

A G E N D A
JAMES CITY COUNTY PLANNING COMMISSION
REGULAR MEETING
County Government Center Board Room
101 Mounts Bay Road, Williamsburg VA 23185
February 7, 2018
7:00 PM

A. CALL TO ORDER

B. ROLL CALL

C. PUBLIC COMMENT

D. REPORTS OF THE COMMISSION

E. CONSENT AGENDA

1. Minutes of the December 6, 2017 Regular Meeting
2. Development Review Committee Action Item: Case No. SP-0130-2017, Berkeley's Green Recreation Area Amendment

F. PUBLIC HEARINGS

1. ZO-0003-2017 and SO-0001-2017. Zoning Ordinance and Subdivision Ordinance Amendments for Streetscapes
2. Z-0003-2017/HW-0004-2017. Oakland Pointe
3. SUP-0014-2017, Yard Works SUP Amendment

G. PLANNING COMMISSION CONSIDERATIONS

H. PLANNING DIRECTOR'S REPORT

1. Planning Director's Report - January and February 2018

I. PLANNING COMMISSION DISCUSSION AND REQUESTS

J. ADJOURNMENT

ITEM SUMMARY

DATE: 2/7/2018

TO: The Planning Commission

FROM: Paul D. Holt, III, Secretary

SUBJECT: Minutes of the December 6, 2017 Regular Meeting

ATTACHMENTS:

	Description	Type
	Minutes of the December 6, 2017 Regular Meeting	Minutes

REVIEWERS:

Department	Reviewer	Action	Date
Planning Commission	Holt, Paul	Approved	12/27/2017 - 3:44 PM
Planning Commission	Holt, Paul	Approved	12/27/2017 - 3:44 PM
Publication Management	Burcham, Nan	Approved	12/27/2017 - 3:46 PM
Planning Commission	Holt, Paul	Approved	12/27/2017 - 3:47 PM

MINUTES
JAMES CITY COUNTY PLANNING COMMISSION
REGULAR MEETING
County Government Center Board Room
101 Mounts Bay Road, Williamsburg VA 23185
December 6, 2017
7:00 PM

A. CALL TO ORDER

Mr. Rich Krapf called the meeting to order at 7:00 p.m.

B. ROLL CALL

Planning Commissioners Present:

Rich Krapf
John Wright
Heath Richardson
Jack Haldeman
Danny Schmidt
Felice Pete

Absent:

Tim O'Connor

Staff Present:

Paul Holt, Director of Community Development and Planning
Christy Parrish, Zoning Administrator
José Ribeiro, Senior Planner II
Scott Whyte, Senior Landscape Planner II
Roberta Sulouff, Senior Planner
Savannah Pietrowski, Senior Planner
Max Hlavin, Assistant County Attorney

C. PUBLIC COMMENT

Mr. Krapf opened Public Comment.

Mr. Aaron Small, Junior Warden for Hickory Neck Church, addressed the Commission with a concern about a recent change in the Zoning Ordinance which now requires houses of worship to obtain a Special Use permit (SUP) in the A-1, General Agricultural District. Mr. Small noted that this change created nonconforming uses for a number of churches. Mr. Small requested that the County review this change.

As no one else wished to speak, Mr. Krapf closed Public Comment.

D. REPORTS OF THE COMMISSION

Mr. Danny Schmidt stated that the Development Review Committee (DRC) did not meet in November.

Mr. John Haldeman stated that the Policy Committee met on November 9 to consider updates

to the Floodplain Ordinance. Mr. Haldeman stated that the amendments focused on construction regulations for small accessory structures in the special flood hazard area. Mr. Haldeman noted that new regulations would provide a lower construction cost option for property owners, while ensuring compliance with the National Flood Insurance Program. Mr. Haldeman stated that the Committee voted unanimously to recommend approval of the amendments and move the matter forward to the Planning Commission for consideration.

Mr. Haldeman further stated that at the same meeting, the Policy Committee considered amendments to the Zoning Ordinance related to short term rentals. Mr. Haldeman stated that the revisions would allow Homestays as a permitted use in most zoning districts. Mr. Haldeman stated that this change would allow for short-term rentals with minimal disruption to the character of the community. Mr. Haldeman stated that for a Homestay the property must be the owner's primary residence. Mr. Haldeman stated that staff has also proposed amendments or to the definitions section to which clarify existing definitions and add additional definitions. Mr. Haldeman stated that the Committee also reviewed a policy that would establish standards for SUPs for short-term rentals.

Mr. Krapf requested that Mr. Haldeman report on the Greater Williamsburg Housing Symposium.

Mr. Haldeman stated that he attended the Greater Williamsburg Housing Symposium that was held on November 15. Mr. Haldeman stated that some of the take-aways from the Symposium were the relationship between poverty and health, the increase in poverty in the Greater Williamsburg area and the increase the number of individuals who are housing burdened where the cost of housing exceeds 30% of their income. Mr. Haldeman noted that the kick-off meeting for the County's Workforce Housing Task Force would be held on December 7.

E. CONSENT AGENDA

1. Minutes of the November 1, 2017 Regular Meeting

Mr. Haldeman made a motion to approve the minutes of the November 1, 2017 Regular Meeting.

On a voice vote the Commission voted to approve the minutes of the November 1, 2017 Regular Meeting. (6-0)

F. PUBLIC HEARINGS

1. SUP-0011-2017. 3001 Ironbound Road Tourist Home

A motion to Approve was made by Jack Haldeman, the motion result was Passed.

AYES: 6 NAYS: 0 ABSTAIN: 0 ABSENT: 1

Ayes: Haldeman, Krapf, Pete, Richardson, Schmidt, Wright III

Absent: O'Connor

Ms. Roberta Sulouff, Senior Planner, stated that this case was postponed from the November 1, 2017 Planning Commission meeting. Ms. Sulouff stated that since that meeting a proposed condition has been added which stipulates that the applicant may only rent the property to one rental party per rental period. The condition is intended to limit the intensity of the use at the property, as the tourist home use might otherwise permit such operations as traditional bed and breakfasts or boarding homes. Ms. Sulouff stated that the applicant supports this condition

and that it is consistent with his intent for the rental of the property.

Ms. Sulouff stated that the proposal is consistent with the language included in the proposed ordinance amendments.

Ms. Sulouff stated that staff finds the proposal to be compatible with surrounding development and consistent with the adopted Comprehensive Plan and Zoning Ordinance. Ms. Sulouff stated that staff recommends that the Commission recommend approval of this application to the Board of Supervisors, subject to the attached conditions.

Mr. Krapf reopened the Public Hearing.

Ms. Phana Tung, 2908 Robert Hunt North, addressed the Commission in opposition of the application. Ms. Tung stated that the main concerns are related to excessive noise from outdoor speakers.

Mr. Telmo Contreras, applicant, stated that he had not been notified of the noise concerns. Mr. Contreras stated that he would have addressed the problem if he had been notified.

As no one else wished to speak Mr. Krapf closed the Public Hearing.

Mr. Krapf noted that the purpose of this case coming before the Commission is to determine if this is an appropriate land use. Mr. Krapf further noted that noise issues would be remedied through channels such as enforcement of the Noise Ordinance.

Mr. Krapf opened the floor for discussion by the Commission.

Mr. Haldeman inquired if the Commission could propose a condition that would eliminate the outside speakers.

Mr. Krapf questioned whether this was something that should be regulated through an SUP condition or fall to other avenues for regulation.

Mr. Haldeman stated that there is a greater risk that transient renters would not be respectful of the neighbors.

Mr. John Wright inquired whether an SUP could be revoked if the applicant did not ensure adherence to the conditions.

Mr. Holt stated that revoking the SUP would be initiated by the Board of Supervisors and referred back to the Planning Commission for a recommendation. Mr. Holt stated that the final determination would be made by the Board.

Mr. Schmidt stated that he would like SUP conditions to be consistent for all properties. Mr. Schmidt further stated that such a condition might be getting too detailed and restrictive.

Mr. Richardson stated that he believes that the conditions as they currently stand are sufficient to guide this SUP. Mr. Richardson stated that considering additional restrictive conditions may be going outside of the Commission's scope of making a land use recommendation.

Mr. Schmidt noted that he appreciated the improvements the applicant made to the property. Mr. Schmidt stated that those improvements should benefit the adjacent properties by improving land value and appearance of the community.

Ms. Felice Pete stated that she believes adding a condition regarding outdoor speakers is not

within the Commission's purview. Ms. Pete stated that she believes the use is appropriate for the property and that the applicant has done everything necessary. Ms. Pete stated that she sympathizes with neighbors; however, noise issues would be more properly addressed through the Noise Ordinance.

Mr. Krapf asked that the applicant be sensitive to the noise issues that have been brought forward and work with the adjacent property owners to address those issues.

Mr. Haldeman made a motion to recommend approval of SUP-0011-2017.

On a roll call vote the Commission voted to recommend approval of SUP-0011-2017, 3001 Ironbound Road Tourist Home (6-0).

2. SUP-0013-2017. Kensington School

A motion to Approve was made by John Wright III, the motion result was Passed.

AYES: 6 NAYS: 0 ABSTAIN: 0 ABSENT: 1

Ayes: Haldeman, Krapf, Pete, Richardson, Schmidt, Wright III

Absent: O'Connor

Mr. Scott Whyte, Senior Landscape Planner, stated that The Kensington School applied for an SUP last month. Mr. Whyte stated that since that time the applicant has withdrawn that application and has instead decided to pursue this SUP.

Mr. Whyte stated that Ms. Rachel Salmon has applied for an SUP to operate a second location for The Kensington School day-care center. Mr. Whyte stated that The Kensington School was established in 2010 and now serves over 250 families in James City County from its existing location at 3435 John Tyler Highway. Mr. Whyte further stated that The Kensington School now proposes to expand by adding a second location at 8340 Richmond Road where the historic Hickory Neck Church is located.

Mr. Whyte stated that The Kensington School proposes to serve up to 76 children with seven employees at this location. Mr. Whyte noted that the age of the children range from 6 weeks to 5 years old. Mr. Whyte stated that the hours of operation are proposed to be 7 a.m.-6 p.m., Monday-Friday. Mr. Whyte stated that the drop-off and pick-up schedule is modeled after their current location's schedule.

Mr. Whyte state that the applicant proposes to construct a 4,340 square foot modular building. Mr. Whyte stated that 49 parking spaces exist on-site with a looping drive aisle, which is proposed to be utilized as a drop-off and pick-up area. Mr. Whyte stated that staff has calculated that 26 spaces is the minimum amount of spaces required for 76 children and 7 employees.

Mr. Whyte stated that surrounding properties to the north and west across Richmond Road, contain single-family residential dwellings. Mr. Whyte stated that properties to the south and east contain agricultural uses.

Mr. Whyte stated that the site is designated Low Density Residential on the adopted Comprehensive Plan Land Use Map. Mr. Whyte stated that staff finds that the proposed commercial use of a day-care compatible with the rural character of the Toano area and would support the creation and retention of local small businesses and work force housing in keeping with the intent of the Economic Development section of the Comprehensive Plan.

Mr. Whyte stated that staff finds the proposal to be compatible with the Comprehensive Plan,

the Zoning Ordinance and surrounding development. Mr. Whyte further stated that staff recommends that the James City County Planning Commission recommend approval of this application to the Board of Supervisors, subject to the conditions listed in the Staff Report.

Mr. Haldeman inquired about the reference to a directional factor in the Staff Report.

Mr. Whyte stated that he would defer to the applicant's representative to answer that question.

Mr. Krapf called for disclosures from the Commission.

There were no disclosures.

Mr. Krapf opened the Public hearing.

Mr. Aaron Small, Junior Warden for Hickory Neck Church, stated that the Church welcomes The Kensington School to the property.

Mr. Small requested that the Commission consider removing three conditions from the SUP. Mr. Small stated that Condition No. 3 regarding the archaeological study should be removed because the Virginia Department of Historic Resources (VDHR) has already approved the archaeological study.

Mr. Small further stated that Condition No. 5 regarding turnlane and taper warrants should be removed as the information has already been provided.

Mr. Small stated that Condition No. 7 regarding the height of exterior lighting is inconsistent with the existing features of the property as the existing lights are 35 feet tall.

Mr. Small stated that to address the question about the directional factor. A total volume for the road is determined and the directional factor is applied to determine the amount of traffic in each direction. Mr. Small stated that in this case it is slightly more than 50% and is applied to the direction of concern.

Mr. Krapf inquired if the change to SUP conditions had been discussed with staff.

Mr. Small stated that it had been mentioned to staff early on.

Mr. Holt stated that the SUP conditions were standard language and that staff would be reluctant to change that language, especially for Condition No. 3. Mr. Holt stated that staff has not yet received the Virginia Department of Transportation (VDOT) response on the Traffic Study and that staff would prefer that Condition No. 5 remain until VDOT has responded. Mr. Holt stated that Condition No. 7 applied only to new lighting and not existing fixtures. Mr. Holt stated that staff would work with the applicant to address concerns over the lighting requirements.

Mr. Krapf inquired if the applicant was satisfied regarding Condition No. 7.

Mr. Small stated that he would be comfortable working with staff on the lighting requirements.

Mr. Richardson inquired if there was a concern about Condition Nos. 3 and 5 being time consuming to complete.

Mr. Small stated that the items were essentially completed but leaving them as SUP conditions would require extra steps in the process.

Mr. Schmidt inquired about the process to confirm completion of Condition No. 3.

Mr. Holt noted that the Letter from the VDHR has been received.

Mr. Krapf noted that retaining the SUP conditions formalizes the process and ensures that all the project complies with all requirements.

Rev. Jennifer Andrews-Weckerly, Rector of Hickory Neck Episcopal Church, addressed the Commission in support of the application. Rev. Andrews-Weckerly stated that by partnering with the Kensington School, the Church would fulfil its mission to provide child day-care in the community. Rev. Andrews-Weckerly requested that the Commission recommend approval of the application.

As no one else wished to speak, Mr. Krapf closed the Public Hearing.

Mr. Richardson stated that he believes the use is appropriate for the site. Mr. Richardson stated that he believes there is a great demand for day-care in that area and that he would support the application.

Ms. Pete stated that she believes the use is in accord with the Comprehensive Plan. Ms. Pete further stated that she appreciates seeing the partnership between the Church and the School to provide needed services in the Community.

Mr. Wright stated that he finds this to be the better location for the School and that he supports the application.

Mr. Krapf stated that he finds the use to be compatible with the Comprehensive Plan and that he would support the application.

Mr. Wright made a motion to recommend approval of SUP-0013-2017.

On a roll call vote the Commission voted to recommend approval of SUP-0013-2017, The Kensington School (6-0).

3. SUP-0028-2016. Solar Electrical Generation Facility at Norge

A motion to Approve the Resolution for Comprehensive Plan Consistency was made by Heath Richardson, the motion result was Passed.

AYES: 6 NAYS: 0 ABSTAIN: 0 ABSENT: 1

Ayes: Haldeman, Krapf, Pete, Richardson, Schmidt, Wright III

Absent: O'Connor

A motion to Approve the SUP was made by Jack Haldeman, the motion result was Passed.

AYES: 5 NAYS: 1 ABSTAIN: 0 ABSENT: 1

Ayes: Haldeman, Krapf, Pete, Richardson, Schmidt

Nays: Wright III

Absent: O'Connor

Mr. José Ribeiro, Senior Planner II, stated that at its April 5, 2017 meeting, the Commission recommended approval of this application by a vote of 5-2, with changes to SUP Condition No. 5, Vehicular Access. Mr. Ribeiro further stated that the Commission also approved, by a vote of 5-2, a resolution to find the proposal consistent with the Comprehensive Plan.

Mr. Ribeiro stated that since April, the applicant has requested that the Board of Supervisors

defer consideration of this application to allow time to develop ways to further mitigate impacts associated with construction traffic and the feasibility of an alternative access to the site. Mr. Ribeiro stated that on October 10, 2017, the Board of Supervisors remanded this application back to the Planning Commission for its consideration at the December 6, 2017 meeting, due to substantive changes proposed by the applicant.

Mr. Ribeiro stated that the applicant is no longer proposing vehicular access to the site via Farmville Lane/Oslo Court but, instead, through Old Church Road. Mr. Ribeiro stated that that the proposed access route will accommodate all vehicular traffic during and after the construction period and that traffic through Old Church Road is expected to create less impact to the neighborhood than vehicular access through Farmville Lane, as previously proposed. Mr. Ribeiro stated that both VDOT and the Fire Department concur with the change. Mr. Ribeiro further stated that based on feedback received by citizens, the applicant has proposed to use an off-site parking lot location to accommodate parking for workers during the construction period of the project. Mr. Ribeiro stated that according to SunPower, the construction period is typically completed within nine months. Mr. Ribeiro noted that the peak volume of traffic and the number of construction workers visiting the site lasts between four and five months. Mr. Ribeiro stated that during the peak construction period it is expected that at any one time there could be 60 to 80 workers on-site. Mr. Ribeiro stated that SunPower anticipates that the proposed off-site parking area will accommodate up to 80 vehicles for their workforce during the construction period. Mr. Ribeiro stated that workers would be transported from the off-site parking lot location, to the construction site via a shuttle bus, thereby reducing the volume of construction related traffic created by private passenger vehicles. Mr. Ribeiro stated that after the construction period is over, the site will likely receive around four trips per day during normal operation. Mr. Ribeiro stated that staff has created a new SUP condition to address the proposed off-site parking.

Mr. Ribeiro stated that in addition to an SUP issued by the County this project will require an agreement with Dominion Energy to interconnect into the electrical power distribution network. Mr. Ribeiro stated that the applicant has submitted an interconnection request to Dominion Energy and expects to execute an interconnection agreement in early 2018. Mr. Ribeiro stated that the project also requires issuance of a Renewable Energy "Permit by Rule" by the Virginia Department of Environmental Quality (DEQ). Mr. Ribeiro stated that the applicant has initiated the "Permit by Rule" process with an initial notice of intent filing and pre-application meeting with DEQ.

Mr. Ribeiro stated that the land for the project will be leased and the lease term of the land agreement is 35 years which is the estimated operational life for this facility. Mr. Ribeiro stated that at the end of the project life cycle, SunPower will implement a decommissioning and restoration plan as outlined in the SUP conditions.

Mr. Ribeiro stated that Section 15.2-2232 of the Code of Virginia requires that unless a utility facility is shown on the adopted Comprehensive Plan or other master plan for the County, the local planning commission shall review the facility to determine whether the location, character and extent of the project is substantial in accord with the adopted Comprehensive Plan. Mr. Ribeiro stated that the proposed solar electrical generation facility is not currently shown on the County's adopted Comprehensive Plan, therefore, requires this additional level of review by the Planning Commission.

Mr. Ribeiro stated that staff finds the proposal to be compatible with surrounding zoning and development and that it is consistent with the Comprehensive Plan. Mr. Ribeiro stated that staff recommends the Commission recommend approval of this application to the Board of Supervisors subject to the attached conditions. Mr. Ribeiro further stated that staff recommends that the Commission find this application consistent with the Code of Virginia Section 15.2-2232.

Mr. Richardson inquired whether it was staff or the applicant that developed the proposal for the change in vehicular access.

Mr. Ribeiro stated that the change evolved as the applicant met with residents in Norvalia in response to citizen concerns over traffic impacts in the community.

Mr. Schmidt inquired about the additional parcels that would be included.

Mr. Ribeiro stated that there were five small parcels added to the application which will make up the private right-of-way access from the end of Church Lane.

Mr. Krapf called for disclosures from the Commission related to the current hearing.

There were no disclosures. Mr. Krapf opened the Public Hearing.

Mr. Peter Toomey, Senior Manager, Utility Origination, SunPower Corp, provided an overview of the project. Mr. Toomey noted that the existing Resource Protection Area serves to buffer the majority of the project. Mr. Toomey further noted that a 50 foot evergreen buffer would be installed where the property abuts the neighboring community.

Mr. Toomey confirmed the status of the various necessary permits.

Mr. Toomey provided a list of common questions related to solar installations which included concerns over property value, noise and glare. Mr. Toomey noted that similar projects have not affected property value. Mr. Toomey further noted that solar installations generate very little noise and that there would be no glare due to the nature of the panels.

Mr. Toomey stated that benefits of the project include minimal impact to the land, minimal impact to public services and the potential to attract businesses that seek to use solar power.

Mr. Toomey requested that the Commission support the application.

Mr. Richardson inquired about ownership of the existing fence line. Mr. Richardson further inquired if the Community is satisfied with the buffer plan.

Mr. Toomey stated that they have not received specific feedback on the buffer.

Mr. Dave Stoner, SunPower Corp, stated that the existing fence is on a neighboring parcel. Mr. Stoner stated that to buffer the project, in addition to filling in vegetation where necessary, there would be a fabric fence installed for additional screening.

Mr. Richardson inquired if the existing residential structure on the property would be demolished.

Mr. Toomey confirmed.

Mr. Schmidt noted that the property feeds into the Yarmouth Creek watershed and inquired if fertilizer would be used on the property to maintain the grassy areas.

Mr. Cory Howell, Kimley-Horn and Associates, Inc., stated that fertilizer would be used only to establish the initial vegetation.

Mr. Holt stated that SUP Condition No. 3 calls for a nutrient management plan to ensure compliance with best practices. Mr. Holt noted that the nutrient management plan will be

reviewed by Stormwater and Resource Protection.

As no one else wished to speak, Mr. Krapf closed the Public Hearing.

Mr. Krapf opened the floor for discussion by the Commission.

Mr. Krapf noted that the Commission would need to vote separately on the resolution for consistency with the Comprehensive Plan and the SUP.

Mr. Haldeman made a motion to find the project in substantial accord with the Comprehensive Plan.

On a roll call vote the Commission voted to find the project consistent with the Comprehensive Plan (6-0).

Mr. Richardson stated that he appreciates the efforts of the applicant to find solutions to the community concerns.

Mr. Wright stated that he has concerns about the effect of the project on the Primary Service Area (PSA) as the properties fall within the PSA. Mr. Wright stated that by allowing this type of development which removes a substantial amount of land from the PSA which could be used for residential development, it could eventually put pressure on the County to extend the PSA.

Mr. Haldeman stated that he supports the application because it does make the property unavailable for residential development which would put more burden on the County's infrastructure and resources.

Mr. Schmidt noted that in addition to relieving the strain on County resources, it also drastically reduces the traffic impacts that residential development would have on the existing neighborhood. Mr. Schmidt stated that he will support the application.

Mr. Krapf stated that he appreciates the efforts of the applicant to resolve concerns over traffic. Mr. Krapf stated that he approves of the intent to remediate the property at the end of the project lifecycle. Mr. Krapf further stated that he finds the project to be in accord with both the Comprehensive Plan and the County's Strategic Plan.

Mr. Richardson made a motion to recommend approval of SUP-0028-2016 subject to the proposed SUP Conditions.

On a roll call vote, the Commission voted to recommend approval of SUP-0028-2016. Solar Electrical Generation Facility at Norge subject to the proposed Conditions (5-1).

4. ZO-0001-2017. Amendments to the Zoning Ordinance, Division 3, Floodplain Area Regulations

A motion to Approve was made by Jack Haldeman, the motion result was Passed.

AYES: 6 NAYS: 0 ABSTAIN: 0 ABSENT: 1

Ayes: Haldeman, Krapf, Pete, Richardson, Schmidt, Wright III

Absent: O'Connor

Ms. Christy Parrish, Zoning Administrator, stated that in response to recent guidance from the Federal Emergency Management Agency (FEMA) and the Department of Conservation and Recreation (DCR), staff has identified the need to update the Floodplain Ordinance to address

the construction regulations of small accessory structures in the special flood hazard area. Ms. Parrish stated that the current regulations only permit the construction of nonresidential structures in the floodplain when the lowest floor of that structure is either elevated or watertight flood-proofed up to the level of two feet above the base flood elevation. Ms. Parrish stated that all structures that are not used for dwelling purposes are considered nonresidential, which includes residential detached garages and sheds. Ms. Parrish stated that as a result of the recent FEMA determinations, DCR guidance and model regulations have been recently updated to address wet-proofing construction standards for small accessory structures in the floodplain. Ms. Parrish stated that if adopted locally it would provide a lower construction cost option for property owners. Ms. Parrish further stated that staff has used this opportunity with consult with DCR to re-review all sections of the Floodplain Area Regulations to ensure compliance with the National Flood Insurance Program. Ms. Parrish stated that staff did receive minor clarifying updates to various sections, but did not receive any large substantive changes.

Ms. Parrish stated that on November 9, 2017, the Policy Committee voted 4-0 to recommend approval of all the proposed changes. Ms. Parrish stated that staff recommends that the Commission recommend approval of the ordinance amendments to the Board of Supervisors for consideration at its January 9, 2018 meeting.

Mr. Haldeman inquired if manufactured homes would now be treated the same way as accessory structures.

Ms. Parrish stated that new manufactured homes are not permitted within the Special Flood Hazard Area. Ms. Parrish stated that existing manufactured homes would have to be elevated if they are modified.

Mr. Krapf opened the Public Hearing.

As no one wished to speak Mr. Krapf closed the Public Hearing.

Mr. Haldeman made a motion to recommend approval of the Ordinance amendments.

On a roll call vote, the Commission voted to recommend approval of ZO-0001-2017. Amendments to the Zoning Ordinance, Division 3, Floodplain Area Regulations (6-0).

5. ZO-0002-2017. Zoning Ordinance Revisions to Permit Short-Term Residential Rentals

A motion to Approve was made by Danny Schmidt, the motion result was Passed.

AYES: 6 NAYS: 0 ABSTAIN: 0 ABSENT: 1

Ayes: Haldeman, Krapf, Pete, Richardson, Schmidt, Wright III

Absent: O'Connor

Ms. Roberta Sulouff, Senior Planner, stated that during the course of two public hearing cases, members of both the Planning Commission and the Board of Supervisors expressed a desire for a policy addressing the emerging issue of short-term residential rentals, also known as homesharing. Ms. Sulouff stated that this request was echoed at the May 23, 2017, Joint Board of Supervisors and Planning Commission Work Session and again at the Planning Commission's November 1, 2017 meeting, at which the Commission formally initiated the consideration of Zoning Ordinance amendments to permit short-term residential rentals in residentially zoned areas. Ms. Sulouff stated that staff has also received several public inquiries and conceptual plan applications from citizens interested in pursuing this use on their properties.

Ms. Sulouff stated that during the 2017 General Assembly Session, the legislature approved SB 1578 which allows a locality to create a short-term rental registry. Ms. Sulouff stated that this legislation does not prohibit, limit, or otherwise supersede existing local authority to regulate the short-term rental property through general land use and zoning authority.

Ms. Sulouff stated that on July 13, 2017, the Policy Committee met to discuss initial planning for policies and Ordinance amendments to address the emerging topic of short-term residential rentals. Ms. Sulouff stated that at that meeting, the Committee expressed interest in pursuing a hybrid approach to permitting such rentals, similar to the approach taken during the recent amendment process addressing rural event facilities, wherein certain aspects of the use would be permitted by-right and others would require the issuance of an SUP. Ms. Sulouff stated that the Committee directed staff to research and develop draft language to define and develop a permitting process for short-term residential rentals. Ms. Sulouff stated that staff met with the Committee again at its September 16, November 9 meetings to receive feedback on draft Ordinance and policy language. Ms. Sulouff stated that staff incorporated feedback from these meetings, as well as feedback from the Commissioner of the Revenue and the County Attorney, into the language in the attached policies and amended ordinances.

Ms. Sulouff stated that staff has worked to provide draft language that makes clear distinctions between uses based on the intensity and nature of those uses with the intent of providing transparency for the applicant and clarity to the Commission and the Board of Supervisors.

Ms. Sulouff stated that staff has also developed performance standards that will assist staff, the Commission and the Board in reviewing SUP conditions for short-term rentals. Ms. Sulouff further stated that the policy attempts to draw distinctions between the residential uses that fall under the Homestay definition and the more commercial uses that fall under the tourist home definition.

Ms. Sulouff stated that the Ordinance amendments, performance standards and administrative policy provide a logical and predictable framework for short-term residential rentals in the County. Ms. Sulouff stated that staff recommends that the Commission recommend approval of the ordinance amendments and the administrative policy to the Board of Supervisors.

Mr. Krapf expressed appreciation for staff's efforts in preparing the Ordinance amendments.

Mr. Richardson inquired how the administrative review fee would be collected.

Ms. Sulouff stated that the fee is the same as the Conceptual Plan review fee and will be collected at the time of submittal as all other Planning fees are collected.

Mr. Wright inquired if Airbnb falls under the category of Homestay.

Ms. Sulouff stated that Airbnb is a medium for many different types of rentals.

Ms. Sulouff stated that a tourist home could be rented through Airbnb well as a Homestay. Ms. Sulouff stated that the Homestay is required to be the owner's primary residence. Ms. Sulouff stated that Homestays are what you generally find on Airbnb.

Mr. Wright inquired how the County would ensure that the properties are not in violation of home owners association (HOA) restrictions.

Ms. Sulouff stated that the County does not enforce HOA covenants which are private matters; however, the process and application could certainly be developed to notify the applicant that they must ensure that they are in compliance with HOA covenants.

Mr. Holt stated that staff will be developing a customer service guide for the process and similar to the guide for Chicken Keeping applications it would require that the applicant confirm that the HOA does not have any restrictions that would prevent short-term rental of the property.

Mr. Haldeman inquired if the proposed amendments would remove the number of rooms that can be rented as a tourist home.

Ms. Sulouff confirmed that the new definitions for tourist home removes that distinction. Ms. Sulouff stated that since tourist homes require an SUP it is possible for the applicant to request fewer or more rooms based on the property.

Mr. Krapf opened the Public Hearing.

Ms. Beth Hall, 116 Lake Drive, addressed the Commission in opposition to the Ordinance amendments. Ms. Hull requested that short-term rentals not be allowed in the R-1 District.

Mr. James Bradley, 104 Malvern Circle, addressed the Commission in opposition to the Ordinance amendments and requested that short term rentals not be permitted in the R-1 District.

As no one else wished to speak, Mr. Krapf closed the Public Hearing.

Mr. Krapf opened the floor for discussion by the Commission.

Mr. Richardson stated that since the General Assembly did not preempt a locality's ability to regulate short-term rentals, it falls to the locality to develop ordinance language and standards to govern this type of activity and ensure it will be in keeping with the character of the community.

Mr. Wright inquired if the County could incorporate state law into the Ordinance that is being adopted.

Mr. Holt clarified that the state has not adopted laws or policies related to short-term rentals to preempt local zoning ordinances. Mr. Holt stated that the County's language related to the registry does come directly from State Code. Mr. Holt noted that the County is not requiring the \$500 registry fee which is more appropriate for localities that do not require business licenses or require review fees.

