be required at Land Development Permit submittal. Other comments later once traffic study is received.

N3. See N2.

N4. Does a recycling plant automatically trigger a DRI? Lancaster Road is classified as a local road. This property is in the Bouldercrest Overlay District Tier 4- verify infrastructure requirements in Code. It appears to be a packed gravel, unimproved road, not up to current standards with a right of way corridor of only 35 feet. DeKalb County has no current plans to upgrade this road to modern standards. Right of way dedication of 27.5 from centerline is required.

N5. Does a recycling plant automatically trigger a DRI? Fleetwood Drive is classified as a local road. Please note that there is an effort to make the private railroad crossing to the private properties a Quiet Zone- no RR train horns will be sounded. The property owner needs to pave their approach to the crossing to reduce the amount of sediment tracked onto the county road.

N6. Memorial Drive is a state route. GDOT review and permits required. Transportation is requesting a traffic study be performed. This development will have a hard time getting thru the land development process. Chapter 14 requires 3 access points. See Chapter 14, Section 14-200 (6) for the requirements of separation of access points. Requests deferral until the traffic study is completed for additional comments. This seems like a large development for such a small parcel. Sight Triangles for access point will be required at Land Development Permit.

N7. No Comment.

N8. Mountain Drive is a state route. GDOT review and permits are required. Not enough information to comment about the change in alleys. Public alleys must connect to public street on both ends. Private alleys may end in a turn around. See section 14-195 of the Land Development Code for more information related to alleys.

N9. No comments.



# DEKALB COUNTY GOVERNMENT PLANNING DEPARTMENT DISTRIBUTION FORM

**NOTE: PLEASE RETURN ALL COMMENTS VIA EMAIL OR FAX TO EXPEDITE THE PROCESS TO  
MADOLYN SPANN [MSPANN@DEKALBCOUNTYGA.GOV](mailto:MSPANN@DEKALBCOUNTYGA.GOV) OR JOHN REID [JREID@DEKALBCOUNTYGA.GOV](mailto:JREID@DEKALBCOUNTYGA.GOV)**

## COMMENTS FORM: PUBLIC WORKS TRAFFIC ENGINEERING

Case No.: Z-18-22285 Parcel I.D. #: 15-230.01-005

Address: 4213  
Memorial Dr  
Decatur, GA

Kensington Rd **Adjacent Roadway (s):** \_\_\_\_\_  
\_\_\_\_\_  
(classification) (classification)

Capacity (TPD) _____	Capacity (TPD) _____
Latest Count (TPD) _____	Latest Count (TPD) _____
Hourly Capacity (VPH) _____	Hourly Capacity (VPH) _____
Peak Hour. Volume (VPH) _____	Peak Hour. Volume (VPH) _____
Existing number of traffic lanes _____	Existing number of traffic lanes _____
Existing right of way width _____	Existing right of way width _____
Proposed number of traffic lanes _____	Proposed number of traffic lanes _____
Proposed right of way width _____	Proposed right of way width _____

Please provide additional information relating to the following statement.

According to studies conducted by the Institute of Traffic Engineers (ITE) 6/7<sup>TH</sup> Edition (whichever is applicable), churches generate an average of fifteen (15) vehicle trip end (VTE) per 1,000 square feet of floor area, with an eight (8%) percent peak hour factor. Based on the above formula, the \_\_\_\_\_ square foot place of worship building would generate \_\_\_\_\_ vehicle trip ends, with approximately \_\_\_\_\_ peak hour vehicle trip ends.

Single Family residence, on the other hand, would generate ten (10) VTE's per day per dwelling unit, with a ten (10%) percent peak hour factor. Based on the above referenced formula, the \_\_\_\_\_ (Single Family Residential) District designation which allows a maximum of \_\_\_\_\_ units per acres, and the given fact that the project site is approximately \_\_\_\_\_ acres in land area, \_\_\_\_\_ daily vehicle trip end, and \_\_\_\_\_ peak hour vehicle trip end would be generated with residential development of the parcel.

COMMENTS:

Field and plans reviewed. This project will
Need a GADOT permit. Traffic Engineering
Recommend a right turn IN and right turn
OUT.

Signature: [Signature] David M. Boss

**DeKalb County School District  
Zoning Review Comments**

Analysis Date: 6/11/2018

**Submitted to:** DeKalb County

**Case #:** Z-18-22285

**Name of Development:** Memorial Drive Apts

**Parcel #:** 15-230-01-005

**Location:** Memorial Dr near Kensington Road

**Description:** Proposed development of 220 apartment units on currently vacant property.

**Impact of Development:** When fully constructed, this development would be expected to house 23 students: 5 at Peachcrest ES, 3 at Bethune MS, 7 at Towers HS, and 8 at other DCSD schools. All three neighborhood schools have capacity for additional students.

<b>Current Condition of Schools</b>	<b>Peachcrest ES</b>	<b>Bethune MS</b>	<b>Towers HS</b>	<b>Other DCSD Schools</b>	<b>Private Schools</b>	<b>Total</b>
Capacity	1,086	1,350	1,299			
Portables	0	0	10			
Enrollment (Fcst. Oct. 2018)	957	870	947			
Seats Available	129	480	352			
Utilization (%)	88.1%	64.4%	72.9%			
<b>New students from development</b>	<b>5</b>	<b>3</b>	<b>7</b>	<b>8</b>	<b>0</b>	<b>23</b>

New Enrollment	962	873	954
New Seats Available	124	477	345
New Utilization	88.6%	64.7%	73.4%

<b>Yield Rates</b>	<b>Attend Home School</b>	<b>Attend other DCSD School</b>	<b>Private School</b>	<b>Total</b>
Elementary	0.024050	0.018904	0.002222	0.045177
Middle	0.014218	0.006459	0.001111	0.021788
High	0.029552	0.012391	0.000000	0.041944
<b>Total</b>	<b>0.0678</b>	<b>0.0378</b>	<b>0.0033</b>	<b>0.1089</b>
<b>Student Calculations</b>				
<b>Proposed Units</b>	220			
<b>Unit Type</b>	APT			
<b>Cluster</b>	Towers			
<b>Units x Yield</b>	<b>Attend Home School</b>	<b>Attend other DCSD School</b>	<b>Private School</b>	<b>Total</b>
Elementary	5.29	4.16	0.49	9.94
Middle	3.13	1.42	0.24	4.79
High	6.50	2.73	0.00	9.23
<b>Total</b>	<b>14.92</b>	<b>8.31</b>	<b>0.73</b>	<b>23.96</b>
<b>Anticipated Students</b>	<b>Attend Home School</b>	<b>Attend other DCSD School</b>	<b>Private School</b>	<b>Total</b>
Peachcrest ES	5	4	0	9
Bethune MS	3	1	0	4
Towers HS	7	3	0	10
<b>Total</b>	<b>15</b>	<b>8</b>	<b>0</b>	<b>23</b>



DEKALB COUNTY GOVERNMENT  
PLANNING DEPARTMENT  
DISTRIBUTION FORM

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COMMENTS FORM:  
PUBLIC WORKS WATER AND SEWER

Case No.: Z-18-22285 / 2018-2157

Parcel I.D. #: 15-230-01-005

Address: 4213 Memorial Drive

Decatur, Georgia

WATER:

Size of existing water main: 8" DI Water Main (adequate/inadequate)

Distance from property to nearest main: Approximately 106 Feet Northwest from the Property

Size of line required, if inadequate: N/A

SEWER:

Outfall Servicing Project: Indian Creek Basin

Is sewer adjacent to property: Yes (X) No ( ) If no, distance to nearest line: Adjacent to Property

Water Treatment Facility: Snapfinger Creek WTF ( ) adequate ( ) inadequate

Sewage Capacity: \* (MGPD)

Current Flow: 21.77 (MGPD)

COMMENTS:

\* Please note that the sewer capacity has not been reviewed or approved for this project. A Sewer Capacity Request (SCR) must be completed and submitted for review. This can be a lengthy process and should be addressed early in the process.


FKL

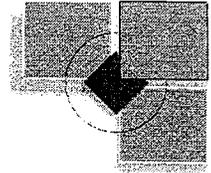
Signature:



DeKalb County Department of Planning & Sustainability

Michael L. Thurmond
Chief Executive Officer

Andrew A. Baker, AICP
Director



APPLICATION TO AMEND OFFICIAL ZONING MAP
OF DEKALB COUNTY, GEORGIA

APR 26 2018

Z/CZ No. 2-18-22285
Filing Fee: 500.00

Date Received: Application No.:

Applicant: Sam Artopoous and R. Kyle Williams E-Mail: sartopoous@williamsteusink.com

Applicant Mailing Address: 309 Sycamore Street, Decatur, Georgia 30030

Applicant Phone: 404-373-9590 Fax: 404-378-6049

Owner(s): See Exhibit A E-Mail:
(If more than one owner, attach as Exhibit "A")

Owner's Mailing Address: 2010 Enrique Drive, The Villages, FL 32159

Owner(s) Phone: 352-259-4299 Fax:

Address/Location of Subject Property: 4213 Memorial Drive

District(s): 15 Land Lot(s): 230 Block: 01 Parcel(s): 005

Acreage: 2.3 Commission District(s): 4 and 6

Present Zoning Category: R-75 Proposed Zoning Category: HR-3

Present Land Use Category: RC

PLEASE READ THE FOLLOWING BEFORE SIGNING

This form must be completed in its entirety before the Planning Department accepts it. It must include the attachments and filing fees identified on the attachments. An application, which lacks any of the required attachments, shall be determined as incomplete and shall not be accepted.

Disclosure of Campaign Contributions

In accordance with the Conflict of Interest in Zoning Act, O.C.G.A., Chapter 36-67A, the following questions must be answered:

Have you the applicant made \$250 or more in campaign contributions to a local government official within two years immediately preceding the filing of this application? X Yes No

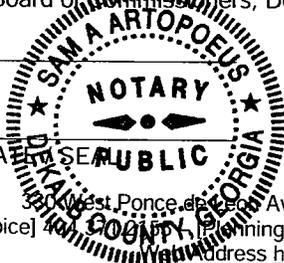
If the answer is yes, you must file a disclosure report with the governing authority of DeKalb County showing:

- 1. The name and official position of the local government official to whom the campaign contribution was made.
2. The dollar amount and description of each campaign contribution made during the two years immediately preceding the filing of this application and the date of each such contribution.

The disclosure must be filed within 10 days after the application is first filed and must be submitted to the C.E.O. and the Board of Commissioners, DeKalb County, 1300 Commerce Drive, Decatur, Ga. 30030.

NOTARY

1/26/19
EXPIRATION DATE



SIGNATURE OF APPLICANT / DATE

Check One: Owner Agent

300 West Ponce de Leon Avenue - Suites 100-500 - Decatur, Georgia - 30030
[voice] 404-371-3000 [Planning Fax] (404) 371-4556 [Development Fax] (404) 371-3007
Address http://www.dekalbcountyga.gov/planning
Email Address: planninganddevelopment@dekalbcountyga.gov

# PUBLIC NOTICE

## REQUEST FOR REZONING

**FILED BY:** JOHN AND SHIRLEY SPINELLI (OWNER)  
KENSINGTON STATION, LLC (DEVELOPER)  
WILLIAMS TEUSINK, LLC (COUNSEL)

**PROPERTY LOCATED:** 4213 MEMORIAL DRIVE, DECATUR, GEORGIA 30332

**CURRENT ZONING:** R-75 (RESIDENTIAL MEDIUM LOT-75)

**CURRENT LAND USE:** REGIONAL CENTER (RC)

**CURRENT USE:** UNDEVELOPED LAND

**PROPOSED ZONING:** HR-3 (HIGH DENSITY RESIDENTIAL-3)

**PROPOSED LAND USE:** REGIONAL CENTER (RC)

**PROPOSED USE:** RESIDENTIAL APARTMENTS WITH STREET LEVEL  
STOREFRONT RETAIL AND INCIDENTAL COMMERCIAL  
FRONTING MEMORIAL DRIVE

### **PRE-SUBMITTAL COMMUNITY MEETING TO TAKE PLACE AT:**

**LOCATION:** COVINGTON BRANCH LIBRARY  
3500 COVINGTON HIGHWAY  
DECATUR, GEORGIA 30032

**DATE & TIME:** TUESDAY, MAY 15, 2018 AT 7:00 PM

Notice Date: April 25, 2018



Kyle Williams <kwilliams@williamsteusink.com>

---

## PUBLIC NOTICE: Community Meeting for Rezoning of 4213 Memorial Dr.

---

Kyle Williams <kwilliams@williamsteusink.com>

Mon, Apr 30, 2018 at 11:07 AM

To: Kyle Williams <kwilliams@williamsteusink.com>

Cc: "Robin L. Detar" <srbradshaw@dekalbcountyga.gov>, "Alesia D. Brooks" <adbrooks@dekalbcountyga.gov>, Kelly Cato <kgannon@dekalbcountyga.gov>

Bcc: joeba@earthlink.net, njqb@outlook.com, o4corvett@bellsouth.net, legal51996@yahoo.com, conward.jones07@gmail.com, davidkaminski2012@gmail.com, grammymix@gmail.com, blusty@mindspring.com, tonyastri@gmail.com, ojonwudegu@yahoo.com, evorari@bellsouth.net, Victoria Webb <vic@furiousdreams.com>, allisongroup40@gmail.com, little.creek@aol.com

Please see the attached Public Notice for a Community Meeting on Tuesday, May 15 at 7 pm at the Covington Branch Library regarding proposed rezoning of 4213 Memorial Drive.

Kyle

R. Kyle Williams

WILLIAMS TEUSINK, LLC  
The High House  
309 Sycamore Street  
Decatur, Georgia 30030  
Direct Dial: (404) 373-9351  
Cell: (404) 931-7032  
Facsimile: (404) 378-6049  
kwilliams@williamsteusink.com  
www.williamsteusink.com

***Vacation Alert: I will be out of the office from May 3, 2018 through May 13, 2018, with no access to voicemail and emails. Please contact my assistant Sam Artopoeus at 404-373-9590 or sartopoeus@williamsteusink.com during this time. I will return to the office on Monday, May, 14, 2018.***

This communication is CONFIDENTIAL and solely for intended recipients. If you are not an intended recipient, your receipt of this communication is the result of an inadvertent or unauthorized disclosure. Sender reserves and asserts all rights to confidentiality and privileges that are applicable and for violations thereof. Accordingly, immediately DESTROY all copies of the email and attachments, and NOTIFY the sender of your receipt of this email. DO NOT review, copy, or rely on in any way the contents of this communication. NO DUTIES ARE CREATED BY THIS COMMUNICATION.

CIRCULAR 230 DISCLOSURE: This communication is not intended to be used, and cannot be used, for the purpose of (i) avoiding penalties under the Internal Revenue Code or (ii) promoting, marketing or recommending to another party any transaction or matter addressed herein.

---

 Public Notice for Community Meeting.pdf  
66K

Parcel	Owner	Mailing Address
15 230 01 010	4151 MEMORIAL LLC	550 PHARR RD STE 220 ATLANTA GA 30305
15 230 01 034	4151 MEMORIAL LLC	550 PHARR RD STE 220 ATLANTA GA 30305
15 231 05 001	DOWNTOWN DEV AUTH OR AVOND EST	21 N AVONDALE PLZ AVONDALE ESTATE GA 30002-1317
15 230 01 003	MARTA	2424 PIEDMONT RD NE ATLANTA GA 30324-3330
15 230 01 022	MARTA	2424 PIEDMONT RD NE ATLANTA GA 30324-3330
15 230 01 026	MARTA	2424 PIEDMONT RD NE ATLANTA GA 30324-3330
15 230 01 036	MARTA	2424 PIEDMONT RD NE ATLANTA GA 30324-3330
15 250 06 009	MARTA	2424 PIEDMONT RD NE ATLANTA GA 30324-3330
15 250 07 024	MARTA	2424 PIEDMONT RD NE ATLANTA GA 30324-3330
15 251 02 002	MARTA	2424 PIEDMONT RD NE ATLANTA GA 30324-3330
15 251 02 003	MARTA	2424 PIEDMONT RD NE ATLANTA GA 30324-3330
15 251 02 004	MARTA	2424 PIEDMONT RD NE ATLANTA GA 30324-3330
15 251 03 001	MARTA	2424 PIEDMONT RD NE ATLANTA GA 30324-3330
15 230 01 028	ROBINSON I MICHELLE	4179 MEMORIAL DR DECATUR GA 30032-1503
15 230 01 001	CC OTV LLC	131 SOUNDVIEW LN, NEW CANAAN CT 06840
15 230 01 037	CC OTV LLC	131 SOUNDVIEW LN, NEW CANAAN CT 06840
15 251 05 015	DEKALB COUNTY Oak Tree Villas	1330 COMMERCE DR # 6 DECATUR GA 30030 3465 Kensington Road, Decatur GA 30032
15 230 01 006	RITCHIE WILLIAM C	PO BOX 489 HULL GA 30646-0489
15 230 01 007	RITCHIE WILLIAM C	PO BOX 489 HULL GA 30646-0489
15 230 01 008	RITCHIE WILLIAM C	PO BOX 489 HULL GA 30646-0489



**A. SUMMARY OF PROPOSED REZONING**

Applicant requests rezoning of the Property from R-75 (Residential Medium Lot-75) to HR-3 (High Density Residential-3). The requested rezoning of the Property does not require an amendment to the Land Use Plan as it is consistent with the Existing Land Use classification as Regional Center (RC) set forth in the 2035 Comprehensive Plan and Future Land Use Map comprehensive.

Applicant is under contract to sell the Property to Kensington Station, LLC (“Kensington Station”) conditioned upon the requested rezoning. Kensington Station intends to develop and use the Property as two (2) seven (7) story residential apartment buildings with incidental street level storefront retail and commercial fronting Memorial Drive, as detailed and conditioned upon the plans submitted in support of this Application. The proposed development would consist of an apartment unit mix of fifty-nine (59) one-bedroom apartments, one hundred and six (106) two-bedroom apartments, and fifty-three (53) three-bedroom apartments for a total of two hundred and eighteen (218) residential units.

**A. DOCUMENTED IMPACT ANALYSIS**

**(a) Whether the proposed land use change will permit uses that are suitable in consideration of the use and development of adjacent and nearby property or properties.**

The proposed rezoning of the Property will permit development of a higher density residential apartment use with incidental street level storefront retail and commercial fronting Memorial Drive that is suitable in view of the use and development of adjacent and nearby property. The adjacent and adjoining properties on Memorial Drive to the north and south of the Property are zoned OI (Office-Institutional). The adjacent and adjoining property to the rear of the Property is zoned MR-2 (Heavy Industrial) pursuant to CZ-88089.

The Property is centrally located within the highly trafficked commercial area at the intersection of Memorial Drive and Kensington Road. The Property is within walking distance of the MARTA Kensington Station. The surrounding area is a mix of governmental, commercial, retail, and other non-residential uses. However, the immediate surrounding area is lacking in high density residential uses.

The proposed rezoning would allow for a higher density residential development that would complement and better serve the existing non-residential uses. The proposed rezoning and development would serve as a catalyst for other residential redevelopment adjacent to and within the Kensington-Memorial Drive Overlay. While outside of the boundaries of the overlay district, the proposed rezoning is consistent with the overlay’s stated objective to “create a positive real estate investment climate which will stimulate economic development and job creation.” The proposed rezoning and development would allow for a trans-oriented development near the MARTA Kensington Station that is sought by the Kensington-Memorial Drive Overlay District.

More importantly, the current zoning of the Property as R-75 (Residential Medium Lot-

75) is obsolete and inconsistent with the 2035 Comprehensive Plan and Future Land Use Map comprehensive. It is not economically feasible or desirable that the Property be used as a single-family house as currently zoned. By contrast, the proposed rezoning is consistent with the Existing Land Use classification of the Property as Regional Center (RC) as set forth in the 2035 Comprehensive Plan and Future Land Use Map comprehensive.

**(b) Whether the proposed land use change will adversely affect the existing use or usability of adjacent or nearby property or properties.**

As detailed in Section (a) above, the proposed rezoning is consistent with and will not adversely affect the existing use or usability of adjacent and nearby properties. Furthermore, the proposed rezoning is consistent with the Existing Land Use classification of the Property as Regional Center (RC) as set forth in the 2035 Comprehensive Plan and Future Land Use Map comprehensive.

**(c) Whether the proposed land use change will result in uses which will or could cause excessive or burdensome use of existing streets, transportation facilities, utilities, or schools.**

The proposed rezoning will not result in uses which would cause excessive or burdensome uses of existing streets, transportation facilities, utilities, or schools. The Property is well served by existing streets, transportation facilities, and utilities within the immediate surrounding areas located at the intersection of Kensington Road and Memorial Drive. The proposed apartment development will not impact existing schools as apartment uses typically do not attract families with school age children given the unit size. The existing infrastructure is more than sufficient to support the proposed residential development. More importantly, the Property is ideally situated within walking distance of the MARTA Kensington Station and will introduce a needed residential use to complement the existing non-residential uses in the immediate surround area.

**(d) Whether the amendment is consistent with the written policies in the comprehensive plan text.**

The requested rezoning of the Property does not require an amendment to the Land Use Plan. The proposed rezoning is consistent with the Existing Land Use classification of the Property as Regional Center (RC) as set forth in the 2035 Comprehensive Plan and Future Land Use Map comprehensive.

**(e) Whether there are potential impacts on property or properties in an adjoining governmental jurisdiction, in cases of proposed changes near county or municipal boundary lines.**

The Property is not located near county or municipal boundary lines. As such, there are no potential impacts on property or properties in any adjoining governmental jurisdiction.

(f) **Whether there are other existing or changing conditions affecting the use and development of the affected land areas which support either approval or denial of the proposed land use change.**

Except as detailed above, there are no other existing or changing conditions affecting the use or development of the affected land areas which support either approval or denial of the proposed land use change.