Mr. Krapf stated that in addition to bringing the registry language over from State Code, the amendments and policy guidelines were developed to make conflicting guidelines more consistent.

Mr. Wright noted that the registry language allows the County to deny or revoke the ability to do short-term rentals if there are violations. Mr. Wright inquired about the types of violations that would apply.

Mr. Holt stated that this would be violations of local code.

Mr. Hlavin clarified that it could include violations of local codes such as Building Code violations, Zoning violations or violation of the registry ordinance. Mr. Hlavin stated that multiple violations would allow the Commissioner of the Revenue to prohibit short-term rentals at that location.

Mr. Wright inquired if, after the Ordinance amendments are adopted, a neighborhood could

establish new covenants that would prohibit short-term rentals.

Mr. Hlavin stated that the Ordinance amendments would not trump existing HOA covenants. Mr. Hlavin noted that there is a very specific legal process requiring concurrence of all property owners to amend or establish new covenants. Mr. Hlavin noted that enforcement of HOA covenants is a private action of the HOA against the homeowner.

Mr. Schmidt inquired if the County could take action if it were reported that a property has not complied with the registration process.

Mr. Hlavin confirmed.

Mr. Haldeman inquired if Rental of Rooms is permitted in the R-1 Zoning District.

Ms. Sulouff stated that Rental of Rooms currently requires an SUP in the R-1 Zoning District. Ms. Sulouff stated that under the current language rental of rooms applies to both long-term and short-term rentals. Ms. Sulouff stated that if the Ordinance amendments are approved, Rental of Rooms will only apply to long-term uses that exceed the definition of family.

Mr. Haldeman inquired if Homestays would be permitted in R-1 if the Ordinance amendments are approved.

Ms. Sulouff stated that currently Tourist Homes are not permitted in the R-1 Zoning District. Ms. Sulouff stated that Rental of Rooms which currently encompasses short-term rentals requires an SUP. Ms. Sulouff stated that currently there are no by-right uses for short-term rentals in the R-1 Zoning District.

Ms. Sulouff stated that if the ordinance amendments are approved, there will be a by-right option to rent one room in the owner's primary residence for less than 180 days.

Mr. Haldeman inquired if the by-right option is a Homestay.

Ms. Sulouff confirmed.

Mr. Haldeman inquired if registration would be required for Homestays.

Ms. Sulouff stated that they would need to register, have a business license and pay taxes.

Mr. Schmidt inquired if the County could note on the customer service guide that the HOA could take legal action if the applicant is in violation of HOA covenants.

Mr. Hlavin stated that the County could note that County approval does not supersede HOA covenants which can be enforced by that private organization.

Mr. Krapf stated that in addition to making the process consistent for all zoning districts, the by-right use is only for one room rental in a property owner's primary residence with a limit on the number of days of operation. Mr. Krapf stated that anything outside of that would require an SUP. Mr. Krapf stated that the strength of the process lies in the guidelines which allow for conditions to be applied to address specific concerns for each property. Mr. Krapf further stated that this will bring an underground economy out in the open and minimize the problems that arise. Mr. Hlavin clarified that in the A-1, R-8 and R-4 Zoning Districts, the one room restriction does not apply to Homestays.

Mr. Schmidt made a motion to recommend approval of the Ordinance amendments and the proposed policies for Tourist Homes and Homestays.

On a roll call vote the Commission voted to approve ZO-0002-2017, Zoning Ordinance Revisions to Permit Short-Term Residential Rentals and the proposed policies for Tourist Homes and Homestays (6-0).

G. PLANNING COMMISSION CONSIDERATIONS

1. Z-0004-2017. Powhatan Terrace Proffer Amendment

A motion to Approve was made by John Wright III, the motion result was Passed.

AYES: 6 NAYS: 0 ABSTAIN: 0 ABSENT: 1

Ayes: Haldeman, Krapf, Pete, Richardson, Schmidt, Wright III

Absent: O'Connor

Ms. Savannah Pietrowski, Senior Planner, stated that Ms. Brandie Weiler, of Housing Partnerships, Incorporated, has submitted a request to amend Condition No. 1 of the adopted Proffers for Powhatan Terrace. Ms. Pietrowski stated that the development was approved by the Board of Supervisors on March 28, 2008, as a cluster development consisting of 36 townhouse units.

Ms. Pietrowski stated that the applicant is requesting to amend the Proffers to allow rental units within the development in order to develop Powhatan Terrace as an affordable rental community. Ms. Pietrowski stated that there are no other proposed changes to the master plan or other proffered conditions.

Ms. Pietrowski stated that staff finds that the requested Proffer amendment would be consistent with the recommendations of the Comprehensive Plan and the Strategic Plan regarding affordable housing. Ms. Pietrowski stated that staff also finds that the requested Proffer amendment would not negatively impact surrounding development. Ms. Pietrowski stated that staff recommends that the Planning Commission recommend approval of the proposed Proffer amendment to the Board of Supervisors.

Mr. Wright inquired about the parcel shown in the middle of the development.

Ms. Pietrowski stated that the boundary line would be extinguished as part of the subdivision process.

Mr. Krapf inquired if there were any meetings with existing residents in the development to discuss the changes.

Ms. Pietrowski stated that she was not aware of any meetings.

Mr. Krapf inquired if renters would be required to join the HOA.

Ms. Pietrowski stated that there is a Proffer Condition that requires an HOA once the project is developed.

Mr. Krapf inquired if the applicant wished to address the Commission.

Ms. Brandie Weiler, Executive Director, Housing Partnerships Inc., addressed the Commission in support of the request. Ms. Weiler noted that there are no existing residents as the project is still under development, therefore, no public meeting was held.

Mr. Wright made a motion to recommend approval of Z-0004-2017.

On a roll call vote the Commission voted to recommend approval of Z-0004-2017. Powhatan Terrace Proffer Amendment (6-0).

H. PLANNING DIRECTOR'S REPORT

1. Planning Director's Report - December 2017

Mr. Holt stated that he had nothing in addition to the report provided in the Agenda Packet.

I. PLANNING COMMISSION DISCUSSION AND REQUESTS

Mr. Krapf stated that he would cover the Board of Supervisors meeting for December.

Mr. Krapf stated that in an effort to communicate more effectively, he would like to propose to the Board of Supervisors that the Commission provide the Board with a monthly Chairman's Report. Mr. Krapf stated that the report would highlight Planning Commission initiatives and be provided to the Board with their agenda materials. Mr. Krapf noted that the Commission representative each month would have the same report and be able to address any questions that come forward. Mr. Krapf further stated that he would like the Commission to be on the Board's Work Session schedule once each quarter to provide updates and see where the Board stands on various initiatives.

Mr. Richardson concurred with the proposal.

Mr. Schmidt inquired whether the Policy Committee and DRC should provide a condensed version of their reports.

Mr. Krapf stated that he would work with the Chairs of the DRC and Policy Committee to develop the report and ensure all pertinent information was covered.

Mr. Haldeman requested that staff address Mr. Small's concerns regarding requirements for Houses of Worship in the A-1 Zoning District.

Mr. Holt noted that the amendments to the A-1 and R-8 Zoning Districts are consistent with what was done in the other districts regarding incorporating fraternal organizations and Houses of Worship as Places of Public Assembly. Mr. Holt stated that he would provide the Commission with additional information on those changes.

Mr. Schmidt noted that he has joined the Steering Committee for the Pocahontas Trail Corridor Study. Mr. Krapf thanked the Commissioners and staff for their efforts over the last year and wished everyone the very best for the holidays.

J. ADJOURNMENT

Mr. Wright made a motion to adjourn.

The meeting was adjourned at approximately 9:07 p.m.

Rich Krapf, Chairman

Paul D. Holt, III, Secretary

ITEM SUMMARY

DATE: 2/7/2018

TO: The Planning Commission

FROM: Savannah Pietrowski, Senior Planner

SUBJECT: Development Review Committee Action Item: Case No. SP-0130-2017, Berkeley's Green Recreation Area Amendment

The applicant is proposing to convert one existing tennis court to a basketball court and to convert the existing basketball court to a picnic/recreation area.

Adopted Special Use Permit (SUP) Conditions require Planning Commission Review and approval for alternate recreation facilities, as well as Planning Commission approval of all site plans for recreation facilities.

Link to DRC Agenda and Staff Report:

[https://jamescity.novusagenda.com/AgendaPublic/MeetingView.aspx?](https://jamescity.novusagenda.com/AgendaPublic/MeetingView.aspx?MeetingID=609&MinutesMeetingID=654&doctype=Agenda)

[MeetingID=609&MinutesMeetingID=654&doctype=Agenda](https://jamescity.novusagenda.com/AgendaPublic/MeetingView.aspx?MeetingID=609&MinutesMeetingID=654&doctype=Agenda)

DRC Recommendation on January 24, 2018: The DRC determined that the requested amendment did not change the basic concept or character of the Berkeley's Green development nor did it decrease the total number of recreational amenities provided.

Therefore, the DRC voted 2-0 to approve the Recreational Area Amendment.

REVIEWERS:

Department	Reviewer	Action	Date
Planning Commission	Holt, Paul	Approved	1/31/2018 - 9:35 AM
Planning Commission	Holt, Paul	Approved	1/31/2018 - 9:36 AM
Publication Management	Burcham, Nan	Approved	1/31/2018 - 9:38 AM
Planning Commission	Holt, Paul	Approved	1/31/2018 - 9:50 AM

ITEM SUMMARY

DATE: 2/7/2018

TO: The Planning Commission

FROM: W. Scott Whyte, Senior Landscape Planner II

SUBJECT: ZO-0003-2017 and SO-0001-2017. Zoning Ordinance and Subdivision Ordinance Amendments for Streetscapes

ATTACHMENTS:

	Description	Type
☐	Staff Report	Staff Report
☐	Proposed Zoning Ordinance Amendments	Ordinance
☐	Proposed Subdivision Ordinance Amendments	Ordinance
☐	York County Subdivision Ordinance	Exhibit
☐	Minutes from the September 14, 2017, Policy Committee meeting	Minutes
☐	Minutes from the December 14, 2017, Policy Committee meeting	Minutes

REVIEWERS:

Department	Reviewer	Action	Date
Planning Commission	Holt, Paul	Approved	1/24/2018 - 11:05 AM
Planning Commission	Holt, Paul	Approved	1/24/2018 - 11:00 AM
Planning Commission	Holt, Paul	Approved	1/24/2018 - 11:00 AM
Publication Management	Burcham, Nan	Approved	1/24/2018 - 11:02 AM

MEMORANDUM

DATE: February 7, 2018

TO: The Planning Commission

FROM: W. Scott Whyte, Senior Landscape Planner II

SUBJECT: Case No. ZO-0003-2017 and SO-0001-2017. Zoning Ordinance and Subdivision Ordinance Amendments for Streetscapes

INTRODUCTION

The County's Streetscape Guidelines Policy was first adopted by the Board of Supervisors in 1999 and was amended in 2004 and 2010. The Policy was first proposed as a result of the 1997 Comprehensive Plan recommendation and subsequent Zoning Ordinance revisions. The goal of the Policy was to establish or preserve a tree canopy along residential streets and to achieve a 20% canopy coverage within a 20-year period.

Since that time, the Streetscape Policy elements have been incorporated into the Community Appearance Guide, the Toano, Five Forks and New Town design guidelines and have been supported in all revisions of the Comprehensive Plan. Most major subdivisions since 1999 that were approved via either a Special Use Permit or proffered rezoning also implemented the Streetscape Policy. The Policy has worked very well since it was created, with slight revisions made in 2004 and 2010.

At its 2016 Session, the Virginia General Assembly approved Senate Bill 549, which was signed into law by the Governor as Chapter 322. Chapter 322 created new Section 15.2-2303.4 to the Code of Virginia, 1950, as amended (the "Virginia Code") which fundamentally changed the conditional zoning system in the Commonwealth of Virginia. As a result, the County no longer accepts proffers for new residential rezoning applications or the residential component of multi-use rezoning applications. On September 14, 2017, the Policy Committee met to discuss initial planning for policies and ordinance amendments to address the topic. At the meeting, the Committee expressed interest in retaining the existing adopted Streetscape Guidelines Policy to serve as the guide for major subdivisions which have either proffered or conditioned streetscape improvements per the adopted Policy. At the meeting, the Committee also expressed interest in having staff create a draft of the Streetscape Policy as an ordinance requirement. This would enable staff to require street trees within all major subdivisions. The ordinance is modeled after York County's street tree ordinance which has been in existence for a long time and retains many elements of the existing Streetscape Guidelines Policy.

Staff has worked to incorporate feedback from this meeting, as well as feedback from the County Attorney's Office, into draft regulations. On December 14, 2017 the Policy Committee met to review the draft regulations, and upon no farther requested changes, directed staff to bring forward the regulations to the Planning Commission.

DRAFT ORDINANCE LANGUAGE

The draft subdivision ordinance language is included as Attachment No. 2 and accomplishes the following:

- In the Subdivision Ordinance, amends Section 19-27 (Preliminary Plan - submittal requirements):
 - Adds submission of a landscape plan to the list of preliminary plan submittal requirements.

- In the Subdivision Ordinance Section, creates new Section 19-74 (Street Trees):
 - Creates a new section that lists the standards and specifications for street trees in major subdivisions.
- In the Zoning Ordinance which is included as Attachment No. 1, Article II, Special Regulations, Division 4 (Landscaping), creates new Section 24-102 (Street Trees);
 - Creates a new section that lists standards and specifications for street trees in multi-family and apartment developments, or areas of multi-family or apartment units within a larger development. The existing Streetscape Guidelines Policy would be retained to serve as the guide for past development cases which have either proffered or conditioned streetscape improvements per the adopted policy.

CHANGES SINCE THE DECEMBER 14, 2017, (STAGE II), POLICY COMMITTEE MEETING

None

RECOMMENDATION

Staff recommends the Planning Commission recommend approval of the attached Subdivision and Zoning Ordinance revisions to the Board of Supervisors.

WSW/nb
ZO-03-17-SO-01-17StScapes-mem

Attachments:

1. Proposed Zoning Ordinance Amendments
2. Proposed Subdivision Ordinance Amendments
3. York County's Subdivision Ordinance
4. Minutes from September 14, 2017, Policy Committee Meeting
5. Minutes from December 14, 2017, Policy Committee Meeting

ORDINANCE NO. _____

AN ORDINANCE TO AMEND AND REORDAIN CHAPTER 24, ZONING, OF THE CODE OF THE COUNTY OF JAMES CITY, VIRGINIA, BY AMENDING ARTICLE II, SPECIAL REGULATIONS, DIVISION 4, LANDSCAPING, BY ADDING SECTION 24-102, STREET TREES.

BE IT ORDAINED by the Board of Supervisors of the County of James City, Virginia, that Chapter 24, Zoning, is hereby amended and reordained by amending Article II, Special regulations, Division 4, Landscaping, by adding Section 24-102, Street trees.

Chapter 24. Zoning

Article II. Special Regulations

Division 4. Landscaping

Section 24-102. Street trees.

In multi-family and independent living facilities and apartment developments, or areas of multi-family or apartment units containing two or more dwelling units, deciduous shade trees shall be planted as street trees along all rights-of-way. In instances where all or portions these developments are designed as parking lots rather than rights-of-way, then landscaping shall instead be provided in accordance with section 24-99. Street trees shall meet the following requirements:

- a) Deciduous shade trees shall be planted as street trees along all right-of-ways within the development. Such trees shall be located either within the right-of-way or within a five-foot (5') landscape preservation easement contiguous to such right-of-way. Where located within an easement, the subdivided shall dedicate the easement together with a maintenance easement to the property owners' association or other entity approved by the county attorney.*
- b) The easement or right-of-way shall contain at a minimum, one (1) tree planted approximately every forty feet (40').*
- c) All trees planted to meet this requirement shall have a minimum caliper of one and one half inch (1 ½") and conform to the provisions of section 24-94 of the zoning ordinance. Existing trees within the landscape preservation easement that are protected and preserved in accordance with the standards contained in the zoning ordinance may be used to satisfy the planting requirement.*
- d) All street trees shall be deciduous shade trees that are native species or street trees commonly planted in james city county and adaptive to the soils and climate of james city county. if an applicant wishes to substitute the required shade trees with an evergreen or ornamental tree, a landscape modification request form referenced in section 24-91 of the zoning ordinance may be submitted for consideration by the planning director.*
- e) Installation. Unless otherwise approved by the planning director or his designee, plantings shall occur between September and February while the plant materials are dormant; however, temporary certificates of occupancy may be issued pursuant to section 24-8 (b).*

ORDINANCE NO. _____

AN ORDINANCE TO AMEND AND REORDAIN CHAPTER 19, SUBDIVISIONS, OF THE CODE OF THE COUNTY OF JAMES CITY, VIRGINIA, BY AMENDING ARTICLE II, PROCEDURES AND DOCUMENTS TO BE FILED, BY AMENDING SECTION 19-27, PRELIMINARY PLAN - SUBMITTAL REQUIREMENTS; AND BY AMENDING ARTICLE III - REQUIREMENTS FOR DESIGN AND MINIMUM IMPROVEMENTS, BY ADDING SECTION 19-73.1, STREET TREES

BE IT ORDAINED by the Board of Supervisors of the County of James City, Virginia, that Chapter 19, Subdivisions, is hereby amended and reordained by amending Article II, Procedures and Documents to be Filed, by amending Section 19-27, Preliminary plan - Submittal requirements; and amend Article III - Requirements for Design and Minimum Improvements by adding Section 19-73.1, Street trees.

Chapter 19. Subdivisions

Article II. Procedures and Documents to be Filed

Section 19-27. Preliminary plan - Submittal requirements.

(q) For proposed major subdivisions and multifamily subdivisions, a landscape plan showing street trees per section 19-73.1 street trees, and any applicable requirements of article II, division 4 of the zoning ordinance.

Article III. Requirements for Design and Minimum Improvements

Section 19-73.1. Street trees.

Street trees shall meet the following requirements:

- a) In all major subdivisions, deciduous shade trees shall be planted as street trees along all rights-of-way within the subdivision. Such trees shall be located within a five-foot (5') landscape preservation easement contiguous to such right-of-way. Where located within an easement, the subdividing landowner shall dedicate the easement together with a maintenance easement to the property owners' association or other entity approved by the agent and county attorney. Street trees may also be located within the right-of-way. When located within the right-of-way the trees will need to meet any applicable VDOT standards and maintenance provisions. Street trees should only be located within the right-of-way when topographic, utility or other constraints prohibit the landscape preservation easement from being located adjacent to the right-of-way.*
- b) The easement or right-of-way shall contain at a minimum, one (1) tree planted approximately every forty feet (40').*
- c) All trees planted to meet this requirement shall have a minimum caliper of one and one half inch (1-1/2") and conform to the provisions of section 24-94 of the zoning ordinance. Existing trees within the landscape preservation easement that are protected and preserved in accordance with the standards contained in the zoning ordinance may be used to satisfy the planting requirement.*
- d) All street trees shall be deciduous shade trees that are native species or street trees commonly planted in James City County and adaptive to the soils and climate of James City County. If an applicant wishes to substitute the required shade trees with an evergreen or ornamental tree, a landscape modification request form referenced in section 24-91 of the zoning ordinance may be submitted for consideration by the planning director.*
- e) Installation. Unless otherwise approved by the director of planning or his designee plantings shall occur between September and February while the plant materials are dormant. Installation shall be guaranteed in accordance with article IV of this chapter.*

ARTICLE VI. DESIGN STANDARDS

DIVISION 1. GENERAL LAYOUT AND DESIGN

Sec. 20.5-84. Landscaping, buffers and screening.

(a) Landscaping.

(1) Entrances and common areas shall be landscaped by the subdivider with appropriate combinations of trees, shrubs, grass and groundcovers except where the existing mature trees have been preserved and protected in such areas. Unless the agent determines that such landscape treatment is unnecessary, impractical or in conflict with drainage, utilities, or other required features of the subdivision, the cleared portions of entrance and common areas in residential subdivisions shall be landscaped with a minimum of one (1) tree and one (1) shrub for each one thousand (1,000) square feet contained in such areas exclusive of roadways, sidewalks, recreational facilities, or other paved areas.

(2) All landscape treatments required by this chapter or the zoning ordinance shall be designed, arranged, installed and maintained in accordance with the landscaping standards contained in the zoning ordinance.

(b) Tree planting and replacement.

(1) In accordance with section 15.2-961, Code of Virginia, trees shall be preserved, planted or replaced on all residential lots, excluding recreation lots. Tree preservation/planting shall be accomplished such that, within twenty (20) years growing time, the minimum tree canopy or cover on residential lots shall be twenty percent (20).

(2) The required tree canopy or cover shall generally be evenly distributed across the lot with a preference for trees located in front of the principal building and along the rear property line.

(3) The calculation of tree canopies shall be based on the Manual of Woody Landscape Plants, 4th edition, 1990, by Michael A. Dirr (ISBN 0-87563-347-1) or Street Tree Factsheets, 1993, Municipal Tree Restoration Program, Pennsylvania State University (ISBN 1-883956-00-5) as they may from time to time be amended.

(4) Existing trees which are to be preserved and used to meet all or part of the canopy requirements shall be protected before, during, and after the development process in accordance with those standards contained in the zoning ordinance.

(5) Newly planted trees and shrubs shall be selected, installed and maintained in accordance with the standards contained in the zoning ordinance.

(6) In all subdivisions in nonindustrial zoning districts, deciduous shade or ornamental trees shall be planted as street trees along all rights-of-way within and abutting the subdivision. Such trees shall be located either within the right-of-way itself or within a ten-foot (10') landscape preservation easement contiguous to such right-of-way and shall contain, at a minimum, one (1) tree planted approximately every forty feet (40'). Where located within an easement, the subdivider shall dedicate the easement together with a maintenance easement to the property owners' association or other entity approved by the agent and county attorney. All trees planted to meet this requirement shall have a minimum caliper of two and one-half inches (2½") and conform with the relevant provisions of the zoning ordinance. Existing trees which are within twenty feet (20') of the edge of the right-of-way and which are protected and preserved in accordance with the standards contained in the zoning ordinance may be used to satisfy the planting requirement.

(7) The subdivider shall have the option to meet the requirements of this subsection through actual installation/retention, a postponed improvement agreement with surety, establishment of restrictive covenants, or some combination which achieves the same intent.

MINUTES
JAMES CITY COUNTY POLICY COMMITTEE REGULAR MEETING
Building A Large Conference Room
101 Mounts Bay Road, Williamsburg, VA 23185
September 14, 2017
4:00 PM

A. CALL TO ORDER

Ms. Robin Bledsoe called the meeting to order at approximately 4 p.m.

B. ROLL CALL

Present:

Robin Bledsoe, Chair

Rich Krapf

Jack Haldeman

Heath Richardson

Danny Schmidt

Staff:

Paul Holt, Planning Director

Ellen Cook, Principal Planner

Tammy Rosario, Principal Planner

Christy Parrish, Zoning Administrator

Scott Whyte, Senior Planner II

Jose Ribeiro, Senior Planner II

Lauren White, Planner

Roberta Sulouff, Planner

Alex Baruch, Planner

Tom Leininger, Community Development Assistant

Maxwell Hlavin, Assistant County Attorney

C. MINUTES

1. August 10, 2017, Meeting Minutes

Mr. Jack Haldeman made a motion to Approve the August 10, 2017, meeting minutes.

The motion passed 5-0.

D. OLD BUSINESS

1. Preliminary Review and Discussion of the R-8, Rural Residential District and the Residential Cluster Overlay District

Ms. Robin Bledsoe opened the discussion.

Mr. Alex Baruch stated that on April 11, 2017, the Board of Supervisors (BOS) adopted an initiating resolution. He stated that the BOS initiated amendments of the R-8, Rural Residential District and Residential Cluster

Development, in order to address the provision of age-restricted housing, independent living facilities and specially permitted density bonuses. He stated that the memorandum provides background information about age-restricted housing, independent living facilities, the R-8 District and the Cluster Overlay District. He stated that the memorandum provides information about the potential amendments that could result from the language of the initiating resolution. He stated that staff would appreciate feedback from the Policy Committee in preparation for the November Policy Committee meeting.

Ms. Bledsoe asked Committee members if they had any questions.

Mr. Jack Haldeman stated that he was unsure on how he would quantify the need for age-restricted housing. He stated that the Comprehensive Plan detailed the growth of older aged people. He stated that there were not any figures that would quantify the need. He stated that many residents would prefer to age in place.

Ms. Bledsoe asked Mr. Haldeman to clarify if he was unsure of the need of 55 and older age-restrictive housing or the need for Continuing Care Retirement Community (CCRC) facilities.

Mr. Haldeman stated that he does not know what the need is for either of them. He stated that there is a difference between the people that already live here and want to stay here and the other group that are looking to move to James City County later in life and want a place that can take care of them. He asked if the residents of James City County see a need for more age-restrictive housing and if James City County believes more age-restrictive housing is needed.

Ms. Bledsoe stated that the need is already there with the variety of living facilities located around the County. She stated that this need is a product of the Baby Boomers and that many of them wish to reside here.

Mr. Haldeman asked how many more units would be needed and how do we encourage more facilities.

Mr. Heath Richardson stated that there is not a matrix showing the need compared to the population. He stated that the Parks & Recreation Department has done a lot of studies on the aging demographic. He stated that he did not know if other communities had a matrix on the need for assisted living facilities based on population.

Mr. Baruch stated that he was not aware of localities having such matrices; however, many of the adjacent localities discuss the need of age-restrictive living facilities in their Comprehensive Plans.

Mr. Richardson stated that Williamsburg Landing started the conversation. He stated that it would help if Mr. Baruch walked him through the Williamsburg Landing application process.

Mr. Baruch stated that the amendment would affect the County as a whole and that the initiating resolution asked staff to investigate R-8, Rural

Residential, Residential Cluster Development, independent living facilities age-restricted housing and specially permitted density bonuses. He stated that by examining the items in the initiating resolution, staff put together a list of amendments and implications in the memorandum. Mr. Baruch stated that the changes would impact properties in the R-8, Rural Residential Zoning District within the Primary Service Area (PSA) that are over two acres in size. Mr. Baruch stated that if a property met those criteria, under the new Ordinance they could apply for an age-restricted independent living facility. Mr. Baruch stated that he wanted to make it clear that the Williamsburg Landing Proposal and the initiating resolution are separate items with different directives.

Mr. Baruch stated that the Williamsburg Landing rezoning and Special Use Permit (SUP) proposal would add 135 independent living facility units to a 15.5-acre parcel of land. He stated that the units are split between apartments and duplexes. Mr. Baruch stated that the applicant came to the Development Review Committee (DRC) to gather insight about the proposal from the Planning Commission sub-committee. Mr. Baruch stated that independent living facilities are considered a residential use and proffers could not be accepted because of state legislation and direction from the BOS. Mr. Baruch stated that the applicant had moved through the Master Plan and SUP process up to Planning Commission consideration; however, some impacts could not be addressed via SUP conditions that would have been addressed by proffers. He stated that one of the impacts the application could not address without proffers include age restriction of the residents of the independent-dwelling units. Mr. Baruch stated that the applicant had met all of the submittal requirements and was ready to move forward to the Planning Commission, but decided to defer the case indefinitely when the initiating resolution was presented to the BOS.

Ms. Bledsoe stated the subject property is separate from the current Williamsburg Landing property.

Mr. Baruch stated the new parcel was not shown on the existing current Williamsburg Landing Master Plan.

Mr. Haldeman stated that the BOS approved the new mixed-use zoning ordinance. He asked if there is still a need to change the ordinance of other zoning districts since mixed-use allows age-restrictive housing and independent living facilities.

Mr. Baruch stated that the properties would still need to be rezoned to mixed-use and be fewer than five acres to take advantage of the ordinance amendment.

Mr. Haldeman stated that the mixed-use ordinance change increases the potential supply of properties that could be used for an independent living facility.

Mr. Krapf stated that proposals for this particular use will be market-driven. He stated that the Policy Committee's role is from a land use standpoint. He stated that the Comprehensive Plan has the demographics and that the County is an aging community.

Mr. Haldeman asked if the changes to the uses for the zoning district are aligned with the residents.

Ms. Bledsoe stated that the parcel that Williamsburg Landing wants to expand on is unique from the ordinance changes presented. Ms. Bledsoe asked how the Cluster Overlay District was added.

Mr. Krapf stated that it was an effort to increase density.

Mr. Baruch stated that the cluster overlay could allow 1-4 units per acre.

Ms. Bledsoe asked to skip to the potential amendments.

Mr. Baruch stated that the definition of independent living facilities could be amended to add an age restriction to the definition. He stated that the definition could be re-examined to make sure the definition is up-to-date.

Mr. Richardson asked how the age restriction would replace a proffer.

Mr. Baruch stated that a proffer for an independent living facility would state that an affidavit to verify the age of the residents of the facility would be required to be kept on file. Additionally, he stated that by amending the definition other classifications, such as disabilities, would be included.

Mr. Baruch stated that the next amendment would be to include specific details on the services that needed to be done at the facility.

Ms. Bledsoe asked why the first change would not include the services.

Mr. Baruch stated that the current definition does not specifically state that services are required.

Mr. Baruch stated that the third amendment would include a clarification of the types of units allowed on the parcel.

Ms. Cook stated that the type of unit for the independent living facility must be one of the unit types currently allowed in the zoning district.

Mr. Haldeman asked if the changes would affect the definition of independent living facility in all of the residential zoning districts that allow the use.

Mr. Baruch confirmed.

Mr. Krapf asked if the cluster overlay overrides the zoning district.

Mr. Baruch confirmed.

Mr. Krapf asked if the changes to independent living facility would be overridden by the cluster overlay.

Mr. Baruch stated that the definition would extend across the zoning

ordinance whenever independent living facilities were addressed.

Ms. Bledsoe stated that she had a concern as to why the cluster overlay was included in the initiating resolution.

Mr. Danny Schmidt stated that the density would increase.

Mr. Krapf stated that the tradeoff is higher density for more open space and other amenities. He stated that the cluster overlay removes some of the sprawl effect.

Mr. Baruch asked if the Policy Committee would like staff to continue with drafting the amendment.

Ms. Bledsoe confirmed.

Mr. Baruch stated that the next amendment would include the independent living facility contained within residential cluster development to the R-8 Residential District use list.

Mr. Baruch stated that the next change would be to allow for the independent living facility use to utilize cluster overlay in the R-8 Zoning District.

Mr. Schmidt asked if there were any parcels zoned R-8 outside the PSA.

Mr. Baruch stated that there are parcels outside the PSA. He stated that the cluster overlay states that the parcel must be two acres or more and within the PSA.

Ms. Bledsoe stated that she would like staff to move forward.

Mr. Baruch stated that the table regarding the differences between the current R-8 ordinance and the potential R-8 ordinance with cluster overlay is included in the memorandum along with the previously discussed changes.

Ms. Bledsoe asked if another facility similar to Williamsburg Landing could potentially be built.

Mr. Baruch stated that there are several factors to whether or not a facility like Williamsburg Landing would be built in other parts of the County. He stated that the R-8 Zoning District is intended to be rural and low density. He stated that the 1-4 units per acre would limit the density of the parcel.

Mr. Krapf asked for a summary of the final paragraph of the memorandum.

Mr. Baruch stated that the intent of the final paragraph was to ask the Policy Committee if they would like staff to go through the use list and bring the list up-to-date for the uses related to age-restricted living facilities.

Ms. Bledsoe stated that staff can go forward with the list.

Mr. Baruch stated that staff would do a strike-through version to allow Policy Committee members to see the changes.

Mr. Haldeman asked if uses such as grocery stores and pharmacies would be added to the use list as well.

Mr. Baruch stated that they would not be added to the use list because the initiating resolution did not ask staff to look into those.

Ms. Bledsoe asked if there were any questions.

2. Zoning Ordinance Revision to Permit Short-Term Residential Rentals

Ms. Bledsoe opened the discussion.

Ms. Sulouff stated that at the July Policy Committee meeting the Committee directed staff to come up with an approach addressing short-term residential rentals. She stated that the Committee expressed interest in pursuing a hybrid approach which would create a system in which short-term residential rental uses would be subject to permitting and performance standards based on the intensity of the application. She stated that there are some by-right processes as well as an SUP process. She stated that staff proposes definitions to homestay, rental of rooms and tourist homes. She stated that staff have also included a proposed use list and a matrix which shows what is permitted by-right depending on the zoning district and intensity of the application. Ms. Sulouff stated that staff recommends performance standards. She stated that staff is seeking Policy Committee guidance on the draft language and the performance standards and that staff will make changes to the draft ordinance based on the feedback of the Policy Committee. She asked if there were any questions.

Mr. Richardson asked how the 180-day limit for 12 months was decided.

Ms. White stated that the 180-day mark would help keep the home's primary use as a residential property.

Ms. Sulouff stated that guidance from Building Safety and Permits suggested that 180 days is part of their requirements for a single-family home.

Mr. Schmidt asked if the homestay fees would be equitable and fair to the current bed and breakfast and hotels.

Ms. Sulouff stated that the administrative permit was designed for an application process, low in intensity and residential in character. She stated that the idea was to create a spectrum from mostly residential in use to mostly commercial in use.

Mr. Schmidt asked if there would be an annual reapplication.

Ms. Sulouff stated that this could be a provision. She stated that applicants would have to pay the transient occupancy tax.

Ms. Bledsoe stated that shared economy is happening and there are rentals already available. She stated that her concern would be if it was fair to hotels and paying of taxes. She stated that the General Assembly has given the

County the ability to begin a database.

Mr. Haldeman stated that he was still unclear regarding the existing and proposed definitions.

Ms. Sulouff stated she would be able to describe each definition.

Mr. Haldeman asked why there are three different types of short-term rentals.

Ms. Sulouff stated that currently there are two uses: rental of rooms and tourist homes. She stated that under this proposal rental of rooms would be taken out of the transient category. She stated that rental of rooms would only address long-term rentals over and above the family definition. She stated that rental of rooms includes a landlord and tenant relationship. Ms. Sulouff stated that homestays depend on the intensity of the application and require a permanent resident and the renter cannot exceed 180 days a year. She stated that the tourist home does not require a permanent resident at the home. She stated that tourist home allows for commercial entities such as bed and breakfasts.

Mr. Haldeman asked which definition would require an administrative process.

Ms. Sulouff stated that a homestay would be permitted by-right with an administrative permit in all districts for one bedroom. She stated that homestays would be permitted by-right for any number of rooms for R-8, R-4 and A-1 districts.

Mr. Krapf stated that if a homeowner wants to rent out more than one room, depending on the zoning district, an SUP would be required.

Ms. Sulouff confirmed and stated that A-1, R-4 and R-8 do not require an SUP. She stated that for R-4 and MU, the amended ordinance is to remain consistent with the way that short-term rentals are permitted currently.

Mr. Schmidt asked how fire safety was included in the new ordinance.

Ms. Sulouff stated that the issue for fire safety is the ability to enforce it.

Ms. Rosario stated that the best route would be for staff to reconnect with Building Safety and Permits.

Ms. Sulouff stated that some other localities do enforce fire safety and require a yearly inspection. She stated that a complaint from another citizen could also require an inspection.

Mr. Richardson stated that hotels are required to have fire inspections and safety standards.

Ms. Bledsoe stated that sites like Airbnb require inspections; however, other advertising sites may not.

Mr. Schmidt asked if there would be any legal issues with the County if there

would be a fire or accident.

Ms. Bledsoe stated that she believes the issues would fall on the homeowner.

Mr. Hlavin concurred that the County would not be accountable.

Mr. Schmidt stated that there could be a way to enforce fines on homestays if applicants do not comply.

Ms. Sulouff stated that the Homeowners Association (HOA) still overrides the policy of the County.

Mr. Richardson stated the policy of the County will help HOAs establish their policy.

E. NEW BUSINESS

1. Adoption of a Revised Policy for Remote Participation in Meetings by Commission Members

Ms. Bledsoe opened the floor for discussion.

Mr. Hlavin stated that state law has changed regarding the participation policy. He stated that the new law is two meetings per year for remote participation.

Mr. Richardson asked if it was calendar year or fiscal year.

Mr. Hlavin stated that it is for the calendar year.

Mr. Paul Holt stated that the new law includes two remote participations for Policy Committee, two for DRC and two for Planning Commission.

Ms. Bledsoe asked if there were any questions. There were none.

Ms. Bledsoe asked the Policy Committee members if they were okay with forwarding the revised policy to the Planning Commission.

The Committee members concurred.

2. Potential Amendments to Address Formerly Proffered Policies and Impact Mitigation Items: Cover Memorandum - Stage I

Ms. Bledsoe opened the floor for discussion.

Mr. Hlavin stated that these potential amendments were previously covered by proffers. He stated that he is trying to get the amendments into the zoning ordinance.

Ms. Cook stated that the cover memorandum summarizes the topics and sets the stage for items that were previously covered by proffers. She stated that four topics are presented today. She stated that the water conservation topic would be handled by the James City Service Authority.

3. Potential Amendments to Address Formerly Proffered Policies and Impact Mitigation Items: Streetscape Policy - Stage I

Ms. Bledsoe opened the floor for discussion.

Mr. Whyte stated that the streetscape policy has been in place since 1999. He stated that the policy was created based on the 1997 Comprehensive Plan recommendations. He stated that the policy was amended in 2004 and 2010. He stated that the goal was to preserve a tree canopy along residential streets and to achieve a 20% canopy coverage within a 20-year period. He stated that the policy has worked well for the past 18 years. He stated that the policy has been applied to a countless number of cases. He stated that the policy has been reinforced by the Community Appearance Guide. Mr. Whyte stated that staff recommends two revisions. He stated that staff recommends amending the subdivision section of the zoning ordinance by drafting new streetscape ordinance language and requiring all new subdivisions to plant street trees on both sides of the street. He stated that staff recommends modeling the ordinance after York County's street tree ordinance and that the previous streetscape policy was also modeled after York County. He stated that staff recommends keeping the existing streetscape policy in place to cover the approved subdivisions that have not been built out.

Mr. Haldeman asked if the marked-up version of the ordinance is the new streetscape guidelines policy.

Mr. Whyte stated that it was not the new policy and he will have an amended version for the Committee for the next meeting.

Ms. Bledsoe asked if the Committee wants staff to move forward.

Mr. Krapf confirmed and the rest of the committee agreed.

4. Potential Amendments to Address Formerly Proffered Policies and Impact Mitigation Items: Bicycle and Pedestrian Accommodations and Transportation Impact Analysis - Stage I

Ms. Bledsoe opened the floor for discussion.

Mr. Baruch stated that at the BOS and Planning Commission work session they asked staff to research the ability to add transportation, bicycle and pedestrian accommodations as binding master plan elements as well as reviewing and amending the zoning ordinance if necessary. He stated that transportation impacts created by developments requiring legislative approval are addressed by three administrative policies and corresponding submittal requirements. He stated that the first accommodation is the Pedestrian Accommodation Master Plan, which was implemented as a binding resource in determining pedestrian accommodation requirements external to a development unless required by the pedestrian accommodation section of the zoning ordinance. He stated that the second is the Regional Bikeways Plan, which encourages the coordinated development of a comprehensive system of bikeways throughout the region. He stated that the third policy is the Traffic Impact Analysis Submittal Requirements Policy,

which provides guidance to applicants regarding the minimum content required for a traffic impact analysis. Mr. Baruch stated that some examples are multi-use paths, turn lanes and traffic lights. He stated that these improvements are limited without the use of proffers. He stated that the staff suggests the Policy Committee consider including the language in Section 24-35 Pedestrian Accommodation to extend the requirements of the section to bicycle facilities per the adopted Regional Bikeway Plan. He stated that unlike bicycle and pedestrian accommodations, general traffic impact improvements cannot be addressed through submittal or master plan requirements because there is no ability through state code to do so. He stated that staff can look into how other localities handle traffic improvements. He stated that staff would take any feedback to bring to the Stage II meeting.

Mr. Richardson stated that in the past members of the public have expressed concern with bicycle improvements.

Mr. Krapf stated that the bikeway plan is a regional bikeway plan requiring other localities to partner in as well.

Mr. Holt stated that without proffers, there is no way to implement the Regional Bikeway Plan.

Mr. Schmidt asked if York County and the City of Williamsburg are doing the same.

Ms. Sulouff stated that the City of Williamsburg did not accept proffers before; however, they put more funding towards bike and pedestrian impacts.

Mr. Baruch stated that York County does have certain aspects of the bike plan in their ordinance. He stated that staff can bring some additional benchmarks to show how other localities are handling bikeways. He stated that many localities have pedestrian accommodations.

Mr. Holt stated that the City of Williamsburg maintains its own right-of-ways. He stated that they do not go through the Virginia Department of Transportation (VDOT).

Mr. Krapf asked if the Committee would like staff to look at traffic impacts.

Ms. Bledsoe confirmed.

Mr. Baruch stated that submittal requirements could be a way to get the impacts upfront; however, there is not any enabling legislation to allow that change. He stated that staff will look at other localities for examples. He stated that off-site improvements cannot be achieved unless VDOT requires the improvement.

Mr. Holt stated that staff may not be able to come up with a solution to mitigate traffic impacts. He stated that VDOT cannot require off-site traffic improvements.

Ms. Sulouff stated that a traffic impact analysis can still be required for any

case that reaches 100 peak hour trips. She stated as examples of off-site improvements, that there is no way to compensate for turn lanes or traffic signals.

Mr. Krapf asked if an applicant states they will build turn lanes would that be like a proffer.

Mr. Holt stated that staff would have to go by the applicant's word as no proffers for residential rezoning can be accepted.

Mr. Haldeman asked if these are minimal changes to the County.

Mr. Holt stated that the changes are worth it in staff's recommendation.

Ms. Sulouff stated that off-site changes cannot be included on a master plan.

Mr. Baruch stated that adding bike lane requirements to the pedestrian accommodation section of the zoning ordinance would mandate that any new major subdivision or site plan would be reviewed in accordance with the pedestrian accommodations section.

5. Potential Amendments to Address Formerly Proffered Policies and Impact Mitigation Items: Archaeological Policy - Stage I

Ms. Bledsoe opened the floor for discussion.

Ms. White stated that the Archaeological Policy was adopted in 1998. She stated that the policy seeks to identify and protect areas where significant archaeological potential exists. She stated that according to the submittal requirements, the submission of a Phase 1A Archaeological Study is required for all sites identified as ultra- or highly-sensitive on the Comprehensive Plan. She stated that for all legislative cases, the Archaeological Policy suggests adding a condition or a proffer that requires a Phase 1 study prior to land disturbance. She stated that a Phase 1 study identifies and defines the actual site boundaries for any identified archaeological resources. She stated that the policy also lays forth any procedures and guidelines to follow when staff interpret the condition or proffer. She stated that staff suggests including the contents of the current Archaeological Policy into a zoning ordinance.

Mr. Schmidt stated that he did not have any questions and that he agreed.

Ms. Bledsoe stated that she did not have any questions.

6. Potential Amendments to Address Formerly Proffered Policies and Impact Mitigation Items: Natural Resource Policy - Stage I

Ms. Bledsoe opened the floor for discussion.

Mr. Ribeiro stated that the Natural Resource Policy was modeled after the Archaeological Policy and was adopted in 1999. He stated that James City County is part of the Chesapeake Bay ecosystem. He stated that the policy applies to SUP applications and rezoning applications. He stated that a submittal requirement for a legislative case is that a natural resource

inventory is submitted. He stated that if the inventory confirms that a natural resource exists, then further steps are taken. He stated that a management plan and/or mitigation plan would then be required. He stated that York County has a requirement for submittal of a natural resource inventory as part of their submittal requirements. He stated that staff recommends adding the Natural Resource Policy to the zoning ordinance.

Ms. Bledsoe stated that she supports the change.

Mr. Krapf asked if the current policy includes the Biological and Conservation Data system to identify natural resources.

Mr. Ribeiro stated that there was a study called the Conservation Planning for the Natural Areas of the Lower Peninsula of Virginia. He stated that the study identifies areas of importance.

Mr. Krapf asked if new provisions need to be added to the new ordinance.

Mr. Ribeiro stated that staff will make sure to capture all aspects of the Natural Resource Policy.

Ms. Bledsoe asked if there are any questions. There were none.

F. ADJOURNMENT

Mr. Krapf made a motion to Adjourn. The motion passed unanimously.

Ms. Bledsoe adjourned the meeting at approximately 5:45 p.m.

MINUTES
JAMES CITY COUNTY POLICY COMMITTEE
REGULAR MEETING
Building A Large Conference Room
101 Mounts Bay Road, Williamsburg, VA 23185
December 14, 2017
4:00 PM

A. CALL TO ORDER

Mr. Jack Haldeman called the meeting to order at approximately 4 p.m.

B. ROLL CALL

Present:

Jack Haldeman, Chair
Rich Krapf

Absent:

Felice Pete
Danny Schmidt
Heath Richardson

Staff:

Tammy Rosario, Principal Planner
Ellen Cook, Principal Planner
Scott Whyte, Landscape Planner
Tom Leininger, Community Development Assistant

C. MINUTES

1. November 9, 2017 Meeting Minutes

Action on the minutes was deferred until the next meeting.

D. OLD BUSINESS

1. Potential Amendments to Address Formerly Proffered Policies Impact Mitigation Items:
Streetscape Policy - Stage II

Mr. Jack Haldeman opened the discussion.

Mr. Scott Whyte stated that at the November 1 Policy Committee meeting, staff discussed the need to prepare the draft Ordinance. He stated that the revision would require street trees within all major subdivisions. He stated that staff modeled the new Ordinance after the York County Subdivision Ordinance Section 20.5-84b6. He stated that after internal discussions with staff and consulting with the County Attorney's office, staff has amended both the Subdivision and Zoning Ordinances. He stated that the Subdivision Ordinance Section 19-27, Preliminary Plans-Submittal Requirements, was amended to require a landscape plan. He stated that Subdivision Ordinance Section 19-73.1, Street Trees, is a newly created section that lists standards and specification for street trees in major subdivisions. He stated that

Zoning Ordinance Section 24-102, Street Trees, is a newly created section of the Zoning Ordinance. He stated that the section list the standards and specifications for street trees in developments that contain multi-family units and/or apartments. He stated that staff recommends to send the draft proposal to the Planning Commission.

Mr. Haldeman asked if the caliper tree requirement would be modeled after the York County requirement of 2.5-inch caliper.

Mr. Whyte stated that the current policy states 1.5-inch caliper. He stated that there has been some debate about increasing the size. He stated that the plant experiences a greater shock when the plant is moved.

Mr. Rich Krapf asked if any mechanized equipment would be required to move a tree with a 1.5-inch caliper.

Mr. Whyte stated that trees with a 1.5-inch caliper come in a container and experience less root damage.

Mr. Krapf asked if there is any policy pertaining to trees hanging over electrical lines.

Mr. Whyte stated that an ornamental tree can be recommended if the height could be an issue.

Mr. Krapf asked if that is in the draft Ordinance.

Mr. Whyte stated that the language is in the policy currently.

Ms. Ellen Cook stated that an applicant can substitute the required shade tree with an evergreen or an elm tree with a landscape modification form.

Mr. Krapf asked what the process was to substitute the trees.

Mr. Whyte stated that he makes a recommendation to the Planning Director.

Mr. Haldeman asked if James City County would keep the policy for 20% canopy coverage in 20 years.

Mr. Whyte stated that during the revision of the canopy coverage, staff looked into the distance trees can be planted from the road. He stated that there is a restriction on distance from the road and will help accomplish the coverage percentage. He stated that it is difficult to measure the coverage.

Mr. Whyte stated that the current policy will be retained for older subdivisions that have not been installed yet as reference.

Mr. Haldeman stated that he did not see any issues.

Mr. Krapf confirmed and directed staff to bring forward the regulations to the Planning Commission.

E. NEW BUSINESS

There was no new business.

F. ADJOURNMENT

Mr. Krapf made a motion to Adjourn. The motion passed 2-0.

Mr. Haldeman adjourned the meeting at approximately 4:25 p.m.

Mr Jack Haldeman, Chair

Mr. Paul Holt, Secretary

ITEM SUMMARY

DATE: 2/7/2018

TO: The Planning Commission

FROM: Jose Ribeiro, Senior Planner II

SUBJECT: Z-0003-2017/HW-0004-2017. Oakland Point

ATTACHMENTS:

	Description	Type
▣	Staff Report	Staff Report
▣	Attachment 1. Location Map	Exhibit
▣	Attachment 2. Master Plan	Exhibit
▣	Attachment 3. Community Impact Statement	Exhibit
▣	Attachment 4. Fiscal Impact Study	Exhibit
▣	Attachment 5. Parks & Recreation Exception Request	Exhibit
▣	Attachment 6. Traffic Impact Study	Exhibit
▣	Attachment 7. LOS Information	Exhibit
▣	Attachment 8. Proposed Easement Agreement	Exhibit
▣	Attachment 9. Height Waiver Application Discussion	Exhibit
▣	Attachment 10. Draft Height Waiver Conditions	Exhibit
▣	Attachment 11. Low Income Tax Credit Program Information	Exhibit
▣	Attachment 12. Citizen Correspondence	Exhibit

REVIEWERS:

Department	Reviewer	Action	Date
Planning Commission	Holt, Paul	Approved	1/30/2018 - 11:24 PM
Planning Commission	Holt, Paul	Approved	1/30/2018 - 11:24 PM
Publication Management	Burcham, Nan	Approved	1/31/2018 - 7:34 AM
Planning Commission	Holt, Paul	Approved	1/31/2018 - 9:31 AM

REZONING-0003-2017/HEIGHT LIMITATION WAIVER-0004-2017. Oakland Pointe

Staff Report for the February 7, 2018 Planning Commission Public Hearing**SUMMARY FACTS**

Applicant: Timothy O. Trant II, on behalf of Connelly Development, LLC

Land Owner: Lisa Joy P. Marston, Trustee

Proposal: To rezone ± 14.54 acres of land from A-1, General Agricultural to R-5, Multi-family Residential District for the purpose of constructing up to 126 apartment units. A Height Limitation Waiver application has also been submitted for the proposed apartment buildings to be constructed up to 40 feet from grade.

Location: 7581 Richmond Road

Tax Map/Parcel No.: 2310100002

Project Acreage: ± 14.54 acres

Current Zoning: A-1, General Agricultural

Proposed Zoning: R-5, Multi-family Residential District

Comprehensive Plan: Moderate Density Residential

Primary Service Area: Inside

Staff Contact: Jose Ribeiro, Senior Planner II

PUBLIC HEARING DATES

Planning Commission: January 3, 2018, 7:00 p.m. (deferred by applicant)
February 7, 2018, 7: 00 p.m.

Board of Supervisors: March 13, 2018, 5:00 p.m. (tentative)

FACTORS FAVORABLE

1. Staff finds the proposal will not negatively impact surrounding zoning and development.
2. The proposal's density is within the range recommended for lands designated Moderate Density Residential (MDR) by the adopted Comprehensive Plan.
3. The proposal meets the Adequate Public Schools Facilities Test, adopted by the Board of Supervisors on June 23, 1998.
4. Increases workforce and affordable housing opportunities via an Easement Agreement, although this requirement may not be binding unless agreed to by the Board of Supervisors.
5. While unable to provide proffers, the applicant is proposing to demonstrate commitment to various Board of Supervisors adopted policies and other public benefits (including affordable housing) to support the proposed density through notes on the Master Plan and via an Easement Agreement that the County would be a party to; please see the "Ability to Guarantee the Development as Proposed" section below for discussion regarding these items.

This staff report is prepared by the James City County Planning Division to provide information to the Planning Commission and Board of Supervisors to assist them in making a recommendation on this application. It may be useful to members of the general public interested in this application.

FACTORS UNFAVORABLE

1. Proffers are not accepted for residential rezonings. As such, some of the typical impacts associated with residential development are not mitigated or addressed, including impacts to schools and impacts to public utilities (such as James City Service Authority). Please see the “Ability to Guarantee the Development as Proposed” section below for discussion regarding these items.
2. The project is fiscally negative per the submitted Fiscal Impact Analysis worksheet.
3. This proposal does not fully meet the recommendations of the Parks & Recreation Master Plan for new residential development within the Parks & Recreation Master Plan. The applicant is seeking an exception from the Board of Supervisors, as further discussed below.
4. Because of traffic from this proposed development, the Level of Service (LOS) for a turning movement at the Croaker Road intersection will worsen. The Traffic Study recommends both physical turn lane improvements and adjustments to the traffic signal timing. The applicant proposes to complete the physical turn lane improvements via a note and depiction on the Master Plan and via an Easement Agreement that the County would be a party to. However, the adjustments to the traffic signal timing needed to maintain LOS are at the sole discretion of VDOT. For the traffic on Oakland Drive leaving the subdivision and turning left onto westbound Route 60, the LOS will also worsen from an acceptable LOS (LOS C) to an unacceptable LOS (LOS D) in the P.M. peak hour.
5. Citizens have expressed concerns with this proposal.

SUMMARY STAFF RECOMMENDATION

The proposed development includes a number of favorable aspects. In addition, the proposed development’s density is within the range recommended for lands designated MDR by the adopted Comprehensive Plan. However, central to the MDR language is the following statement from the adopted Comprehensive Plan:

“Development at this density is not recommended unless it offers particular public benefits. Examples of such public benefits include mixed-cost housing, affordable and workforce housing and enhanced environmental protection.”

As discussed in this staff report, the applicant is proposing to offer public benefits and provide assurances to comply with the Board of Supervisors’ adopted policies through a combination of notes on the Master Plan, through stated intention in the Community Impact Statement and through a proposed Easement Agreement. The applicant is proposing the County be made a party to the Easement Agreement.

Through notes on the Master Plan, compliance with Board adopted policies include: a 150-foot-wide Community Character Corridor buffer (a 50-foot-wide buffer width is otherwise required for by-right development), the provision of bike and pedestrian improvements consistent with the Board’s adopted Bike and Ped Master Plans (bike and pedestrian connections are not required for by-right minor subdivisions), an alternative set of recreation facilities designed to comply with the intent of the Parks & Recreation Master Plan, proposed James City Service Authority (JCSA) Water Conservation Standards (also in the Easement Agreement), and based on the project’s location within the Yarmouth Creek Watershed, the implementation of Special Stormwater Criteria measures. Architectural renderings have also been included in the proposed

Staff Report for the February 7, 2018 Planning Commission Public Hearing

Master Plan (also in the Easement Agreement). While not a note on the Master Plan, the applicant has also submitted a Phase I archaeological study which has been reviewed by the Virginia Department of Historic Resources.

Through the proposed Easement Agreement, the applicant is proposing that any proposed development that may occur on this property which results in a density higher than that allowed by-right under the current A-1 Zoning District (i.e., four minimum 3-acre lots) may only be developed in accordance with Virginia Housing and Development Authority's Low Income Tax Credit Program (or alternative as the County may approve). The applicant is also proposing the following commitments in the Easement Agreement:

- Use of the building elevations included in the Master Plan set;
- Achieving EarthCraft/Viridian gold certification (or other comparable certification);
- Development of Water Conservation Standards;
- Construction of the offsite traffic improvements;
- Construction and maintenance of a five-foot sidewalk across the adjacent property (7575 Richmond Road); and
- Provision of a Nutrient Management Plan.

In order to achieve a density bonus above nine dwelling units per acre, the applicant proposes to construct each of the buildings to the EarthCraft Gold standard.

Proffers are not accepted for residential rezonings. There are also no Special Use Permit conditions associated with this request. The County Attorney's office has determined that the Easement Agreement is legal and would be binding. With the exception of one turning movement at the Croaker Road intersection and a worsening LOS for traffic leaving Oakland Drive and heading westbound on Route 60 in the P.M. peak hour, staff finds the requirements of the Easement

Agreement, along with the binding Master Plan would mitigate impacts from this development. However, without knowing whether or not the Board of Supervisors will enter into an Easement with the developer, and without the applicant being able to mitigate impacts otherwise, staff cannot recommend approval of this application

The Board of Supervisors will consider the Height Limitation Waiver portion of this application. Proposed conditions have been included for this application as Attachment No. 10 for informational purposes as the Commission does not review Height Limitation Waiver requests.

PROJECT DESCRIPTION

- The applicant is requesting a rezoning from A-1, General Agricultural to R-5, Multi-family Residential District to permit 126 apartment units on approximately 14.54 acres.
- The project proposes a gross density of 8.67 units per acre. However, per R-5 Zoning Ordinance requirements, the net density (which takes into account the non-developable portions of the site) is calculated as 9.75 units per acre. Per the R-5 District requirements, the project could propose up to a net density of nine units per acre without a need for any density bonuses. In order to achieve the proposed 9.75 units per acre net density, the project will need to achieve one bonus density point. From the options available in the Ordinance, the applicant is proposing to achieve the one bonus density point by committing to green building techniques, specifically through the EarthCraft Gold certification. A note to this effect is shown on the Master Plan and there is also a commitment in the Easement Agreement. Please see the "Ability to Guarantee the Development as Proposed" section above for discussion regarding this item.

This staff report is prepared by the James City County Planning Division to provide information to the Planning Commission and Board of Supervisors to assist them in making a recommendation on this application. It may be useful to members of the general public interested in this application.

Staff Report for the February 7, 2018 Planning Commission Public Hearing

- The 126 apartment units are arranged on the site in five buildings. One of the buildings is designed to be handicapped accessible and has an elevator. The Master Plan also shows a clubhouse building.
- The applicant is proposing a private access road and parking area. Private roads are permitted by-right in the R-5 District.
- The project is located on a Community Character Corridor (CCC) per the adopted Comprehensive Plan, and thus, provides a 150-foot buffer along the Richmond Road frontage of the subject property. The Master Plan shows the buffer as retaining the existing wooded character.
- The project includes buffers along the perimeter of the site per the R-5 Zoning Ordinance requirements. However, at the rear of the site, the Master Plan shows a portion of the multi-use field within the buffer, which would require Planning Director approval of a buffer depth reduction at the development plan stage. As proposed, the perimeter buffers would largely retain existing trees and would be supplemented with additional landscaping.
- As shown on Sheet 3.0 of the Master Plan, R-5 recreation requirements would be met through provision of recreation areas at the rear of the development.
- Per the adopted Pedestrian Accommodations Master Plan, this project includes the construction of a sidewalk along the Richmond Road frontage of the subject property. The Master Plan also shows a sidewalk connection across the adjacent property (7575 Richmond Road) allowing pedestrian access to the Richmond Road intersection with Croaker Road/Pricket Road. In addition, per the adopted Regional Bikeways Plan, the project includes a shoulder bike lane along Richmond Road.
- If approved, the project will also be required to be constructed to the Design Requirements of the R-5 Zoning Ordinance. These Zoning Ordinance requirements include:
 - All units being served by public water and sewer (private systems are not permitted);
 - Open space to be maintained exclusively for conservation and recreation purposes;
 - The provision of playground equipment;
 - Parking lot light fixtures limited to a height of 15 feet;
 - Separation distances between the buildings a distance at least equal to the heights of the buildings; and
 - Per Section 24-35 of the Zoning Ordinance, sidewalks will also be required along both sides of all streets and driveways, including the entrance road, for this project.
- The applicant is proposing to develop this apartment complex in accordance with Virginia Housing and Development Authority's Low Income Housing Tax Credit Program (LIHTC). A brief description of the LIHTC program can be found in Attachment No. 11.

ABILITY TO GUARANTEE THE DEVELOPMENT AS PROPOSED

- On June 28, 2016, the Board of Supervisors adopted a Resolution specifying that the County will only accept proffers associated with non-residential rezonings. Further, certain policies were rescinded by the Board as they apply to residential developments including the Natural Resource Policy, the Cash Proffer Policy for Schools and the Housing Opportunities Policy. With regard to the Natural Resource Policy, the Virginia Department of Conservation and Recreation has found that this site may be a suitable Small Whorled Pogonia location. However, this property is not within

This staff report is prepared by the James City County Planning Division to provide information to the Planning Commission and Board of Supervisors to assist them in making a recommendation on this application. It may be useful to members of the general public interested in this application.

Staff Report for the February 7, 2018 Planning Commission Public Hearing

one of the designated sensitive natural areas and as such the former policy would not have requested further work.

- The County, therefore, is faced with assessing the development potential and associated land use impacts of this proposal.
- The applicant proposes to commit to certain County policies or adopted documents that remain in effect via notes or depictions on the Master Plan document. These would include the proposed building elevations (also in the Easement Agreement); development of water conservation standards with the JCSA (also in the Easement Agreement); the road and bicycle/pedestrian improvements (including the off-site improvements at Richmond Road/Croaker and Richmond Road/Oakland Drive and the off-site sidewalk connection across the adjacent property) the CCC Buffer Guidelines; Parks & Recreation Master Plan Guidelines (with some requested exception elements); and Special Stormwater Criteria from the Yarmouth Creek Watershed Master Plan. A Master Plan is a binding document per Section 24-23 of the Zoning Ordinance. However, should an applicant propose to not include an element shown on the Master Plan on subsequent development plans, the Planning Director would be charged with making a Master Plan consistency determination based on the following criteria included in the existing Zoning Ordinance: “a (development plan) may deviate from the Master Plan if the Planning Director concludes that the development plan does not: 1) Significantly affect the general location or classification of housing units or buildings as shown on the Master Plan; 2) Significantly alter the distribution of recreation or open space areas on the Master Plan; 3) Significantly affect the road layout as shown on the Master Plan; 4) Significantly alter the character of land uses or other features or conflict with any building conditions place on the corresponding legislatively-approved case associated with the Master Plan.” Per the Zoning Ordinance appeals of a

Planning Director determination are made by the Development Review Committee.