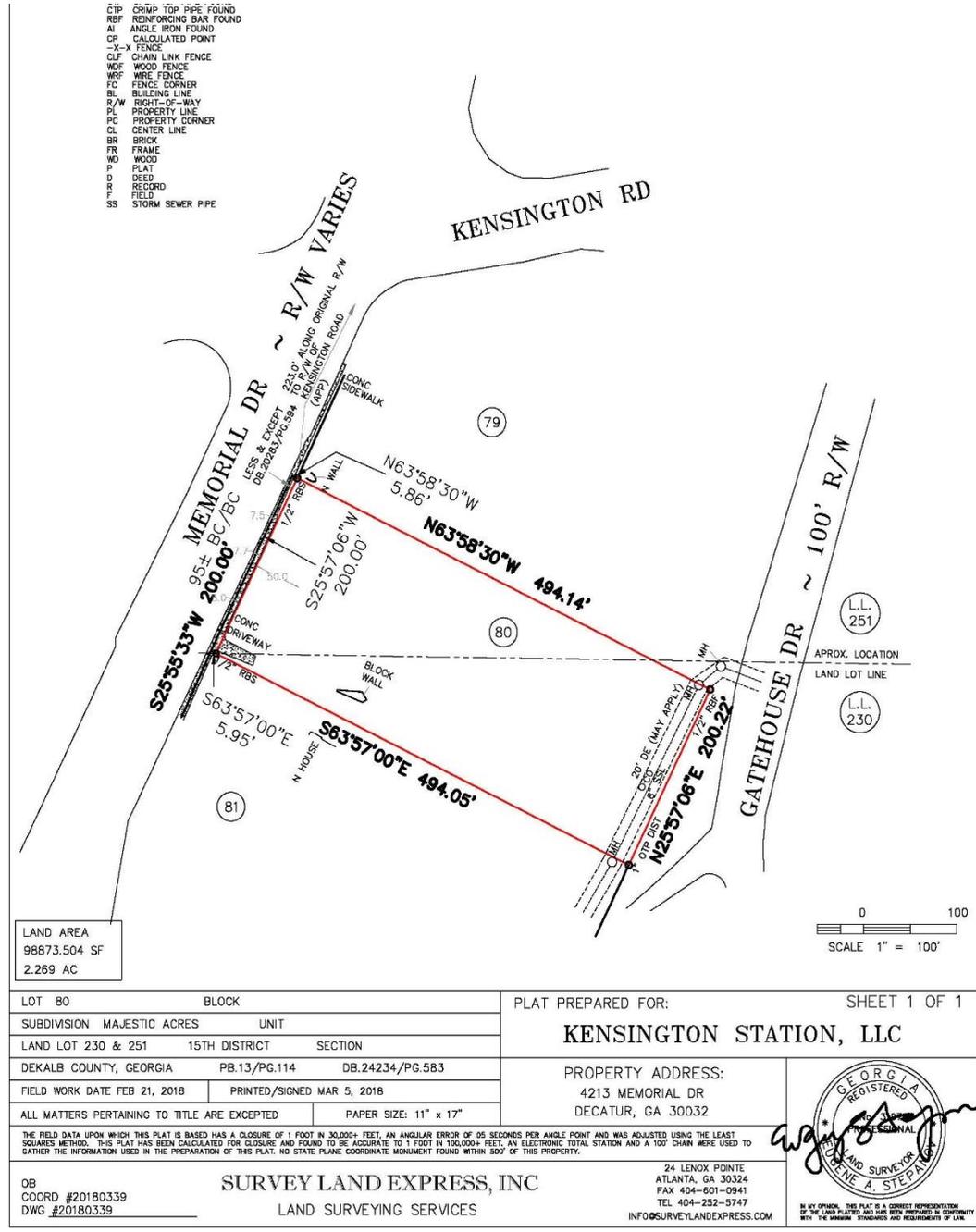
(g) **Whether there will be an impact on historic buildings, sites, districts or archaeological resources resulting from the proposed change.**

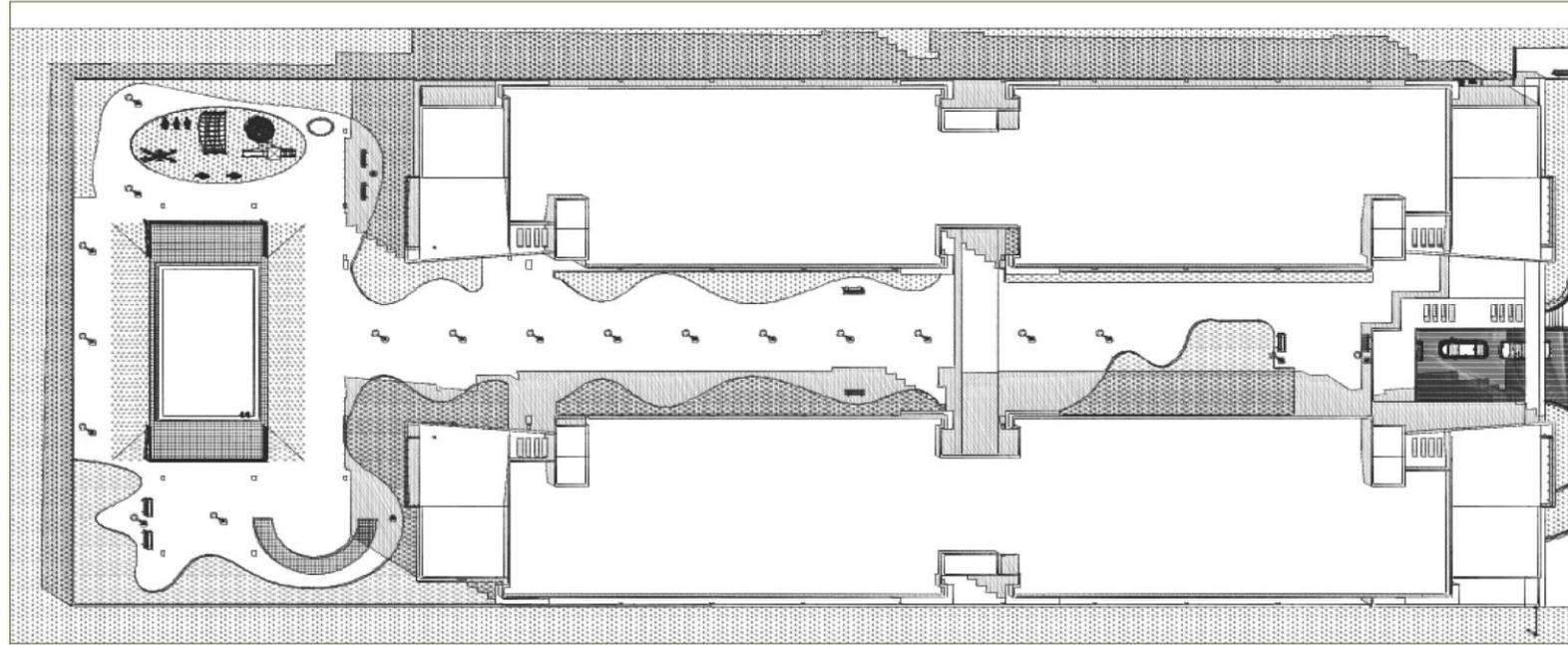
The proposed rezoning and development will have no impact on any historic building, site, district, or archaeological resource.

**B. ADDITIONAL SUPPORTING DOCUMENTATION**

Applicant includes as additional support for its Application the following:

1. Pre-Application Form Rezone, Special Land Use Permit, Modification, and Land Use;
2. Application to Amend Official Zoning Map of DeKalb County, Georgia;
3. Rezone Application Authorization, John Spinelli and Shirley Spinelli;
4. Notarized Authorization by Property Owner for Representation (John Spinelli);
5. Notarized Authorization by Property Owner for Representation (Shirley Spinelli);
6. Public Notice for Community Meeting;
7. *Deed Under Power of Sale*, dated January 7, 2014;
8. Legal Description of the Property;
9. Zoning Map of the Property;
10. Survey of Property, prepared by Survey Land Express, Inc., dated March 5, 2018;
11. Architectural, Elevation, and Landscape Plans (Sheet Nos. 1 – 6), prepared by REMOS Architects, dated April 18, 2018;
12. Four (4) Conceptual Drawings, prepared by REMOS Architects; and,
13. Application Fee.





Roof Plan image



East Elevation

3/32" = 1'-0"

**ZONING LEGEND:**

**PROPOSED ZONING:** HR3  
**SITE AREA:** 2.3+/- acres, 99,065 SF  
**DENSITY ALLOWED:** 120 units/acre = 276 units  
**DENSITY PROPOSED:** 95 units/acre = 220 units  
**OPEN SPACE REQUIRED:** 15.00 %  
**OPEN SPACE PROVIDED:** 18.4 % + 8,308 SF Open Area Plaza Level  
**LOT COVERAGE ALLOWED:** 85.00 %  
**LOT COVERAGE PROVIDED:** 81.60 %  
**LOT WIDTH REQUIRED:** 100 FT.  
**LOT WIDTH PROVIDED:** 200.33 FT.  
**BUILDING HEIGHT ALLOWED:** No Limit  
**BUILDING HEIGHT PROPOSED:** 77 FT. - 7 Stories ( Height to last floor level = 67 FT )  
**PARKING REQUIRED:** 330 Spaces  
**PARKING PROVIDED:** 348 Spaces ( Retail 19 Spaces)  
**BICYCLE RACKS**  
 Required: 1/20 Car Spaces = 348/20 = 17.4  
 Provided: 20 Bicycle Racks  
**BUILDING AREA:** 262,136 SF  
**BALCONY AREA:** 11,410 SF  
**PARKING GARAGE AREA:** 161,670 SF  
**FIRST FLOOR RETAIL AREA:** 2,474 SF

**OWNER / DEVELOPER:**

Kensington Station, LLC,  
160 Clairmont Ave. #239  
Decatur, GA 30030

**ARCHITECT:**

Alejandro Remos, RA  
18501 Pines Blvd. #107  
Pembroke Pines, FL 33029

**UNIT MIX:**

<b>UNIT A TOTAL 59</b>	ONE BEDROOM APARTMENT	612 SF
<b>UNIT B TOTAL 108</b>	TWO BEDROOM APARTMENT	942 SF
<b>UNIT C TOTAL 53</b>	THREE BEDROOM APARTMENT	1,259 SF



Alejandro Remos, RA, 0011702  
18501 Pines Blvd., Suite 107  
Pembroke Pines, FL 33029  
Tel: (954) 442-7102  
Fax: (954) 442-7100  
e-mail: remos@remosarch.com

**Memorial Drive - Apartments**

4213 Memorial Dr.  
Decatur, GA 30032

**CONSULTANTS:**

**ALBERTO CHINCHILLA**  
ARCHITECT

**JANNETH ARDILA**  
ARCHITECT

18501 Pines Blvd., Suite 107  
Pembroke Pines, FL 33029

**STRUCTURAL ENG.:**

**M.E.P. ENG.:**

**CIVIL ENG.:**

**LANDSCAPE ARCH.:**

**SEAL:**

A.R. 0011702

**REVISIONS:**

NO.	DESCRIPTION

Project No: AT.010

Model File: J.A.C.

Drawn by: J.A.C.

Approved by: A.R.

Date: 5/31/2018

Scale: Shown

**Copyright**

**Content**

Roof Plan Image

East Elevation

Zoning Legend

**Sheet Title**

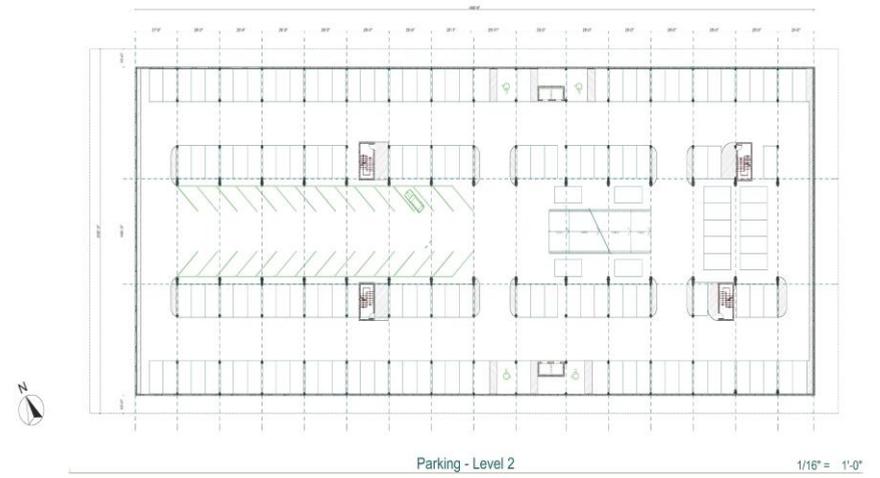
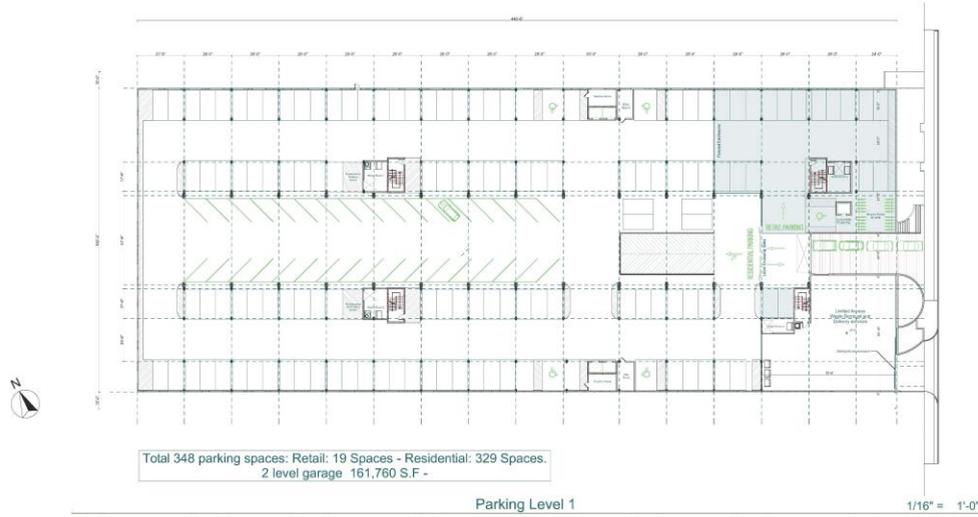
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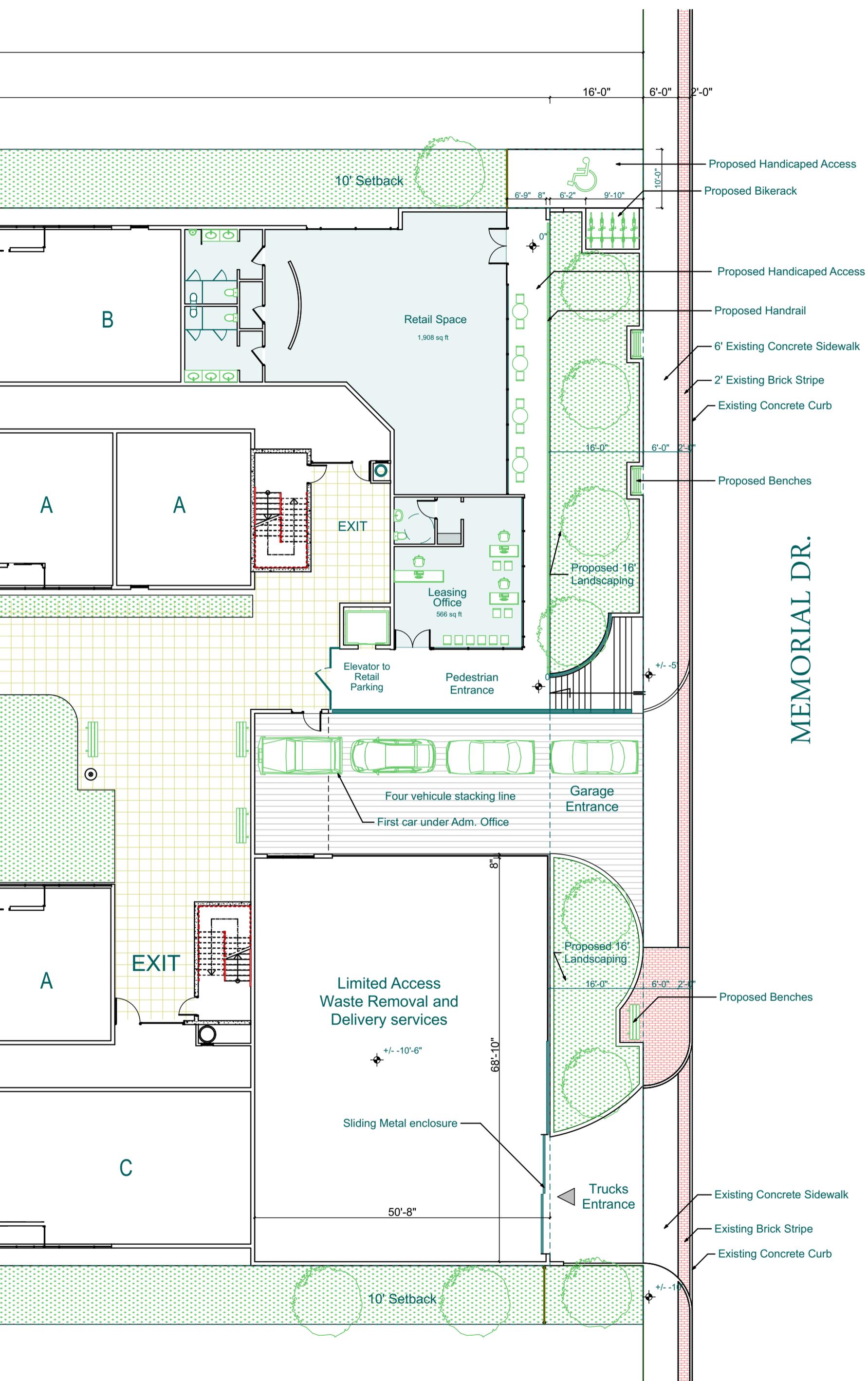
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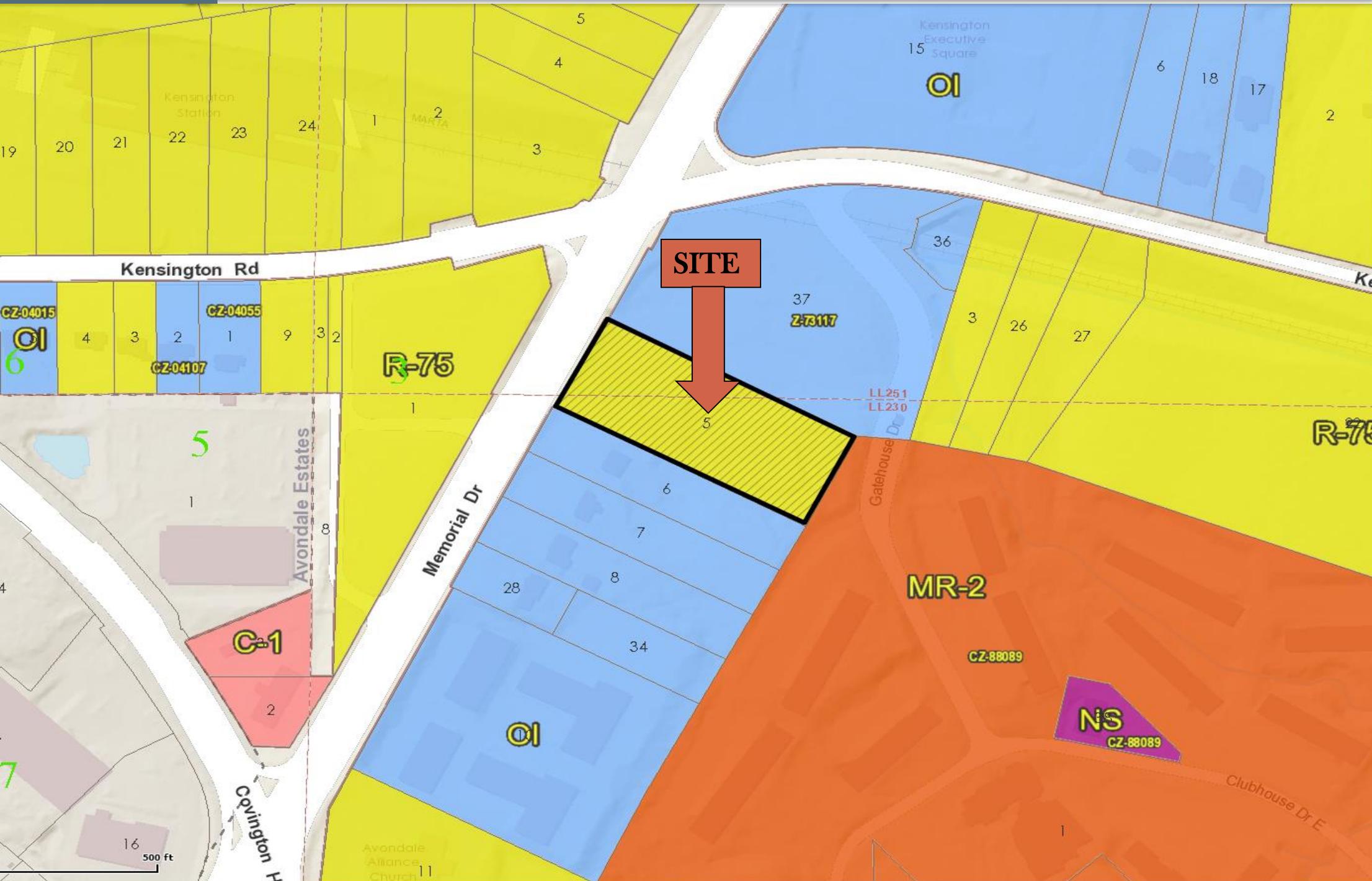


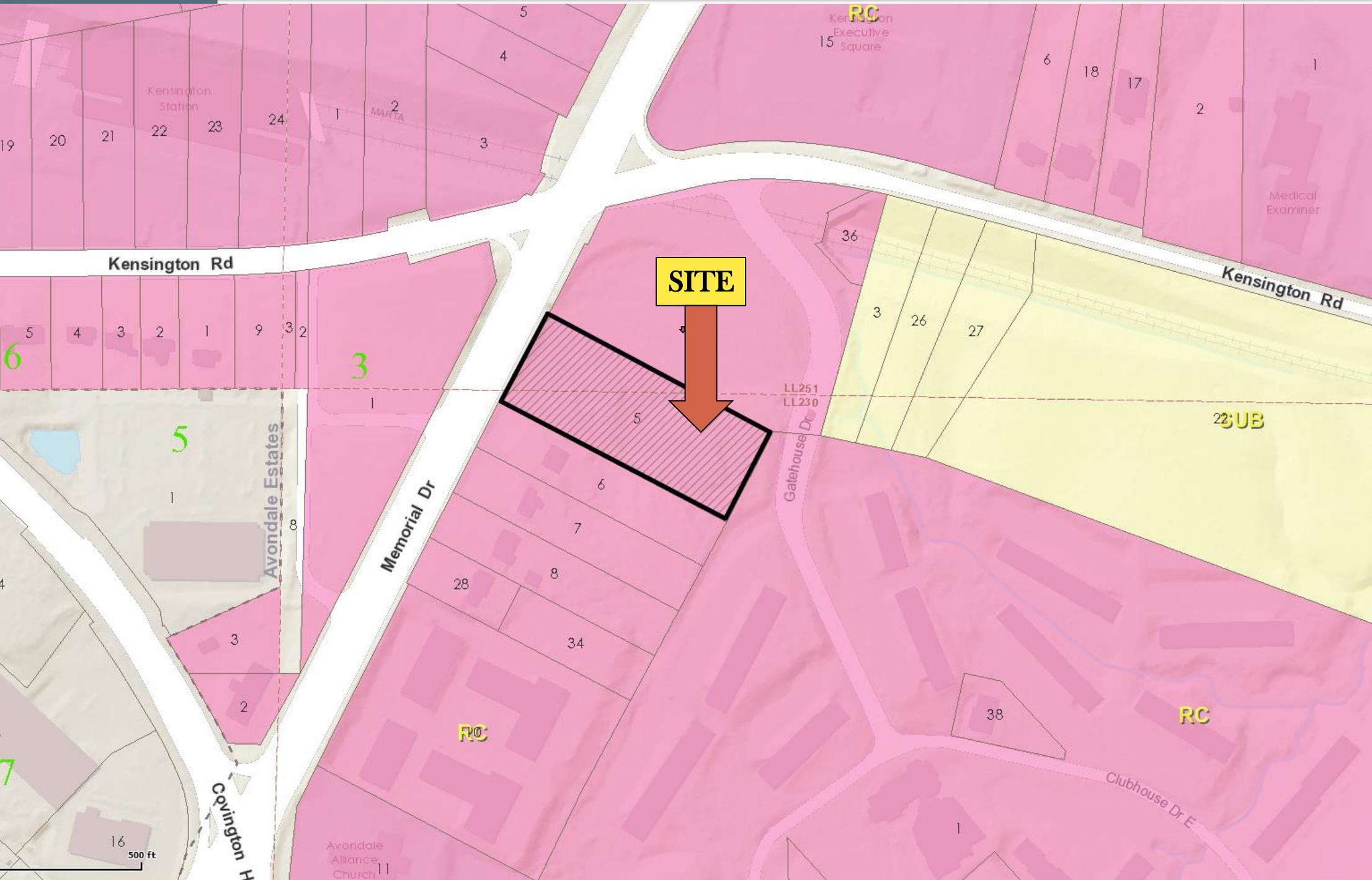


MEMORIAL DR.