- The applicant also proposes to achieve a density bonus to allow the project to increase from nine dwelling units per acre to 9.75 dwelling units per acre by achieving EarthCraft Gold certification. The applicant has also indicated that achieving certification would be part of the applicant’s planned funding approval from the Virginia Housing Development Authority and has included this commitment in the Easement Agreement.
- The applicant also proposes to commit to certain public benefits via provision of an “Easement Agreement” which is included as Attachment 8. The Easement Agreement commits to development of the property “in accordance with the Virginia Housing and Development Authority’s Low Income Housing Tax Credit Program or such other affordable housing regime as the County may approve.” The applicant is also proposing the following commitments in the Easement Agreement:
 - Use of the building elevations included in the Master Plan set;
 - Achieving EarthCraft/Viridian gold certification (or other comparable certification);
 - Development of Water Conservation Standards;
 - Construction of the offsite traffic improvements;
 - Construction and maintenance of a five-foot sidewalk across the adjacent property (7575 Richmond Road);
 - Provision of a Nutrient Management Plan.
- There is one policy that remains in effect that is not currently included as a note on the Master Plan or in the easement document: the Archaeology Policy. The applicant has submitted a Phase I Archaeology Study (please see discussion on page 9).

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PLANNING AND ZONING HISTORY

- This parcel is currently zoned A-1, General Agriculture and is currently used as a single residential lot.

SURROUNDING ZONING AND DEVELOPMENT

- North, South and West: A-1, General Agricultural, currently a single-family residence and undeveloped land with a portion in agricultural use.
- East: One parcel zoned MU, Mixed Use, developed as the CrossWalk Church. The second area is zoned PUD, Planning Unit Development - Residential, under development as the Village at Candle Station neighborhood consisting of single-family detached and multi-family (townhouse) units.

PUBLIC IMPACTS

Anticipated Impact on Public Facilities and Services:

Streets

- A Traffic Impact Study (TIS) was prepared for this development. Based on the Institute of Transportation Engineers manual, the study projects that the development would generate 87 P.M. peak hour trips and approximately 887 daily trips.
- The project is adjacent to Richmond Road which is a four-lane road with a median in this area. There is no access to Oakland Drive from this property. The entrance road and the parking area for the project will be privately maintained.
- The segment of Richmond Road immediately in front of the

project is currently operating at a LOS A-C and is anticipated to remain operating at this LOS through 2034. The segment of Richmond Road to the east of Croaker Road is listed in the Transportation Chapter of the Comprehensive Plan as “Forecasted 2035 volumes indicate improvement needed. WATCH” (Table T-1).

- The development proposes to use a right-in, right-out entrance; the median divide would remain in place as it exists currently. As a result, vehicles leaving the development that want to travel westbound on Richmond Road would need to complete a U-turn at the Richmond Road intersection with Croaker Road/Pricket Road. Similarly, vehicles entering the development from westbound Richmond Road would need to use the median break at Oakland Drive to first turn left onto eastbound Richmond Road.
- The TIS analyzed the project entrance as well as the two intersections mentioned above. The study included the following improvements:
 - On Richmond Road, construct a 100-foot right-turn taper at the development’s entrance.
 - At the intersection of Richmond Road with Croaker Road/Pricket Road, extend the 200-foot left-turn lane on eastbound Richmond Road to 400 feet.
 - At the intersection of Richmond Road with Oakland Drive (median break), construct a 100-foot left-turn lane with a 100-foot taper on westbound Richmond Road.
 - Adjustments to the current signal timing to optimize its function.

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REZONING-0003-2017/HEIGHT LIMITATION WAIVER-0004-2017. Oakland Pointe

Staff Report for the February 7, 2018 Planning Commission Public Hearing

- The TIS includes projected buildout in year 2025 LOS information for the three intersections, with the improvements listed above:

Richmond Road at the Oakland Pointe Development Entrance

	A.M. Peak Hour	P.M. Peak Hour
Northbound Right	B	B

There is no overall intersection LOS provided since this intersection is unsignalized.

Richmond Road at the Croaker Road/Prickett Road Intersection

A table showing the projected buildout in year 2025 is included as Attachment 7. The table also shows how these LOS compare to the projected 2025 LOS without the project being built. The table shows that with the project buildout the overall intersection LOS stays the same in the A.M. and P.M. peak hours (“C” and “D,” respectively). For the movement most influenced by this project, the eastbound left (which would handle the U-turns for westbound travelers), the study shows the LOS worsening in the A.M. peak hour (from a “D” to an “E”) and staying the same in the P.M. peak hour (LOS “E”). The study also examined adjustments to the signal timing to optimize its function: if these adjustments were done, it could result in maintaining the eastbound left at a LOS “D” in the A.M. peak hour. Staff notes that adjustments to the traffic signal timing are at the sole discretion of VDOT.

Richmond Road at Oakland Drive

	A.M. Peak Hour	P.M. Peak Hour
Northbound Left	C	D
Northbound Through	B	B
Westbound Left	B	B

There is no overall intersection LOS provided since this intersection

is unsignalized. Compared with the projected 2025 LOS without this project being built, the LOS declines for two movements: the Westbound Left would now be a “B” rather than “A” in both the A.M. and P.M. peak hour (these remain an acceptable LOS) and the Northbound Left would now be a “D” rather than a “C” in the P.M. peak hour.

- Since January, the applicant prepared a revised version of the TIS to address VDOT comments and made several changes to the analysis methods and improvements as noted in the Foreword to the revised version. At the time of the writing of this staff report VDOT had not finalized the review of the revised traffic study.

Parks & Recreation

- As noted above in the Project Description section, this project must meet the R-5 Zoning Ordinance requirements for recreation area. However, the R-5 requirements do not encompass all aspects of the Development Guidelines contained within the Parks & Recreation Master Plan. The applicant is proposing to fully meet most Parks & Recreation Development Guidelines through provision of facilities on-site, including parkland, playgrounds and trails. The applicant is requesting an exception to the Guidelines for the multi-use field due to its smaller dimensions (200’ by 100’, instead of 360’ by 225’ per the Guidelines). They are also requesting an exception to the courts/pools item. In lieu of the full dimension multi-use field and the court/pool, the applicant has included a dog park area, a second playground (one for toddlers and one for elementary age children) and a pavilion with grills. The applicant’s exception request is included as Attachment No. 5. Planning and Parks & Recreation staff are receptive to this request; however, the waiver must be approved by the Board of Supervisors.

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REZONING-0003-2017/HEIGHT LIMITATION WAIVER-0004-2017. Oakland Pointe

Staff Report for the February 7, 2018 Planning Commission Public Hearing

- *Requirement:* Park Land - 0.3 acres minimum
- *Proposed:* 1.30+/- acres

- *Requirement:* Biking/Jogging Trails - 404.5 linear feet minimum
- *Proposed:* 1,026 linear feet of soft surface trail and 2,390 linear feet of hard surface trail

- *Requirement:* Playgrounds - one playground (or other age-appropriate activity) minimum
- *Proposed:* Two playgrounds

- *Requirement:* Sport Courts or Pools - one court or pool minimum
- *Proposed:* No courts or pools

- *Requirement:* Multiuse/Rectangular/Soccer Fields - one multi-use field minimum
- *Proposed:* One multi-use field; however, the proposed field does not fully meet the recommended dimensions in the Guidelines as described above

Schools

- The proposed apartment units are anticipated to generate an additional 39 students. As illustrated in the table below, the 39 students projected from the development would not cause the enrollment levels for Norge Elementary or Warhill High Schools to exceed effective capacity. However, it would contribute to higher enrollment level exceeding the effective capacity at Toano Middle School. If physical improvements have been programmed through the County Capital Improvements Project (CIP), then the applicant will meet the adequate public school policy. Staff notes

that a new middle school is in the CIP and is currently under construction. As a result, the proposal meets the Adequate Public Schools Facilities Test.

Student Enrollment and School Capacity, WJCC Schools 2017

<i>School</i>	<i>Effective Capacity</i>	<i>Enrollment</i>	<i>Projected Students Generated</i>	<i>Enrollment + Projected Students</i>
Norge Elementary	695	583	± 17	600
Toano Middle	790	816	± 9	825
Warhill High	1,441	1,372	± 13	1,385

Source: Student Enrollment Report, October 2017

Fiscal Impact

- The Fiscal Impact Analysis worksheet was submitted per the Fiscal Year 2018 calculations provided by the Department of Financial and Management Services.
- Per that analysis, the development would result in a \$635,589 annual negative fiscal impact to the County.

Fire

- The location of the project allows for coverage by both Fire Station 1, located in Toano and Station 4, located on Olde Towne Road. The Community Impact Statement indicates that both stations are within a ten-minute drive of the project site.

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Staff Report for the February 7, 2018 Planning Commission Public Hearing

Utilities

- The project would be served by public water and sewer.
- The JCSA has recommended that a Water Conservation Agreement be prepared for this development: please see the “Ability to Guarantee the Development as Proposed” section above for discussion regarding this item.
- The JCSA has reviewed the Master Plan and concurs with the proposed utility layout generally.

Environmental/Cultural/Historic:

Environmental

- Watershed: Yarmouth Creek.
- The existing wet pond (Marston Pond) along the project’s southeast border will be used for meeting both water quality and quantity regulations. The Community Impact Statement and Master Plan commit to upgrades to the existing pond, including provision of a forebay near the entrance to the site which is recommended per the Yarmouth Creek Watershed Management Plan. This forebay shall be designed for off-site drainage in its current condition while the other two forebays will be designed for on-site drainage. The project will also need to implement three Special Stormwater Criteria measures to meet the Yarmouth Creek Watershed Management Plan: please see the “Ability to Guarantee the Development as Proposed” section above for discussion of this item. Additional details regarding stormwater management are shown on Sheet C5.0 of the Master Plan. In addition, for this location, staff finds that a Nutrient Management Plan would be preferred and is recommended. The applicant has included

provisions for a Nutrient Management Plan in the Easement Agreement.

- The Stormwater and Resource Protection Division has reviewed the proposal and generally concurs with the Master Plan as proposed.

Cultural/Historic

- A Phase I Archaeological Study has been conducted which concluded that no further archaeological historic preservation efforts were necessary on site. The Virginia Department of Historic Resources has reviewed the study, has concurred with the study findings and has asked for minor non-substantive revisions to the final report.

Nearby and Surrounding Properties

Visual Impact

- Staff finds that the proposed perimeter buffers mitigate visual impacts to other adjacent properties. Additionally, much of the eastern portion of the parcel includes Resource Protection Area which provides an even larger buffer.
- The project is located on a Community Character Corridor (CCC) per the adopted Comprehensive Plan, and thus, provides a 150-foot wooded buffer along the Richmond Road frontage of the subject property.

Height

- Please see Height Limitation Waiver application discussion in Attachment No. 9.

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Staff Report for the February 7, 2018 Planning Commission Public Hearing

COMPREHENSIVE PLAN

- This parcel is designated MDR by the adopted Comprehensive Plan. Recommended uses in MDR include multi-family units, apartments, recreation areas, manufactured home parks and subdivisions.
- This application proposes a gross density of 8.67 dwelling units per acre. For MDR the Comprehensive Plan recommends “a minimum gross density of four units per acre up to 12 units per acre, depending on the character and density of surrounding development, physical attributes of the property, buffers, the number of dwelling units proposed and the degree to which the development is consistent with the Comprehensive Plan. Development at this density is not recommended unless it offers particular public benefits. Examples of such public benefits include mixed-cost housing, affordable and workforce housing and enhanced environmental protection.” Please see the “Ability to Guarantee the Development as Proposed” section above for discussion regarding the provision of public benefits and requested density bonuses.
- Richmond Road is a Community Character Corridor. The project is within the Norge Community Character Area.
- Surrounding Comprehensive Plan Designations include Low Density Residential to the southeast, south and southwest (Villages at Candle Station, undeveloped land), Mixed Use (the CrossWalk Church parcel) and MDR (undeveloped land to the west and north across Richmond Road).

STAFF RECOMMENDATION

Please see the recommendation on pages 2 and 3.

JR/nb

RZ03-17HLW04-17OaklandP

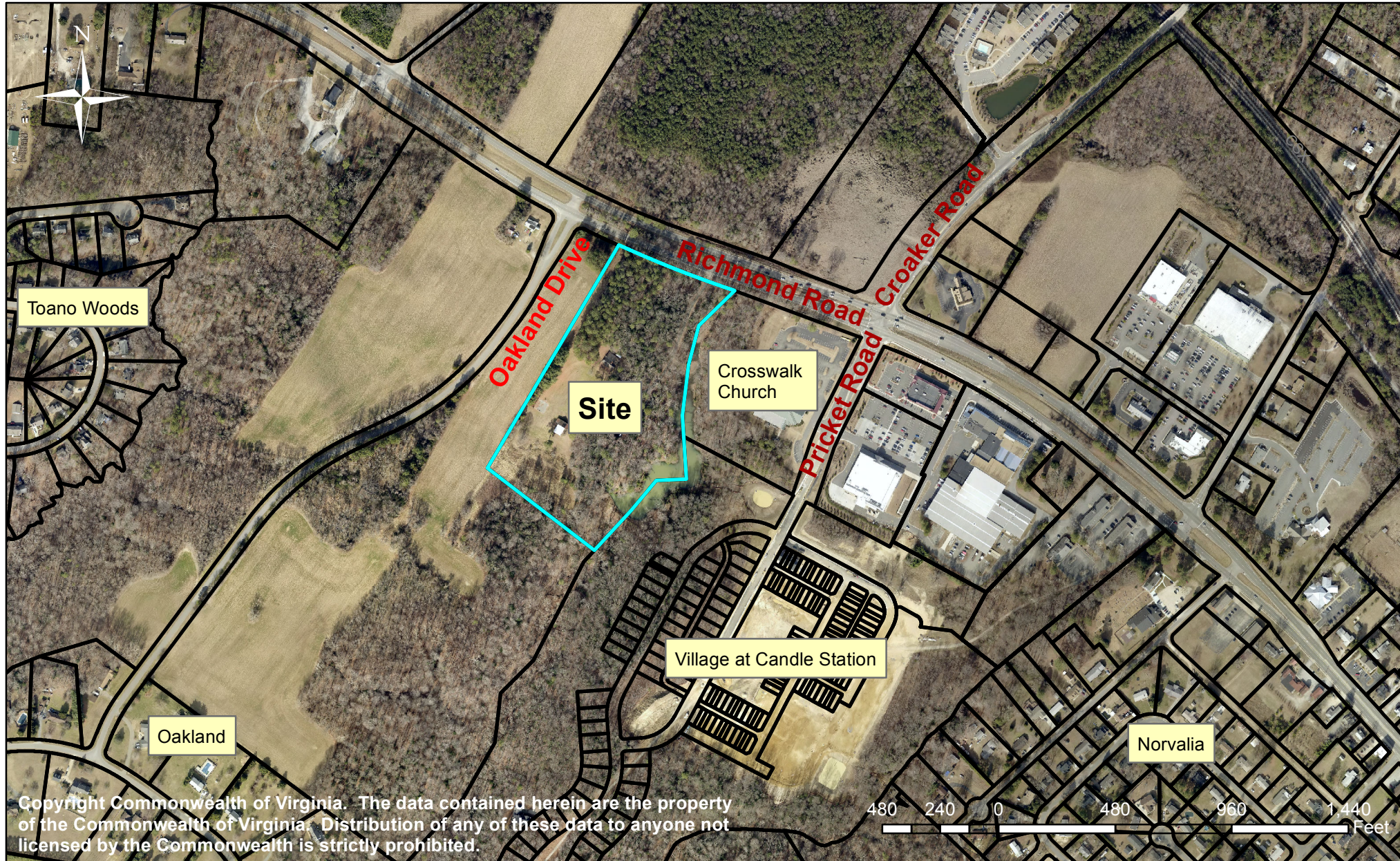
Attachments:

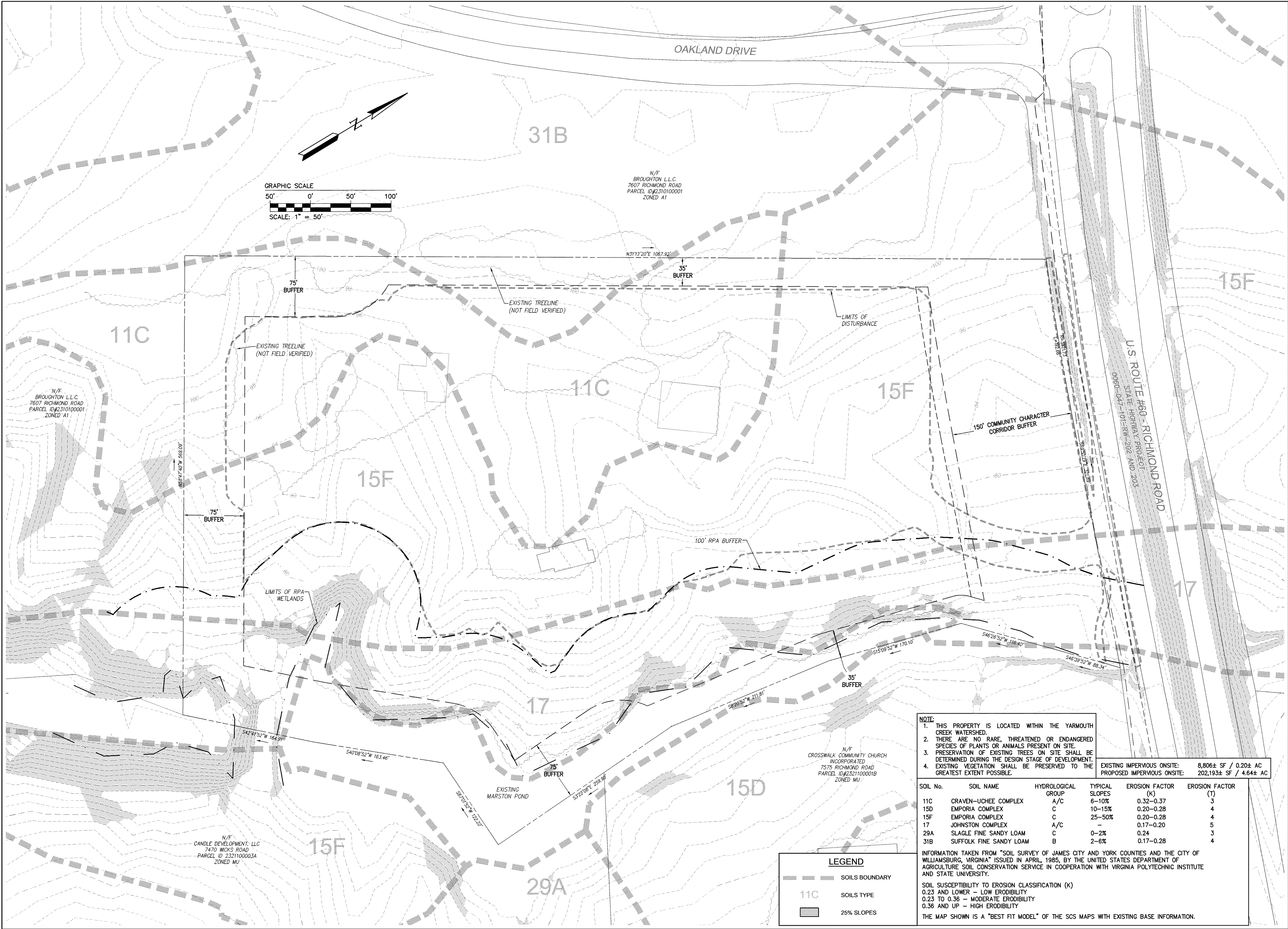
1. Location Map
2. Master Plan
3. Community Impact Statement
4. Fiscal Impact Study
5. Parks & Recreation Exception Request
6. Traffic Impact Study
7. LOS Information for the intersection of Richmond Road and Croaker Road/Pricket Road
8. Proposed Easement Agreement
9. Height Waiver Application Discussion
10. Draft Height Waiver Conditions
11. Low Income Tax Credit Program Information
12. Citizen Correspondence

This staff report is prepared by the James City County Planning Division to provide information to the Planning Commission and Board of Supervisors to assist them in making a recommendation on this application. It may be useful to members of the general public interested in this application.

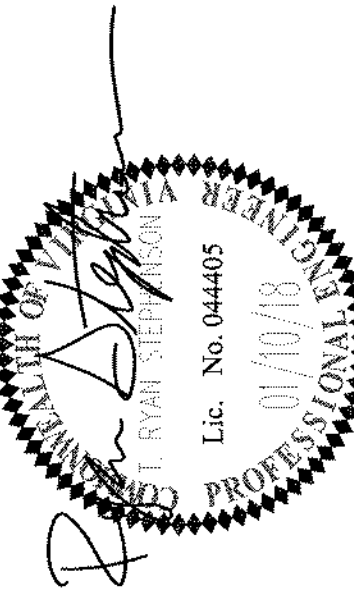
Z-0003-2017/HW-0004-2017

Oakland Pointe





Rev.	Date	Description
2	01/10/18	REVISED PER COUNTY COMMENTS
1	12/27/17	REVISED PER COUNTY COMMENTS



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Hampton Roads | Central Virginia | Middle Peninsula

MASTER PLAN
for
OAKLAND POINTE
DEVELOPER: CONNELLY BUILDERS, INC.

STONERIDGE DISTRICT | JAMES CITY COUNTY | VIRGINIA

Project Contacts: HWP/TRS
Project Number: 10503-00
Scale: 1"=50'
Date: 10/25/17

Sheet Title:
**EXISTING
CONDITIONS**

Sheet Number
C2.0

PROJECT TABULATIONS

AREA OF SITE	14.54± AC
EXISTING ZONING	A-1 (GENERAL AGRICULTURAL)
PROPOSED ZONING	R-5 (MULTIFAMILY RESIDENTIAL)
NET DEVELOPABLE AREA	12.93± AC
GROSS DEVELOPABLE AREA	10.02± AC
20% OF GROSS ACREAGE	2.91± AC
NET NON-DEVELOPABLE AREA	4.52± AC (31.1%)
RPA BUFFERS	4.52± AC
1,000 sf STEEP SLOPES (25+%)	0.00 AC
FEMA ZONES A,AE,AO,V,VE, COASTAL A	0.00 AC
TOTAL DWELLING UNITS	126 UNITS
MAXIMUM BUILDING HEIGHT	40'
UNIT DENSITY ALLOWED	9.00 DU/AC (WITHOUT DENSITY BONUS)
	9.90 DU/AC (WITH DENSITY BONUS)*
UNIT DENSITY PROPOSED	9.75 DU/AC
OPEN SPACE REQUIRED	1.29± AC (10% DEVELOPABLE AREA)
OPEN SPACE PROVIDED	5.84± AC (45.2% DEVELOPABLE AREA)
PERIMETER BUFFERS	0.65± AC
SWM FACILITIES	0.12± AC
REST OF SITE	5.07± AC
R-5 RECREATION AREA REQUIRED	1.26± AC
(0.5 AC. PER 50 UNITS @ 126 UNITS)	
RECREATION AREA PROVIDED	1.40± AC
(INCLUDES DOG RUN AREA, MULTI-USE FIELD, PLAYGROUND (TODDLER AND ELEMENTARY), PAVILION AND PARK)	
4' MULCH TRAIL	965 LINEAR FEET (NOT INCLUDED IN REC. AREA CALCULATIONS)
8' MULTI-USE 'HARD' TRAIL	2,390 LINEAR FEET (NOT INCLUDED IN REC. AREA CALCULATIONS)
PARKING CALCULATIONS	
PARKING REQUIRED	278 SPACES
(@ 2.2 SPACES PER UNIT)	
PARKING PROVIDED	280 SPACES

* PER SECTION 24-307 OF THE JCC ORDINANCE, AN ADDITIONAL BONUS POINT CAN BE OBTAINED BASED ON THE PROPOSAL FOR EARTH-CRAFT GOLD CERTIFICATION (SECTION 24-549 OF THE JCC ORDINANCE).

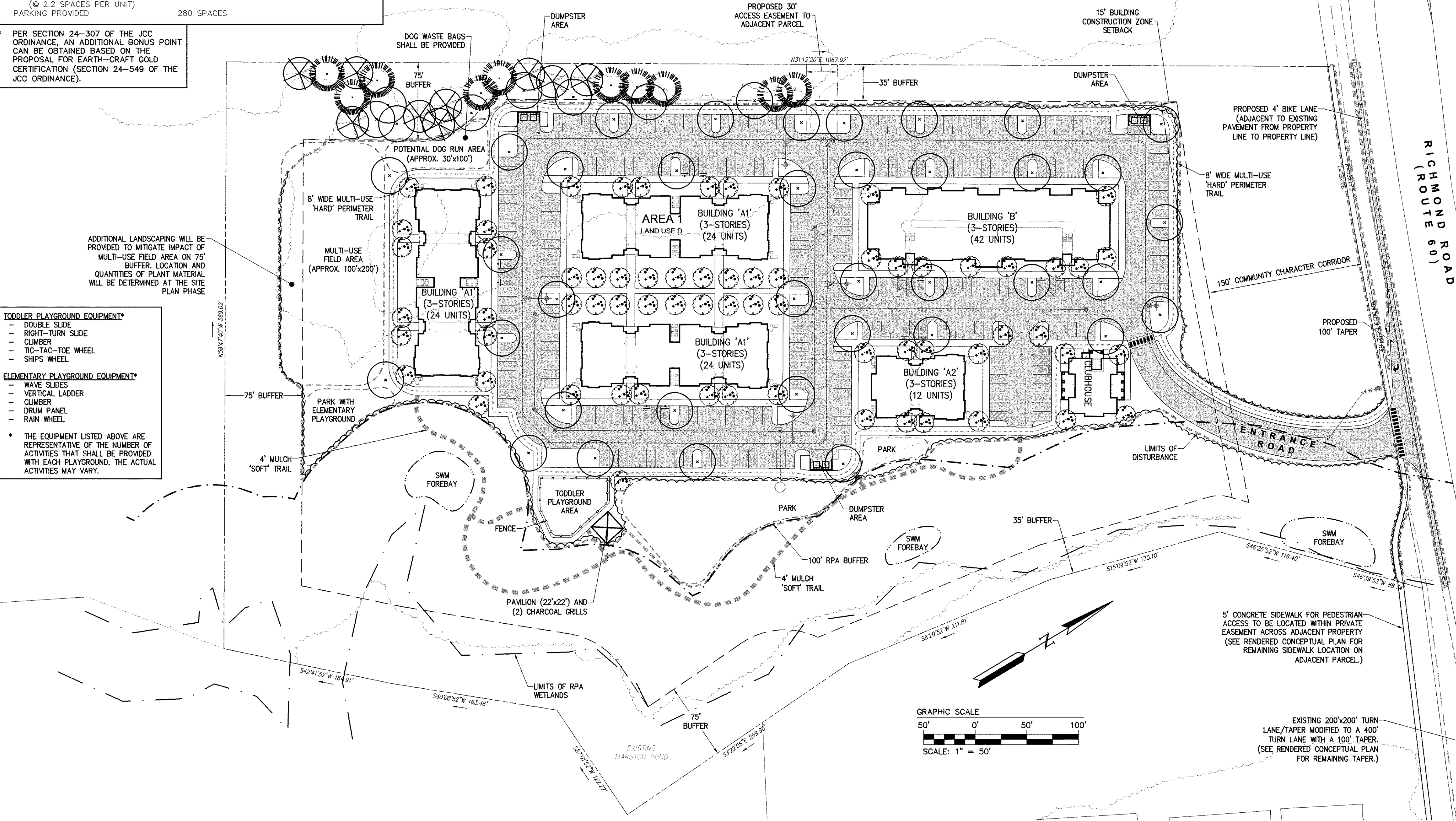
AREA TO BE REZONED TO R-5

LAND USE AREA	USE DESIGNATION	PROPOSED USE	AREA IN ACRES (±)	PERCENT OF TOTAL SITE	TOTAL UNITS	DENSITY PER GROSS ACRE	GFA SQ. FEET	MAX. FLOOR TO AREA RATIO
1	D,J	MULTIFAMILY RESIDENTIAL	14.54	100.0%	126	8.67 DU/AC	N/A	N/A

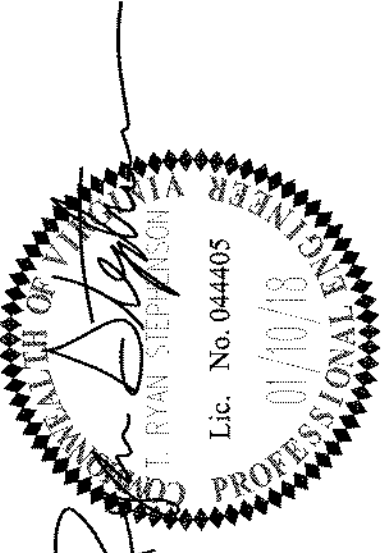
DESIGNATED LAND USE KEY:

D: APARTMENTS

J: COMMON OPEN SPACE WITH RECREATION AREAS



- NOTES:
1. PROJECT WILL BE DEVELOPED TO ACHIEVE EARTH-CRAFT GOLD CERTIFICATION.
 2. FINAL LAYOUT OF 5' SIDEWALK TO BE DETERMINED DURING THE DESIGN STAGE OF DEVELOPMENT AND BASED ON FIELD CONDITIONS.
 3. THE 4' MULCH TRAIL SHALL MEANDER THROUGH THE RPA BUFFER IN ORDER TO AVOID CLEARING AND MINIMIZING DISTURBANCE TO THE GREATEST EXTENT POSSIBLE.



THIS PLAN HAS NOT RECEIVED FINAL APPROVAL AND IS NOT APPROVED FOR CONSTRUCTION.