1/16" = 1'-0"









MARTA

Kensington Road

Kensington Road

SITE

Juvenile Justice Center

Oak Tree Villas Apartments

Covington Hwy.

Memorial Drive

Office Park

500 ft





*Traffic Impact Study*

# 4213 Memorial Drive

DeKalb County, Georgia

*Report Prepared:*

July 2018

*Prepared for:*

Kensington Station, LLC

*Prepared by:*

**Kimley»»Horn**

Kimley-Horn and Associates, Inc.  
817 West Peachtree Street, Suite 601  
Atlanta, Georgia 30308  
Project #013184000

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- Appendix A: Site Plan
- Appendix B: Intersection Volume Worksheets
- Appendix C: *Synchro* Analysis Reports
- Appendix D: Raw Traffic Counts
- Appendix E: Site Photographs

## 1.0 INTRODUCTION

This report presents the analysis of the anticipated traffic impacts associated with the *4213 Memorial Drive* development. The approximate 2.27-acre site is proposed to consist of approximately 220 apartment units and 2,474 square feet of retail and is located just south of Kensington Road at Memorial Drive (SR 154 / SR 10) in DeKalb County, Georgia.

The *4213 Memorial Drive* development is proposed to be completed and open to traffic by year 2020. This report will summarize the analyses of the following three (3) scenarios:

1. Existing 2018 Traffic Conditions
2. Projected 2020 No-Build Traffic Conditions
3. Projected 2020 Build Traffic Conditions

The proposed development will be served by one (1) proposed full-movement driveway along Memorial Drive (SR 154 / SR 10).

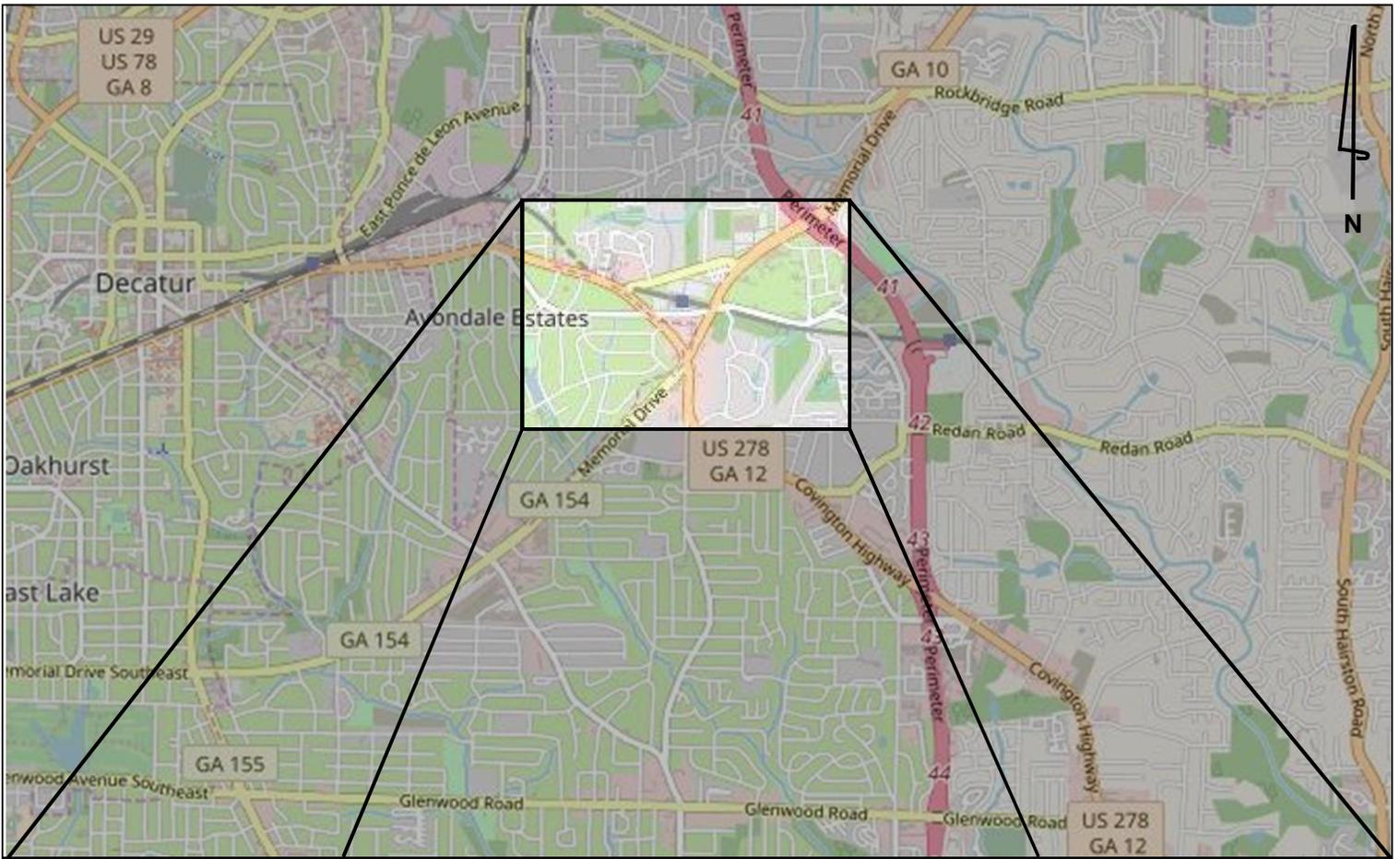
**Figure 1** provides a location map. **Figure 2** provides an aerial imagery of the project site. Additionally, a copy of the proposed site plan is provided in Appendix A.

## 2.0 STUDY AREA DETERMINATION

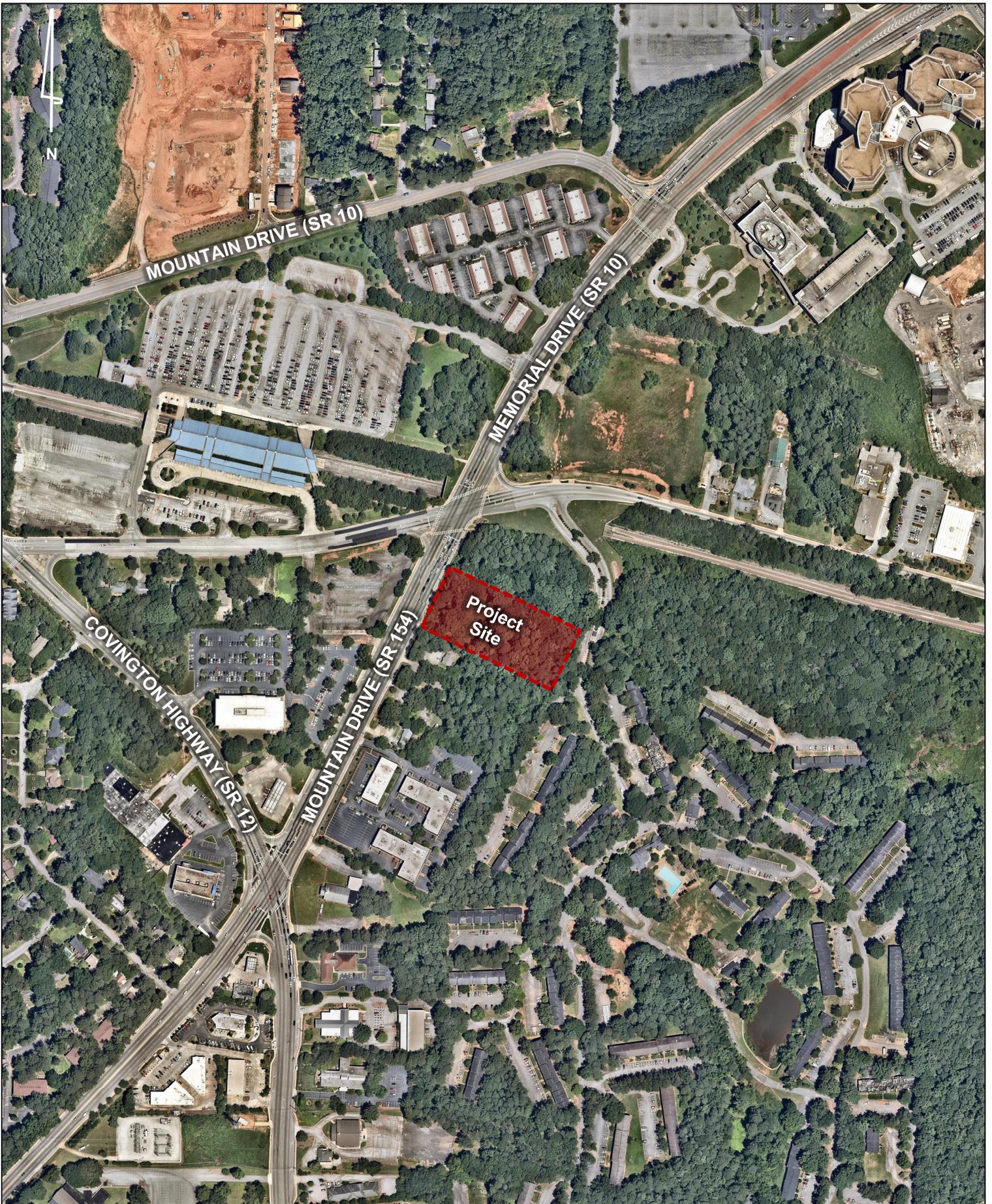
The study area consists of the following existing intersections:

1. Memorial Drive (SR 154 / SR 10) at Kensington Road (signalized)
2. Memorial Drive (SR 154 / SR 10) at Proposed Site Driveway (unsignalized, full-movement)

This analysis considers Memorial Drive (SR 154 / SR 10) as having a north-south orientation, and Kensington Road as having an east-west orientation. Site photographs are provided in Appendix E.



LEGEND	
	Project Site



### 3.0 EXISTING TRAFFIC CONDITIONS

The roadways within the study network have the following characteristics:

Memorial Drive (SR 154 / SR 10) is a 7-lane undivided roadway (three travel lanes in each direction with a center two-way left-turn lane) with a posted speed limit of 45 MPH in the vicinity of the project site. GDOT counts taken north of Kensington Road indicate a 2016 AADT of 29,500 vehicles per day.

Kensington Road is a five-lane undivided roadway (two travel lanes in each direction with a center two-way left-turn lane) with a posted speed limit of 35 MPH. GDOT counts taken west of Memorial Drive indicate a 2016 AADT of 4,260 vehicles per day.

Vehicle peak hour turning movement counts during the AM period (7:00 AM to 9:00 AM) and the PM period (4:00 PM to 6:00 PM) were performed on Thursday, March 22, 2018. It was determined from these counts that the AM peak hour occurs at 7:30-8:30 and the PM peak hour occurs at 5:00-6:00. The counts are provided in Appendix D. **Figure 3** illustrates the Existing 2018 peak hour volumes.



NOT TO SCALE

**Peak Hour**  
AM: 7:30 AM to 8:30 AM  
PM: 5:00 PM to 6:00 PM

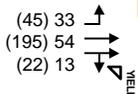
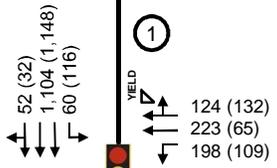
ADT: 29,500

Memorial Drive

ADT: 4,260

Kensington Road

Kensington Road



Existing Two-Way Left-Turn Lane

Project Site

Proposed Site Driveway

Memorial Drive

**LEGEND**

- Existing Roadway Laneage
- - Proposed Driveway
- XX AM Peak Hour Traffic Volumes
- (XX) PM Peak Hour Traffic Volumes
- Existing Traffic Signal
- (X) Intersection Reference Number
- XX 2016 Daily Traffic Volume (2-way volume)

## 4.0 PROJECTED BACKGROUND (NON-PROJECT) TRAFFIC

Projected background (non-project) traffic is defined as the expected traffic on the roadway network in the future year(s) absent the construction and opening of the proposed project. The Existing 2018 peak hour traffic volumes were increased by 1.0% per year for two (2) years to account for the expected background growth in traffic to 2020. Please note that the assumed 1.0% annual growth rate is consistent with other recent studies done in the area. **Figure 4** illustrates the Projected 2020 No-Build traffic conditions.

### 4.1 FUTURE ROADWAY/INTERSECTION PROJECTS

The ARC's Atlanta Region's Plan and GDOT Statewide TIP (STIP) were researched for currently programmed transportation projects within the vicinity of the proposed development. No major projects were identified.

## 5.0 PROJECT TRAFFIC

Project traffic used in this analysis is defined as the vehicle trips expected to be generated by the development and the distribution and assignment of that traffic through the study roadway network. This traffic impact study evaluated the impacts of developing approximately 220 apartment units and 2,474 square feet of retail space.

### 5.1 PROJECT SITE ACCESS

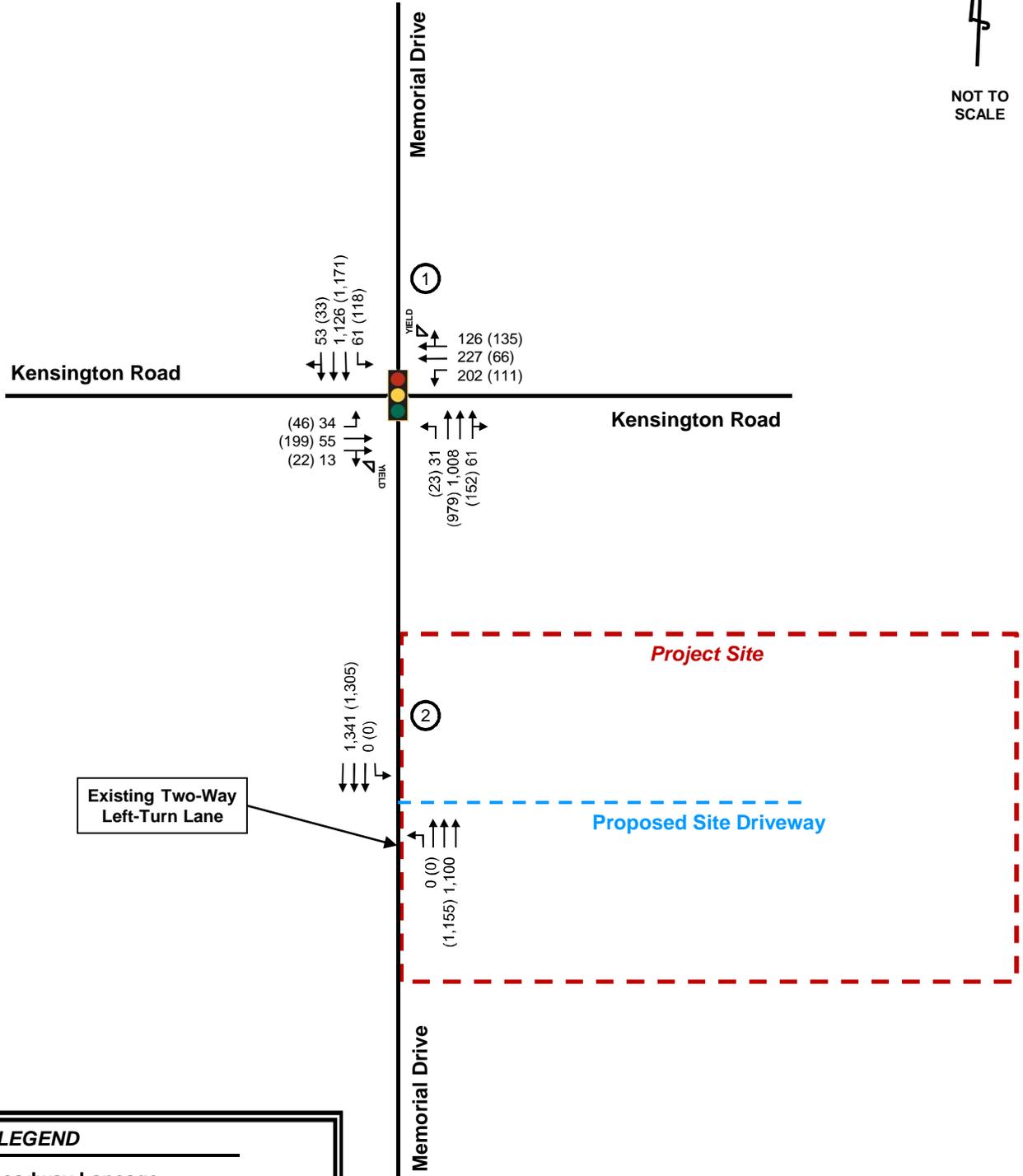
Access to the proposed *4213 Memorial Drive* development will be provided at one (1) location, which is shown on the site plan in Appendix A. The unsignalized proposed site driveway is located along Memorial Drive (SR 154 / SR 10) approximately 300 feet south of Kensington Road. There is approximately 200 feet of available storage for vehicles entering the site traveling southbound along Memorial Drive (SR 154 / SR 10).

See the referenced site plan in Appendix A for a visual representation of vehicular access and circulation throughout the proposed site.

A second site driveway is proposed along Memorial Drive (SR 154 / SR 10) approximately 150 feet south of Kensington Road which will have limited access and only serve trucks such as delivery and waste removal heavy vehicles.



NOT TO SCALE



## 5.2 TRIP GENERATION

Traffic for the proposed development was calculated using equations and rates contained in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, Tenth Edition, 2017. The trip generation was calculated assuming 220 apartment units (Land Use 221) and 2,474 square feet of retail (Land Use 930). The exact land use planned to occupy the 2,474 square feet of retail space has yet to be finalized. Therefore, Fast Casual Restaurant (Land Use 930) is believed to be a conservative assumption.

**Table 1** summarizes the trip generation for the proposed development under full build-out (year 2020).

Land Use	Density	ITE Code	Daily Traffic		AM Peak Hour		PM Peak Hour	
			Enter	Exit	Enter	Exit	Enter	Exit
Multifamily Housing (Mid-Rise)	220 d.u.	221	599	599	19	55	57	37
Fast Casual Restaurant	2,474 s.f.	930	390	390	3	2	19	16
<i>Mixed-Use Reductions</i>			-78	-78	0	0	-2	-2
<i>Alternative Mode Reductions</i>			-228	-228	-6	-15	-19	-13
<b>Total New Trips</b>			<b>683</b>	<b>683</b>	<b>16</b>	<b>42</b>	<b>55</b>	<b>38</b>

Due to the 4213 Memorial Drive development's close proximity to local transit routes, an alternative mode reduction of 25% was applied to vehicle trip generation calculations.

## 5.3 TRIP DISTRIBUTION AND ASSIGNMENT

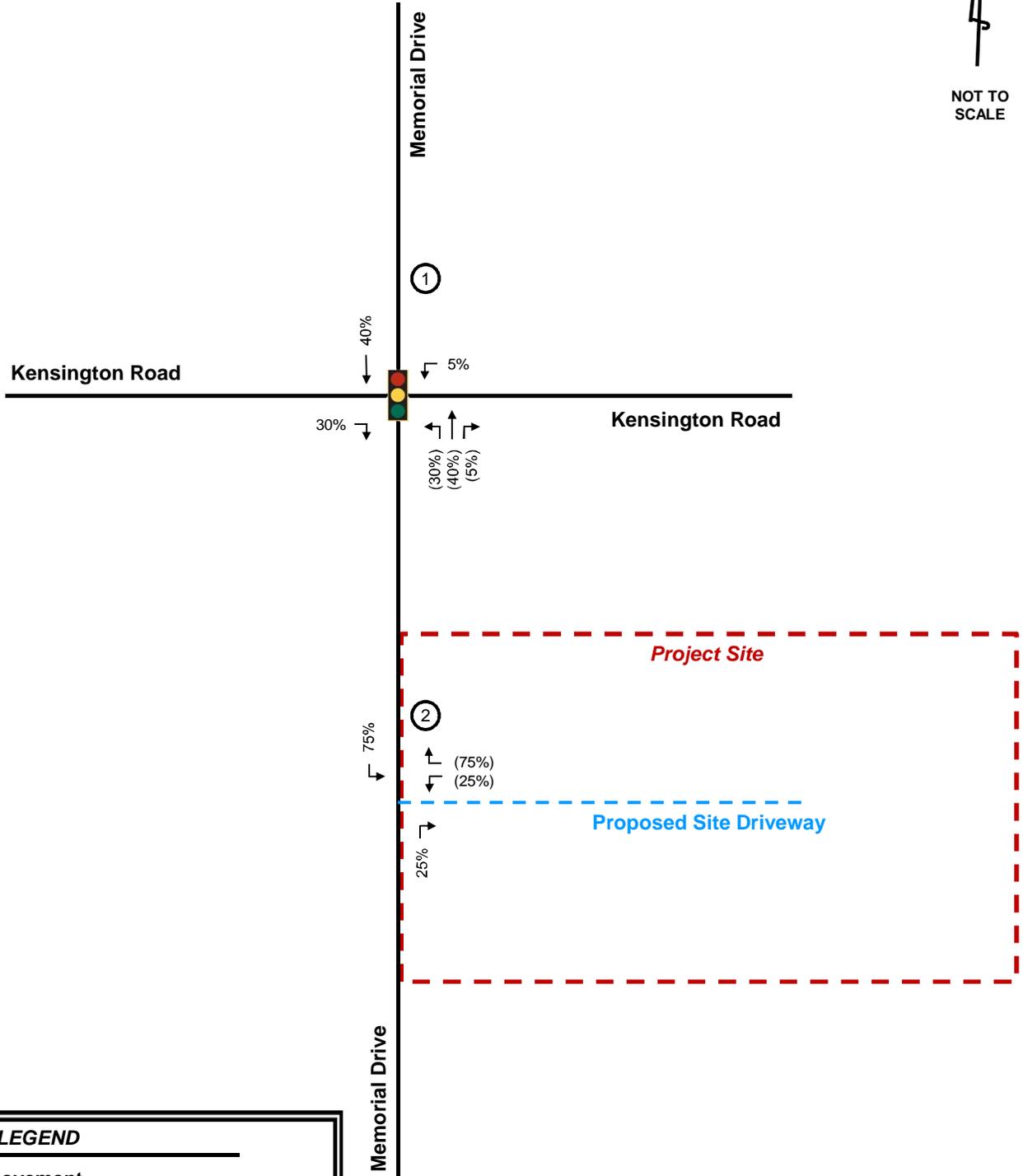
The directional distribution and assignment of new project trips was based on a review of land uses and population densities in the area; and the existing peak hour turning movement counts. **Table 2** shows the trip distribution by land use applied to all projected traffic associated with the 4213 Memorial Drive development. **Figure 5** provides the directional distribution and assignment of new project trips.

Land Use	Kensington Road		Memorial Drive (SR 154 / SR 10)		Total
	To/From East	To/From West	To/From North	To/From South	
Project Trips (All Land Uses)	5%	30%	40%	25%	100%

**Figure 6** illustrates the Projected 2020 Build traffic conditions for the AM and PM peak hours. Appendix B provides intersection volume worksheets for all intersections and driveways within the study network.