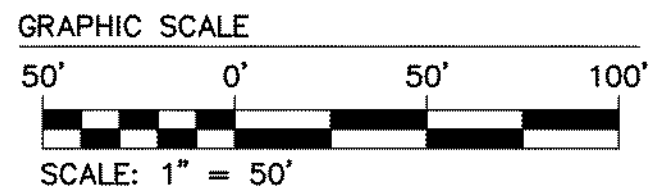
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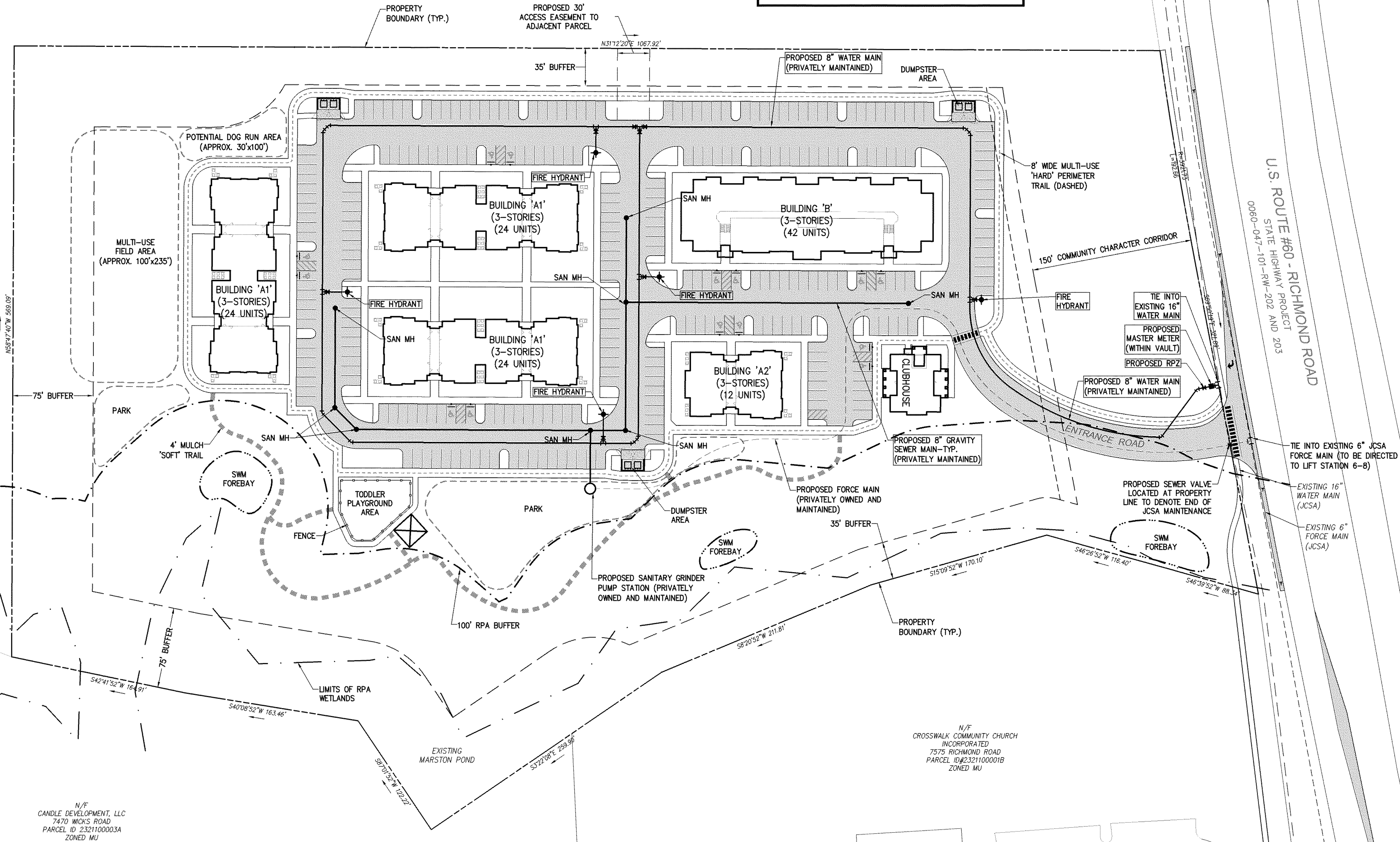
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Project Number:	10503-00
Scale:	1"=50'
Date:	10/25/17
Sheet Title:	MASTER CONCEPTUAL PLAN
Sheet Number	C3.0



- NOTES:
1. THE WATER AND SEWER PIPE DIAMETERS PROVIDED ON THIS PLAN ARE SUBJECT TO CHANGE DURING THE SITE PLAN DESIGN STAGE WHEN FURTHER MODELS AND ANALYSIS ARE CONDUCTED.
 2. WATER CONSERVATION STANDARDS SHALL BE DEVELOPED AND SUBSEQUENTLY APPROVED BY THE JAMES CITY SERVICE AUTHORITY.
 3. ONSITE WATER AND SEWER SHALL BE PRIVATE.
 4. A PORTION OF THE EXISTING FORCE MAIN GOING TO LIFT STATION 6-6 SHALL BE DISCONNECTED AND THEN RECONNECTED TO THE FORCE MAIN TO LIFT STATION 6-8 WHERE THERE IS SUFFICIENT CAPACITY.

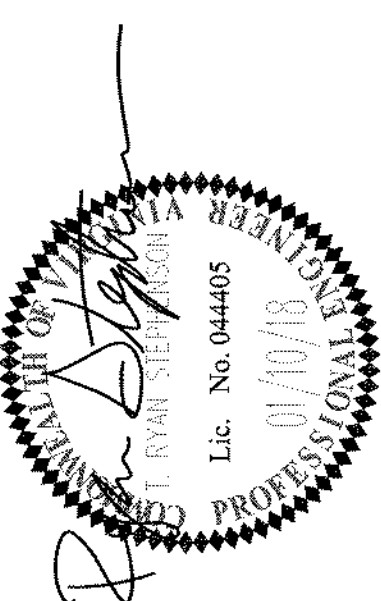
N/F
BROUGHTON L.L.C.
7607 RICHMOND ROAD
PARCEL ID#2310100001
ZONED A1

N/F
BROUGHTON L.L.C.
7607 RICHMOND ROAD
PARCEL ID#2310100001
ZONED A1



N/F
CANDLE DEVELOPMENT, LLC
7470 WICKS ROAD
PARCEL ID 2321100003A
ZONED MU

N/F
CROSSWALK COMMUNITY CHURCH
INCORPORATED
7575 RICHMOND ROAD
PARCEL ID#2321100001B
ZONED MU



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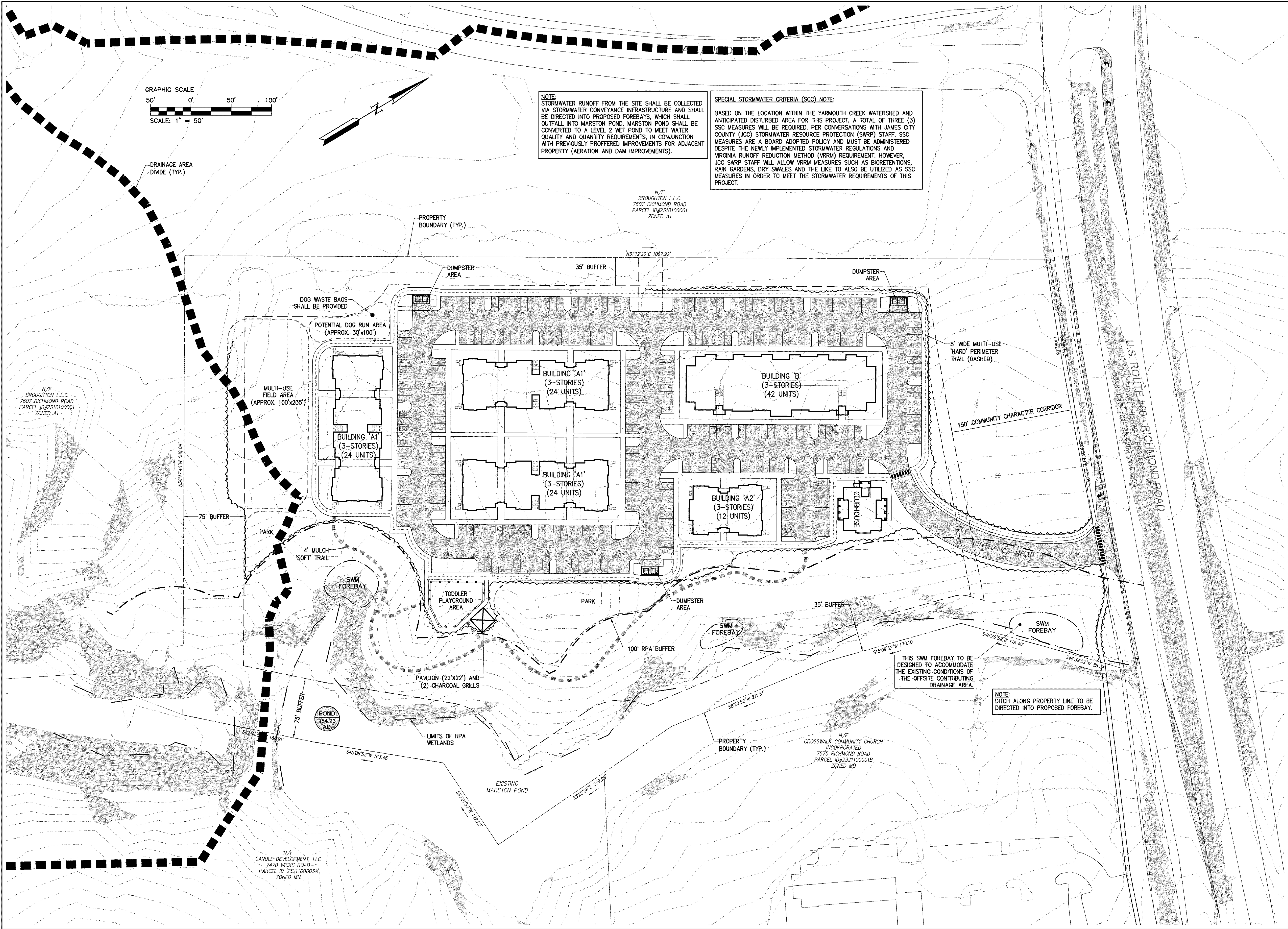
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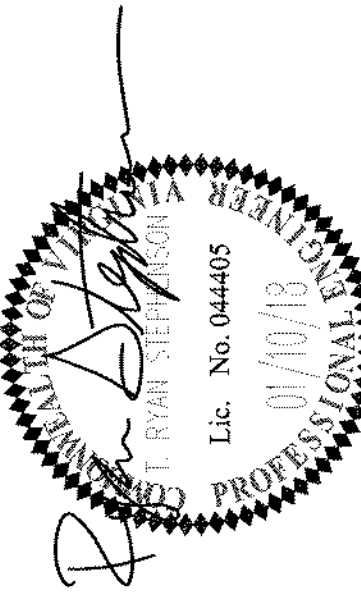
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Project Contacts:	HWP/TRS
Project Number:	10503-00
Scale:	1"=50'
Date:	10/25/17
Sheet Title:	MASTER UTILITY PLAN
Sheet Number	C4.0



REVISED PER COUNTY COMMENTS	JMB	JMB	JMB
2	01/10/18	1	12/27/17
1	12/27/17	1	12/27/17
Rev:	Date	Rev:	Date
By	By	By	By



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Project Contacts: HWP/TRS
Project Number: 10503-00
Scale: 1"=50' Date: 10/25/17
Sheet Title: MASTER STORMWATER PLAN
Sheet Number: C5.0

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1 BUILDING TYPE "A1" FRONT & REAR ELEVATION
1/8" = 1'-0"

- 80% of exterior surface Brick
- 20% Cementous siding (Hardi panel)
- Architectural cut 30 year shingles
- Metal handrails and railings
- Concrete decking on breezeways
- Aluminum color coordinated fascia
- Vinyl ventilated soffit
- Metal accent railings
- Energy Efficiency (Earthcraft Gold)

[illegible]

A B C

C

[illegible]

- NOTES:
1. PROJECT WILL BE DEVELOPED TO ACHIEVE EARTH-CRAFT GOLD CERTIFICATION.
 2. FINAL LAYOUT OF 5' SIDEWALK TO BE DETERMINED DURING THE DESIGN STAGE OF DEVELOPMENT AND BASED ON FIELD CONDITIONS.
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RENDERED CONCEPTUAL PLAN

OAKLAND POINTE

JAMES CITY COUNTY, VIRGINIA

(AES PROJECT #: W10503-00 - AES PROJECT CONTACT: T. RYAN STEPHENSON, P.E.)



Revised: 1/02/2018

DATE: 12/06/2017

SCALE: 1"=50'

SHEET 1 of 1



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Community Impact Statement

For

Oakland Pointe

Prepared For

***Connelly Development, LLC
125 Old Chapin Road
Lexington, SC 29072
803-798-0572***

Original: October 25, 2017

Revised: January 10, 2018

AES Project Number: W10503-00

County Number: C-0072-2017

Prepared by:



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I. INTRODUCTION

Connelly Development, LLC proposes to amend the Zoning Map of James City County, Virginia to create a Multifamily Residential District (R-5) on approximately 14.5 acres presently zoned General Agriculture (A-1). The proposed R-5 would consist of 126 affordable apartment units with access directly off of Richmond Road. The property is located in the Stonehouse District adjacent to Oakland Farms, Crosswalk Church and Villages at Candle Station. A vicinity map is included on page 6.

The purpose of this Community Impact Statement is to summarize and organize the planning efforts of the project team into a cohesive package for Staff review, addressing the pertinent planning issues, the requirements of the Multifamily Residential Zoning District, cultural, fiscal, and physical impacts of the proposed development to the County.

Connelly Development, LLC Bio

President Mr. Kevin Connelly is a second-generation builder, with a reputation for performance, value and integrity spanning more than 30 years. The Company approach is to build each project as if we were building it for ourselves- professionally, safely, within budget, on schedule and by partnering. Seventy percent of Mr. Connelly's work is for repeat clients.

Since becoming involved in the residential construction and development industry in 1987 Kevin has been instrumental in producing over 5,867 units of multi-family housing. He is very involved in all aspects of his company's day-to-day operations and has demonstrated the ability to exceed expectations. His experience and knowledge within the construction industry has been instrumental in resolving design challenges often coming up with an innovative approach that is more economically feasible.

Connelly Builders, Inc. has an Unlimited General Contractor License with the State of North Carolina, Georgia, Virginia and South Carolina. Connelly Builders has experience and capability of building anything from a single-family detached dwelling to a mid- rise residential structure.

Kevin is a native of Lexington, South Carolina and is very active within his community. He is a past member of the Lexington Jaycees having served as Vice President, is a member of the Lexington Chamber of Commerce, served as Committee Chairman for the Lexington Chamber of Ducks Unlimited. He is a very active member of the South Carolina Home Builders Association. Kevin is a Board Member, Investors Council Member, has served as Chairman of the Public Policy Committee, and past President of the South Carolina Affordable Housing Coalition.

Kevin is also very active in his church, Mt. Horeb United Methodist in Lexington. Recently Kevin served as co-chair of the building committee and was instrumental in planning, design, and overseeing construction of their \$16.4 million-dollar expansion, one of the largest expansions of the United Methodist Churches in the United States.

II. THE PROJECT TEAM

The organizations that participated in the preparation of the information provided with this rezoning submission are as follows:

- | | |
|---------------------|--|
| • Developer | - Connelly Development, LLC |
| • Civil Engineering | - AES Consulting Engineers |
| • Land Planning | - AES Consulting Engineers |
| • Traffic | - DRW Consultants, LLC |
| • Environmental | - Kerr Environmental Services Corp. |
| • Archaeology | - Circa~ Cultural Resource Management, LLC |
| • Attorney | - Kaufman & Canoles |

Key Components of this Community Impact Statement are:

- Existing Conditions
- Project Description
- Planning Considerations
- Analysis of Impacts to Public Facilities and Services
- Analysis of Environmental Impacts
- Analysis of Storm Water Management
- Traffic Impact Analysis
- Fiscal Impact Study
- Conclusions

III. EXISTING CONDITIONS

Site Location - See Figure 1, Vicinity Map, page 6

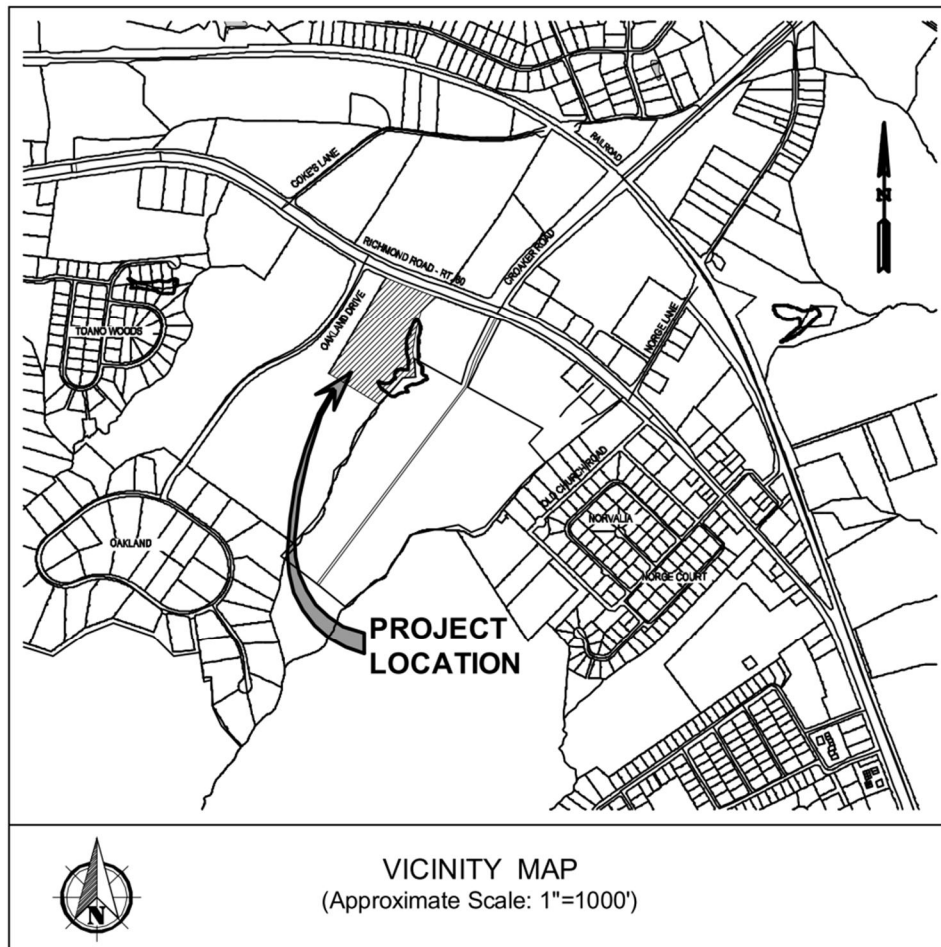
The Existing Conditions Map (included in the Appendix) details the location of buffers, wetlands, soils and slopes. The Master Plan also adheres to all items noted in the environmental constraints analysis as spelled out in Section 24-23 of the Zoning Ordinance. A pre-development site analysis revealed the following results:

Gross Site Area	14.54 acres
<i>RPA Buffers</i>	4.52 acres
<i>Non-RPA Wetland areas</i>	0.00 acres
<i>Areas of 25% or greater slopes (beyond RPA Buffers)</i>	0.00 acres
<u>Total Non-Developable Area</u>	<u>4.52 acres</u>
Gross Developable Area	10.02 acres

IV. PROJECT DESCRIPTION

Connelly Development, LLC proposes to establish an R-5, Multifamily Residential District on the 14.54 acre property. The proposed property will consist of a maximum of 126 apartment units with a clubhouse, multi-use field area, two playground areas (one for toddlers and one for elementary school aged children), pavilion (with charcoal grills), dog run area and a trail/sidewalk system. The concept, as depicted on the Master Plan (included in the Appendix), shows the proposed layout of the site. The roads serving the community will be private and there will be one entrance that will tie into Richmond Road south of Oakland Drive and it will utilize the existing entrance to the property. Pedestrian connectivity shall be provided to the adjacent properties with a proposed 5' concrete sidewalk. A separate 4' shoulder bike lane will extend from property line to property line along the existing pavement at the property's frontage (conforming to the County's bike lane program). This project will consist of 100% affordable housing through the VHDA program and it will serve a greater need for affordable housing throughout James City County (JCC) in accordance with the JCC Strategic Plan.

Figure 1



VICINITY MAP
for
Oakland Pointe
James City County, Virginia

V. PLANNING CONSIDERATIONS

A. Land Use & Density

The entire 14.54 acre parcel is currently zoned as A-1, General Agriculture District and the Comprehensive Plan designates this parcel as Moderate Density Residential (4 to 12 units/acre). Initial discussions with James City County Staff have indicated that the proposed residential development with affordable housing would be an appropriate neighbor to the existing communities and a good land use fit for this particular site.

The proposed site has a gross density of 8.67 units per acre, which is below the maximum density allowed in the Moderate Density Residential (MDR) classification of the Comprehensive Plan. After subtracting non-developable areas, the net developable area for the site is 12.93 acres which results in a proposed net density of 9.75 units/acre. While this is also within the range of the MDR, the allowable density per the R-5 zoning district (for projects with 101-200 units and three stories or more) is 9.0 units/acre. In order to adhere to the Zoning Ordinance, a bonus point for Earth-Craft Gold certification shall be utilized to meet the required density. With the bonus point added (10% above the base density of 9.0); the new maximum density for the site is 9.90 units/acre. Our proposed density of 9.75 units/acre falls within the newly established density.

B. Environmental

Watershed protection surrounding Yarmouth Creek played an important role when making decisions regarding this property. The proposed development was laid out to provide as much undisturbed open space as possible and limit disturbance to the existing RPA buffer while avoiding impacts to the existing wetlands.

C. Historic & Archeological

Circa~ Cultural Resource Management, LLC has completed a Phase I archaeological investigation for the property. The study has been provided to James City County and it found that no further investigation is required for the property.

D. Zoning Strategy

Since residential apartments are not an allowed use within the A-1 District, a rezoning is being sought to create a Multifamily Residential District (R-5) designation for the property. The Multifamily Residential District is an appropriate vehicle for this proposal and falls in line with the Comprehensive Plan that shows this area as moderate density residential (4 to 12 units/acre). This district provides opportunities for development which reduces land consumption, reduces the amount of land devoted to streets and other impervious surfaces by requiring increased amounts of open space, buffers and

recreational amenities. The conclusions that follow in this report will summarize how this proposal meets the criteria and purpose of the Multifamily Residential District.

While the Zoning Ordinance establishes maximum building heights for the R-5 zoning district, Connelly Development, LLC requests a waiver to permit apartment building heights not to exceed 40 feet. A formal waiver request has been provided to James City County under separate cover.

E. Parks and Recreation

Connelly Development, LLC proposes to provide recreational amenities (1.30 acres of recreation space provided versus 1.26 acres required) designed to satisfy the JCC Recreational Facility Development Guidelines. These amenities shall include a clubhouse, multi-use field area, two playground areas (one for toddlers and one for elementary school aged children), pavilion (with charcoal grills), dog run area and a trail/sidewalk system. The playground areas will each consist of at least five elements and possible facility elements are listed on the Master Plan.

With this application Connelly Development, LLC also requests a waiver to provide alternate amenities from what is detailed in the JCC Recreational Facility Development Guidelines. A formal waiver request has been provided to James City County under separate cover.

VI. ANALYSIS OF IMPACTS TO PUBLIC FACILITIES AND SERVICES

A. Public Water & Sewer Facilities

The proposed development will generate 39,060 GPD (average project daily flow). As this flow is less than 40,000 GPD, an HRSD flow acceptance letter is not required.

Water service shall be provided by looping the system and connecting to the existing 16" JSCA water main located along Richmond Road. The Utility Master Plan is included in the Appendix and shows the proposed waterline layout to serve the development. The site will include a master meter near the property line (at the connection) and all onsite water distribution system features beyond the master meter will be privately owned and maintained. Hydrants will be provided to meet JSCA minimum standards and as otherwise directed by the Fire Marshall.

A fire hydrant flow test was conducted by JCSA on October 18, 2017 and the results of the test indicate approximately 5,850 gpm of flow at 20 psi. These results will be placed into a water model which will be completed and submitted prior to or with the final site plan. The model will examine volume and pressures throughout the immediate water system area, however based on the flows obtained during the test there should be adequate availability for the 126 proposed units.

Sanitary sewer service is provided to the site by a proposed (privately owned and maintained) on-site gravity sewer collection system which will convey wastewater flows to a proposed grinder pump station which will also be privately owned and maintained. Flows will then be directed from the station via proposed sewer force main to an existing 6" JCSA sewer force main along Richmond Road. Per conversations with JCSA, a portion of the existing force main heading towards Lift Station 6-6 shall be disconnected and reconnected into the Lift Station 6-8 service area. This shall be done due to the fact that Lift Station 6-6 would have to be upgraded to handle the additional flow, while Lift Station 6-8 has capacity for this development.

All system components shall be designed to JCSA standards; however onsite water and sewer features will be privately owned and maintained. Please refer to the Utility Master Plan (included in the Appendix) for the preliminary layout of the on-site water and sanitary sewer system. Please find "Table 1" which shows the anticipated wastewater flows for the project.

Table 1 – Projected Wastewater Flows

Type of Development	No. of Units	Flow (GPD/Unit)	Average Daily Flow (GPD)	Duration (hrs)	Avg. Flow (GPM)	Peak Flow (GPM)
RESIDENTIAL						
Apartment Units	126	310	39,060	24	27.1	67.8
TOTAL			39,060		27.1	67.8

B. Fire Protection and Emergency Services

There are currently five (5) fire stations providing fire protection and Emergency Medical Services (EMS) services to James City County. Two (2) stations are located within a reasonable distance to the project site. These are Fire Stations 1 and 4. The closest fire station to the subject site within James City County is Fire Station 1, located at 3135 Forge Road, approximately 2 miles west of this project site. However, both of these stations are within a 10 minute drive of the project site. Response time to the site is within appropriate limits if an emergency event occurs which requires additional fire and life safety support. The proximity of the site to these two fire stations affords the future residents of the project more than adequate response to potential emergencies.

C. Solid Waste

The proposed development on the subject property will generate solid wastes that will require collection and disposal to promote a safe and healthy environment. Multiple dumpster locations are provided on site where trash and recycle material can be deposited into the appropriate vehicle for transport of both materials to a solid waste transfer station.

D. Utility Service Providers

Virginia Natural Gas, Dominion Virginia Power, Cox Communications, and Verizon Communications provide respectively; natural gas, electricity, cable TV service, and telephone service to this area. The current policy of these utility service providers is to extend service to the development at no cost to the developer when positive revenue is identified; plus, with new land development, these utility service providers are required to place all new utility service underground.

E. Schools

The proposed development will generate approximately 39 students K-12. This figure is based on the proposal to build 126 apartment units at a student generation rate of 0.31 per apartment unit. This calculation is provided as part of the Fiscal Impact Analysis (included within the Appendix). The calculated number of K-5 students generated from the proposed development is 17 (44%), grade level 6-8 is 9 (23%) and grade level 9-12 is 13 (33%). The multiplier used for each grade level is based on the pro rata share of students currently enrolled in each grade level as reported in the 2016-2017 enrollment report published by James City County.

The proposed development will be zoned for students to attend Norge Elementary School, Toano Middle School and Warhill High School. All of these schools are currently operating below capacity.

VII. ANALYSIS OF ENVIRONMENTAL IMPACTS

A. Wetlands & Resource Protection Areas

There are existing wetlands and associated Resource Protection Area (RPA) buffers on site and they are shown within the Master Plan (included in the Appendix). The only anticipated impacts to the RPA buffer are for the installation of forebays within the existing on-site BMP, corresponding storm outfalls and a portion of the entrance into the site. The impacts related to the installation of forebays and corresponding storm outfalls can be approved administratively per County Staff. The entrance improvements within the RPA buffer will follow the already cleared existing entrance and will be designed to curve out of the RPA as quickly as possible in order to minimize disturbance to the RPA buffer. This impact however, will need to be approved by the Chesapeake Bay Board.

The wetlands have been field located per delineation by Kerr Environmental Services Corp. and a confirmation of the wetlands and RPA buffers shall be provided by the Army Corps of Engineers during the site plan stage.

B. Soils

The USDA Web Soil Survey shows several soil types within the property boundary. This property is predominantly situated on low to moderately drained soils of Craven-Uchee Complex, Emporia Complex and Johnston Complex soil types. Soils mapping can be seen on the Existing Conditions Map (included in the Appendix).

VIII. ANALYSIS OF STORMWATER MANAGEMENT

A. Water Quality

The Virginia Runoff Reduction Method (VRRM) as set forth by the Virginia Department of Environmental Quality (DEQ) governs the water quality requirements for both new and re-development projects. Since this proposed project will be constructed on mostly wooded area, this site is classified as a “New Development” project. Following the procedures for a new development, the required pollutant load reduction will be calculated to ensure the proposed development does not have a negative impact on downstream waterways. This reduction is measured in total phosphorus, a chemical that the DEQ has determined that drives all other pollutants levels. Essentially, if phosphorus is reduced, so are all the other pollutants.

The VRRM spreadsheet has been included in the Appendix detailing the site soil data, required pollutant removal, and Best Management Practices (BMPs) provided to achieve improved water quality. For this proposed site, 9.03 lbs/year of phosphorus load reduction is required. The existing wet pond (Marston Pond) located on site will be converted to a Level 2 Wet Pond (DEQ SPEC #14) and will be used to treat 13.45 acres of the proposed development, including 4.62 acres of impervious area, in order to achieve this requirement. The existing pond was designed to handle an area equivalent to 60% impervious for the entire parcel (approximately 8.73 acres) however our site is only proposing approximately 4.62 acres of impervious cover (or approximately 32%). Using this Level 2 Wet Pond, 10.82 lbs/year of phosphorus load reduction will be achieved. This load reduction exceeds the requirement by 1.79 lbs/year. Additionally, this Level 2 Wet Pond will need to meet the specifications as set forth by the DEQ, including but not limited to providing adequate treatment volume.