NOT TO SCALE

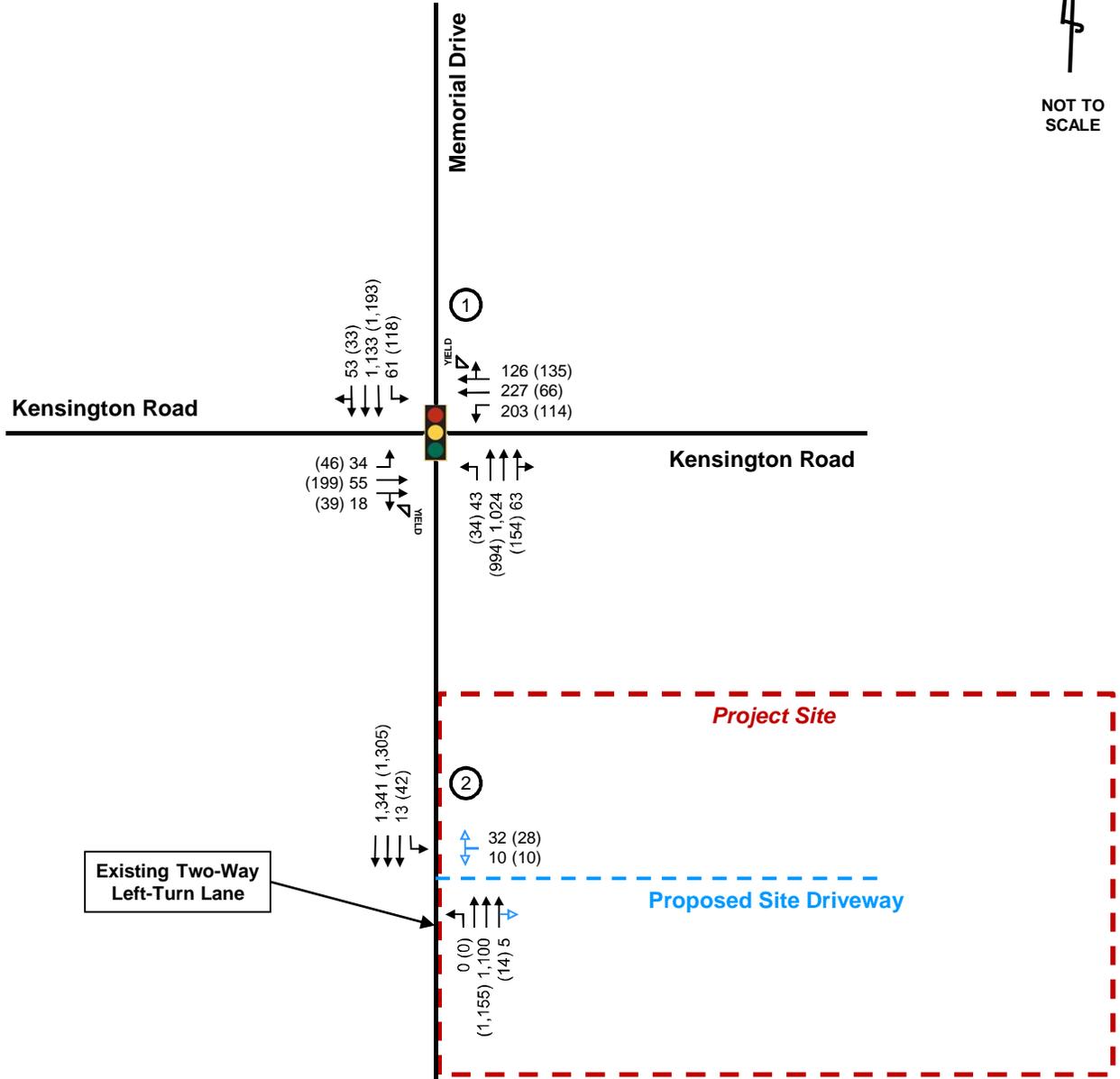


**LEGEND**

- Turning Movement
- - - Proposed Driveway
- XX % Project Trips Entering
- (XX) % Project Trips Exiting
- Existing Traffic Signal
- (X) Intersection Reference Number



NOT TO SCALE



**6.0 LEVEL-OF-SERVICE ANALYSIS**

Level-of-service (LOS) determinations were made for the weekday AM and PM peak hours for the existing study network intersections and proposed site-access intersections using *Synchro Professional, Version 9.0*. The program uses methodologies contained in the *2010 Highway Capacity Manual* to determine the operating characteristics of an intersection. Capacity is defined as the maximum number of vehicles that can pass over a particular road segment or through a particular intersection within a specified period under prevailing roadway, traffic, and control conditions.

LOS is used to describe the operating characteristics of a road segment or intersection in relation to its capacity. LOS is defined as a qualitative measure that describes operational conditions and motorists' perceptions of a traffic stream. The *Highway Capacity Manual* defines six levels of service, LOS A through LOS F, with A being the best and F the worst.

LOS for signalized intersections are reported for the intersection as a whole. One or more movements at an intersection may experience a low level-of-service, while the intersection as a whole may operate acceptably.

LOS for unsignalized intersections, with stop control on the minor street(s) only, are reported for the side street approaches. It is not uncommon to have long delays for stop-controlled approaches when there is heavy major street volume.

In addition to the Existing 2018 traffic conditions, analyses were performed for the AM and PM peak hours for the Projected 2020 No-Build traffic conditions and the Projected 2020 Build traffic conditions.

The results of the LOS analysis for the scenarios stated above are summarized in **Table 3**.

Table 3: Level-of-Service Summary LOS (Delay in Seconds)							
Intersection	Approach/ Control	Existing 2018		Projected 2020 No-Build		Projected 2020 Build	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
1. Memorial Drive (SR 154 / SR 10) at Kensington Road (signalized)	Overall	C (31.4)	C (30.3)	C (31.7)	C (30.5)	C (31.9)	C (31.0)
2. Memorial Drive (SR 154 / SR 10) at Proposed Driveway (unsignalized)	Westbound	N/A	N/A	N/A	N/A	C (20.2)	C (21.7)
	Southbound Left	N/A	N/A	N/A	N/A	C (17.0)	C (19.7)

\* Note: It is not uncommon to have long delays for stop-controlled approaches when there is heavy major street volume.

As shown in **Table 3**, all study intersections are projected to operate at LOS C or better during the AM and PM peak hours under Projected 2020 Build traffic conditions.

**7.0 QUEUE LENGTH ANALYSIS**

Queuing analyses were performed for the AM and PM peak hours based on the peak of the overall intersection (peak of adjacent street traffic) for the signalized study intersections with the study network using *Synchro, Version 9*. The queuing analysis focused on the southbound left turning movement entering the project site from Memorial Drive (SR 154 / SR 10) under Projected 2020 Build traffic conditions.

**Table 4** summarizes the 95<sup>th</sup> percentile queue lengths. The *Synchro* queuing analysis reports are provided in Appendix C.

<b>Table 4: Synchro Queue Length Analysis</b> <i>Projected 2020 Build Conditions</i>				
INT #	Intersection	Vehicle Movement	AM Peak Hour 95 <sup>th</sup> % Queue (# of vehicles)	PM Peak Hour 95 <sup>th</sup> % Queue (# of vehicles)
1	Memorial Drive (SR 154 / SR 10) at Kensington Road	NB Left	1.9	1.4
2	Memorial Drive (SR 154 / SR 10) at Proposed Driveway	SB Left	0.1	0.5

The queue lengths reported in **Table 4** are directly from *Synchro Professional, Version 9.0*, which uses methodologies contained in the *2010 Highway Capacity Manual*. The average length of a passenger car is assumed to be 25 feet and the average length of a heavy vehicle is assumed to be 45 feet.

Based on the results of this queue length analysis and the approximate 200 feet of available storage from the northbound left-turn stop bar at the intersection of Memorial Drive at Kensington Road to the proposed site drive, queuing along Memorial Drive does not appear to be problematic.

## 8.0 CONCLUSION

As currently envisioned, the *4213 Memorial Drive* development will consist of approximately 220 apartment units and 2,474 square feet of retail space. The site is located just south of Kensington Road at Memorial Drive (SR 154 / SR 10) in the DeKalb County, Georgia. The *4213 Memorial Drive* development is proposed to be completed and open to traffic by year 2020. This report summarizes the analyses of the following three (3) scenarios:

1. Existing 2018 Traffic Conditions
2. Projected 2020 No-Build Traffic Conditions
3. Projected 2020 Build Traffic Conditions

The proposed development will be served by one (1) proposed full-movement driveway along Memorial Drive (SR 154 / SR 10). The level-of-service (LOS) analysis indicates that all study intersections are projected to operate at LOS C or better during the AM and PM peak hours under Projected 2020 Build traffic conditions.

## 9.0 GENERAL RECOMMENDATIONS

Kimley-Horn and Associates, Inc. recommends site-access improvements based on the results of this study. Site-access improvements are needed to serve the *4213 Memorial Drive* development traffic.

### 9.1 SITE-ACCESS IMPROVEMENTS

Based on the results of this study, Kimley-Horn and Associates, Inc. recommends the following site-access improvements to serve the Projected 2020 Build traffic conditions (note: this would be the improvements needed to serve the traffic associated with the *4213 Memorial Drive* development):

Intersection #2: Memorial Drive (SR 154 / SR 10) at Proposed Site Driveway

- On-site, construct one (1) westbound shared left-turn/through/right-turn lane exiting the site onto Memorial Drive (SR 154 / SR 10) and one (1) ingress lane entering the site.

# Site Plan

**Memorial Drive - Apartments**  
4213 Memorial Dr.  
Decatur, GA 30032

CONSULTANTS:  
**ALBERTO CHINCHILLA**  
architect  
**JANNETH ARDILA**  
architect  
18501 Pines Blvd., Suite 107  
Pembroke Pines FL 33029

STRUCTURAL ENG.:

M.E.P. ENG.:

CIVIL ENG.:

LANDSCAPE ARCH.:

SEAL:

A.R. 0011702

**REVISIONS:**

No.	Description

Project No:	AT.010
Model File:	
Drawn by:	J.A.C
Approved by:	A.R.
Date:	5/31/2018
Scale:	Shown

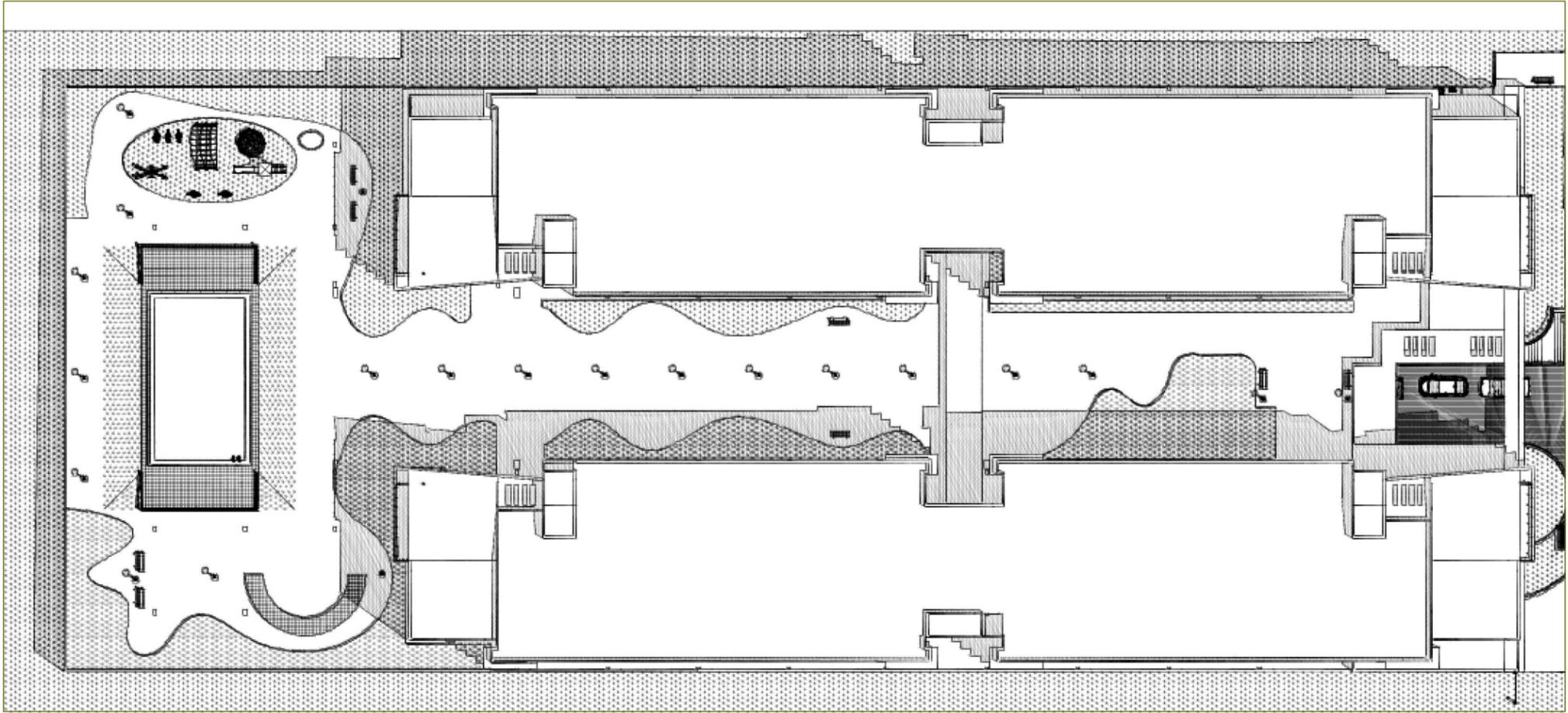
Copyright

Content

Roof Plan Image
East Elevation
Zoning Legend

Sheet Title  
**A-101**

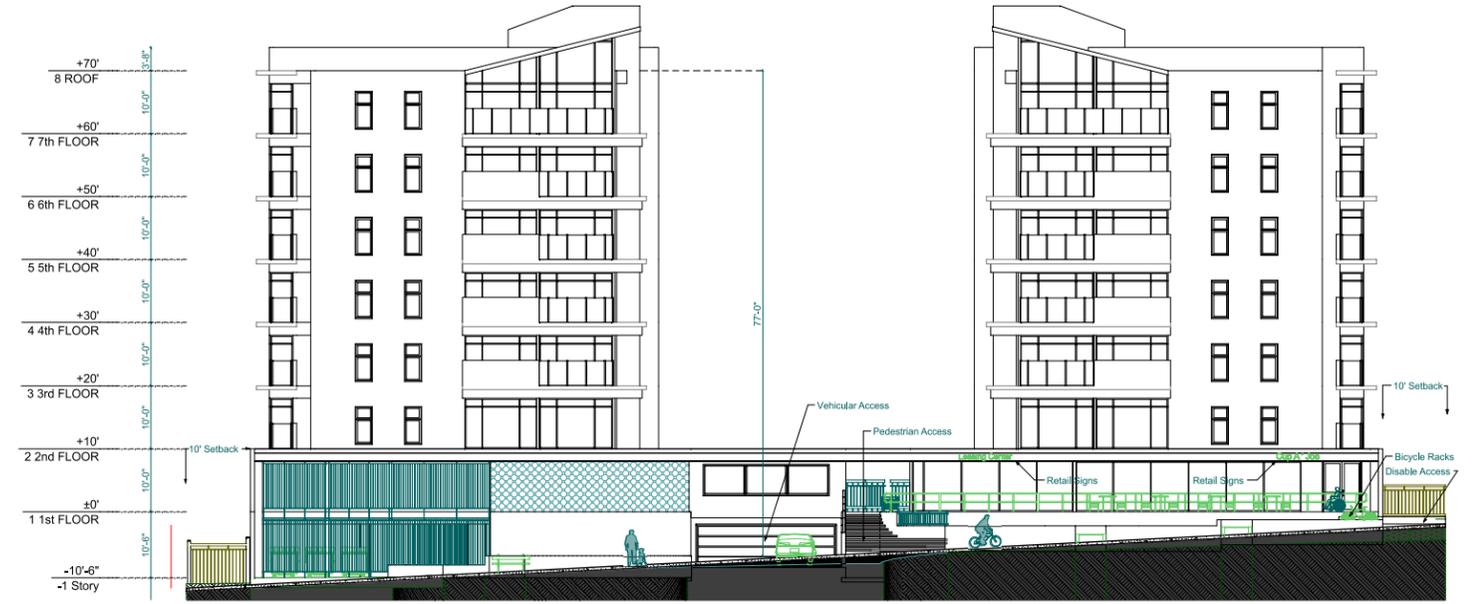
Sheet Number  
**1**



Roof Plan image



ZONING LEGEND:		OWNER / DEVELOPER:	Kensington Station, LLC. 160 Clairmont Ave. #239 Decatur, GA 30030
PROPOSED ZONING:	HR3	ARCHITECT:	Alejandro Remos, RA 18501 Pines Blvd. #107 Pembroke Pines, FL 33029
SITE AREA:	2.3+/- acres, 99,065 SF		
DENSITY ALLOWED:	120 units/acre = 276 units		
DENSITY PROPOSED:	95 units/acre = 220 units		
OPEN SPACE REQUIRED:	15.00 %		
OPEN SPACE PROVIDED:	18.4 % + 8,308 SF Open Area Plaza Level		
LOT COVERAGE ALLOWED:	85.00 %		
LOT COVERAGE PROVIDED:	81.60 %		
LOT WIDTH REQUIRED:	100 FT.		
LOT WIDTH PROVIDED:	200.33 FT.		
BUILDING HEIGHT ALLOWED:	No Limit		
BUILDING HEIGHT PROPOSED:	77 FT. - 7 Stories ( Height to last floor level = 67 FT )		
PARKING REQUIRED:	330 Spaces		
PARKING PROVIDED:	348 Spaces ( Retail 19 Spaces)		
BICYCLE RACKS	Required: 1/20 Car Spaces = 348/20 = 17.4 Provided: 20 Bicycle Racks		
BUILDING AREA:	262,136 SF		
BALCONY AREA:	11,410 SF		
PARKING GARAGE AREA:	161,670 SF		
FIRST FLOOR RETAIL AREA:	2,474 SF		
		<b>UNIT MIX:</b>	
<b>UNIT A TOTAL 59</b>	ONE BEDROOM APARTMENT	612 SF	
<b>UNIT B TOTAL 108</b>	TWO BEDROOM APARTMENT	942 SF	
<b>UNIT C TOTAL 53</b>	THREE BEDROOM APARTMENT	1,259 SF	



East Elevation

3/32" = 1'-0"

# Intersection Volume Worksheets

**Trip Generation Analysis (10th Ed. with *2nd Edition Handbook Daily IC & 3rd Edition AM/PM IC*)**

**4213 Memorial Drive  
DeKalb County, GA**

Land Use	Intensity	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
<b>Proposed Site Traffic</b>								
221 Multifamily Housing (Mid-Rise)	220 d.u.	1,198	74	19	55	94	57	37
930 Fast Casual Restaurant	2,474 s.f.	780	5	3	2	35	19	16
<b>Gross Trips</b>		<b>1,978</b>	<b>79</b>	<b>22</b>	<b>57</b>	<b>129</b>	<b>76</b>	<b>53</b>
Residential Trips		1,198	74	19	55	94	57	37
<i>Mixed-Use Reductions</i>		-78	0	0	0	-2	-1	-1
<i>Alternative Mode Reductions</i>		-280	-19	-5	-14	-23	-14	-9
Adjusted Residential Trips		840	55	14	41	69	42	27
Restaurant Trips		780	5	3	2	35	19	16
<i>Mixed-Use Reductions</i>		-78	0	0	0	-2	-1	-1
<i>Alternative Mode Reductions</i>		-176	-1	-1	-1	-8	-5	-4
<i>Pass By Reductions (Based on ITE Rates)</i>		0	0	0	0	0	0	0
Adjusted Restaurant Trips		526	4	2	1	25	13	11
<i>Mixed-Use Reductions - TOTAL</i>		-156	0	0	0	-4	-2	-2
<i>Alternative Mode Reductions - TOTAL</i>		-456	-20	-6	-15	-31	-19	-13
<i>Pass-By Reductions - TOTAL</i>		0	0	0	0	0	0	0
<b>New Trips</b>		<b>1,366</b>	<b>59</b>	<b>16</b>	<b>42</b>	<b>94</b>	<b>55</b>	<b>38</b>
<b>Driveway Volumes</b>		<b>1,366</b>	<b>59</b>	<b>16</b>	<b>42</b>	<b>94</b>	<b>55</b>	<b>38</b>

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**INTERSECTION VOLUME DEVELOPMENT**

**Intersection 1  
Memorial Drive at Kensington Road  
AM PEAK HOUR**

Description	Memorial Dr <u>Northbound</u>			Memorial Dr <u>Southbound</u>			Kensington Rd <u>Eastbound</u>			Kensington Rd <u>Westbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2018 Traffic Volumes	30	988	60	60	1,104	52	33	54	13	198	223	124
Pedestrians		24			5			23			2	
Conflicting Pedestrians	23		2	2		23	5		24	24		5
Heavy Vehicles												
Heavy Vehicle %	17%	2%	8%	10%	4%	23%	36%	7%	31%	6%	3%	4%
Peak Hour Factor		0.90			0.90			0.90			0.90	
Adjustment												
Adjusted 2018 Volumes	30	988	60	60	1104	52	33	54	13	198	223	124
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020
2020 Background Traffic	31	1,008	61	61	1,126	53	34	55	13	202	227	126
<b>Project Trips</b>												
Trip Distribution IN					40%				30%	5%		
Trip Distribution OUT	30%	40%	5%									
Residential Trips	12	16	2	0	6	0	0	0	4	1	0	0
Trip Distribution IN					40%				30%	5%		
Trip Distribution OUT	30%	40%	5%									
Restaurant Trips	0	0	0	0	1	0	0	0	1	0	0	0
Total Project Trips	12	16	2	0	7	0	0	0	5	1	0	0
<b>2020 Buildout Total</b>	<b>43</b>	<b>1,024</b>	<b>63</b>	<b>61</b>	<b>1,133</b>	<b>53</b>	<b>34</b>	<b>55</b>	<b>18</b>	<b>203</b>	<b>227</b>	<b>126</b>

**PM PEAK HOUR**

Description	Memorial Dr <u>Northbound</u>			Memorial Dr <u>Southbound</u>			Kensington Rd <u>Eastbound</u>			Kensington Rd <u>Westbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2018 Traffic Volumes	23	960	149	116	1,148	32	45	195	22	109	65	132
Pedestrians		26			8			36			5	
Conflicting Pedestrians	36		5	5		36	8		26	26		8
Heavy Vehicles												
Heavy Vehicle %	32%	2%	5%	2%	2%	32%	20%	2%	12%	9%	4%	4%
Peak Hour Factor		0.98			0.98			0.98			0.98	
Adjustment												
Adjusted 2018 Volumes	23	960	149	116	1148	32	45	195	22	109	65	132
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020
2020 Background Traffic	23	979	152	118	1,171	33	46	199	22	111	66	135
<b>Project Trips</b>												
Trip Distribution IN					40%				30%	5%		
Trip Distribution OUT	30%	40%	5%									
Residential Trips	8	11	1	0	17	0	0	0	13	2	0	0
Trip Distribution IN					40%				30%	5%		
Trip Distribution OUT	30%	40%	5%									
Restaurant Trips	3	4	1	0	5	0	0	0	4	1	0	0
Total Project Trips	11	15	2	0	22	0	0	0	17	3	0	0
<b>2020 Buildout Total</b>	<b>34</b>	<b>994</b>	<b>154</b>	<b>118</b>	<b>1,193</b>	<b>33</b>	<b>46</b>	<b>199</b>	<b>39</b>	<b>114</b>	<b>66</b>	<b>135</b>