B. Water Quantity

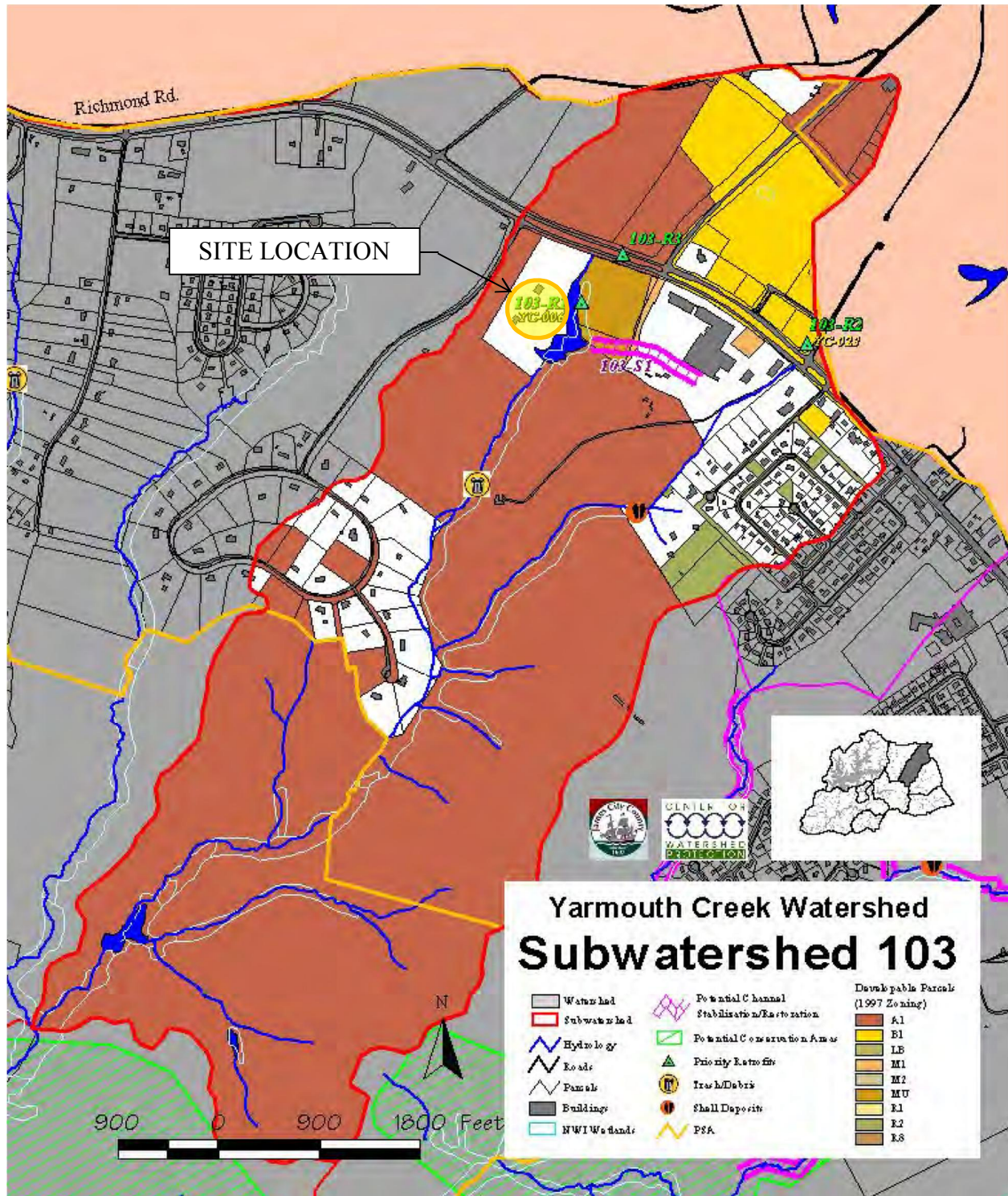
Water quantity control is required to ensure that the post-construction stormwater runoff is controlled to a point that is either at or below the existing condition in terms of flow rates. This quantity of stormwater will be reduced by storing the increased stormwater runoff for a period of time before releasing it back into the downstream waterway. The Level 2 Wet Pond as previously used for water quality control will also be used to store the stormwater to reduce the flow. The Runoff Reduction Method will be used in combination with the SCS Method to calculate the required volume for the Level 2 Wet Pond. Appropriate measures will be taken to ensure that the 1, 2, 10, and 100-year

storms are properly contained within the Level 2 Wet Pond and discharged over time with appropriate flows to maintain or better the existing condition.

C. *Special Stormwater Criteria*

Oakland Pointe is located in Subwatershed No. 103, an area considered to be “sensitive” by the Yarmouth Creek Watershed Management Plan as shown below in Figure 2. This plan was put in place to help prevent any degradation of the ecosystem and waterways downstream of Yarmouth Creek. Based on the anticipated disturbed area for this project, a total of three (3) Special Stormwater Criteria (SSC) measures will be required. Per conversations with JCC staff, SSC measures are a Board adopted policy and must be administered despite the newly implemented stormwater regulations and Virginia Runoff Reduction Method (VRRM) requirements. However, JCC staff will allow VRRM measures such as bioretentions, rain gardens, dry swales and the like to also be utilized as SSC measures in order to meet the stormwater requirements of this project. In addition, a forebay has been added to Marston Pond (near the entrance to the site) which is recommended per the Yarmouth Creek Watershed Management Plan. This forebay shall be designed for off-site drainage in its current condition while the other two proposed forebays will be designed for on-site drainage.

Figure 2



D. Storm Sewer System

The proposed storm sewer system will be comprised mainly of curb inlets and reinforced concrete pipes that are placed throughout the site at critical locations. This system will be used to convey the stormwater runoff into the proposed forebays, which will then outfall into the Level 2 Wet Pond for treatment. The Stormwater Master Plan (included in the Appendix) provides the drainage area divide for the stormwater facility. During final design, storm pipe, structures and the forebays will be located accordingly and calculations will be provided.

IX. ANALYSIS OF IMPACTS TO TRAFFIC

DRW Consultants, LLC has completed the required traffic study for the property. The report and findings have been provided to VDOT and James City County for review. Turn lane and entrance improvements have been added to the Master Plan in accordance with the study. These improvements include a proposed 100' taper into the development, a proposed westbound 100'x100' turn lane/taper at Oakland Drive and the modification of an existing eastbound 200'x200' turn lane/taper into a 400' turn lane with 100' taper at the intersection of Richmond Road and Pricket Road.

X. FISCAL IMPACT STUDY

A Fiscal Impact Analysis has been prepared and is included in this submittal to the County for review.

XI. CONCLUSIONS

Oakland Pointe represents an appropriate use of land on this site in James City County. This proposed project helps to fill a growing regional need of affordable housing in James City County.

This proposed community meets the intent of the Comprehensive Plan with assurances for the provision of ample open space and its efficient use. The project team's experience in construction assures the county of high standards of design, layout and construction. Oakland Pointe will provide a model for the development of affordable housing in James City County.

The traffic study has concluded that minor turn lane/stacking improvements to Richmond Road will be necessary, while the proposed development will not have a significant impact to the school system. The fiscal analysis concludes a net negative fiscal impact to the County at build out. However, this development addresses the County's long-term need for affordable housing.

There are adequate public utilities with capacity to serve this project. The site is capable of being served by public sewer and water. Fire and life safety issues have been addressed with this application.

Finally, the careful planning of this project with regard to open space, buffers, carefully planned stormwater management systems and limits on impervious surfaces assures the County that the sensitive Subwatershed No. 103 of the Yarmouth Creek Watershed will be protected.

APPENDIX

Color Rendered Conceptual Plan
Master Plan Drawings
VRRM Summary - BMP Pollutant Removal Calculation
Fiscal Impact Analysis
Architectural Drawings



Please make sure to use the accompanying Excel Spreadsheet to calculate the numbers below.

FISCAL IMPACT WORKSHEET AND ASSUMPTIONS

Please complete all *applicable* sections. Please use the provided spreadsheet to perform calculations. If space provided is insufficient, please feel free to include additional pages. If you have any questions please contact the Planning Office at 757-253-6685 or planning@jamestownva.gov

- 1a) PROPOSAL NAME: _____
- 1b) Does this project propose residential units? Yes ☐ No ☐ (if no, skip Sec. 2)
- 1c) Does this project include commercial or industrial uses? Yes ☐ No ☐ (If no, skip Sec. 3)

Fiscal Impact Worksheet Section 2: Residential Developments

- 2a) TOTAL NEW DWELLING UNITS. Please indicate the total number of each type of proposed dwelling unit. Then, *add* the total number of new dwelling units.

Single-Family Detached		Apartment	
Townhome/Condominium/Single-Family		Manufactured Home	
Total Dwelling Units			

Are any units affordable? Yes ☐ No ☐ (If yes, how many?) _____

Residential Expenses – School Expenses

- 2b) TOTAL NEW STUDENTS GENERATED. *Multiply* the number of each type of proposed unit from (2a) its corresponding Student Generation Rate below. Then, *add* the total number of students generated by the proposal.

Unit Type	Number of Proposed Units (from 2a)	Student Generation Rate	Students Generated
Single-Family Detached		0.40	
Townhome/Condo/Attached		0.17	
Apartment		0.31	
Manufactured Home		0.46	
Total			

- 2c) **TOTAL SCHOOL EXPENSES.** *Multiply* the total number of students generated from (2b) by the Per-Student Total Expenses below.

Total Students Generated	Per-Student Operating Expenses	Per-Student Capital Expenses	Per-Student Total Expenses	Total School Expenses
	\$8,494.00	\$2,597.00	\$11,091.00	\$ 433,214.46

Residential Expenses - Non-School Expenses

- 2d) **TOTAL POPULATION GENERATED.** *Multiply* the number of proposed units from (2a) and multiply by the Average Household Size number below.

Total Units Proposed	Average Household Size	Total Population Generated
	2.45	

- 2e) **TOTAL NON-SCHOOL EXPENSES.** *Multiply* the population generated from (2d) by the Per-Capita Non-School Expenses below.

Total Population Generated	Per-Capita Non-School Expenses	Total Non-School Expenses
	\$1,187.00	\$

- 2f) **TOTAL RESIDENTIAL EXPENSES.** *Add* school expenses from (2c) and non-school expenses (2e) to determine total residential expenses.

Total School Expenses	Non-School Expenses	Total Residential Expenses
\$	\$	\$

Residential Revenues

- 2g) **TOTAL REAL ESTATE EXPECTED MARKET VALUE.** Write the number of each type of units proposed from (2a). Then *determine the average* expected market value for each type of unit. Then, *multiply* the number of unit proposed by their average expected market value. Finally, *add* the total expected market value of the proposed units.

Unit Type:	Number of Units:	Average Expected Market Value:	Total Expected Market Value:
Single-Family Detached		\$	\$
Townhome/Condo/Multi-family		\$	\$
Total:		N/A	\$

- 2h) **TOTAL REAL ESTATE TAXES PAID.** *Multiply* the total market value from (2g) by the real estate tax rate below.

Total Market Value	Real Estate Tax Rate	Total Real Estate Taxes Paid
\$.0084	\$

- 2i) TOTAL PERSONAL PROPERTY TAXES PAID. *Multiply* the total real estate taxes paid (2h) by the property tax average below.

Real Estate Tax Paid	Personal Property Tax Average	Personal Property Taxes Paid
\$	0.15	\$

- 2j) TOTAL SALES & MEALS TAXES PAID. *Multiply* the total real estate taxes paid (2h) by the sales and meals tax average below:

Real Estate Tax Paid	Sales and Meals Tax Average	Total Sales & Meals Taxes Paid
\$.09	\$

- 2k) TOTAL CONSERVATION EASEMENT TAXES PAID. If the proposal contains a conservation easement, *multiply* the size of the proposed conservation easement by the conservation easement assessment rate.

Proposed Conservation Easement Size	Assessment Rate	Conservation Easement Taxes Paid
	\$2000/acre (prorated)	\$

- 2l) TOTAL HOA TAXES PAID. If the HOA will own any property that will be rented to non- HOA members, *multiply* the expected assessed value of those rentable facilities by the real estate tax rate below.

HOA Property Type	Total Assessed Value	Real Estate Tax Rate	Total HOA Taxes Paid
		.0084	\$

- 2m) TOTAL RESIDENTIAL REVENUES. *Add* all residential taxes paid to the County from (2h) through (2l).

Total Residential Revenues	\$
----------------------------	----

- 2n) RESIDENTIAL FISCAL IMPACT. Subtract total residential revenues (2m) from total residential expenses (2f)

Total Residential Expenses	Total Residential Revenues	Total Residential Fiscal Impact
		\$

Fiscal Impact Analysis Worksheet Section 3: Commercial and Industrial Developments

Commercial and Industrial Expenses

- 3a) TOTAL NEW BUSINESSES. How many new businesses are proposed? _____
(Include all businesses that will rent or lease space at the location as part of the proposal, including probable tenants of an office park or strip mall).

- 3b) TOTAL COMMERCIAL EXPENSES. *Multiply* the total business real estate expected assessment value from (3c) below by the Commercial Expenses Rate below.

Total Expected Assessment Value	Commercial Expense Rate	Total Commercial Expenses
\$1	0.0045	\$

Commercial & Industrial Revenues

- 3c) TOTAL REAL ESTATE EXPECTED ASSESSMENT VALUE. *Estimate* the expected real estate assessment value, at buildout, of all proposed commercial element properties below.

Proposed Business Properties (by use and location)	Expected Assessment Value
Total:	\$

- 3d) TOTAL REAL ESTATE TAXES PAID. *Multiply* the total expected market property value from (3c) by the real estate tax rate below.

Expected Market Value	Real Estate Tax Rate	Real Estate Taxes Paid
	.0084	\$

- 3e) TOTAL BUSINESS PERSONAL PROPERTY TAXES PAID. *Multiply* the total business capitalization for each proposed commercial element by the business personal property tax rate below. Then *add* the total personal property taxes paid.

Proposed Business Name	Total Business Capitalization	Personal Property Tax Rate	Total Business Property Taxes Paid
		0.01	
		0.01	
		0.01	
Total:		N/A	\$

- 3f) TOTAL BUSINESS MACHINERY AND TOOLS TAXES PAID. If any manufacturing is proposed, *multiply* the total business capitalization for each proposed manufacturing element by the business machinery and tools tax rate below. Then, *add* the machinery and tools tax paid.

Proposed Business Name	Total Business Capitalization	Machinery and Tools Tax Rate	Total Business Property Taxes Paid
		0.01	
		0.01	
Total:		N/A	\$

- 3g) **TOTAL SALES TAXES PAID.** *Estimate* the applicable total gross retail sales, prepared meals sales, and hotel/motel room sales for proposal's commercial elements below. Then, *multiply* the projected commercial gross sales by the applicable sales tax rates. Then, *add* the total sales taxes paid.

Tax Type	Projected Gross Sales	Sales Tax Rates	Sales Taxes Paid
Retail Sales		0.01 of Gross Retail Sales	
Prepared Meals		0.04 of Prepared Sales	
Hotel, Motel		0.02 of Gross Sales*	
Total:	N/A	N/A	\$

*Actual Occupancy Tax is 5% of Gross Sales; however, 60% of those funds are targeted to tourism.

- 3h) **TOTAL BUSINESS LICENSES FEES PAID.** Estimate each business element's total gross sales. Multiply each business element's projected gross sales by the Annual Business License rate to determine annual business licenses fee paid.

Proposed Business Name(s)	Business Type* (see exhibit sheet)	Projected Total Gross Sales	Business License Rate	Annual Business License Fees Paid
	Professional Services		0.0058	
	Retail Services		0.0020	
	Contractors		0.0016	
	Wholesalers		0.0005	
	Exempt*		No fee due	
	Other Services		0.0036	
	Total	N/A	N/A	\$

- 3i) **TOTAL COMMERCIAL AND INDUSTRIAL REVENUES.** *Add* the total taxes and fees paid by all of the business elements from (3d) through (3h).

Total Commercial and Industrial Revenues	\$
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- 3j) **COMMERCIAL FISCAL IMPACT.** *Subtract* total commercial and industrial revenues (3i) from total commercial and industrial expenses (3b).

Total Commercial Expenses	Total Commercial Revenues	Total Commercial Fiscal Impact
		\$

- 3k) **TOTAL PROPOSED FISCAL IMPACT.** *Add* residential fiscal impacts (2n) and commercial fiscal impacts (3j).

Residential Fiscal Impact	Commercial Fiscal Impact	Total Proposed Fiscal Impact
		\$

Fiscal Impact Analysis Worksheet Section 4: Current Land Use

Current Residential Use (If there are no existing residential units, skip to (4g)).

- 4a) TOTAL CURRENT DWELLING UNITS. Please indicate the total number of each type of existing dwelling unit. Then, *add* the total number of existing dwelling units.

Single-Family Detached		Apartment	
Townhome/Condominium/Single-Family Attached		Manufactured Home	
Total Dwelling Units			

Residential Expenses - School Expenses

- 4b) TOTAL CURRENT STUDENTS. *Multiply* the number of existing units from (4a) by its corresponding Student Generation Rate below. Then, *add* the total number of existing students.

Unit Type	Number of Existing Units	Student Generation Rate	Existing Students
Single-Family Detached		0.40	
Townhome/Condo/Attached		0.17	
Apartment		0.31	
Manufactured Home		0.46	
Total		N/A	

- 4c) TOTAL CURRENT SCHOOL EXPENSES. *Multiply* the total number of current students from (4b) by the per-student school cost below.

Number of Existing Students	Per-Student School Cost	Current School Expenses
	\$11,091.00	\$4,4364

Residential Expenses - Non-School Expenses

- 4d) TOTAL CURRENT POPULATION. *Multiply* the total number of existing units from (4a) by average household size below.

Total Existing Units	Average Household Size	Total Current Population
	2.45	2.45

- 4e) TOTAL CURRENT NON-SCHOOL EXPENSES. *Multiply* the current population from (4d) by per-capita non-school expenses below.

Total Current Population	Per-Capita Non-School Expenses	Current Non-School Expenses
	\$1,187.00	\$ 2,908.15

- 4f) TOTAL RESIDENTIAL EXPENSES. *Add* school expenses from (4c) and non-school expenses from (4e).

School Expenses	Non-School Expenses	Residential Expenses
\$	\$	\$

Residential Revenues

- 4g) TOTAL CURRENT ASSESSMENT VALUE. *Search* for each residential property included in the proposal on the Parcel Viewer at <http://property.jccgov.com/parcelviewer/Search.aspx>. *Indicate* each property's total assessment value below. Then, *add* total assessment values.

Property Address and Description	Assessment Value
	\$
	\$
	\$
Total:	\$

- 4h) TOTAL CURRENT REAL ESTATE TAXES PAID. *Multiply* the total assessment value from (4g) by the real estate tax rate below.

Total Assessment Value	Real Estate Tax Rate	Real Estate Taxes Paid
	.0084	\$

- 4i) TOTAL CURRENT PERSONAL PROPERTY TAXES PAID. *Multiply* total real estate taxes paid from (4h) by the personal property tax average below.

Real Estate Tax Paid	Personal Property Tax Average	Personal Property Paid
	0.15	\$

- 4j) TOTAL CURRENT SALES AND MEALS TAXES PAID. *Multiply* the total real estate taxes paid from (4h) by the sales and meals tax average below.

Real Estate Tax Paid	Sales and Meals Tax Average	Average Excise Tax Paid
	.09	\$

- 4k) TOTAL CURRENT RESIDENTIAL REVENUES. *Add* all current residential taxes paid to the County from (4h) through (4j).

Total Current Residential Revenues	\$
---	----

- 4l) CURRENT RESIDENTIAL FISCAL IMPACT. *Subtract* total residential revenues (4k) from total residential expenses (4f).

Total Residential Expenses	Total Residential Revenues	Total Residential Fiscal Impact
		\$

- 4m) FINAL RESIDENTIAL FISCAL IMPACT. *Subtract* current residential fiscal impact from (4l) from proposed residential fiscal impact from (2n).

Proposed Residential Impact	Current Residential Impact	Final Residential Fiscal Impact
		\$

Current Commercial Use

Current Commercial Expenses (if there are no current businesses or commercial properties, skip to (5k).

- 5a) TOTAL CURRENT BUSINESSES. How many businesses exist on the proposal properties?
 _____ (Include all businesses that rent or lease space at the location).
- 5b) TOTAL CURRENT COMMERCIAL EXPENSES. *Multiply* the current number of businesses operating on the proposal properties by the per-business expense rate below.

Total Expected Assessment Value	Commercial Expense Rate	Total Commercial Expenses
	0.0045	\$

Current Commercial Revenues

- 5c) TOTAL CURRENT ASSESSMENT VALUE. *Search* for each commercial property included in the proposal on the Parcel Viewer at <http://property.jccegov.com/parcelviewer/Search.aspx>. *Indicate* each property's total assessment value below. Then, *add* total assessment values.

Addresses	Assessment Value	Real Estate Tax Rate	Real Estate Tax Paid
		.0084	
		.0084	
Total:			\$

- 5d) TOTAL CURRENT BUSINESS PERSONAL PROPERTY TAXES PAID. *Multiply* the total business capitalization for each current commercial element by the business personal property tax rate below. Then *add* the total personal property taxes paid.

Current Business	Total Business	Personal Property Tax Rate	Business Property Taxes Paid
		0.01	
		0.01	
		0.01	
Total:		N/A	\$

- 5e) TOTAL CURRENT MACHINERY AND TOOLS TAX PAID. If any manufacturing exists, *multiply* the total capitalization for manufacturing equipment by the business machinery and tools tax rate below.

Current Business	Total Business Capitalization	Personal Property Tax Rate	Machinery and Tools Tax Paid
		0.01	\$

- 5f) TOTAL CURRENT SALES TAXES PAID. *Estimate* the applicable total gross retail sales, prepared meals sales, and hotel/motel sales for existing commercial elements below. Then, *multiply* the projected commercial gross sales by the applicable sales tax rates. Then, *add* the total sales taxes paid.

Activity	Projected Gross Sales	Tax Rate	Sales Taxes Paid
Retail Sales		0.01 of Gross Retail Sales	
Prepared Meals		0.04 of Prepared Sales	
Hotel, Motel		0.02 of Gross Sales*	
Total:	N/A	N/A	\$

*Actual Occupancy Tax is 5% of Gross Sales; however, 60% of those funds are targeted to tourism.

- 5g) TOTAL CURRENT BUSINESS LICENSES FEES PAID. *Estimate* each current business element's total gross sales. Then, *multiply* each business element's projected gross sales by the Annual Business License rate to determine annual business licenses fee paid. Then, *add* the total business license fees paid.

Business Type	Gross Sales	Business License Rate	Annual Business License Fees Paid
Professional Services		\$0.0058	
Retail Sales		\$0.0020	
Contractors		\$0.0016	
Wholesalers		\$0.0005	
Manufacturers		No tax	
Other Services		\$0.0036	
Total:	N/A	N/A	\$

- 5h) TOTAL CURRENT COMMERCIAL REVENUES. *Add* all current commercial revenues paid by existing businesses from (5c) through (5g).

Total Current Commercial Revenues	\$
-----------------------------------	----

- 5i) CURRENT COMMERCIAL FISCAL IMPACT. *Subtract* total commercial revenues (5h) from total residential expenses (5b).

Total Commercial Expenses	Total Commercial Revenues	Total Commercial Fiscal Impact
		\$

- 5j) FINAL COMMERCIAL FISCAL IMPACT. *Subtract* current commercial fiscal impact from (5i) from proposed commercial fiscal impact from (3j).

Proposed Commercial Impact	Current Commercial Impact	Final Commercial Fiscal Impact
		\$

- 5k) FINAL FISCAL IMPACT. *Subtract* the final commercial fiscal impact from (5i) from final residential fiscal impact from (4m).

Final Residential Impact	Final Commercial Impact	Final Fiscal Impact
		\$

Fiscal Impact Worksheet Section 6: Phasing

Residential Phasing

- 6a) *Copy and paste* the residential phasing template from the accompanying Excel sheet to the page below.

Commercial Phasing

- 6b) *Copy and paste* the commercial phasing template from the accompanying Excel sheet to the page below.

Final Phasing Projections

- 6c) *Copy and paste* the final phasing projection from the accompanying Excel sheet to the page below.

Fiscal Impact Worksheet Section 7: Employment

- 7a) *Copy and paste* the employment projections from the accompanying Excel sheet to the page below.

DEFINITIONS AND ASSUMPTIONS

Apartment – A building used, or intended to be used as the residence of three or more families living independently of each other. Tenants have no equity in the dwelling.

Assessment Value – Assessment value is assumed to be within 1% of market value. Market value drives assessment value.

Buildout – All data and assumptions reflect the fiscal impact of the proposal at buildout.

Commercial Expense Rate – The commercial expense rate uses the proportional valuation method (see below) to determine individual business expenses. Under that method businesses are collectively responsible for contributing 15% of the non-school budget (\$10,391,694).

Dividing this portion of the budget by the total commercial real estate in the County (\$2,060,690,000) gives a commercial expense rate of 0.0045. This rate assumes that the costs of providing County services to a business are directly correlated with that business's property assessment. This assumes more valuable properties have generally more intense uses incurring greater County expenses.

Condominium – A building, or group of buildings, in which units are owned individually and the structure, common areas and common facilities are owned by all the owners on a proportional, undivided basis.

Contractor – Any person, firm or corporation accepting or offering to accept orders or contracts for doing any work on or in any building or structure, any paving, curbing or other work on sidewalks, streets, alleys or highways, any excavation of earth, rock or other materials, any construction of sewers and any installation of interior building components.

Direct Impact – The worksheet only calculates direct financial impacts on the County budget. The worksheet is only one of many development management tools and as such, does not make a determination whether any type of development “should” happen based solely on that proposal's fiscal impact. The tool is not designed to measure non-budget impacts, such as increased traffic or non-budget benefits, such as forwarding the goals of the Comprehensive Plan. Costs incurred by other entities, such as other localities or the state, remain uncouned.

Dwelling – Any structure which is designed for use for residential purposes, except hotels, motels, boardinghouses, lodging houses and tourist cabins.

Exempt – Certain types of business activities or products are exempted from annual County business licenses. These include manufacturers, insurance agencies, apartment complexes and gasoline sales.

Fees & Licenses – All fees collected by the County, including business and professional licenses, planning fees, building permit fees, stormwater fees, environmental inspection fees, septic tank fees, dog licenses and motor vehicle licenses, are deducted from the per-capita and per-business budgetary costs of each department that collects them.

Fiscal Impact Analysis – The County has created a set of standardized data and assumptions to streamline both the creation and review of fiscal impact studies. The County had no itemized list of questions for fiscal impact study creators to answer, resulting in portions of fiscal impact studies with no bearing on the County's budgetary bottom line. The guesswork is removed from the creation of these documents. The data used by fiscal impact study authors also came from myriad sources, often within the County, which were difficult to verify. The fiscal impact worksheet allows consistency across multiple fiscal impact studies.

Fiscal Impact Worksheet – The worksheet helps the applicant present relevant data to the County, using data verified by the County. The worksheet provides consistency across all fiscal impact analyses.

Non-School Expenses – Non-school expenses include all FY10 non-school budget spending. Non-school expenses are calculated using the Proportional Variation method. Using the Proportional Variation method, residents and businesses are assumed to be responsible for differing percentages of the County's non-school spending.

Manufacturing – Assembly of components, pieces, or subassemblies, or the process of converting raw, unfinished materials into different products, substances or purposes.

Market Value – Market value is assumed to be within 1% of assessment value. Market value drives assessment value.

Manufactured Home – A manufactured home is a structure not meeting the specifications or requirements or a manufactured home, designed for transportation after fabrication. The only manufactured homes counted in the Student Generation figure are those in designated manufactured home parks. Manufactured homes on individual lots are indistinguishable from single-family detached dwellings for the purposes of the worksheet.

Phasing – All residential developments are assumed to have an absorption rate of 20% per annum. All commercial development are assumed to have an absorption rate of 20% per annum. The date stamp Year 1 in the phasing template represents 365 days after the Board of Supervisors approval.

Professional Services – Work performed by an independent contractor within the scope of the practice of accounting, actuarial services, architecture, land surveying, landscape architecture,

law, dentistry, medicine, optometry, pharmacy or professional engineering. Professional services shall also include the services of an economist procured by the State Corporation Commission.

Proportional Valuation Impact – Proportional valuation impact assumes that a proposed residential or commercial project's fiscal impact is proportional to the percentage of the total tax base that is either residential or commercial.

James City's proportional valuation is calculated using the County's Real Estate Mapping GIS program. The program calculated an aggregate property assessment value of \$13,763,228,800 for the entire County. The program calculated an aggregate commercial and industrial assessment value of \$2,060,690,000. Dividing the commercial value by the total value shows that commercial and industrial properties compose 15% of the total property tax base and are responsible for 15% of County non-school expenses. This results in residential development being responsible for Schools impacts and 85% of non-school County operations. The proportional valuation method does not factor other assorted residential and commercial taxes, fees and licenses into account. As 15% of the tax base, businesses contribute 15% for all County non-school expenses. As 85% of the tax base, residents contribute 85% for all County non-school expenses.

Furthermore, individual business expenses to the County are calculated using the proportional valuation impact method. (See Commercial Expense Rate)

Per-Business Expense Rate – The per-business expense rate assumes that the County incurs non-school expenses equal to 0.04% of the commercial real estate assessment of any given business.

Per Capita Evaluation Method – This worksheet uses the Per Capita Evaluation method to assign per-capita and per-business costs to non-school expenses. This method assumes that current per-capita and per-business expenditures and service levels are consistent with future per-capita and per-business expenditures and service levels.

Per Capita – Per capita calculations divide each department's spending, minus fees and state contributions, by the current County population. This number excludes institutional residents in detention at correctional facilities and mental institutions. Total population is determined from James City County Planning Division figures.

JCC Population 2010	Dwelling Units 2010
66048*	30221**

*US Census 2010 Population Count

**JCC Codes Compliance Division Housing Unit Count + Apartment Count

Per Student – Per student calculations divide County contributions to WJCC Schools, minus state educational contributions, by the total number of K-12 students living in James City and also

attending WJCC Schools. Total students are determined from Williamsburg-James City County Schools 2009-2010 School Year enrollment reports.

Per Business – Per business calculations divide each departments spending, minus fees and state contributions, by the total number of County businesses. Total businesses are determined by the number of business licenses issued.

Total Number of JCC Businesses				5400*
Percentage	of	Property	Tax	15%**
Assessments				*James City County Commissioner of the Revenue

**Commercial impacts are calculated on a proportional variation process

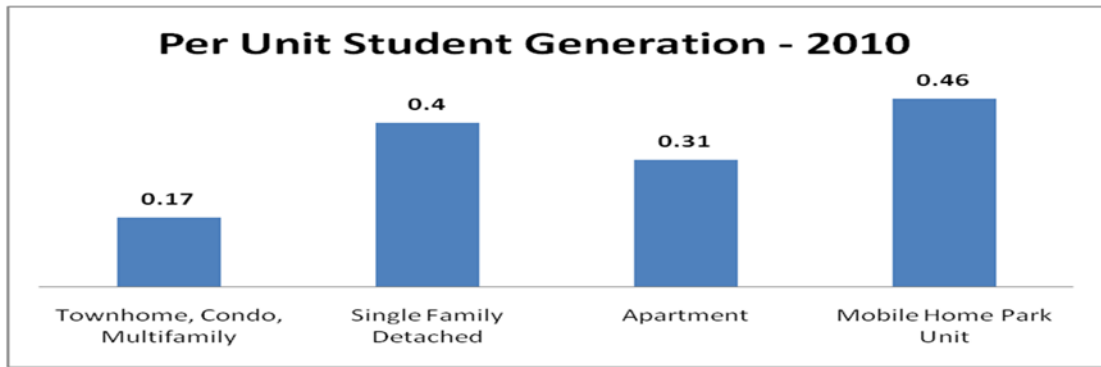
Proffer – Proffers paid for schools can only be applied toward the capital expense portion of per-student school expenses. (See Board of Supervisors' Proffer Policy.)

Retail Services – Display and sale of merchandise at retail or the rendering of personal services, such as food, drugs, clothing, furniture, hardware, appliances, barber and beauty, antiques, and household uses and other uses.

Single-Family Detached Dwelling – A detached structure arranged or designed to be occupied by one family, the structure only having one dwelling unit.

State Contributions – The state contributes both targeted and unspecified funds to the James City County budget. Funds for specific departments were subtracted from the budget totals of those departments. Unspecified state fund amounts were compiled, then evenly subtracted (7.75% of each department total) across all non-school departments.

Student Generation Rate – The student generation rate the number of students produced by an individual dwelling unit per year. Different domestic units produce students at different rates. Using WJCC enrollment figures, an address was found for WJCC students residing in James City County. Using the James City County Real Estate Division's Property Information map on the James City County website, the number of students from each subdivision was determined. Using the Real Estate Division's Real Estate Parcel Count, the number of improved lots in each neighborhood was determined. Total students from each neighborhood were divided by the total number of units from that neighborhood to determine the average number of students per housing unit. The student generation numbers for 256 subdivisions were determined this way, along with the same method for counting students from apartments and manufactured home parks.



Townhome –In a structure containing three or more dwelling units, a dwelling unit for single-family occupancy, not more than three stories in height, attached by one or more vertical party walls extending to the roof sheathing without passageway openings to one or more additional such dwelling units, each of which is served by an individual exterior entrance or entrances.



5248 Olde Towne Road, Suite 1
Williamsburg, Virginia 23188
Phone (757) 253-0040
Fax (757) 220-8994
aesva.com

October 25, 2017

Mr. Paul Holt
Planning Director
James City County
101-A Mounts Bay Road
P.O. Box 8784
Williamsburg, Virginia 23187

**RE: Oakland Pointe
Parks and Recreation Exception Request
Rezoning Application
AES Project Number: W10503-00**

PLANNING DIVISION

OCT 25 2017

RECEIVED

Dear Mr. Holt:

AES Consulting Engineers on behalf of Connelly Development, LLC is requesting an exception to the James City County Recreational Facility Development Guidelines for the subject project. Pursuant to the recent adoption of the Master Plan for Parks and Recreation (April 11, 2017), an exception is allowed by the Board of Supervisors through recommendations from the Director of Planning and the Director of Parks and Recreation.

Our rezoning proposal shall meet the guideline standards as listed for the park area, bike/jogging trail and playground area; however, the areas of exception are the hard court surface and the multi-use field.

Our proposal shall include a park area and playground with a pavilion located within close proximity to each to serve the entire family. In addition, over 2000 feet of multi-use trail is provided within the site that connects to a trail along Richmond Road. This provides excellent connectivity to adjacent properties.

The hard court surface requirement is an issue with long term consequences for most developments as they generally lead to being a hangout for activities that create a disturbance to the neighbors. In lieu of this court, this proposal is providing a dog park area that appeals to a larger percentage of the residents.

The field requirement appears to be more a question of size and location. Our proposal provides a field, but the dimensions fall short of the requirement. We submit that the field is large enough to engage in multiple activities and serve the intended function. The location does encroach into the buffer only because that area is already cleared and the wooded buffer to the neighbors is quite large. This area can be mitigated elsewhere on the site and create a more useful buffer than the large buffer that already exist in the rear of this property.

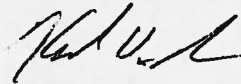
Mr. Paul Holt
October 25, 2017

AES Project Number: W10503-00
page 2 of 2

We appreciate the time spent by the various review agencies in the review and guidance for this project. If anyone has any questions in reference to this project please do not hesitate to call me at my office at 757-253-0040.

Sincerely,

AES Consulting Engineers



Howard W. Price
Principal
howard.price@aesva.com

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Traffic Analysis For Oakland Pointe Apartments

JAMES CITY COUNTY, VIRGINIA

For:
Connelly Development, LLC

By:
**DRW Consultants, LLC
Midlothian, VA**

January 12, 2018

Traffic Analysis For Oakland Pointe Apartments

JAMES CITY COUNTY, VIRGINIA

For:
Connelly Development, LLC

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DRW Consultants, LLC
Midlothian, VA

January 12, 2018

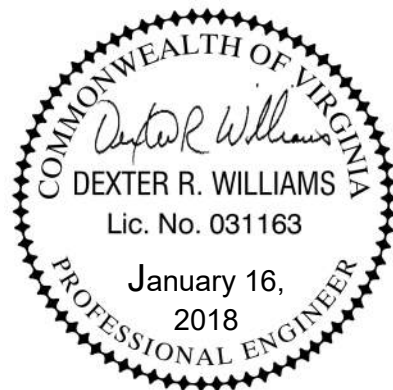


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FOREWORD

This traffic study is an update of the November 20, 2017 study for Oakland Pointe Apartments.

Following are the revisions incorporated in this traffic study:

- 1. The eastbound left turn lane on Rt. 60 at Croaker Road has 400 feet of storage/100 foot taper. The previous study had 300 feet storage/100 foot taper.*
- 2. The unsignalized traffic level of service at Rt. 60/Oakland Drive has been modified to allow one vehicle in the median for the northbound left turn from Oakland Drive to westbound Rt. 60. The previous study did not include this adjustment. The existing width of the median is 52 feet which can actually accommodate two vehicles (25 storage per vehicle) and is more than enough for a single vehicle. This change more accurately reflect traffic operations.*
- 3. Traffic signal timing at Rt. 60/Croaker Road uses the coordinated split values. The previous traffic study used the default values. This change more accurately reflects signal timing.*
- 4. The most current conceptual plan for Oakland Pointe Apartments is included.*

All traffic counts and forecasts in this study are the same as the previous study. All traffic analysis procedures follow the conventions of the previous study.



REPORT TEXT

INTRODUCTION AND SCOPE

Connelly Development, LLC proposes to develop an apartment project in James City County, Oakland Pointe Apartments. The site fronts on Rt. 60 Richmond Road between Croaker Road to the east and Oakland Drive to the west. The upper section of Exhibit 1 shows the site location in the VDOT Hampton Roads District. The lower section of Exhibit 1 shows the location of the site and adjacent areas on the County's parcel map.

Access to Oakland Pointe Apartments is proposed via a right turn in/out only entrance on Richmond Road. This traffic study has been prepared to document existing and future traffic conditions with and without site development. In addition to traffic analysis at the Richmond Road/Oakland Pointe Apartments entrance, the following intersections are included in the study for counts and analysis:

1. Rt. 60 Richmond Road/Croaker Road/Pricket Road - signalized
2. Rt. 60 Richmond Road/Oakland Drive - unsignalized

A preliminary development plan by AES is shown on Exhibit 2 and includes 126 apartments.

This study includes AM and PM peak hour traffic analysis at the existing two intersections and the site access cited above for the following scenarios:

- Existing traffic
- 2025 without the project (with build out of Candle Factory rezoning/Village At Candle Station with access on Pricket Road)
- 2025 with the project and related improvements as shown on Exhibit 2b

RT. 60 RICHMOND ROAD ACCESS

Oakland Pointe Apartments has public road access on Rt. 60 Richmond Road. Rt. 60 is a four lane divided median road with substantial grade separation between eastbound and westbound through lanes. With right turn in and out access only, traffic entering from the east and exiting to the west must make U-turns at Croaker Road and at Oakland Drive intersections. These adjacent crossover U-turning movements are addressed in this study.

EXISTING TRAFFIC CONDITIONS

Intersection turning movement traffic counts were conducted by Peggy Malone & Associates from 7 to 9 AM and from 4 to 6 PM on Tuesday, October 10, 2017. Total volumes are tabulated on Appendix Exhibit A and B series and peak hour counts without balance are shown on Appendix Exhibit D.

Exhibit 3 shows AM and PM peak hour traffic on the study area road network diagram. Rt. 60 Richmond Road (posted speed limit 45 mph, east-west orientation) is a four lane divided roadway. Lane configurations at the Richmond Road intersections with Croaker Road/Pricket Road and Oakland Drive are shown on Exhibit 3.

Synchro 10 has been used to calculate intersection levels of service. VDOT signal timing was obtained for the Richmond Road/Croaker Road/Pricket Road intersection.

The following reports are included in the technical appendix:

1. For signalized Richmond Road/Croaker Road/Pricket Road, 2000 Highway Capacity Manual (HCM2000) report is used. See Appendix Exhibits J1 and J2 for the HCM2000 report AM and PM peak hours, respectively. HCM2010 HCM 6th Edition produce NEMA custom phasing violations and are not used.
2. Unsignalized intersection (Richmond Road/Oakland Drive) LOS results are shown in Appendix Exhibits K1 and K2 for the AM and PM peak hours, respectively.
3. Synchro Queues results are shown in Appendix Exhibits L1 and L2 for the AM and PM peak hours, respectively.
4. SimTraffic Queuing & Blocking results are shown in Appendix Exhibits M1, M1A and M2 series for the AM and PM peak hours, respectively.

The following table shows existing peak hour intersection levels of service and queuing results at Richmond Road/Croaker Road/Pricket Road:

2017 COUNTS - TABLE 1-1 Richmond Road/ Croaker Road/Pricket Road									
Traffic LOS And Seconds Delay					95th Percentile Queues By Lane Group				
	AM		PM		Storage Length	Synchro		SimTraffic Q&B	
Overall	C	31.3	D	36.1		AM	PM	AM 60 min	PM
EBL	D	52.1	D	52.5	200	286	150	221	133
EBT	B	18.4	C	27.7		208	220	139	147
EBR	B	15.0	C	23.4	10	0	0	32	58
WBL	D	42.8	D	45.1	200	7	85	9	109
WBT	C	26.4	C	33.3		76	323	68	205
WBR	C	24.4	C	26.3	200	0	66	1147	101
NBL	D	38.0	D	49.9	165	9	157	90	131
NBL/T	D	39.0	D	42.4		20	132	14	193
NBR	D	37.1	D	38.8	150	0	0	67	73
SBL/T	D	52.7	D	53.5		189	422	176	980
SBR	C	29.9	C	30.6	200	36	59	57	1117

SimTraffic queue shown is maximum report value for multi-lane groups

There is overall LOS C at the Richmond Road/Croaker Road intersection in the AM peak hour and overall LOS D in the PM peak hour. There is LOS D or better for all turning movements.

Queuing on the eastbound left turn on Richmond Road at Croaker Road is of particular importance because site traffic will use this turn lane for left turns and U-turns. Queuing for this left turn was recorded at the time of counts and is tabulated on Appendix Exhibits C1 and C2. The following table shows the recorded queues and calculated values in Table 1-1.

TABLE 1-2 EASTBOUND LEFT QUEUING		
SOURCE	AM	PM
Field	250	161
Synchro	286	150
SimTraffic	221	133

A 10-minute SimTraffic interval was used for AM peak hour traffic and a 60-minute interval was used for PM peak hour traffic as was done in the previous study.

In Table 1-1, the other notable queues are on the southbound approach in the PM peak hour.

The following table shows existing peak hour intersection levels of service and queuing results at Rt. 60 Richmond Road/Oakland Drive:

2017 COUNTS - TABLE 1-3 Richmond Road/Oakland Drive									
Traffic LOS And Seconds Delay					95th Percentile Queues By Lane Group				
	AM		PM		Storage Length	HCM 6th		SimTraffic Q&B	
						AM	PM	AM	PM
NBL	C	19.4	C	21.4		3	3	28	36
NBT	B	11.7	B	11.2		3	3	32	40
WBL	A	9.8	A	9.5		0	3	14	45

The northbound left turn on Oakland Drive has LOS C in the AM peak hour and PM peak hour. All other movements have LOS A and B.

2025 BACKGROUND TRAFFIC

Exhibit 4 shows VDOT daily traffic counts (2012 through 2016) and linear regression analysis trend for Rt. 60 Richmond Road west and east of Croaker Road. For the 2025 design year, the traffic counts show 1.0 growth factor west of Croaker Road and a 1.08 growth factor east of Croaker Road.

A 1.08 growth factor is applied to 2017 counts to produce 2025 background traffic (growth factor only) as shown on Exhibit 5.

Build out of the Candle Factory development on Pricket Road (including Village at Candle Station) is also included in this traffic study. Table 1 on Exhibit 6 shows trip generation for the remaining development on Pricket Road. Table 2 shows trip distribution for the remaining development (see Appendix Exhibit E for trip assignment percentages for Pricket Road and for Oakland Drive). Trip assignments for the remaining development are shown on Exhibit 7 and 2025 background traffic without Oakland Pointe Apartments.

For analysis reports, see Technical Appendix as follows:

- HCM2000 signalized intersections LOS: Exhibit J3 and J4
- Unsignalized intersection: Exhibit K3 and K4
- Synchro Queues: Exhibits L3 and L4.
- SimTraffic Queuing & Blocking: Exhibits M3 and M4.

The following table shows 2025 background traffic peak hour intersection levels of service and queuing results at Rt. 60 Richmond Road/Croaker Road/Pricket Road:

2025 Background - TABLE 2-1 Richmond Road/ Croaker Road/Pricket Road									
Traffic LOS And Seconds Delay By Lane					95th Percentile Queues By Lane Group				
	AM		PM		Storage Length	Synchro		SimTraffic Q&B	
Overall	C	31.5	D	41.4		AM	PM	AM	PM
EBL	D	51.3	E	60.1	200	324	162	356	150
EBT	B	19.6	C	30.2		228	244	266	171
EBR	B	15.9	C	25.2	10	0	0	50	86
WBL	D	40.4	D	50.4	200	29	102	7	129
WBT	C	27.0	D	36.9		136	353	70	219
WBR	C	24.9	C	28.1	200	46	79	143	126
NBL	D	38.4	E	60.1	165	58	190	83	207
NBL/T	D	39.4	D	46.7		73	149	120	254
NBR	D	36.5	D	40.9	150	0	0	33	133
SBL/T	D	50.1	E	64.9		216	499	381	931
SBR	C	29.4	D	41.4	200	45	67	253	1169

SimTraffic queue shown is maximum report value for multi-lane groups

Overall intersection LOS for both peak hours is the same as existing conditions with not much change for turning movement LOS in the AM peak hour. For the eastbound left, northbound left and the southbound left/through in the PM peak hour, LOS changed from LOS D to LOS

E.

The following table shows existing peak hour intersection levels of service and queuing results at Rt. 60 Richmond Road/Oakland Drive:

2025 Background - TABLE 2-2 Richmond Road/Oakland Drive									
Traffic LOS And Seconds Delay By Lane					95th Percentile Queues By Lane Group				
	AM		PM		Storage Length	HCM 6th		SimTraffic Q&B	
						AM	PM	AM	PM
NBL	C	19.4	C	24.2	180	3	5	26	33
NBT	B	11.6	B	11.6	180	3	3	40	47
WBL	A	9.8	A	9.8		0	3	18	54

The northbound left turn on Oakland Drive has LOS C in the AM peak hour AND PM peak hours. All other movements have LOS A and B.

SITE TRIP GENERATION, DISTRIBUTION AND ASSIGNMENT

Table 3 on Exhibit 6 shows trip generation for the site using Trip Generation Manual, 9th Edition (TGM9), published by the Institute of Transportation Engineers (ITE). Site trip distribution is shown in Table 4 on Exhibit 6.

Site trip assignment is shown on Exhibit 9.

2025 TRAFFIC WITH SITE

Exhibit 10 respectively shows 2025 AM and PM peak hour traffic with site traffic.

The westbound left turn/U-turn movement on Richmond Road at Oakland Drive warrants a left turn lane (see Appendix Exhibit F) of 100 foot full width lane with 100 foot taper. The right turn into the site on eastbound Rt. 60 warrants a right turn taper (see Appendix Exhibit F1) with 100 foot length. These improvements are included on Exhibit 10. Also included for analysis is an additional 200 feet of storage on the eastbound left turn on Richmond Road at Croaker Road.

For analysis reports, see Technical Appendix as follows:

- HCM2000 signalized intersections LOS: Exhibit J5 and J6 series
- Unsignalized intersection LOS: Exhibits K5 and K6 series
- Synchro Queues: Exhibits L5 and L6 series
- SimTraffic Queuing & Blocking: Exhibits M5 and M6 series.

The following table shows 2025 total traffic peak hour intersection levels of service and queuing results at Rt. 60 Richmond Road/Croaker Road/Pricket Road:

2025 Total - TABLE 3-1 Richmond Road/ Croaker Road/Pricket Road									
Existing Signal Timing									
Traffic LOS And Seconds Delay					95th Percentile Queues By Lane Group				
	AM		PM		Storage Length	Synchro		SimTraffic Q&B	
Overall	C	34.5	D	42.5		AM	PM	AM	PM
EBL	E	70.9	E	64.4	400	376	191	418	169
EBT	B	19.8	C	30.8		237	252	329	163
EBR	B	15.9	C	24.8	10	0	0	43	71
WBL	D	40.7	D	51.7	200	29	102	59	132
WBT	C	27.0	D	38.2		138	367	132	230
WBR	C	24.9	C	28.7	200	46	88	82	139
NBL	D	38.5	E	62.4	165	58	190	46	190
NBL/T	D	39.2	D	47.8		73	149	114	247
NBR	D	36.6	D	41.8	150	0	0	29	96
SBL/T	D	50.3	E	70.3		117	499	283	1038
SBR	C	29.6	C	33.0	200	48	75	154	509

SimTraffic queue shown is maximum report value for multi-lane groups

Overall intersection LOS for both peak hours is the same as existing conditions. The AM peak hour eastbound left turn has LOS E the AM and the eastbound left, northbound left and the southbound left/through have LOS E in the PM peak hour like the background traffic.

As a sensitivity test for LOS and queuing results, the signal timing at the intersection has been optimized using Synchro with the following results:

2025 Total - TABLE 3-2 Richmond Road/ Croaker Road/Pricket Road Optimized Signal Timing									
Traffic LOS And Seconds Delay					95th Percentile Queues By Lane Group				
	AM		PM		Storage Length	Synchro		SimTraffic Q&B	
						AM	PM	AM	PM
Overall	C	32.5	D	42.0					
EBL	D	52.0	E	68.7	400	293	153	337	202
EBT	B	19.2	C	31.5		654	604	155	160
EBR	B	15.6	C	25.3	10	35	93	41	51
WBL	D	43.4	D	51.1	200	40	178	44	136
WBT	C	28.5	D	39.6		339	817	140	242
WBR	C	26.2	C	29.1	200	174	355	88	137
NBL	D	40.8	E	63.3	165	3.9	143	31	197
NBL/T	D	42.3	D	47.8		54	116	85	247
NBR	D	38.7	D	41.5	150	51	64	40	97
SBL/T	D	51.3	E	60.7		244	381	276	1023
SBR	C	31.0	C	31.6	200	162	205	63	504

SimTraffic queue shown is maximum report value for multi-lane groups

In the AM peak hour, the eastbound left turn LOS reduces to D and related queues are reduced. There was less degree of change in the PM peak hour.

The following table shows existing peak hour intersection levels of service and queuing results at Rt. 60 Richmond Road/Oakland Drive:

2025 Total - TABLE 3-3 Richmond Road/Oakland Drive									
Traffic LOS And Seconds Delay					95th Percentile Queues By Lane Group				
	AM		PM		Storage Length	HCM 6th		SimTraffic Q&B	
						AM	PM	AM	PM
NBL	C	20.0	D	28.0	180	3	3	24	34
NBT	B	11.7	B	11.7	180	3	3	40	40
WBL	B	13.6	B	13.8		3	13	22	60

The northbound left turn on Oakland Drive has LOS C in the AM peak hour and LOS D in the PM peak hour. All other movements have LOS B.

The following table shows existing peak hour intersection levels of service and queuing results at the site entrance:

2025 Total - TABLE 3-4 Richmond Road/Oakland Pointe Apartments									
Traffic LOS And Seconds Delay					95th Percentile Queues By Lane Group				
	AM		PM		Storage Length	HCM 6th		SimTraffic Q&B	
						AM	PM	AM	PM
NBR	B	12.4	B	11.4		8	5	35	36

There is LOS B in the AM peak hour and PM peak hour.

SUMMARY AND CONCLUSIONS

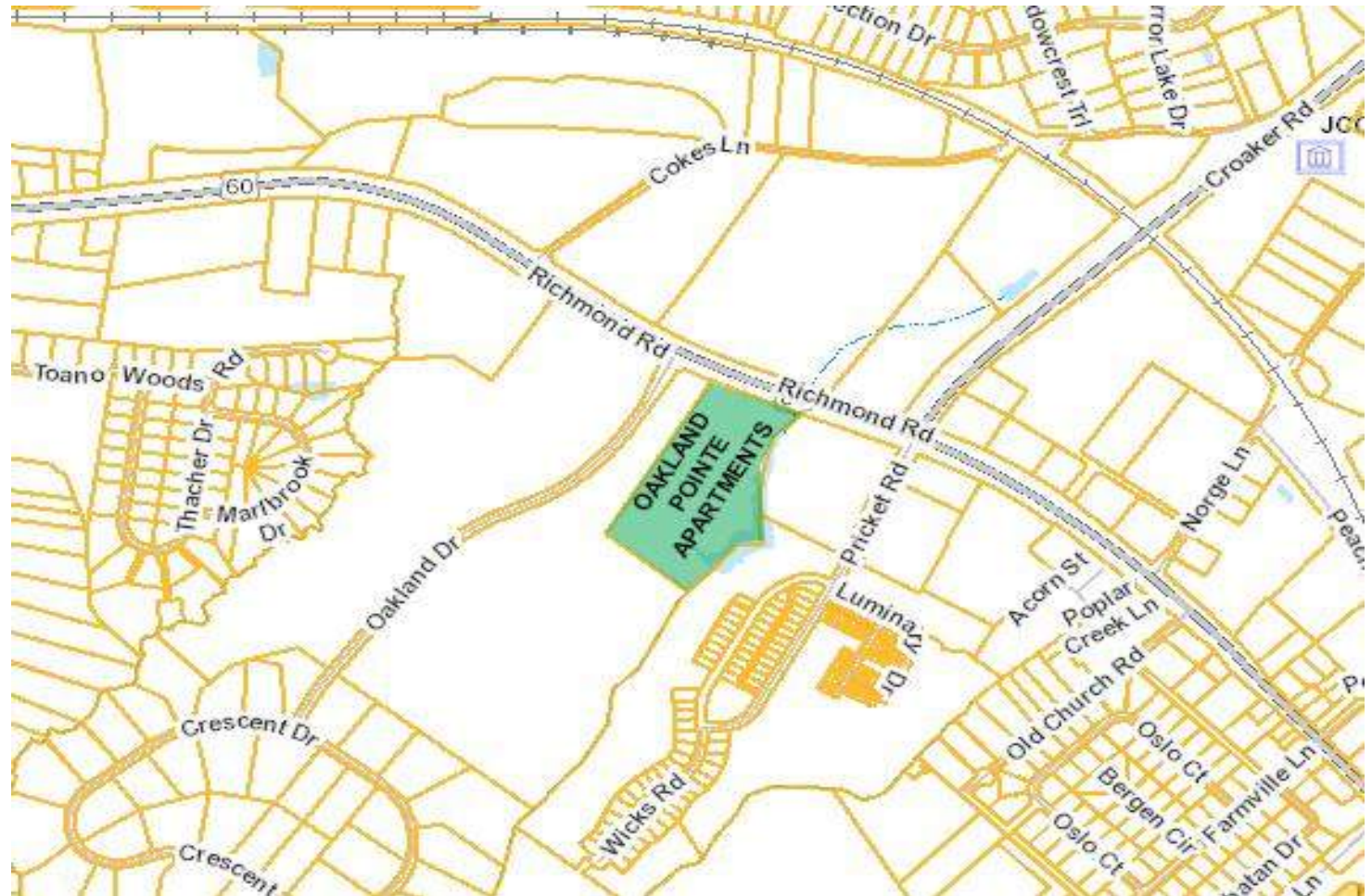
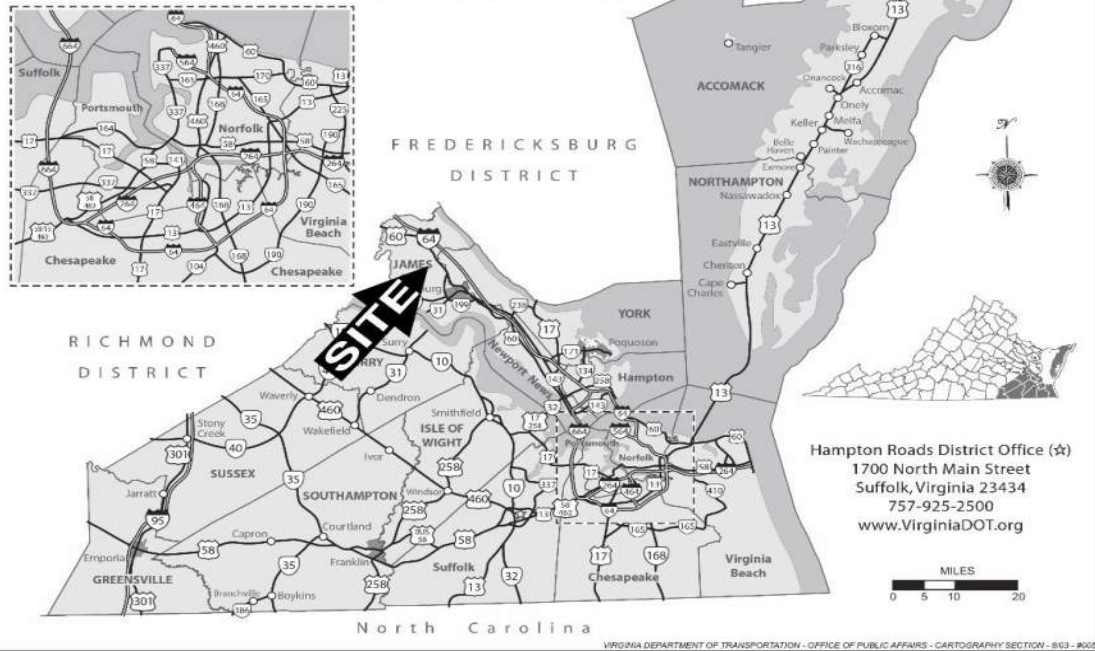
Traffic levels of service are not much affected by the project with the greatest effect being the increase in the queue on the eastbound left turn lane on Rt. 60 at Croaker Road. Improvements to the Rt. 60 corridor by the development to compensate for impacts as shown on Exhibit 2b include:

1. 100 foot left turn lane with 100-foot taper on westbound Rt. 60 at Oakland Drive.
2. 100 foot right turn taper at site entrance.
3. Extend 200 foot left turn on eastbound Rt. 60 at Croaker Road to 400 feet with 100-foot taper.