**INTERSECTION VOLUME DEVELOPMENT**

**Intersection 2  
Memorial Drive at Proposed Site Driveway  
AM PEAK HOUR**

Description	Memorial Dr <u>Northbound</u>			Memorial Dr <u>Southbound</u>			Proposed Site Driveway <u>Eastbound</u>			Proposed Site Driveway <u>Westbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2018 Traffic Volumes		1,078			1,315							
Pedestrians												
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles												
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Peak Hour Factor		0.92			0.92			0.92			0.92	
Adjustment												
Adjusted 2018 Volumes	0	1078	0	0	1315	0	0	0	0	0	0	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020
2020 Background Traffic	0	1,100	0	0	1,341	0	0	0	0	0	0	0
<b>Project Trips</b>												
Trip Distribution IN			25%	75%								
Trip Distribution OUT										25%		75%
Residential Trips	0	0	4	11	0	0	0	0	0	10	0	31
Trip Distribution IN			25%	75%								
Trip Distribution OUT										25%		75%
Restaurant Trips	0	0	1	2	0	0	0	0	0	0	0	1
Total Project Trips	0	0	5	13	0	0	0	0	0	10	0	32
<b>2020 Buildout Total</b>	<b>0</b>	<b>1,100</b>	<b>5</b>	<b>13</b>	<b>1,341</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>32</b>

**PM PEAK HOUR**

Description	Memorial Dr <u>Northbound</u>			Memorial Dr <u>Southbound</u>			Proposed Site Driveway <u>Eastbound</u>			Proposed Site Driveway <u>Westbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2018 Traffic Volumes		1,132			1,279							
Pedestrians												
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles												
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Peak Hour Factor		0.92			0.92			0.92			0.92	
Adjustment												
Adjusted 2018 Volumes	0	1132	0	0	1279	0	0	0	0	0	0	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020
2020 Background Traffic	0	1,155	0	0	1,305	0	0	0	0	0	0	0
<b>Project Trips</b>												
Trip Distribution IN			25%	75%								
Trip Distribution OUT										25%		75%
Residential Trips	0	0	11	32	0	0	0	0	0	7	0	20
Trip Distribution IN			25%	75%								
Trip Distribution OUT										25%		75%
Restaurant Trips	0	0	3	10	0	0	0	0	0	3	0	8
Total Project Trips	0	0	14	42	0	0	0	0	0	10	0	28
<b>2020 Buildout Total</b>	<b>0</b>	<b>1,155</b>	<b>14</b>	<b>42</b>	<b>1,305</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>28</b>

# *Synchro* Analysis Reports

HCM 2010 Signalized Intersection Summary  
 1: Memorial Drive & Kensington Road

4213 Memorial Drive TIA  
 Existing 2018 AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	54	13	198	223	124	30	988	60	60	1104	52
Future Volume (veh/h)	33	54	13	198	223	124	30	988	60	60	1104	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	0.97		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1397	1703	1900	1792	1838	1900	1624	1856	1900	1727	1812	1900
Adj Flow Rate, veh/h	37	60	14	220	248	138	33	1098	67	67	1227	58
Adj No. of Lanes	1	2	0	1	2	0	1	3	0	1	3	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	36	7	7	6	3	3	17	2	2	10	4	4
Cap, veh/h	196	485	109	410	512	274	215	2490	152	259	2515	119
Arrive On Green	0.04	0.19	0.19	0.09	0.24	0.24	0.02	0.51	0.51	0.03	0.52	0.52
Sat Flow, veh/h	1331	2607	584	1707	2174	1162	1547	4880	298	1645	4837	229
Grp Volume(v), veh/h	37	36	38	220	197	189	33	760	405	67	836	449
Grp Sat Flow(s),veh/h/ln	1331	1618	1573	1707	1746	1590	1547	1689	1799	1645	1649	1768
Q Serve(g_s), s	3.5	3.0	3.2	15.0	15.6	16.5	1.6	22.7	22.8	3.1	26.1	26.1
Cycle Q Clear(g_c), s	3.5	3.0	3.2	15.0	15.6	16.5	1.6	22.7	22.8	3.1	26.1	26.1
Prop In Lane	1.00		0.37	1.00		0.73	1.00		0.17	1.00		0.13
Lane Grp Cap(c), veh/h	196	301	292	410	411	375	215	1724	918	259	1715	919
V/C Ratio(X)	0.19	0.12	0.13	0.54	0.48	0.50	0.15	0.44	0.44	0.26	0.49	0.49
Avail Cap(c_a), veh/h	262	504	490	410	544	495	303	1724	918	326	1715	919
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	49.5	54.2	54.3	46.6	52.7	53.0	19.8	24.8	24.8	19.5	24.7	24.7
Incr Delay (d2), s/veh	0.5	0.2	0.2	1.4	0.9	1.0	0.3	0.8	1.5	0.5	0.9	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.4	1.4	1.4	7.6	7.3	0.7	10.8	11.6	1.4	12.1	13.1
LnGrp Delay(d),s/veh	50.0	54.4	54.5	48.0	53.6	54.1	20.1	25.6	26.3	20.0	25.6	26.4
LnGrp LOS	D	D	D	D	D	D	C	C	C	B	C	C
Approach Vol, veh/h		111			606			1198			1352	
Approach Delay, s/veh		53.0			51.7			25.7			25.6	
Approach LOS		D			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.5	89.5	22.0	37.0	9.9	91.1	14.1	44.9				
Change Period (Y+Rc), s	* 6.6	7.9	* 7	7.2	* 6.1	7.9	7.6	7.2				
Max Green Setting (Gmax), s	* 11	55.1	* 15	49.8	* 13	54.1	14.4	49.8				
Max Q Clear Time (g_c+I1), s	5.1	24.8	17.0	5.2	3.6	28.1	5.5	18.5				
Green Ext Time (p_c), s	0.1	19.9	0.0	3.0	0.0	17.9	0.0	2.9				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				31.4								
HCM 2010 LOS				C								
<b>Notes</b>												

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘↗		↑↑↑			↑↑↑
Traffic Vol, veh/h	0	0	1078	0	0	1315
Future Vol, veh/h	0	0	1078	0	0	1315
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	1172	0	0	1429

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1744	586	0	-	-	-
Stage 1	1172	-	-	-	-	-
Stage 2	572	-	-	-	-	-
Critical Hdwy	5.74	7.14	-	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	-	-	-	-
Pot Cap-1 Maneuver	128	389	-	0	0	-
Stage 1	190	-	-	0	0	-
Stage 2	482	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	128	389	-	-	-	-
Mov Cap-2 Maneuver	165	-	-	-	-	-
Stage 1	190	-	-	-	-	-
Stage 2	482	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBTWBLn1	SBT
Capacity (veh/h)	-	-
HCM Lane V/C Ratio	-	-
HCM Control Delay (s)	-	0
HCM Lane LOS	-	A
HCM 95th %tile Q(veh)	-	-

HCM 2010 Signalized Intersection Summary  
 1: Memorial Drive & Kensington Road

4213 Memorial Drive TIA  
 Existing 2018 PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	195	22	109	65	132	23	960	149	116	1148	32
Future Volume (veh/h)	45	195	22	109	65	132	23	960	149	116	1148	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	0.98		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1583	1845	1900	1743	1827	1900	1439	1855	1900	1863	1848	1900
Adj Flow Rate, veh/h	46	199	22	111	66	135	23	980	152	118	1171	33
Adj No. of Lanes	1	2	0	1	2	0	1	3	0	1	3	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	20	2	2	9	4	4	32	2	2	2	2	2
Cap, veh/h	262	680	74	322	401	347	209	2191	339	300	2647	75
Arrive On Green	0.04	0.21	0.21	0.06	0.23	0.23	0.02	0.50	0.50	0.05	0.53	0.53
Sat Flow, veh/h	1508	3175	346	1660	1736	1501	1371	4412	682	1774	5040	142
Grp Volume(v), veh/h	46	109	112	111	66	135	23	749	383	118	781	423
Grp Sat Flow(s),veh/h/ln	1508	1753	1768	1660	1736	1501	1371	1688	1717	1774	1682	1819
Q Serve(g_s), s	3.7	8.3	8.5	8.3	4.9	12.2	1.3	23.0	23.1	5.2	23.0	23.0
Cycle Q Clear(g_c), s	3.7	8.3	8.5	8.3	4.9	12.2	1.3	23.0	23.1	5.2	23.0	23.0
Prop In Lane	1.00		0.20	1.00		1.00	1.00		0.40	1.00		0.08
Lane Grp Cap(c), veh/h	262	376	379	322	401	347	209	1677	853	300	1766	955
V/C Ratio(X)	0.18	0.29	0.30	0.35	0.16	0.39	0.11	0.45	0.45	0.39	0.44	0.44
Avail Cap(c_a), veh/h	332	545	550	371	540	467	292	1677	853	346	1766	955
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	45.7	52.6	52.7	44.9	49.1	51.9	20.1	26.1	26.1	20.2	23.5	23.5
Incr Delay (d2), s/veh	0.3	0.4	0.4	0.6	0.2	0.7	0.2	0.9	1.7	0.8	0.8	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	4.1	4.2	3.8	2.3	5.1	0.5	10.9	11.3	2.6	10.8	11.9
LnGrp Delay(d),s/veh	46.1	53.1	53.2	45.5	49.3	52.7	20.4	26.9	27.8	20.9	24.3	24.9
LnGrp LOS	D	D	D	D	D	D	C	C	C	C	C	C
Approach Vol, veh/h		267			312			1155			1322	
Approach Delay, s/veh		51.9			49.4			27.1			24.2	
Approach LOS		D			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.9	87.4	17.3	41.5	9.3	91.9	14.6	44.2				
Change Period (Y+Rc), s	* 6.6	7.9	* 7	7.2	* 6.1	7.9	7.6	7.2				
Max Green Setting (Gmax), s	* 11	55.1	* 15	49.8	* 13	54.1	14.4	49.8				
Max Q Clear Time (g_c+I1), s	7.2	25.1	10.3	10.5	3.3	25.0	5.7	14.2				
Green Ext Time (p_c), s	0.1	18.8	0.1	2.7	0.0	18.5	0.0	2.6				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				30.3								
HCM 2010 LOS				C								
<b>Notes</b>												

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘↗		↑↑↑			↑↑↑
Traffic Vol, veh/h	0	0	1132	0	0	1279
Future Vol, veh/h	0	0	1132	0	0	1279
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	1230	0	0	1390

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1786	615	0	-	-	-
Stage 1	1230	-	-	-	-	-
Stage 2	556	-	-	-	-	-
Critical Hdwy	5.74	7.14	-	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	-	-	-	-
Pot Cap-1 Maneuver	122	372	-	0	0	-
Stage 1	175	-	-	0	0	-
Stage 2	491	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	122	372	-	-	-	-
Mov Cap-2 Maneuver	154	-	-	-	-	-
Stage 1	175	-	-	-	-	-
Stage 2	491	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBTWBLn1	SBT
Capacity (veh/h)	-	-
HCM Lane V/C Ratio	-	-
HCM Control Delay (s)	-	0
HCM Lane LOS	-	A
HCM 95th %tile Q(veh)	-	-

HCM 2010 Signalized Intersection Summary  
1: Memorial Drive & Kensington Road

4213 Memorial Drive TIA  
No-Build 2020 AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	55	13	202	227	126	31	1008	61	61	1126	53
Future Volume (veh/h)	34	55	13	202	227	126	31	1008	61	61	1126	53
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	0.97		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1397	1704	1900	1792	1838	1900	1624	1856	1900	1727	1812	1900
Adj Flow Rate, veh/h	38	61	14	224	252	140	34	1120	68	68	1251	59
Adj No. of Lanes	1	2	0	1	2	0	1	3	0	1	3	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	36	7	7	6	3	3	17	2	2	10	4	4
Cap, veh/h	195	490	108	410	514	274	210	2484	151	254	2509	118
Arrive On Green	0.04	0.19	0.19	0.09	0.24	0.24	0.02	0.51	0.51	0.03	0.52	0.52
Sat Flow, veh/h	1331	2618	577	1707	2175	1162	1547	4882	296	1645	4838	228
Grp Volume(v), veh/h	38	37	38	224	200	192	34	775	413	68	853	457
Grp Sat Flow(s),veh/h/ln	1331	1619	1575	1707	1746	1590	1547	1689	1799	1645	1649	1768
Q Serve(g_s), s	3.6	3.0	3.2	15.0	15.8	16.7	1.7	23.4	23.4	3.2	26.9	26.9
Cycle Q Clear(g_c), s	3.6	3.0	3.2	15.0	15.8	16.7	1.7	23.4	23.4	3.2	26.9	26.9
Prop In Lane	1.00		0.37	1.00		0.73	1.00		0.16	1.00		0.13
Lane Grp Cap(c), veh/h	195	303	295	410	413	376	210	1719	915	254	1710	917
V/C Ratio(X)	0.19	0.12	0.13	0.55	0.49	0.51	0.16	0.45	0.45	0.27	0.50	0.50
Avail Cap(c_a), veh/h	260	504	490	410	544	495	298	1719	915	320	1710	917
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	49.4	54.1	54.2	46.7	52.7	53.1	20.0	25.0	25.1	19.7	25.0	25.0
Incr Delay (d2), s/veh	0.5	0.2	0.2	1.5	0.9	1.1	0.4	0.9	1.6	0.5	1.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.4	1.4	1.6	7.7	7.5	0.7	11.1	12.0	1.5	12.4	13.5
LnGrp Delay(d),s/veh	49.8	54.3	54.4	48.2	53.6	54.1	20.4	25.9	26.7	20.2	26.0	26.8
LnGrp LOS	D	D	D	D	D	D	C	C	C	C	C	C
Approach Vol, veh/h		113			616			1222			1378	
Approach Delay, s/veh		52.8			51.8			26.0			26.0	
Approach LOS		D			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.6	89.3	22.0	37.1	10.0	90.9	14.1	45.0				
Change Period (Y+Rc), s	* 6.6	7.9	* 7	7.2	* 6.1	7.9	7.6	7.2				
Max Green Setting (Gmax), s	* 11	55.1	* 15	49.8	* 13	54.1	14.4	49.8				
Max Q Clear Time (g_c+I1), s	5.2	25.4	17.0	5.2	3.7	28.9	5.6	18.7				
Green Ext Time (p_c), s	0.1	20.1	0.0	3.0	0.0	17.9	0.0	2.9				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				31.7								
HCM 2010 LOS				C								
<b>Notes</b>												

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘↗		↑↑↑			↑↑↑
Traffic Vol, veh/h	0	0	1100	0	0	1341
Future Vol, veh/h	0	0	1100	0	0	1341
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	1196	0	0	1458

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1779	598	0	-	-	-
Stage 1	1196	-	-	-	-	-
Stage 2	583	-	-	-	-	-
Critical Hdwy	5.74	7.14	-	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	-	-	-	-
Pot Cap-1 Maneuver	123	382	-	0	0	-
Stage 1	183	-	-	0	0	-
Stage 2	475	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	123	382	-	-	-	-
Mov Cap-2 Maneuver	159	-	-	-	-	-
Stage 1	183	-	-	-	-	-
Stage 2	475	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBTWBLn1	SBT
Capacity (veh/h)	-	-
HCM Lane V/C Ratio	-	-
HCM Control Delay (s)	-	0
HCM Lane LOS	-	A
HCM 95th %tile Q(veh)	-	-

HCM 2010 Signalized Intersection Summary  
 1: Memorial Drive & Kensington Road

4213 Memorial Drive TIA  
 No-Build 2020 PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	199	22	111	66	135	23	979	152	118	1171	33
Future Volume (veh/h)	46	199	22	111	66	135	23	979	152	118	1171	33
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	0.98		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1583	1845	1900	1743	1827	1900	1439	1855	1900	1863	1848	1900
Adj Flow Rate, veh/h	47	203	22	113	67	138	23	999	155	120	1195	34
Adj No. of Lanes	1	2	0	1	2	0	1	3	0	1	3	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	20	2	2	9	4	4	32	2	2	2	2	2
Cap, veh/h	261	682	73	322	403	348	204	2183	338	295	2641	75
Arrive On Green	0.04	0.21	0.21	0.07	0.23	0.23	0.02	0.49	0.49	0.05	0.52	0.52
Sat Flow, veh/h	1508	3182	340	1660	1736	1501	1371	4411	683	1774	5038	143
Grp Volume(v), veh/h	47	111	114	113	67	138	23	764	390	120	797	432
Grp Sat Flow(s),veh/h/ln	1508	1753	1770	1660	1736	1501	1371	1688	1717	1774	1681	1819
Q Serve(g_s), s	3.8	8.5	8.7	8.4	4.9	12.4	1.3	23.6	23.7	5.3	23.7	23.7
Cycle Q Clear(g_c), s	3.8	8.5	8.7	8.4	4.9	12.4	1.3	23.6	23.7	5.3	23.7	23.7
Prop In Lane	1.00		0.19	1.00		1.00	1.00		0.40	1.00		0.08
Lane Grp Cap(c), veh/h	261	376	379	322	403	348	204	1672	850	295	1763	953
V/C Ratio(X)	0.18	0.29	0.30	0.35	0.17	0.40	0.11	0.46	0.46	0.41	0.45	0.45
Avail Cap(c_a), veh/h	331	546	551	369	540	467	287	1672	850	339	1763	953
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	45.8	52.7	52.8	44.8	49.1	52.0	20.3	26.4	26.4	20.4	23.7	23.7
Incr Delay (d2), s/veh	0.3	0.4	0.4	0.7	0.2	0.7	0.2	0.9	1.8	0.8	0.8	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	4.2	4.3	3.9	2.4	5.2	0.5	11.2	11.7	2.6	11.2	12.2
LnGrp Delay(d),s/veh	46.1	53.1	53.2	45.5	49.3	52.7	20.6	27.3	28.2	21.2	24.5	25.2
LnGrp LOS	D	D	D	D	D	D	C	C	C	C	C	C
Approach Vol, veh/h		272			318			1177			1349	
Approach Delay, s/veh		52.0			49.4			27.4			24.4	
Approach LOS		D			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	87.1	17.4	41.5	9.3	91.8	14.6	44.3				
Change Period (Y+Rc), s	* 6.6	7.9	* 7	7.2	* 6.1	7.9	7.6	7.2				
Max Green Setting (Gmax), s	* 11	55.1	* 15	49.8	* 13	54.1	14.4	49.8				
Max Q Clear Time (g_c+l1), s	7.3	25.7	10.4	10.7	3.3	25.7	5.8	14.4				
Green Ext Time (p_c), s	0.1	19.0	0.1	2.7	0.0	18.6	0.0	2.7				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				30.5								
HCM 2010 LOS				C								
<b>Notes</b>												

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘↗		↑↑↑			↑↑↑
Traffic Vol, veh/h	0	0	1155	0	0	1305
Future Vol, veh/h	0	0	1155	0	0	1305
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	1255	0	0	1418

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1822	628	0	-	-	-
Stage 1	1255	-	-	-	-	-
Stage 2	567	-	-	-	-	-
Critical Hdwy	5.74	7.14	-	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	-	-	-	-
Pot Cap-1 Maneuver	117	365	-	0	0	-
Stage 1	168	-	-	0	0	-
Stage 2	484	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	117	365	-	-	-	-
Mov Cap-2 Maneuver	148	-	-	-	-	-
Stage 1	168	-	-	-	-	-
Stage 2	484	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBTWBLn1	SBT
Capacity (veh/h)	-	-
HCM Lane V/C Ratio	-	-
HCM Control Delay (s)	-	0
HCM Lane LOS	-	A
HCM 95th %tile Q(veh)	-	-

HCM 2010 Signalized Intersection Summary  
 1: Memorial Drive & Kensington Road

4213 Memorial Drive TIA  
 Build 2020 AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	55	18	203	227	126	43	1024	63	61	1133	53
Future Volume (veh/h)	34	55	18	203	227	126	43	1024	63	61	1133	53
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	0.97		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1397	1683	1900	1792	1838	1900	1624	1856	1900	1727	1812	1900
Adj Flow Rate, veh/h	38	61	20	226	252	140	48	1138	70	68	1259	59
Adj No. of Lanes	1	2	0	1	2	0	1	3	0	1	3	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	36	7	7	6	3	3	17	2	2	10	4	4
Cap, veh/h	195	445	138	407	514	275	212	2481	153	249	2494	117
Arrive On Green	0.04	0.19	0.19	0.09	0.24	0.24	0.03	0.51	0.51	0.03	0.52	0.52
Sat Flow, veh/h	1331	2379	737	1707	2175	1162	1547	4878	300	1645	4840	227
Grp Volume(v), veh/h	38	40	41	226	200	192	48	788	420	68	858	460
Grp Sat Flow(s),veh/h/ln	1331	1598	1518	1707	1746	1590	1547	1689	1799	1645	1649	1768
Q Serve(g_s), s	3.6	3.3	3.6	15.0	15.8	16.7	2.4	23.9	23.9	3.2	27.3	27.3
Cycle Q Clear(g_c), s	3.6	3.3	3.6	15.0	15.8	16.7	2.4	23.9	23.9	3.2	27.3	27.3
Prop In Lane	1.00		0.49	1.00		0.73	1.00		0.17	1.00		0.13
Lane Grp Cap(c), veh/h	195	299	284	407	413	376	212	1719	915	249	1700	911
V/C Ratio(X)	0.19	0.13	0.15	0.56	0.49	0.51	0.23	0.46	0.46	0.27	0.50	0.50
Avail Cap(c_a), veh/h	260	497	472	407	544	495	294	1719	915	316	1700	911
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	49.4	54.2	54.3	46.9	52.7	53.0	20.2	25.2	25.2	19.8	25.4	25.4
Incr Delay (d2), s/veh	0.5	0.2	0.2	1.7	0.9	1.1	0.5	0.9	1.7	0.5	1.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.4	2.7	2.8	3.1	12.3	11.9	1.9	16.9	18.1	2.7	18.2	19.6
LnGrp Delay(d),s/veh	49.8	54.4	54.6	48.5	53.6	54.1	20.8	26.1	26.9	20.3	26.4	27.3
LnGrp LOS	D	D	D	D	D	D	C	C	C	C	C	C
Approach Vol, veh/h	119			618			1256			1386		
Approach Delay, s/veh	53.0			51.9			26.1			26.4		
Approach LOS	D			D			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.6	89.3	22.0	37.1	10.5	90.4	14.1	45.0				
Change Period (Y+Rc), s	* 6.6	7.9	* 7	7.2	* 6.1	7.9	7.6	7.2				
Max Green Setting (Gmax), s	* 11	55.1	* 15	49.8	* 13	54.1	14.4	49.8				
Max Q Clear Time (g_c+I1), s	5.2	25.9	17.0	5.6	4.4	29.3	5.6	18.7				
Green Ext Time (p_c), s	0.1	20.1	0.0	3.1	0.0	17.9	0.0	3.0				

Intersection Summary

HCM 2010 Ctrl Delay	31.9
HCM 2010 LOS	C

Notes

\* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

**Intersection**

Int Delay, s/veh	0.4					
<b>Movement</b>	<b>WBL</b>	<b>WBR</b>	<b>NBT</b>	<b>NBR</b>	<b>SBL</b>	<b>SBT</b>
Lane Configurations	↘↙		↑↑↑		↘	↑↑↑
Traffic Vol, veh/h	10	32	1100	5	13	1341
Future Vol, veh/h	10	32	1100	5	13	1341
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	35	1196	5	14	1458

**Major/Minor**

	<b>Minor1</b>	<b>Major1</b>	<b>Major2</b>		
Conflicting Flow All	1809	601	0	0	1201
Stage 1	1198	-	-	-	-
Stage 2	611	-	-	-	-
Critical Hdwy	5.74	7.14	-	-	5.34
Critical Hdwy Stg 1	6.64	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-
Follow-up Hdwy	3.82	3.92	-	-	3.12
Pot Cap-1 Maneuver	118	380	-	-	313
Stage 1	183	-	-	-	-
Stage 2	459	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	113	380	-	-	313
Mov Cap-2 Maneuver	156	-	-	-	-
Stage 1	183	-	-	-	-
Stage 2	438	-	-	-	-

**Approach**

	<b>WB</b>	<b>NB</b>	<b>SB</b>
HCM Control Delay, s	20.2	0	0.2
HCM LOS	C		

**Minor Lane/Major Mvmt**

	<b>NBT</b>	<b>NBR</b>	<b>WBLn1</b>	<b>SBL</b>	<b>SBT</b>
Capacity (veh/h)	-	-	283	313	-
HCM Lane V/C Ratio	-	-	0.161	0.045	-
HCM Control Delay (s)	-	-	20.2	17	-
HCM Lane LOS	-	-	C	C	-
HCM 95th %tile Q(veh)	-	-	0.6	0.1	-

HCM 2010 Signalized Intersection Summary  
 1: Memorial Drive & Kensington Road

4213 Memorial Drive TIA  
 Build 2020 PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	199	38	114	66	135	33	993	153	118	1192	33
Future Volume (veh/h)	46	199	38	114	66	135	33	993	153	118	1192	33
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	0.98		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1583	1834	1900	1743	1827	1900	1439	1855	1900	1863	1848	1900
Adj Flow Rate, veh/h	47	203	39	116	67	138	34	1013	156	120	1216	34
Adj No. of Lanes	1	2	0	1	2	0	1	3	0	1	3	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	20	2	2	9	4	4	32	2	2	2	2	2
Cap, veh/h	261	619	116	314	403	349	204	2185	336	291	2620	73
Arrive On Green	0.04	0.21	0.21	0.07	0.23	0.23	0.02	0.49	0.49	0.05	0.52	0.52
Sat Flow, veh/h	1508	2909	546	1660	1736	1501	1371	4416	679	1774	5042	141
Grp Volume(v), veh/h	47	120	122	116	67	138	34	774	395	120	811	439
Grp Sat Flow(s),veh/h/ln	1508	1742	1713	1660	1736	1501	1371	1688	1718	1774	1682	1820
Q Serve(g_s), s	3.8	9.3	9.7	8.7	4.9	12.4	2.0	24.0	24.1	5.3	24.4	24.4
Cycle Q Clear(g_c), s	3.8	9.3	9.7	8.7	4.9	12.4	2.0	24.0	24.1	5.3	24.4	24.4
Prop In Lane	1.00		0.32	1.00		1.00	1.00		0.40	1.00		0.08
Lane Grp Cap(c), veh/h	261	371	365	314	403	349	204	1671	850	291	1748	945
V/C Ratio(X)	0.18	0.32	0.34	0.37	0.17	0.40	0.17	0.46	0.46	0.41	0.46	0.46
Avail Cap(c_a), veh/h	331	542	533	359	540	467	281	1671	850	336	1748	945
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	45.9	53.2	53.4	44.9	49.1	51.9	20.4	26.5	26.5	20.5	24.3	24.3
Incr Delay (d2), s/veh	0.3	0.5	0.5	0.7	0.2	0.7	0.4	0.9	1.8	0.9	0.8	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.9	8.0	8.2	7.2	4.3	9.0	1.4	16.9	17.5	4.7	17.0	18.4
LnGrp Delay(d),s/veh	46.2	53.7	53.9	45.7	49.2	52.7	20.8	27.4	28.3	21.4	25.2	25.9
LnGrp LOS	D	D	D	D	D	D	C	C	C	C	C	C
Approach Vol, veh/h	289			321			1203			1370		
Approach Delay, s/veh	52.6			49.4			27.5			25.1		
Approach LOS	D			D			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	87.1	17.7	41.3	10.0	91.0	14.6	44.4				
Change Period (Y+Rc), s	* 6.6	7.9	* 7	7.2	* 6.1	7.9	7.6	7.2				
Max Green Setting (Gmax), s	* 11	55.1	* 15	49.8	* 13	54.1	14.4	49.8				
Max Q Clear Time (g_c+I1), s	7.3	26.1	10.7	11.7	4.0	26.4	5.8	14.4				
Green Ext Time (p_c), s	0.1	19.1	0.1	2.8	0.0	18.5	0.0	2.8				

Intersection Summary

HCM 2010 Ctrl Delay	31.0
HCM 2010 LOS	C

Notes

\* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

**Intersection**

Int Delay, s/veh 0.6

**Movement**      WBL    WBR    NBT    NBR    SBL    SBT

Lane Configurations	↘		↑↑↑		↘	↑↑↑
Traffic Vol, veh/h	9	26	1155	14	40	1305
Future Vol, veh/h	9	26	1155	14	40	1305
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	28	1255	15	43	1418

**Major/Minor**      Minor1      Major1      Major2

Conflicting Flow All	1917	635	0	0	1271	0
Stage 1	1263	-	-	-	-	-
Stage 2	654	-	-	-	-	-
Critical Hdwy	5.74	7.14	-	-	5.34	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	-	-	3.12	-
Pot Cap-1 Maneuver	104	361	-	-	289	-
Stage 1	167	-	-	-	-	-
Stage 2	436	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	89	361	-	-	289	-
Mov Cap-2 Maneuver	137	-	-	-	-	-
Stage 1	167	-	-	-	-	-
Stage 2	371	-	-	-	-	-

**Approach**      WB      NB      SB

HCM Control Delay, s	21.7	0	0.6
HCM LOS	C		

**Minor Lane/Major Mvmt**      NBT    NBR WBLn1    SBL    SBT

Capacity (veh/h)	-	-	254	289	-
HCM Lane V/C Ratio	-	-	0.15	0.15	-
HCM Control Delay (s)	-	-	21.7	19.7	-
HCM Lane LOS	-	-	C	C	-
HCM 95th %tile Q(veh)	-	-	0.5	0.5	-

# Raw Traffic Counts

# All Traffic Data Services, Inc

1336 Farmer Road  
Covington, Ga 30012  
ph 404-374-1283

Site Code: A  
Station ID: A  
KENSINGTON ROAD WEST OF  
MEMORIAL DRIVE  
Latitude: 0' 0.0000 Undefined

Start Time	3/22/2018 Thu	EB		Hour Totals	
		Morning	Afternoon	Morning	Afternoon
12:00		12	33		
12:15		8	38		
12:30		3	36		
12:45		4	40	27	147
01:00		3	35		
01:15		6	29		
01:30		3	26		
01:45		3	42	15	132
02:00		2	25		
02:15		6	39		
02:30		1	40		
02:45		2	23	11	127
03:00		1	43		
03:15		1	44		
03:30		4	49		
03:45		1	54	7	190
04:00		1	40		
04:15		3	68		
04:30		4	57		
04:45		3	58	11	223
05:00		6	70		
05:15		6	74		
05:30		8	74		
05:45		14	64	34	282
06:00		6	66		
06:15		6	58		
06:30		9	48		
06:45		16	53	37	225
07:00		8	48		
07:15		14	44		
07:30		14	44		
07:45		26	24	62	160
08:00		23	27		
08:15		30	28		
08:30		24	33		
08:45		24	22	101	110
09:00		26	31		
09:15		22	23		
09:30		22	19		
09:45		30	19	100	92
10:00		44	19		
10:15		30	18		
10:30		22	17		
10:45		16	18	112	72
11:00		24	18		
11:15		24	13		
11:30		26	12		
11:45		32	12	106	55
Total		623	1815		
Percent		25.6%	74.4%		
Grand Total		623	1815		
Percent		25.6%	74.4%		
ADT		ADT 2,438		AAAT 2,438	

# All Traffic Data Services, Inc

1336 Farmer Road  
Covington, Ga 30012  
ph 404-374-1283

Site Code: A.5  
Station ID: A.5  
KENSINGTON ROAD WEST OF  
MEMORIAL DRIVE  
Latitude: 0' 0.0000 Undefined

Start Time	3/22/2018 Thu	WB		Hour Totals	
		Morning	Afternoon	Morning	Afternoon
12:00		10	41		
12:15		3	49		
12:30		6	36		
12:45		3	33	22	159
01:00		2	36		
01:15		2	28		
01:30		4	29		
01:45		1	28	9	121
02:00		6	29		
02:15		4	32		
02:30		0	24		
02:45		1	27	11	112
03:00		5	33		
03:15		0	36		
03:30		4	34		
03:45		3	32	12	135
04:00		5	33		
04:15		8	31		
04:30		9	29		
04:45		7	30	29	123
05:00		12	30		
05:15		8	29		
05:30		12	34		
05:45		10	40	42	133
06:00		23	28		
06:15		32	38		
06:30		51	21		
06:45		64	30	170	117
07:00		82	20		
07:15		79	24		
07:30		86	35		
07:45		77	21	324	100
08:00		66	20		
08:15		65	15		
08:30		53	20		
08:45		76	14	260	69
09:00		42	14		
09:15		39	16		
09:30		54	11		
09:45		45	11	180	52
10:00		48	13		
10:15		30	15		
10:30		46	17		
10:45		39	7	163	52
11:00		36	11		
11:15		31	6		
11:30		30	6		
11:45		31	6	128	29
Total		1350	1202		
Percent		52.9%	47.1%		
Grand Total		1350	1202		
Percent		52.9%	47.1%		
ADT		ADT 2,552		AAADT 2,552	

# All Traffic Data Services, Inc

1336 Farmer Road  
Covington, Ga 30012  
ph 404-374-1283

Site Code: B  
Station ID: B  
MOUNTAIN DRIVE WEST OF  
MEMORAIL DRIVE  
Latitude: 0' 0.0000 Undefined

Start Time	3/22/2018 Thu	EB		Hour Totals	
		Morning	Afternoon	Morning	Afternoon
12:00		8	50		
12:15		6	58		
12:30		4	42		
12:45		3	43	21	193
01:00		5	48		
01:15		4	46		
01:30		6	42		
01:45		4	52	19	188
02:00		4	49		
02:15		8	54		
02:30		4	44		
02:45		3	34	19	181
03:00		4	43		
03:15		1	38		
03:30		7	42		
03:45		0	45	12	168
04:00		0	34		
04:15		6	37		
04:30		5	32		
04:45		6	40	17	143
05:00		5	36		
05:15		5	50		
05:30		12	46		
05:45		8	36	30	168
06:00		14	36		
06:15		15	33		
06:30		18	37		
06:45		21	38	68	144
07:00		19	22		
07:15		19	29		
07:30		32	32		
07:45		38	21	108	104
08:00		34	22		
08:15		24	28		
08:30		27	14		
08:45		28	30	113	94
09:00		27	25		
09:15		34	20		
09:30		21	16		
09:45		26	14	108	75
10:00		25	20		
10:15		37	9		
10:30		44	10		
10:45		33	12	139	51
11:00		33	13		
11:15		29	9		
11:30		40	11		
11:45		42	7	144	40
Total		798	1549		
Percent		34.0%	66.0%		
Grand Total		798	1549		
Percent		34.0%	66.0%		

ADT

ADT 2,347

AADT 2,347

# All Traffic Data Services, Inc

1336 Farmer Road  
Covington, Ga 30012  
ph 404-374-1283

Site Code: B.5  
Station ID: B.5  
MOUNTAIN DRIVE WEST OF  
MEMORIAL DRIVE  
Latitude: 0' 0.0000 Undefined

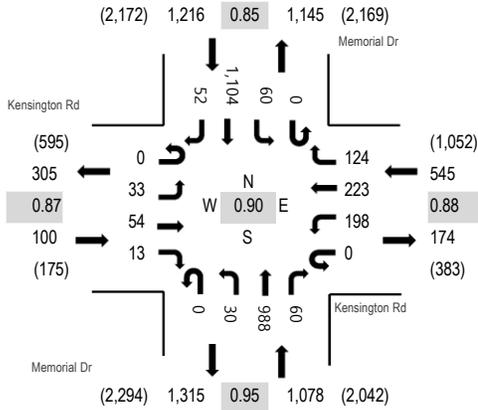
Start Time	3/22/2018 Thu	WB		Hour Totals	
		Morning	Afternoon	Morning	Afternoon
12:00		9	53		
12:15		6	52		
12:30		5	56		
12:45		4	42	24	203
01:00		5	64		
01:15		3	51		
01:30		2	54		
01:45		4	62	14	231
02:00		2	48		
02:15		2	41		
02:30		6	50		
02:45		3	50	13	189
03:00		7	54		
03:15		6	67		
03:30		3	36		
03:45		1	44	17	201
04:00		4	32		
04:15		1	34		
04:30		2	42		
04:45		6	34	13	142
05:00		9	38		
05:15		13	25		
05:30		16	47		
05:45		12	30	50	140
06:00		10	39		
06:15		17	35		
06:30		35	27		
06:45		38	40	100	141
07:00		38	36		
07:15		40	28		
07:30		40	33		
07:45		30	34	148	131
08:00		38	24		
08:15		36	22		
08:30		48	29		
08:45		43	27	165	102
09:00		26	16		
09:15		42	15		
09:30		36	20		
09:45		54	18	158	69
10:00		48	18		
10:15		43	20		
10:30		50	8		
10:45		54	12	195	58
11:00		54	11		
11:15		38	15		
11:30		42	13		
11:45		46	12	180	51
Total		1077	1658		
Percent		39.4%	60.6%		
Grand Total		1077	1658		
Percent		39.4%	60.6%		
ADT		ADT 2,735		ADT 2,735	



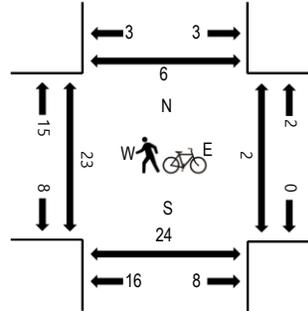
(303) 216-2439  
www.alltrafficdata.net

**Location:** 1 Memorial Dr & Kensington Rd AM  
**Date and Start Time:** Thursday, March 22, 2018  
**Peak Hour:** 07:30 AM - 08:30 AM  
**Peak 15-Minutes:** 07:45 AM - 08:00 AM

**Peak Hour - All Vehicles**



**Peak Hour - Pedestrians/Bicycles in Crosswalk**



Note: Total study counts contained in parentheses.

**Traffic Counts**

Interval Start Time	Kensington Rd Eastbound				Kensington Rd Westbound				Memorial Dr Northbound				Memorial Dr Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	5	8	1	0	43	65	45	0	6	194	10	0	11	162	11	561	2,720	8	0	5	0
7:15 AM	0	4	7	1	0	40	60	28	0	7	222	19	0	16	244	12	660	2,905	3	3	6	0
7:30 AM	0	9	6	1	0	54	77	35	0	3	214	11	0	10	249	11	680	2,939	8	2	8	1
7:45 AM	0	10	14	4	0	53	50	35	0	5	275	13	0	20	325	15	819	2,921	3	0	1	0
8:00 AM	0	7	15	3	0	44	49	31	0	12	250	22	0	14	284	15	746	2,721	10	0	13	3
8:15 AM	0	7	19	5	0	47	47	23	0	10	249	14	0	16	246	11	694		2	0	2	1
8:30 AM	0	8	14	2	1	29	33	33	0	4	222	35	0	30	242	9	662		6	0	7	0
8:45 AM	0	8	15	2	0	31	58	41	0	6	214	25	0	18	182	19	619		10	1	7	5

**Peak Rolling Hour Flow Rates**

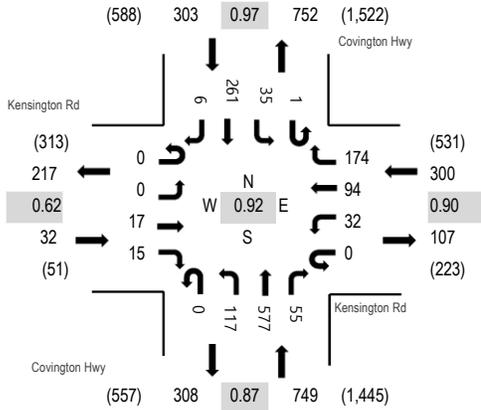
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	0	2	0	0	4	1	0	0	6	0	14
Lights	0	21	50	9	0	187	216	119	0	25	964	55	0	54	1,059	40	2,799
Mediums	0	12	3	4	0	11	7	3	0	5	20	4	0	6	39	12	126
Total	0	33	54	13	0	198	223	124	0	30	988	60	0	60	1,104	52	2,939



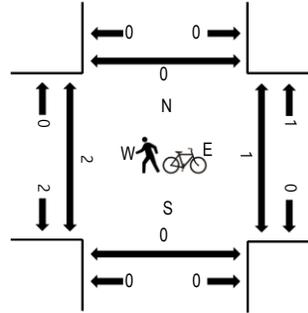
(303) 216-2439  
www.alltrafficdata.net

Location: 2 Covington Hwy & Kensington Rd AM  
Date and Start Time: Thursday, March 22, 2018  
Peak Hour: 07:15 AM - 08:15 AM  
Peak 15-Minutes: 07:30 AM - 07:45 AM

### Peak Hour - All Vehicles



### Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

### Traffic Counts

Interval Start Time	Kensington Rd Eastbound				Kensington Rd Westbound				Covington Hwy Northbound			Covington Hwy Southbound				Total	Rolling Hour	Pedestrian Crossings				
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru			Right	West	East	South	North
7:00 AM	0	0	1	4	0	6	14	51	0	13	167	12	0	8	41	1	318	1,339	0	0	0	0
7:15 AM	0	0	1	2	0	8	17	56	0	24	166	13	0	5	62	1	355	1,384	0	0	0	0
7:30 AM	0	0	2	7	0	5	34	46	0	35	159	10	1	10	64	3	376	1,382	0	1	0	0
7:45 AM	0	0	7	0	0	9	30	29	0	26	100	11	0	12	66	0	290	1,270	1	0	0	0
8:00 AM	0	0	7	6	0	10	13	43	0	32	152	21	0	8	69	2	363	1,276	1	0	0	0
8:15 AM	0	0	2	1	0	1	9	38	0	27	177	16	0	21	61	0	353		0	0	0	0
8:30 AM	0	1	3	2	0	4	6	32	0	11	118	9	0	15	62	1	264		0	2	0	0
8:45 AM	0	0	3	2	0	3	6	61	0	7	125	14	0	12	62	1	296		1	2	0	0

### Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	3
Lights	0	0	17	15	0	30	93	168	0	116	563	52	1	32	251	5	1,343
Mediums	0	0	0	0	0	2	1	6	0	1	13	3	0	2	9	1	38
Total	0	0	17	15	0	32	94	174	0	117	577	55	1	35	261	6	1,384

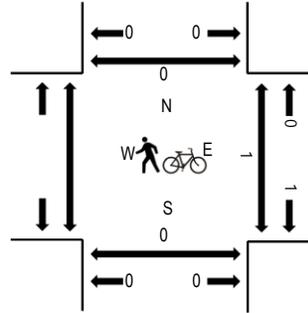
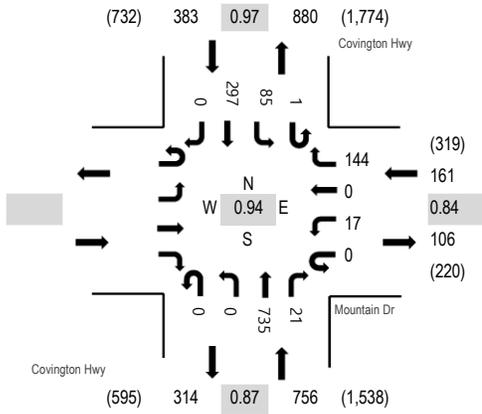


(303) 216-2439  
www.alltrafficdata.net

Location: 3 Covington Hwy & Mountain Dr AM  
Date and Start Time: Thursday, March 22, 2018  
Peak Hour: 08:00 AM - 09:00 AM  
Peak 15-Minutes: 08:15 AM - 08:30 AM

**Peak Hour - All Vehicles**

**Peak Hour - Pedestrians/Bicycles in Crosswalk**



Note: Total study counts contained in parentheses.

**Traffic Counts**

Interval Start Time	Eastbound				Mountain Dr Westbound				Covington Hwy Northbound				Covington Hwy Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM					0	3	0	48	0	0	211	6	0	16	50	0	334	1,289	1	0	1	
7:15 AM					0	5	0	42	0	0	219	6	0	18	65	0	355	1,291	2	0	0	
7:30 AM					0	6	0	30	1	0	198	7	0	28	70	0	340	1,282	1	0	0	
7:45 AM					0	6	0	18	0	0	128	6	0	27	75	0	260	1,254	0	0	0	
8:00 AM					0	3	0	29	0	0	194	7	0	25	78	0	336	1,300	1	0	0	
8:15 AM					0	5	0	34	0	0	206	5	0	17	79	0	346		0	0	0	
8:30 AM					0	7	0	41	0	0	158	7	1	25	73	0	312		0	0	0	
8:45 AM					0	2	0	40	0	0	177	2	0	18	67	0	306		0	0	0	

**Peak Rolling Hour Flow Rates**

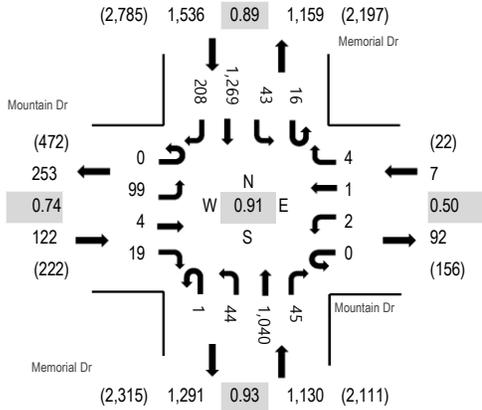
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks					0	0	0	0	0	0	1	0	0	0	1	0	2
Lights					0	17	0	139	0	0	706	21	1	84	276	0	1,244
Mediums					0	0	0	5	0	0	28	0	0	1	20	0	54
Total					0	17	0	144	0	0	735	21	1	85	297	0	1,300



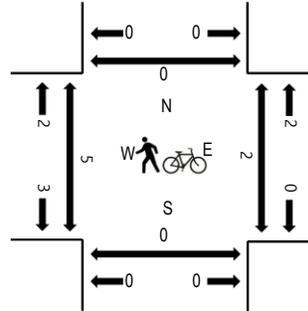
(303) 216-2439  
www.alltrafficdata.net

Location: 4 Memorial Dr & Mountain Dr AM  
Date and Start Time: Thursday, March 22, 2018  
Peak Hour: 07:45 AM - 08:45 AM  
Peak 15-Minutes: 07:45 AM - 08:00 AM

**Peak Hour - All Vehicles**



**Peak Hour - Pedestrians/Bicycles in Crosswalk**



Note: Total study counts contained in parentheses.

**Traffic Counts**

Interval Start Time	Mountain Dr Eastbound				Mountain Dr Westbound				Memorial Dr Northbound				Memorial Dr Southbound				Total	Rolling Hour	Pedestrian Crossings				
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North	
7:00 AM	0	23	0	1	0	0	0	0	0	0	8	224	4	4	1	219	47	531	2,534	1	0	0	0
7:15 AM	0	19	0	9	0	1	0	5	0	3	230	4	4	5	272	50	602	2,684	2	3	0	1	
7:30 AM	0	23	0	1	0	0	0	2	0	8	260	2	3	2	287	47	635	2,787	0	0	0	0	
7:45 AM	0	20	2	7	0	0	0	0	1	20	278	6	2	6	386	38	766	2,795	1	0	0	0	
8:00 AM	0	38	1	2	0	0	1	1	0	12	246	7	4	3	319	47	681	2,606	1	1	0	0	
8:15 AM	0	16	1	6	0	2	0	2	0	3	282	14	5	19	292	63	705		1	0	0	0	
8:30 AM	0	25	0	4	0	0	0	1	0	9	234	18	5	15	272	60	643		2	1	0	0	
8:45 AM	0	22	1	1	0	1	0	6	0	9	209	20	4	25	232	47	577		3	0	0	0	

**Peak Rolling Hour Flow Rates**

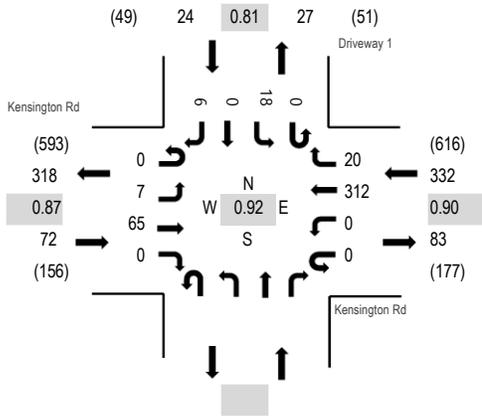
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	5	0	0	0	9	0	14
Lights	0	98	4	19	0	2	1	4	1	42	1,003	45	16	43	1,200	204	2,682
Mediums	0	1	0	0	0	0	0	0	0	2	32	0	0	0	60	4	99
Total	0	99	4	19	0	2	1	4	1	44	1,040	45	16	43	1,269	208	2,795



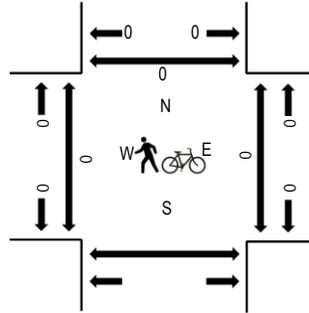
(303) 216-2439  
www.alltrafficdata.net

Location: 5 Driveway 1 & Kensington Rd AM  
Date and Start Time: Thursday, March 22, 2018  
Peak Hour: 07:15 AM - 08:15 AM  
Peak 15-Minutes: 07:30 AM - 07:45 AM

**Peak Hour - All Vehicles**



**Peak Hour - Pedestrians/Bicycles in Crosswalk**



Note: Total study counts contained in parentheses.

**Traffic Counts**

Interval Start Time	Kensington Rd Eastbound				Kensington Rd Westbound				Northbound			Driveway 1 Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru			Right	West	East	South
7:00 AM	0	1	7	0	0	0	0	79	5				0	7	0	1	100	426	0	0	0
7:15 AM	0	3	10	0	0	0	0	81	3				0	3	0	1	101	428	0	0	0
7:30 AM	0	1	13	0	0	0	0	88	7				0	5	0	2	116	426	0	0	0
7:45 AM	0	1	23	0	0	0	0	73	5				0	6	0	1	109	389	0	0	0
8:00 AM	0	2	19	0	0	0	0	70	5				0	4	0	2	102	395	0	0	0
8:15 AM	0	2	26	0	0	0	0	64	1				0	4	0	2	99		0	0	0
8:30 AM	1	2	21	0	0	0	0	42	6				0	3	0	4	79		0	0	0
8:45 AM	1	1	22	0	1	0	0	80	6				0	3	0	1	115		0	0	0

**Peak Rolling Hour Flow Rates**

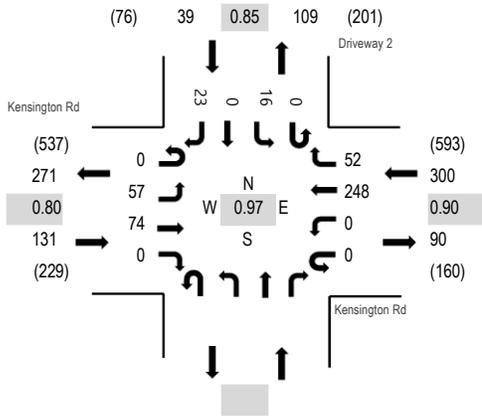
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	0	0					0	0	0	0	1
Lights	0	1	63	0	0	0	306	1					0	0	0	2	373
Mediums	0	6	1	0	0	0	6	19					0	18	0	4	54
Total	0	7	65	0	0	0	312	20					0	18	0	6	428



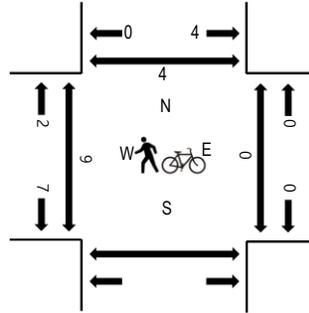
(303) 216-2439  
www.alltrafficdata.net

Location: 6 Driveway 2 & Kensington Rd AM  
Date and Start Time: Thursday, March 22, 2018  
Peak Hour: 07:30 AM - 08:30 AM  
Peak 15-Minutes: 07:30 AM - 07:45 AM

**Peak Hour - All Vehicles**



**Peak Hour - Pedestrians/Bicycles in Crosswalk**



Note: Total study counts contained in parentheses.

**Traffic Counts**

Interval Start Time	Kensington Rd Eastbound				Kensington Rd Westbound				Northbound			Driveway 2 Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru			Right	West	East	South
7:00 AM	0	14	8	0	0	0	0	75	11				0	1	0	7	116	461	2	0	1
7:15 AM	0	13	6	0	1	0	0	65	12				0	5	0	7	109	463	0	0	0
7:30 AM	0	7	14	0	0	0	0	80	11				0	4	0	5	121	470	4	0	1
7:45 AM	0	15	16	0	0	0	0	60	11				0	5	0	8	115	433	1	0	0
8:00 AM	0	18	18	0	0	0	0	58	14				0	3	0	7	118	437	3	0	2
8:15 AM	0	17	26	0	0	0	0	50	16				0	4	0	3	116		1	0	1
8:30 AM	0	10	17	0	0	0	0	36	13				0	5	0	3	84		2	0	0
8:45 AM	0	9	21	0	0	0	0	70	10				0	6	0	3	119		0	0	0

**Peak Rolling Hour Flow Rates**

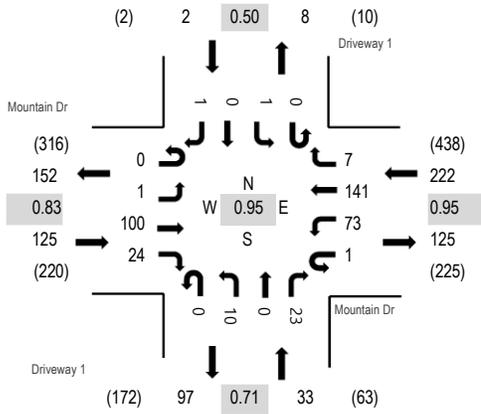
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	0	0					0	0	0	0	1
Lights	0	57	65	0	0	0	235	52					0	16	0	23	448
Mediums	0	0	8	0	0	0	13	0					0	0	0	0	21
Total	0	57	74	0	0	0	248	52					0	16	0	23	470



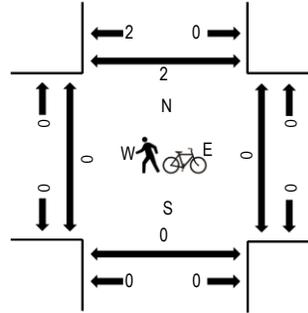
(303) 216-2439  
www.alltrafficdata.net

Location: 7 Driveway 1 & Mountain Dr AM  
Date and Start Time: Thursday, March 22, 2018  
Peak Hour: 07:45 AM - 08:45 AM  
Peak 15-Minutes: 08:30 AM - 08:45 AM

### Peak Hour - All Vehicles



### Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

### Traffic Counts

Interval Start Time	Mountain Dr Eastbound				Mountain Dr Westbound				Driveway 1 Northbound				Driveway 1 Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right			West	East	South	North												
7:00 AM	0	0	14	4	0	14	33	0	0	6	0	6	0	0	0	0	77	349	0	0	0	0
7:15 AM	0	0	17	2	0	21	36	0	0	3	0	7	0	0	0	0	86	372	0	0	0	0
7:30 AM	0	0	30	2	0	15	40	1	0	2	0	3	0	0	0	0	93	374	0	1	0	0
7:45 AM	0	0	29	10	0	20	25	1	0	4	0	3	0	1	0	0	93	382	0	0	0	0
8:00 AM	0	0	30	5	1	17	36	1	0	2	0	8	0	0	0	0	100	374	0	0	0	2
8:15 AM	0	1	17	5	0	22	36	3	0	1	0	3	0	0	0	0	88		0	0	0	0
8:30 AM	0	0	24	4	0	14	44	2	0	3	0	9	0	0	0	1	101		0	0	0	0
8:45 AM	0	0	21	5	0	12	43	1	0	1	0	2	0	0	0	0	85		0	0	0	1

### Peak Rolling Hour Flow Rates

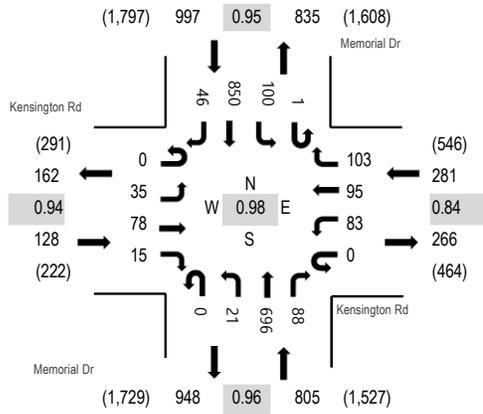
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	1	98	24	1	73	137	6	0	10	0	23	0	0	0	1	374
Mediums	0	0	2	0	0	0	4	1	0	0	0	0	0	1	0	0	8
Total	0	1	100	24	1	73	141	7	0	10	0	23	0	1	0	1	382



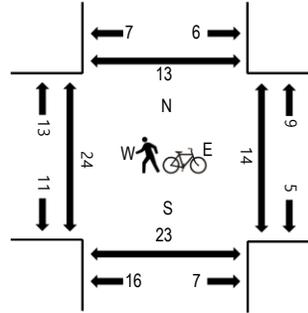
(303) 216-2439  
www.alltrafficdata.net

**Location:** 1 Memorial Dr & Kensington Rd Noon  
**Date and Start Time:** Thursday, March 22, 2018  
**Peak Hour:** 12:00 PM - 01:00 PM  
**Peak 15-Minutes:** 12:15 PM - 12:30 PM

**Peak Hour - All Vehicles**



**Peak Hour - Pedestrians/Bicycles in Crosswalk**



Note: Total study counts contained in parentheses.

**Traffic Counts**

Interval Start Time	Kensington Rd Eastbound				Kensington Rd Westbound				Memorial Dr Northbound				Memorial Dr Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
11:00 AM	0	11	7	3	0	17	20	27	0	5	159	19	0	14	173	6	461	1,881	2	1	3	0
11:15 AM	0	13	7	3	0	19	25	25	0	4	137	24	0	16	165	8	446	1,953	7	6	4	5
11:30 AM	0	6	9	7	0	21	20	24	0	2	169	13	0	26	169	9	475	2,070	16	1	10	0
11:45 AM	0	11	16	1	0	21	21	25	0	1	165	24	1	23	182	8	499	2,151	4	2	4	1
12:00 PM	0	9	21	3	0	15	27	24	0	5	158	18	0	23	221	9	533	2,211	6	3	7	2
12:15 PM	0	8	15	6	0	18	28	23	0	8	175	21	1	24	221	15	563		5	4	4	4
12:30 PM	0	7	24	3	0	30	25	31	0	5	184	21	0	21	195	10	556		4	2	6	2
12:45 PM	0	11	18	3	0	20	15	25	0	3	179	28	0	32	213	12	559		9	5	6	5

**Peak Rolling Hour Flow Rates**

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	1	0	7	0	0	2	1	0	2	3	0	16
Lights	0	28	71	13	0	80	92	93	0	17	671	84	1	97	835	40	2,122
Mediums	0	7	7	2	0	2	3	3	0	4	23	3	0	1	12	6	73
<b>Total</b>	0	35	78	15	0	83	95	103	0	21	696	88	1	100	850	46	2,211



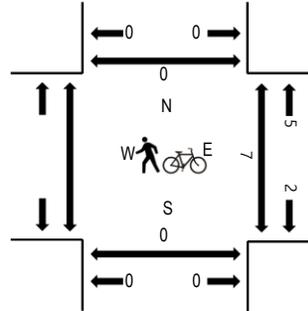
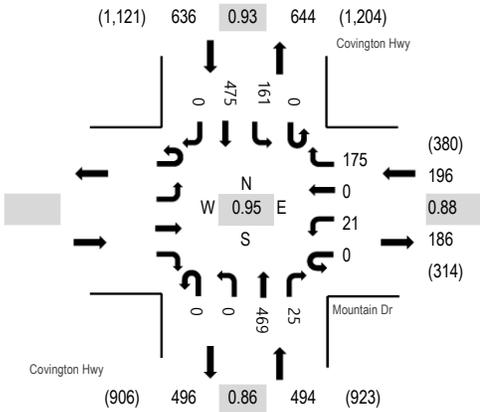


(303) 216-2439  
www.alltrafficdata.net

**Location:** 3 Covington Hwy & Mountain Dr Noon  
**Date and Start Time:** Thursday, March 22, 2018  
**Peak Hour:** 12:00 PM - 01:00 PM  
**Peak 15-Minutes:** 12:00 PM - 12:15 PM

**Peak Hour - All Vehicles**

**Peak Hour - Pedestrians/Bicycles in Crosswalk**



Note: Total study counts contained in parentheses.

**Traffic Counts**

Interval Start Time	Eastbound				Mountain Dr Westbound				Covington Hwy Northbound				Covington Hwy Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
11:00 AM					1	8	0	51	0	0	87	8	0	23	91	0	269	1,098	0	0	0	
11:15 AM					0	7	0	32	0	0	122	8	0	20	92	0	281	1,178	2	0	0	
11:30 AM					0	6	0	35	0	0	96	5	0	25	87	0	254	1,232	0	0	0	
11:45 AM					0	4	0	40	0	0	97	6	0	32	115	0	294	1,315	0	0	0	
12:00 PM					0	7	0	45	0	0	135	9	0	45	108	0	349	1,326	0	0	0	
12:15 PM					0	6	0	50	0	0	101	7	0	46	125	0	335		5	0	0	
12:30 PM					0	4	0	40	0	0	125	7	0	34	127	0	337		1	0	0	
12:45 PM					0	4	0	40	0	0	108	2	0	36	115	0	305		1	0	0	

**Peak Rolling Hour Flow Rates**

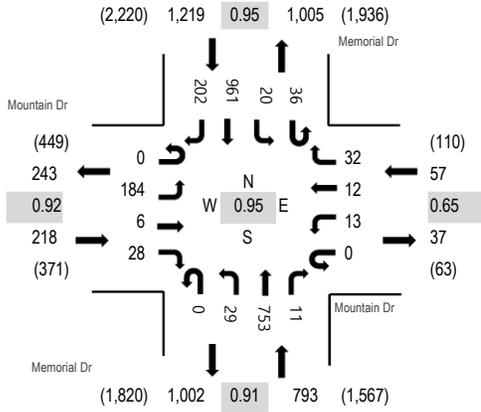
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks					0	0	0	0	0	0	0	0	0	4	1	0	5
Lights					0	21	0	172	0	0	460	25	0	155	463	0	1,296
Mediums					0	0	0	3	0	0	9	0	0	2	11	0	25
Total					0	21	0	175	0	0	469	25	0	161	475	0	1,326



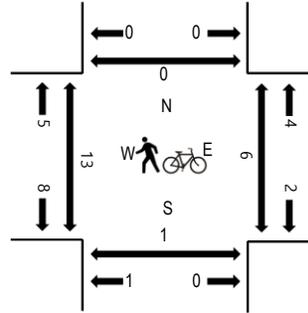
(303) 216-2439  
www.alltrafficdata.net

**Location:** 4 Memorial Dr & Mountain Dr Noon  
**Date and Start Time:** Thursday, March 22, 2018  
**Peak Hour:** 12:00 PM - 01:00 PM  
**Peak 15-Minutes:** 12:45 PM - 01:00 PM

**Peak Hour - All Vehicles**



**Peak Hour - Pedestrians/Bicycles in Crosswalk**



Note: Total study counts contained in parentheses.

**Traffic Counts**

Interval Start Time	Mountain Dr Eastbound				Mountain Dr Westbound				Memorial Dr Northbound				Memorial Dr Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
11:00 AM	0	32	0	2	0	3	2	15	0	4	189	3	5	4	197	54	510	1,981	2	1	0	0
11:15 AM	0	26	1	6	0	3	3	8	0	7	162	0	7	0	184	40	447	2,019	0	2	2	0
11:30 AM	0	38	0	9	0	1	0	7	0	8	187	4	12	4	196	39	505	2,161	2	1	0	0
11:45 AM	0	32	1	6	0	3	2	6	0	7	201	2	4	7	208	40	519	2,201	3	2	0	0
12:00 PM	0	45	1	7	0	8	4	10	0	5	176	0	10	4	225	53	548	2,287	3	0	0	0
12:15 PM	0	48	3	8	0	0	2	5	0	6	192	3	9	3	255	55	589		6	4	0	0
12:30 PM	0	49	0	8	0	3	4	6	0	10	180	2	7	5	223	48	545		2	2	1	0
12:45 PM	0	42	2	5	0	2	2	11	0	8	205	6	10	8	258	46	605		1	0	0	0

**Peak Rolling Hour Flow Rates**

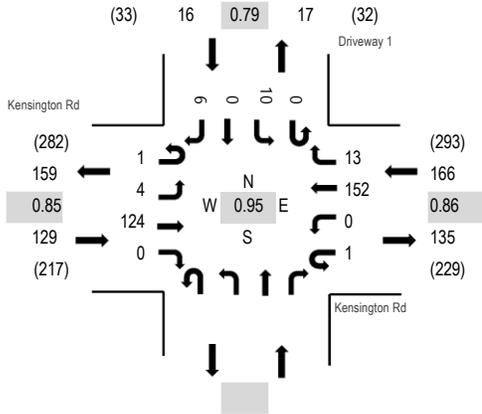
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	3	0	1	0	0	0	0	0	0	10	0	0	0	4	0	18
Lights	0	176	6	27	0	13	12	32	0	29	708	11	35	19	936	198	2,202
Mediums	0	5	0	0	0	0	0	0	0	0	35	0	1	1	21	4	67
Total	0	184	6	28	0	13	12	32	0	29	753	11	36	20	961	202	2,287



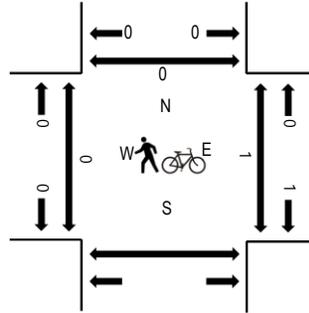
(303) 216-2439  
www.alltrafficdata.net

**Location:** 5 Driveway 1 & Kensington Rd Noon  
**Date and Start Time:** Thursday, March 22, 2018  
**Peak Hour:** 12:00 PM - 01:00 PM  
**Peak 15-Minutes:** 12:15 PM - 12:30 PM

**Peak Hour - All Vehicles**



**Peak Hour - Pedestrians/Bicycles in Crosswalk**



Note: Total study counts contained in parentheses.

**Traffic Counts**

Interval Start Time	Kensington Rd Eastbound				Kensington Rd Westbound				Northbound			Driveway 1 Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru			Right	West	East	South
11:00 AM	0	0	18	0	0	0	0	28	1				0	4	0	2	53	232	0	0	0
11:15 AM	0	1	19	0	1	0	0	32	4				0	2	0	1	60	254	0	0	0
11:30 AM	0	1	21	0	0	0	0	30	3				0	2	0	2	59	276	0	2	0
11:45 AM	0	3	25	0	0	0	0	26	2				0	2	0	2	60	299	0	0	0
12:00 PM	0	0	28	0	0	0	0	37	4				0	4	0	2	75	311	0	0	0
12:15 PM	1	1	28	0	1	0	0	44	3				0	2	0	2	82		0	0	0
12:30 PM	0	1	32	0	0	0	0	41	3				0	3	0	2	82		0	1	0
12:45 PM	0	2	36	0	0	0	0	30	3				0	1	0	0	72		0	0	0

**Peak Rolling Hour Flow Rates**

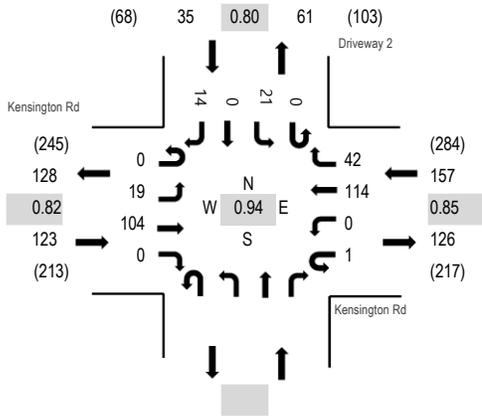
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0					0	0	0	0	0
Lights	1	1	117	0	1	0	149	2					0	1	0	2	274
Mediums	0	3	7	0	0	0	3	11					0	9	0	4	37
Total	1	4	124	0	1	0	152	13					0	10	0	6	311



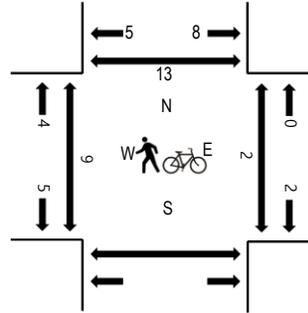
(303) 216-2439  
www.alltrafficdata.net

**Location:** 6 Driveway 2 & Kensington Rd Noon  
**Date and Start Time:** Thursday, March 22, 2018  
**Peak Hour:** 12:00 PM - 01:00 PM  
**Peak 15-Minutes:** 12:30 PM - 12:45 PM

**Peak Hour - All Vehicles**



**Peak Hour - Pedestrians/Bicycles in Crosswalk**



Note: Total study counts contained in parentheses.

**Traffic Counts**

Interval Start Time	Kensington Rd Eastbound				Kensington Rd Westbound				Northbound			Driveway 2 Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru			Right	West	East	South
11:00 AM	0	4	13	0	0	0	25	5					0	9	0	2	58	250	0	0	3
11:15 AM	0	4	10	0	0	0	32	2					0	5	0	4	57	260	0	0	4
11:30 AM	0	5	16	0	2	0	21	8					0	6	0	3	61	285	0	0	4
11:45 AM	0	9	29	0	0	0	27	5					0	1	0	3	74	308	0	0	3
12:00 PM	0	3	25	0	0	0	29	7					0	3	0	1	68	315	6	0	4
12:15 PM	0	6	21	0	1	0	32	13					0	7	0	2	82		0	1	1
12:30 PM	0	7	24	0	0	0	29	13					0	6	0	5	84		0	0	2
12:45 PM	0	3	34	0	0	0	24	9					0	5	0	6	81		3	1	6

**Peak Rolling Hour Flow Rates**

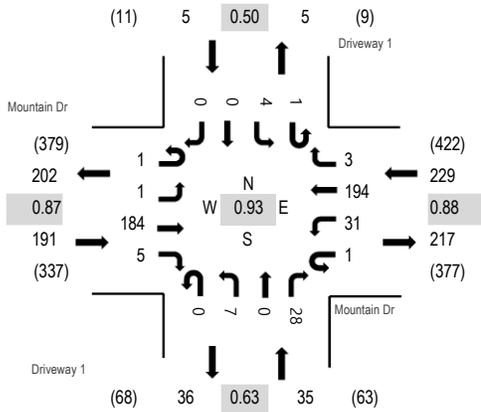
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0					0	0	0	0	0
Lights	0	18	94	0	1	0	107	41					0	21	0	13	295
Mediums	0	1	10	0	0	0	7	1					0	0	0	1	20
<b>Total</b>	0	19	104	0	1	0	114	42					0	21	0	14	315



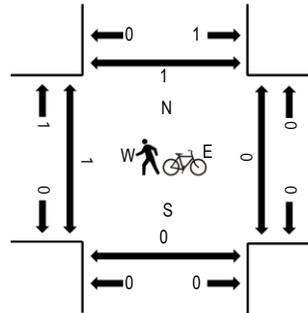
(303) 216-2439  
www.alltrafficdata.net

Location: 7 Driveway 1 & Mountain Dr Noon  
Date and Start Time: Thursday, March 22, 2018  
Peak Hour: 12:00 PM - 01:00 PM  
Peak 15-Minutes: 12:15 PM - 12:30 PM

### Peak Hour - All Vehicles



### Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

### Traffic Counts

Interval Start Time	Mountain Dr Eastbound				Mountain Dr Westbound				Driveway 1 Northbound				Driveway 1 Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right			West	East	South	North												
11:00 AM	0	0	30	4	0	6	51	0	0	0	0	7	0	0	0	0	98	373	0	0	0	0
11:15 AM	0	0	30	1	0	5	36	1	0	2	0	2	1	0	0	0	78	386	0	0	0	1
11:30 AM	0	0	36	3	0	4	37	0	0	4	0	5	0	3	0	0	92	431	1	0	0	1
11:45 AM	0	1	41	0	0	9	44	0	0	2	1	5	0	1	0	1	105	453	0	0	0	2
12:00 PM	0	1	47	3	0	4	50	0	0	2	0	4	0	0	0	0	111	460	0	0	0	1
12:15 PM	0	0	55	0	0	9	49	1	0	3	0	6	0	0	0	0	123		0	0	0	0
12:30 PM	1	0	37	1	0	10	54	2	0	1	0	5	0	3	0	0	114		0	0	0	0
12:45 PM	0	0	45	1	1	8	41	0	0	1	0	13	1	1	0	0	112		1	0	0	0

### Peak Rolling Hour Flow Rates

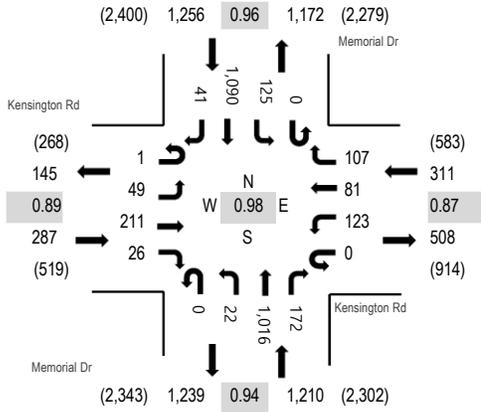
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Lights	1	1	178	5	1	31	190	3	0	7	0	27	1	4	0	0	449
Mediums	0	0	2	0	0	0	4	0	0	0	0	1	0	0	0	0	7
Total	1	1	184	5	1	31	194	3	0	7	0	28	1	4	0	0	460



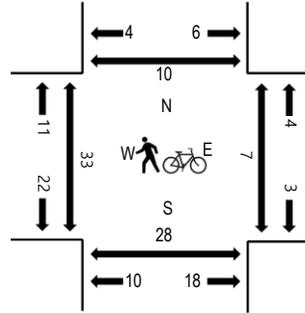
(303) 216-2439  
www.alltrafficdata.net

**Location:** 1 Memorial Dr & Kensington Rd PM  
**Date and Start Time:** Thursday, March 22, 2018  
**Peak Hour:** 05:00 PM - 06:00 PM  
**Peak 15-Minutes:** 05:15 PM - 05:30 PM

**Peak Hour - All Vehicles**



**Peak Hour - Pedestrians/Bicycles in Crosswalk**



Note: Total study counts contained in parentheses.

**Traffic Counts**

Interval Start Time	Kensington Rd Eastbound				Kensington Rd Westbound				Memorial Dr Northbound				Memorial Dr Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	10	28	4	0	20	28	30	0	3	220	40	0	27	198	4	612	2,740	11	0	10	1
4:15 PM	0	15	52	7	0	17	20	21	0	2	252	34	0	26	230	10	686	2,898	10	0	11	0
4:30 PM	0	10	37	5	0	14	19	34	0	2	233	27	0	28	303	8	720	2,996	10	0	9	1
4:45 PM	0	11	49	4	0	22	14	33	0	7	238	34	0	24	280	6	722	3,050	8	1	5	2
5:00 PM	0	13	51	8	0	42	17	33	0	7	242	42	0	36	271	8	770	3,064	10	1	7	1
5:15 PM	1	10	58	5	0	31	15	32	0	7	247	46	0	28	294	10	784		8	3	5	4
5:30 PM	0	15	60	7	0	34	24	23	0	3	276	43	0	30	247	12	774		6	2	8	3
5:45 PM	0	11	42	6	0	16	25	19	0	5	251	41	0	31	278	11	736		9	1	8	2

**Peak Rolling Hour Flow Rates**

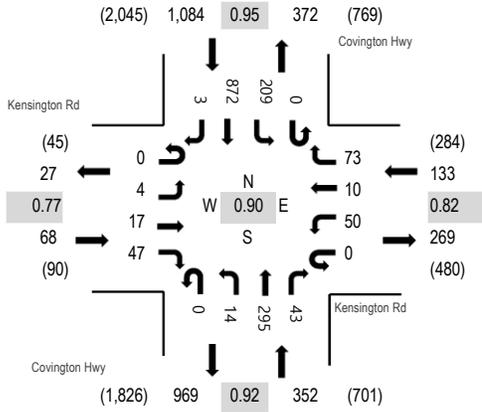
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	6	0	1	0	0	3	5	0	0	1	0	16
Lights	1	39	206	23	0	112	78	103	0	15	1,000	163	0	124	1,078	28	2,970
Mediums	0	10	5	3	0	5	3	3	0	7	13	4	0	1	11	13	78
<b>Total</b>	<b>1</b>	<b>49</b>	<b>211</b>	<b>26</b>	<b>0</b>	<b>123</b>	<b>81</b>	<b>107</b>	<b>0</b>	<b>22</b>	<b>1,016</b>	<b>172</b>	<b>0</b>	<b>125</b>	<b>1,090</b>	<b>41</b>	<b>3,064</b>



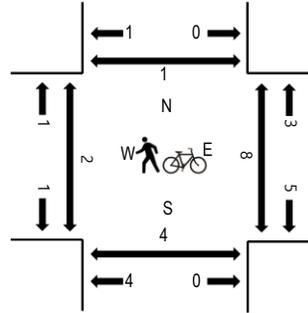
(303) 216-2439  
www.alltrafficdata.net

**Location:** 2 Covington Hwy & Kensington Rd PM  
**Date and Start Time:** Thursday, March 22, 2018  
**Peak Hour:** 04:45 PM - 05:45 PM  
**Peak 15-Minutes:** 05:30 PM - 05:45 PM

**Peak Hour - All Vehicles**



**Peak Hour - Pedestrians/Bicycles in Crosswalk**



Note: Total study counts contained in parentheses.

**Traffic Counts**

Interval Start Time	Kensington Rd Eastbound				Kensington Rd Westbound				Covington Hwy Northbound				Covington Hwy Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	1	3	0	9	0	30	0	0	69	8	0	29	179	0	328	1,505	1	4	0	1
4:15 PM	0	0	4	4	0	18	0	21	0	3	78	14	0	47	207	0	396	1,575	0	2	0	0
4:30 PM	0	0	3	1	0	7	3	18	0	2	86	11	0	40	211	0	382	1,566	2	2	0	0
4:45 PM	0	0	5	4	0	10	3	17	0	5	66	10	0	45	234	0	399	1,637	0	4	2	0
5:00 PM	0	1	4	17	0	14	2	19	0	4	74	10	0	53	200	0	398	1,615	2	2	0	0
5:15 PM	0	2	3	11	0	12	3	15	0	2	66	5	0	59	207	2	387		0	2	2	0
5:30 PM	0	1	5	15	0	14	2	22	0	3	89	18	0	52	231	1	453		0	0	0	1
5:45 PM	0	1	3	2	0	13	5	27	0	4	67	7	0	44	203	1	377		0	5	0	0

**Peak Rolling Hour Flow Rates**

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	4	17	46	0	44	10	71	0	14	289	39	0	203	859	3	1,599
Mediums	0	0	0	1	0	6	0	2	0	0	6	4	0	6	13	0	38
Total	0	4	17	47	0	50	10	73	0	14	295	43	0	209	872	3	1,637

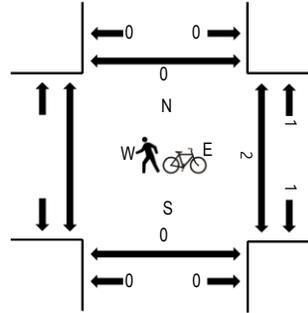
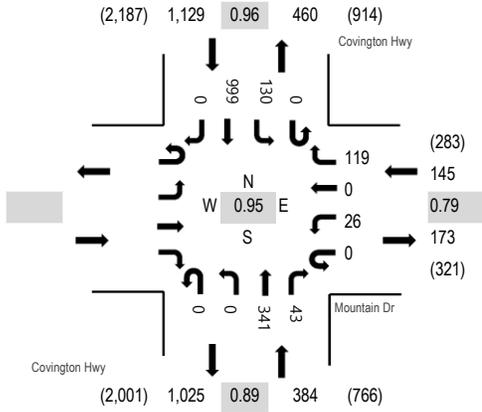


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**Location:** 3 Covington Hwy & Mountain Dr PM  
**Date and Start Time:** Thursday, March 22, 2018  
**Peak Hour:** 05:00 PM - 06:00 PM  
**Peak 15-Minutes:** 05:30 PM - 05:45 PM

**Peak Hour - All Vehicles**

**Peak Hour - Pedestrians/Bicycles in Crosswalk**



Note: Total study counts contained in parentheses.

**Traffic Counts**

Interval Start Time	Eastbound				Mountain Dr Westbound				Covington Hwy Northbound				Covington Hwy Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM					0	9	0	25	0	0	91	7	0	25	190	0	347	1,578	1	0	0	
4:15 PM					0	7	0	29	0	0	84	12	0	29	237	0	398	1,642	0	0	0	
4:30 PM					0	9	0	28	0	0	97	9	0	27	261	0	431	1,638	1	0	0	
4:45 PM					0	6	0	25	0	0	75	7	0	32	257	0	402	1,645	4	0	0	
5:00 PM					0	11	0	37	0	0	86	8	0	33	236	0	411	1,658	2	0	0	
5:15 PM					0	3	0	22	0	0	73	11	0	34	251	0	394		0	0	0	
5:30 PM					0	7	0	35	0	0	81	17	0	30	268	0	438		0	0	0	
5:45 PM					0	5	0	25	0	0	101	7	0	33	244	0	415		0	0	0	

**Peak Rolling Hour Flow Rates**

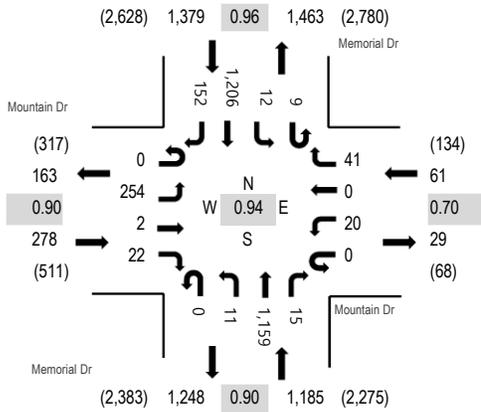
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks					0	0	0	0	0	0	0	0	0	0	0	0	0
Lights					0	24	0	116	0	0	332	43	0	128	985	0	1,628
Mediums					0	2	0	3	0	0	9	0	0	2	14	0	30
Total					0	26	0	119	0	0	341	43	0	130	999	0	1,658



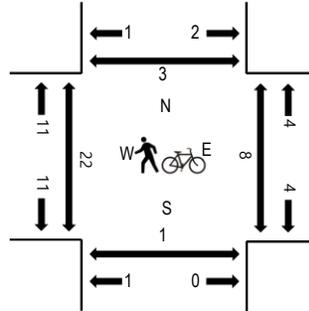
(303) 216-2439  
www.alltrafficdata.net

**Location:** 4 Memorial Dr & Mountain Dr PM  
**Date and Start Time:** Thursday, March 22, 2018  
**Peak Hour:** 05:00 PM - 06:00 PM  
**Peak 15-Minutes:** 05:30 PM - 05:45 PM

**Peak Hour - All Vehicles**



**Peak Hour - Pedestrians/Bicycles in Crosswalk**



Note: Total study counts contained in parentheses.

**Traffic Counts**

Interval Start Time	Mountain Dr Eastbound				Mountain Dr Westbound				Memorial Dr Northbound				Memorial Dr Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	57	0	8	0	6	0	11	0	6	248	4	2	5	206	34	587	2,645	7	2	0	1
4:15 PM	0	44	1	4	0	5	1	11	0	3	279	7	6	2	276	29	668	2,819	1	1	0	0
4:30 PM	0	52	0	7	0	12	0	12	0	5	273	2	5	9	308	39	724	2,856	3	2	0	0
4:45 PM	0	50	0	10	0	4	1	10	0	6	251	6	6	3	289	30	666	2,902	4	1	0	0
5:00 PM	0	66	0	6	0	10	0	21	0	1	291	5	4	3	313	41	761	2,903	6	2	0	0
5:15 PM	0	55	2	10	0	4	0	10	0	5	280	5	2	2	300	30	705		4	1	0	0
5:30 PM	0	73	0	4	0	4	0	3	0	2	325	2	3	4	304	46	770		5	3	1	3
5:45 PM	0	60	0	2	0	2	0	7	0	3	263	3	0	3	289	35	667		7	2	0	0

**Peak Rolling Hour Flow Rates**

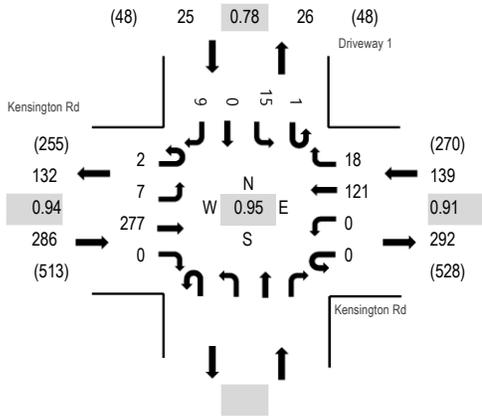
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3
Lights	0	249	2	22	0	20	0	41	0	11	1,131	15	9	12	1,179	148	2,839
Mediums	0	5	0	0	0	0	0	0	0	0	26	0	0	0	26	4	61
Total	0	254	2	22	0	20	0	41	0	11	1,159	15	9	12	1,206	152	2,903



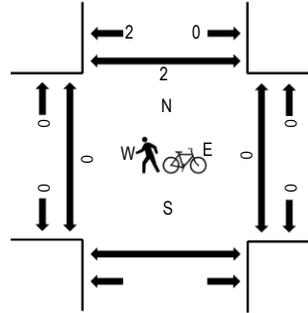
(303) 216-2439  
www.alltrafficdata.net

Location: 5 Driveway 1 & Kensington Rd PM  
Date and Start Time: Thursday, March 22, 2018  
Peak Hour: 05:00 PM - 06:00 PM  
Peak 15-Minutes: 05:30 PM - 05:45 PM

**Peak Hour - All Vehicles**



**Peak Hour - Pedestrians/Bicycles in Crosswalk**



Note: Total study counts contained in parentheses.

**Traffic Counts**

Interval Start Time	Kensington Rd Eastbound				Kensington Rd Westbound				Northbound				Driveway 1 Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	1	40	0	0	0	32	4					0	5	0	1	83	381	0	0	1	
4:15 PM	0	2	69	0	0	0	26	4					0	3	0	3	107	406	2	1	2	
4:30 PM	0	2	55	0	0	0	28	4					0	3	0	3	95	414	0	0	1	
4:45 PM	0	1	57	0	0	0	29	4					0	4	0	1	96	437	0	0	0	
5:00 PM	1	1	69	0	0	0	26	5					0	4	0	2	108	450	0	0	0	
5:15 PM	0	3	72	0	0	0	27	5					0	4	0	4	115		0	0	1	
5:30 PM	0	0	76	0	0	0	33	5					0	3	0	1	118		0	0	1	
5:45 PM	1	3	60	0	0	0	35	3					1	4	0	2	109		0	0	0	

**Peak Rolling Hour Flow Rates**

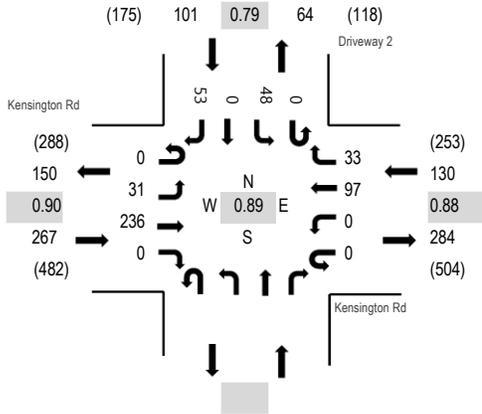
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0					0	0	0	0	0
Lights	2	1	275	0	0	0	120	1					1	0	0	1	401
Mediums	0	6	2	0	0	0	1	17					0	15	0	8	49
Total	2	7	277	0	0	0	121	18					1	15	0	9	450



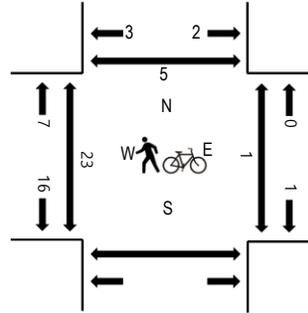
(303) 216-2439  
www.alltrafficdata.net

**Location:** 6 Driveway 2 & Kensington Rd PM  
**Date and Start Time:** Thursday, March 22, 2018  
**Peak Hour:** 05:00 PM - 06:00 PM  
**Peak 15-Minutes:** 05:30 PM - 05:45 PM

**Peak Hour - All Vehicles**



**Peak Hour - Pedestrians/Bicycles in Crosswalk**



Note: Total study counts contained in parentheses.

**Traffic Counts**

Interval Start Time	Kensington Rd Eastbound				Kensington Rd Westbound				Northbound			Driveway 2 Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru			Right	West	East	South
4:00 PM	0	5	35	0	0	0	0	30	1				0	5	0	9	85	412	3	1	0
4:15 PM	0	10	55	0	0	0	0	26	5				0	11	0	13	120	456	3	0	1
4:30 PM	0	10	44	0	0	0	0	23	8				0	13	0	5	103	451	1	0	2
4:45 PM	0	6	50	0	0	0	0	21	9				0	7	0	11	104	488	1	0	1
5:00 PM	0	9	63	0	0	0	0	20	10				0	13	0	14	129	498	3	1	0
5:15 PM	0	3	63	0	0	0	0	21	9				0	10	0	9	115		2	0	1
5:30 PM	0	14	61	0	0	0	0	24	9				0	16	0	16	140		13	0	4
5:45 PM	0	5	49	0	0	0	0	32	5				0	9	0	14	114		5	0	0

**Peak Rolling Hour Flow Rates**

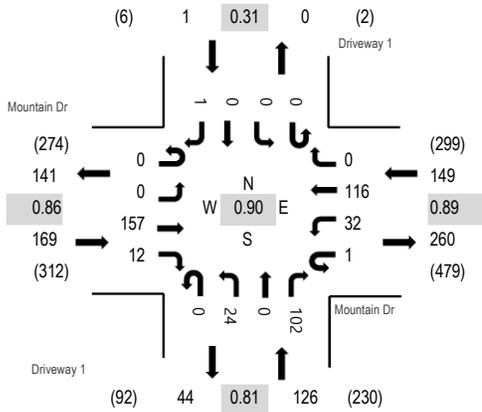
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0					0	0	0	0	0
Lights	0	28	229	0	0	0	88	32					0	46	0	53	476
Mediums	0	3	7	0	0	0	9	1					0	2	0	0	22
Total	0	31	236	0	0	0	97	33					0	48	0	53	498



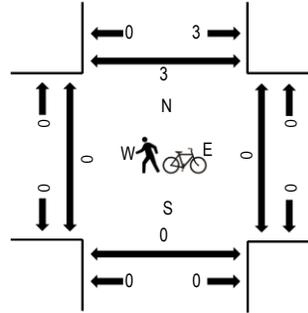
(303) 216-2439  
www.alltrafficdata.net

Location: 7 Driveway 1 & Mountain Dr PM  
Date and Start Time: Thursday, March 22, 2018  
Peak Hour: 05:00 PM - 06:00 PM  
Peak 15-Minutes: 05:30 PM - 05:45 PM

**Peak Hour - All Vehicles**



**Peak Hour - Pedestrians/Bicycles in Crosswalk**



Note: Total study counts contained in parentheses.

**Traffic Counts**

Interval Start Time	Mountain Dr Eastbound				Mountain Dr Westbound				Driveway 1 Northbound				Driveway 1 Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right			West	East	South	North												
4:00 PM	0	1	32	3	0	12	29	1	0	2	0	20	0	4	0	0	104	402	0	0	0	0
4:15 PM	0	0	33	3	0	6	23	0	0	6	0	23	0	0	0	1	95	412	0	1	0	1
4:30 PM	0	0	25	4	0	10	32	0	0	8	0	28	0	0	0	0	107	419	0	0	0	1
4:45 PM	0	0	40	2	0	8	29	0	0	3	0	14	0	0	0	0	96	436	0	0	0	1
5:00 PM	0	0	33	2	0	9	34	0	0	5	0	31	0	0	0	0	114	445	0	0	0	0
5:15 PM	0	0	43	7	0	6	25	0	0	2	0	19	0	0	0	0	102		0	0	0	1
5:30 PM	0	0	44	1	0	8	32	0	0	13	0	26	0	0	0	0	124		0	0	0	0
5:45 PM	0	0	37	2	1	9	25	0	0	4	0	26	0	0	0	1	105		0	0	0	1

**Peak Rolling Hour Flow Rates**

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	154	11	1	31	114	0	0	23	0	100	0	0	0	1	435
Mediums	0	0	3	1	0	1	2	0	0	1	0	2	0	0	0	0	10
Total	0	0	157	12	1	32	116	0	0	24	0	102	0	0	0	1	445

# Site Photographs

4213 Memorial Drive

Photo No. 1



Comments: Site Driveway: Looking north along Memorial Drive (SR 154 / SR 10)

Photo No. 2



Comments: Site Driveway: Looking south along Memorial Drive (SR 154 / SR 10)