REPORT EXHIBITS

Virginia Department of Transportation HAMPTON ROADS DISTRICT



OAKLAND POINTE APARTMENTS
REGION AND AREA MAPS

DRW Consultants, LLC
804-794-7312

Exhibit 1

No.	Date	Description



AES
CONSULTING ENGINEERS
1400 West 10th Street
Suite 100
Oklahoma City, Oklahoma 73106
Phone: (405) 521-1100
Fax: (405) 521-1101
www.aes-engineers.com

Transportation | Civil | Surveying | Geotechnical | Environmental | Construction Management

OAKLAND FARM APARTMENTS

STOKESBORO DISTRICT
JAMES CITY COUNTY
VIRGINIA

Project Number: 2020-008
Project Name: OAKLAND FARM APARTMENTS
Scale: AS SHOWN
Sheet Size: 11x17
Sheet Number: 1 of 1

RENDERED
PROPOSED ROAD
IMPROVEMENTS
PLAN

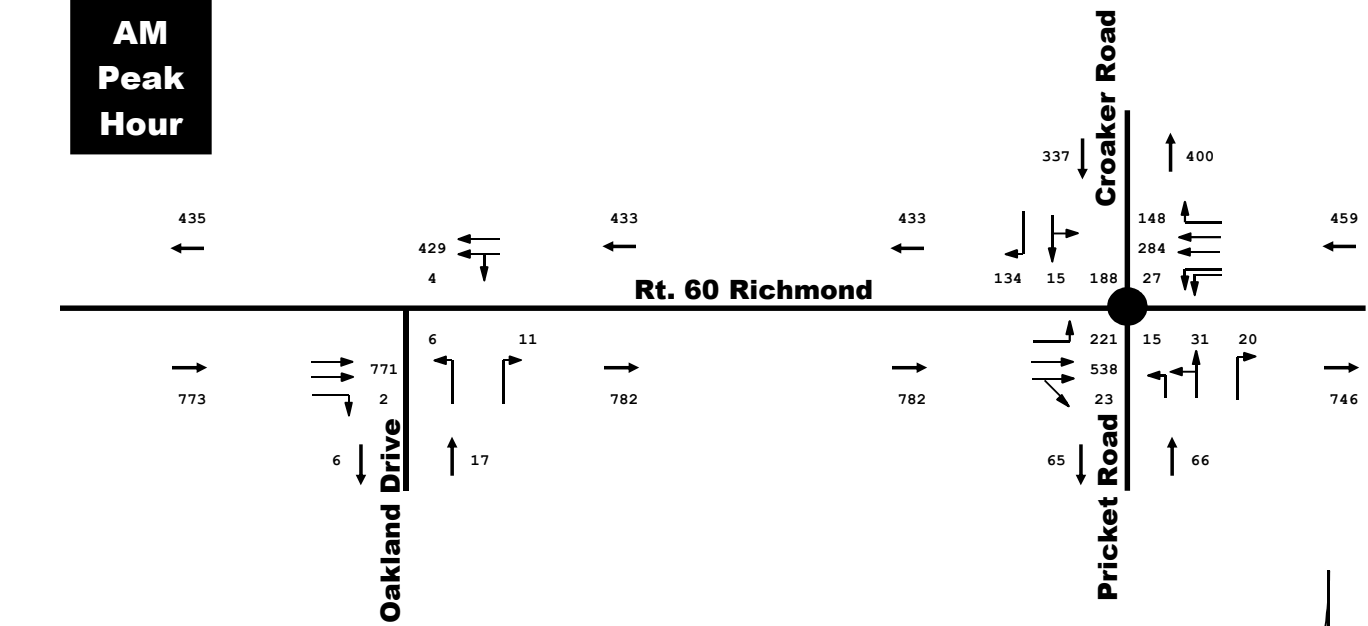


OAKLAND POINTE APARTMENTS
ROAD IMPROVEMENTS PLAN

DRW Consultants, LLC
804-794-7312

Exhibit 2b

**AM
Peak
Hour**



**PM
Peak
Hour**

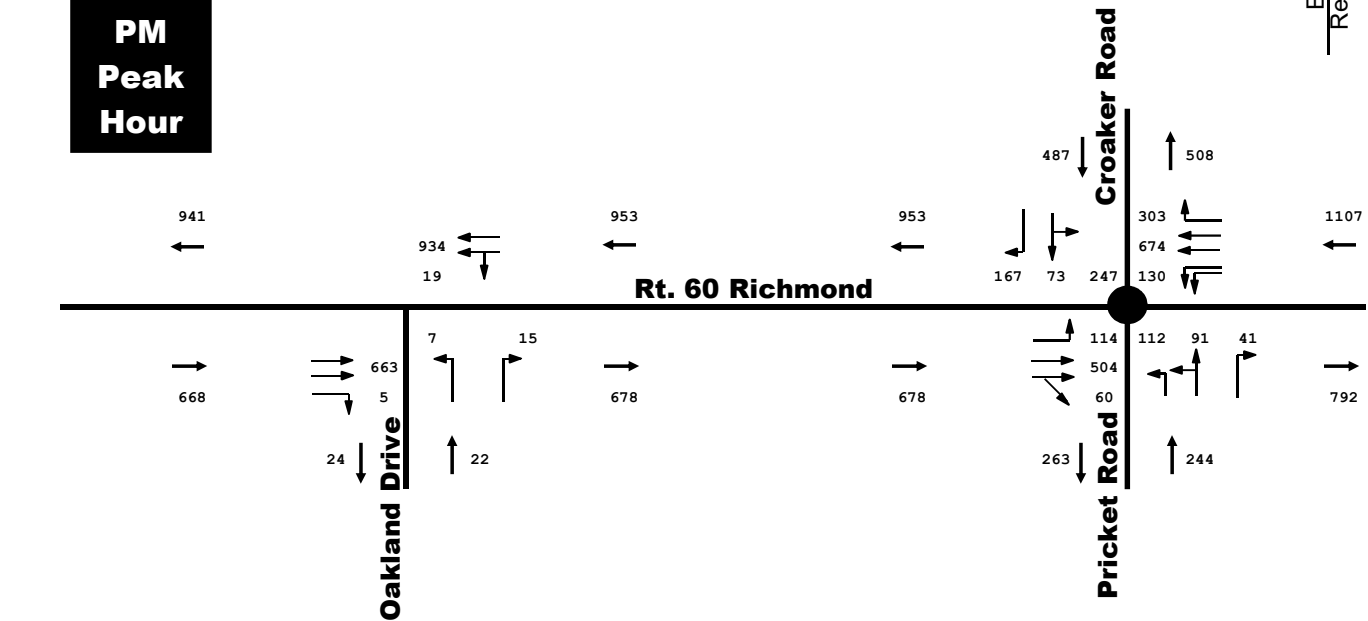


Exhibit
Reference

2017 PEAK HOUR COUNTS
WITH BALANCE

DRW Consultants, LLC
804-794-7312

Exhibit 3

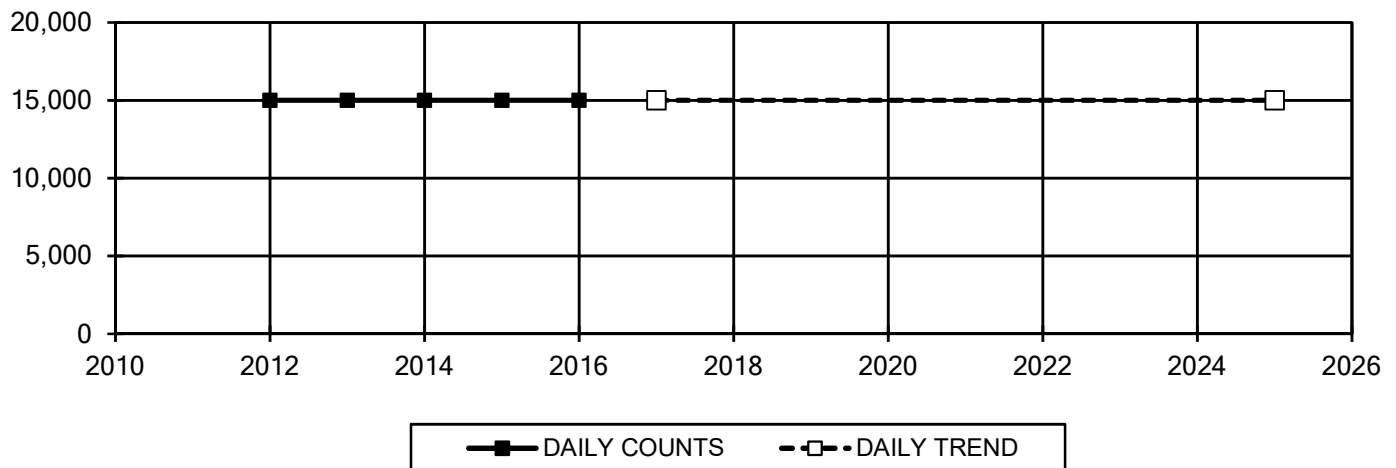
Street: Richmond Road, Rt. 60
 From: Rt. 30
 To: Croaker Road

Street: Richmond Road, Rt. 60
 From: Croaker Road
 To: Centerville Road

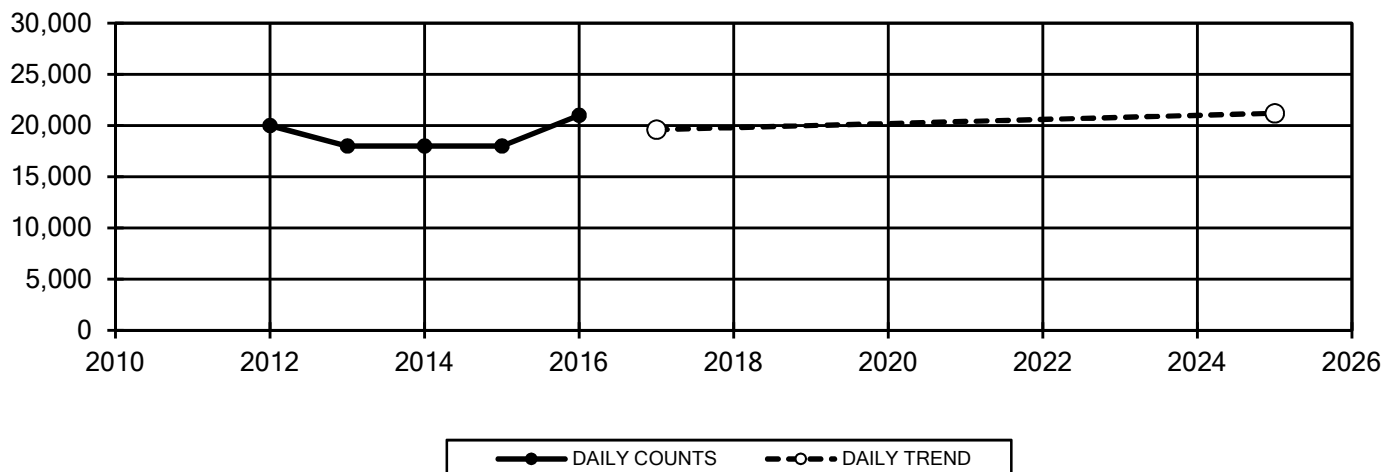
Year	DAILY COUNTS	
2012	15,000	
2013	15,000	
2014	15,000	
2015	15,000	
2016	15,000	
Year	DAILY TREND	
2017	15,000	$\Delta 17$
2025	15,000	1.00

Year	DAILY COUNTS	
2012	20,000	
2013	18,000	
2014	18,000	
2015	18,000	
2016	21,000	
Year	DAILY TREND	
2017	19,600	$\Delta 17$
2025	21,200	1.08

From Rt. 30 To Croaker Road



From Croaker Road To Centerville Road



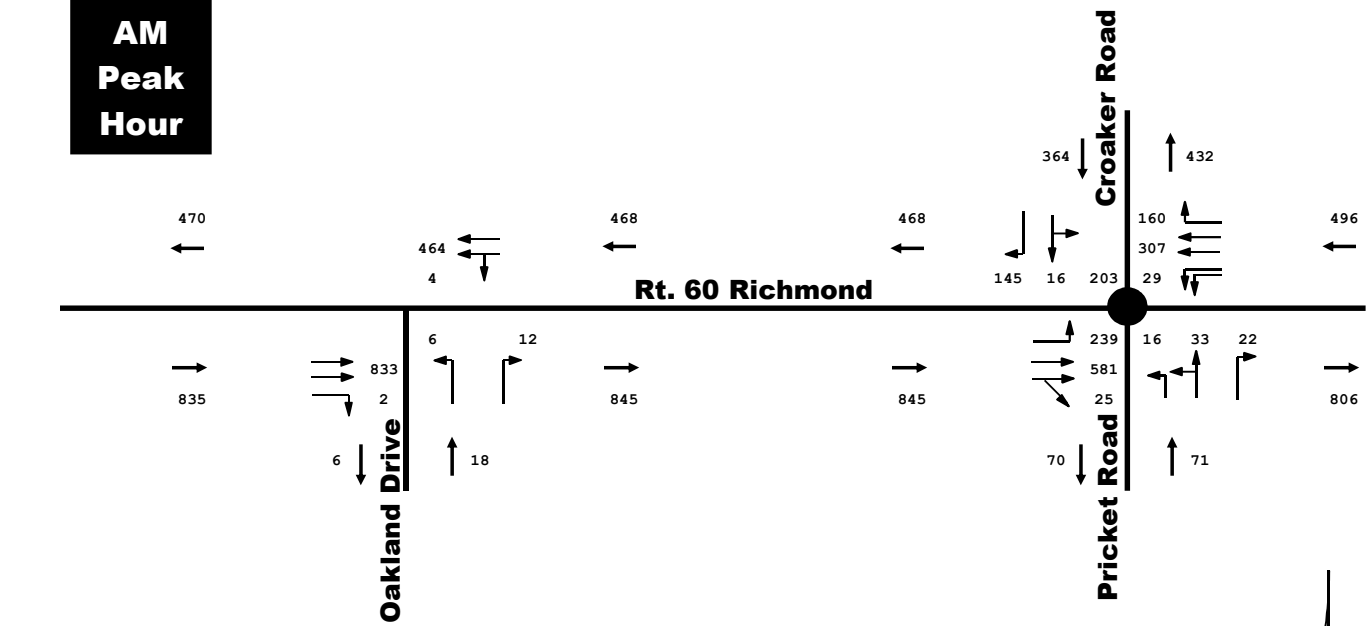
VDOT Average Annual Daily Traffic (AADT) Volume Estimates

RT. 60 RICHMOND ROAD
 DAILY TRAFFIC COUNTS AND TRENDS

DRW Consultants, LLC
 804-794-7312

Exhibit 4

**AM
Peak
Hour**



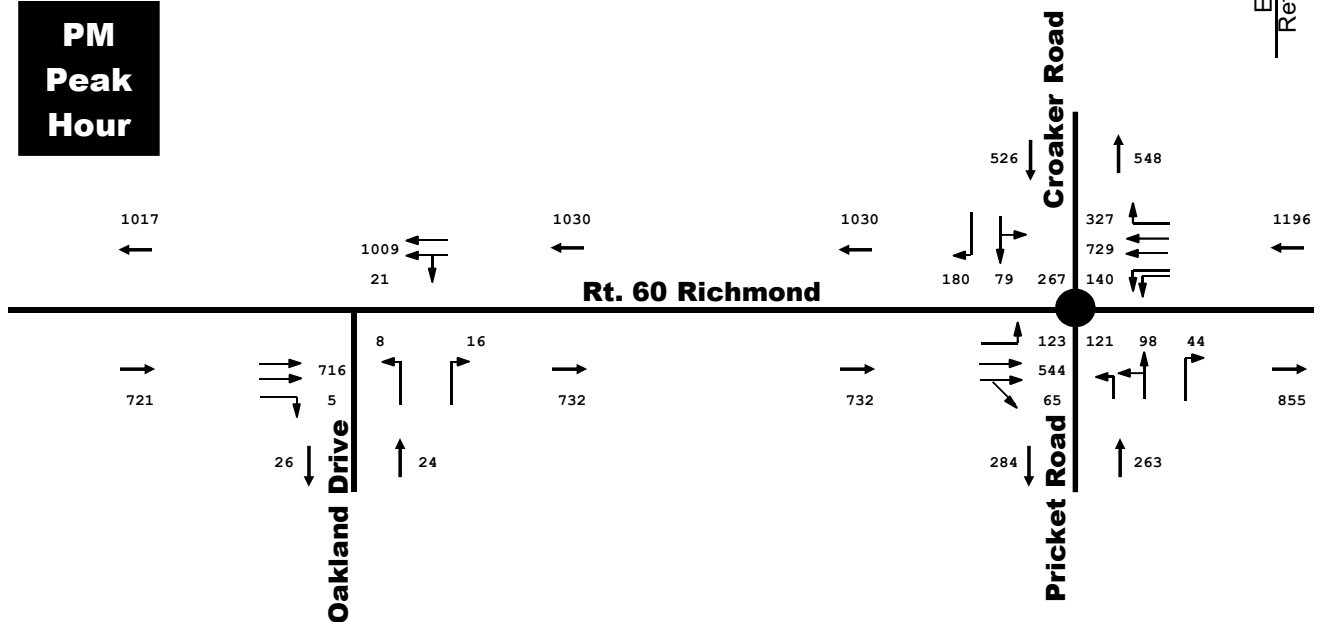
TO

WILLIAMSBURG

GROWTH FACTOR: 1.08

Exhibit
Reference

**PM
Peak
Hour**



2025 PEAK HOUR BACKGROUND TRAFFIC
GROWTH FACTOR ONLY

DRW Consultants, LLC
804-794-7312

Exhibit 5

		LAND USE CODE		WEEKDAY TRIP GENERATION						
			SQ.FT., OTHER UNITS	AM PEAK HOUR			PM PEAK HOUR			
VALUE	LAND USE			Enter	Exit	Total	Enter	Exit	Total	
DAILY										

TABLE 1 - Trip Generation - Candle Factory Remaining Development

eq.-adj. st.	Single-Family	210	33 units	8	25	33	25	14	39	379
eq.-adj. st.	Condo/Townhouse	230	78 units	7	35	42	33	16	49	518
rate-adj. st.	Mini-Warehouse	151	355 units	5	2	7	3	4	7	88
TOTAL:				20	62	82	61	34	95	985

TABLE 2 - Candle Factory Trip Distribution

		20				62		82		61		34		95	
		AM Peak Hour								PM Peak Hour					
		Entering Traffic		Exiting Traffic						Entering Traffic		Exiting Traffic			
Direction		% Dist.	Trips	% Dist.	Trips					% Dist.	Trips	% Dist.	Trips	% Dist.	Trips
	Rt. 60 West	33%	7	33%	20			33%	21	33%	11				
	Rt. 60 East	40%	8	40%	25			40%	24	40%	14				
	Croaker North	27%	5	27%	17			27%	16	27%	9				
		100%	20	100%	62			100%	61	100%	34				

TABLE 3 - Trip Generation - Oakland Farm Apartments

eq.-adj. st.	Apartment	220	126 units	13	52	65	57	30	87	887
TOTAL:				13	52	65	57	30	87	887

TABLE 4 - Oakland Farm Trip Distribution

		13				52		65		57		30		87	
		AM Peak Hour								PM Peak Hour					
		Entering Traffic		Exiting Traffic						Entering Traffic		Exiting Traffic			
Direction		% Dist.	Trips	% Dist.	Trips					% Dist.	Trips	% Dist.	Trips	% Dist.	Trips
	Rt. 60 West	33%	4	33%	17			33%	19	33%	10				
	Rt. 60 East	40%	5	40%	21			40%	23	40%	12				
	Croaker North	27%	4	27%	14			27%	15	27%	8				
		100%	13	100%	52			100%	57	100%	30				

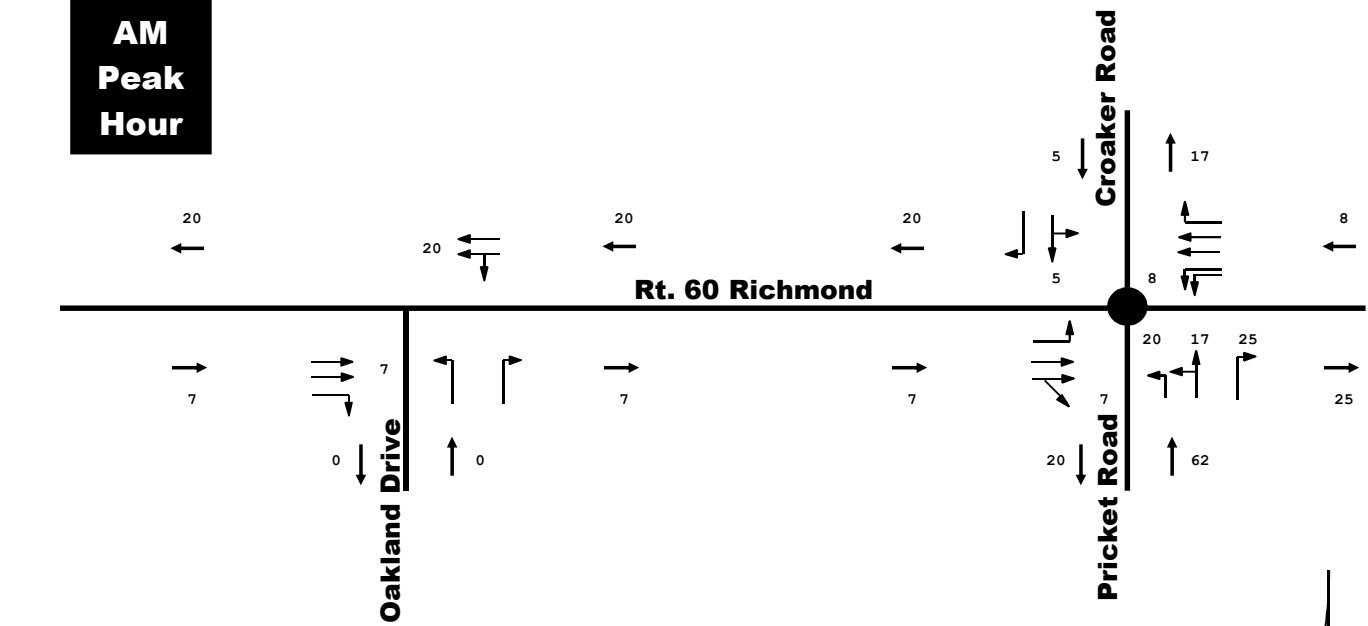
Trip generation rates from Trip Generation Manual, 9th Edition (TGM9)
by the Institute of Transportation Engineers (ITE)

REMAINING CANDLE FACTORY DEVELOPMENT
AND OAKLAND FARM APARTMENTS
TRIP GENERATION AND DISTRIBUTION

DRW Consultants, LLC
804-794-7312

Exhibit 6

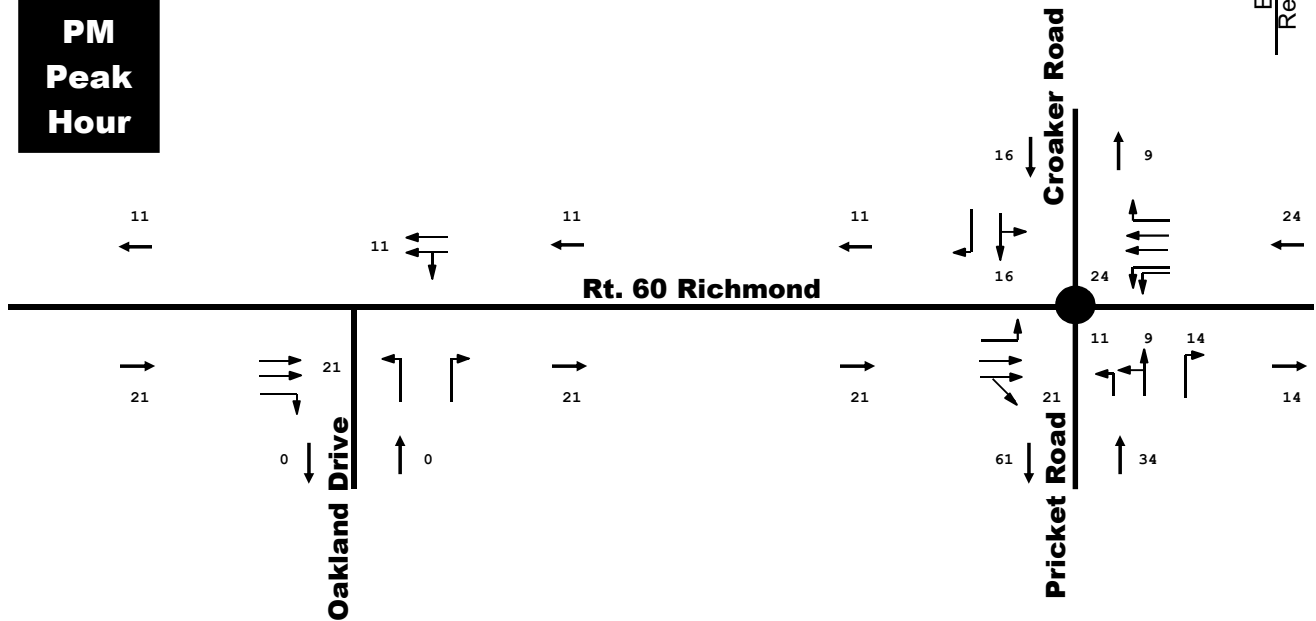
**AM
Peak
Hour**



TO
WILLIAMSBURG →

Exhibit
Reference

**PM
Peak
Hour**

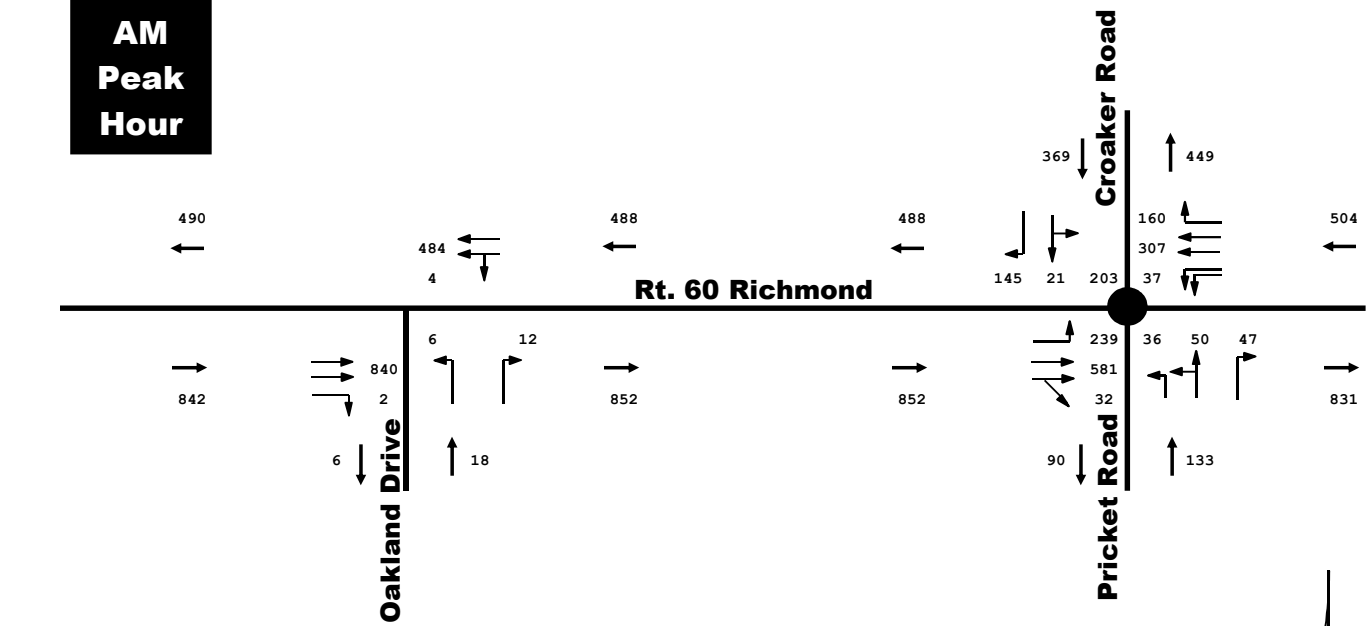


REMAINING CANDLE FACTORY TRIP ASSIGNMENT

DRW Consultants, LLC
804-794-7312

Exhibit 7

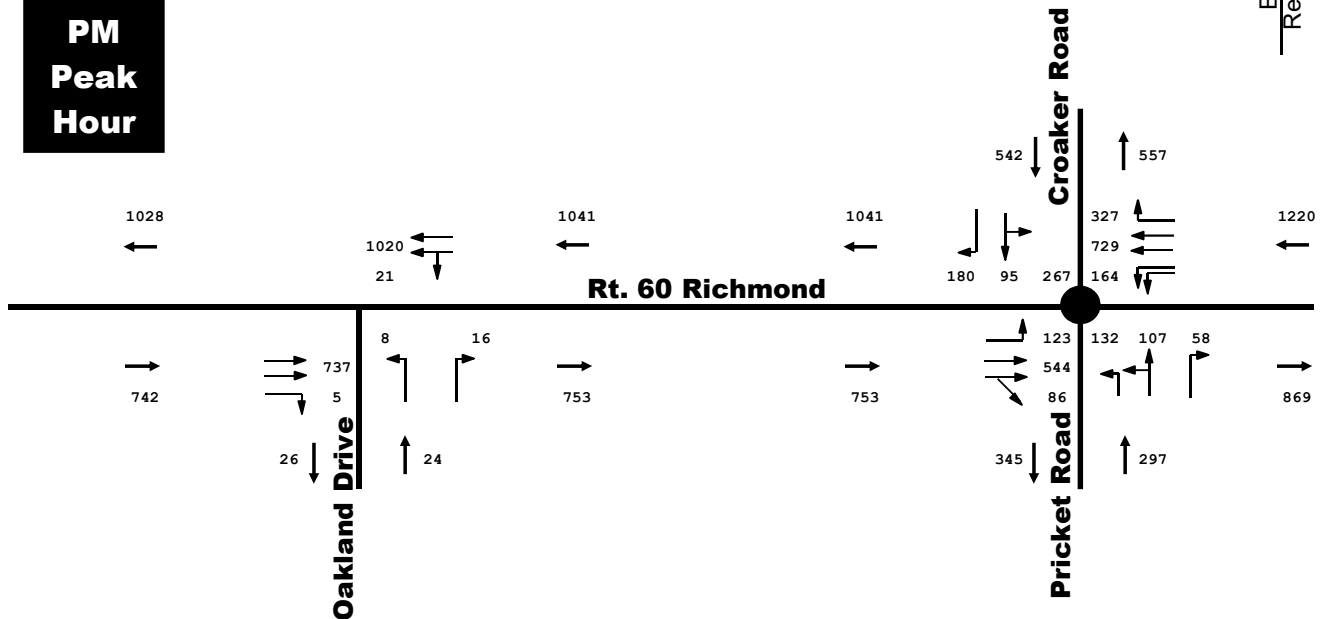
**AM
Peak
Hour**



TO
WILLIAMSBURG →

Exhibit
Reference

**PM
Peak
Hour**

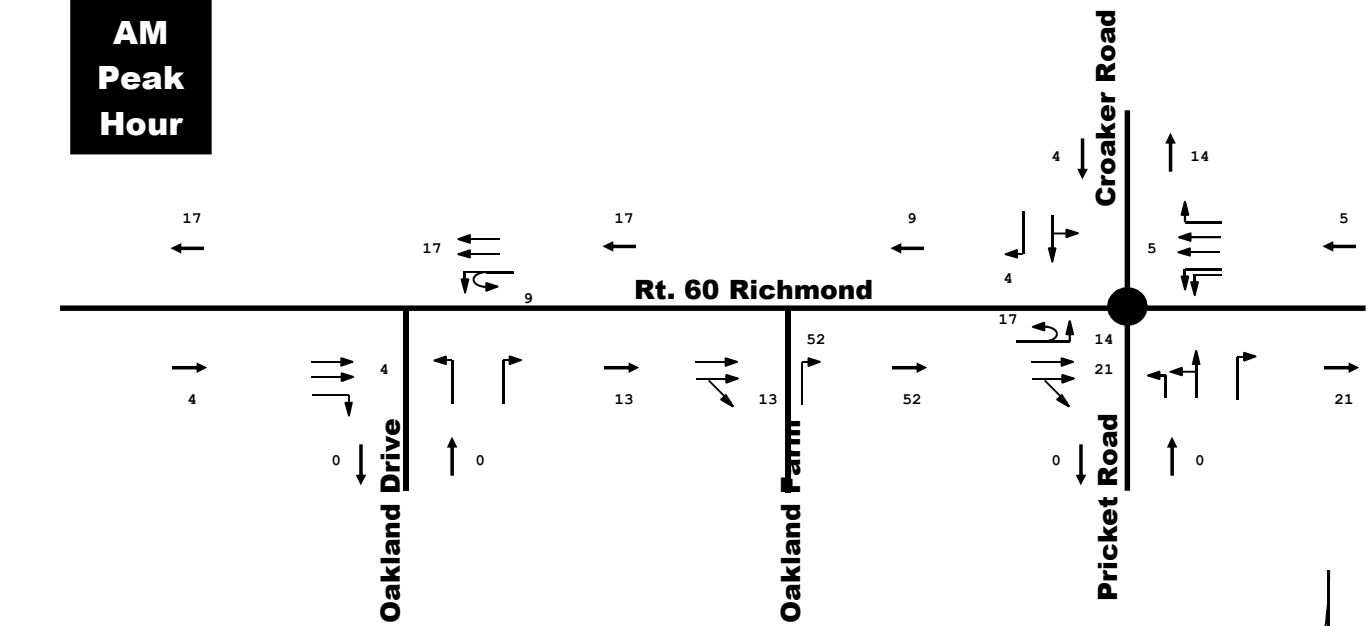


2025 PEAK HOUR BACKGROUND TRAFFIC
WITHOUT OAKLAND FARM APARTMENTS

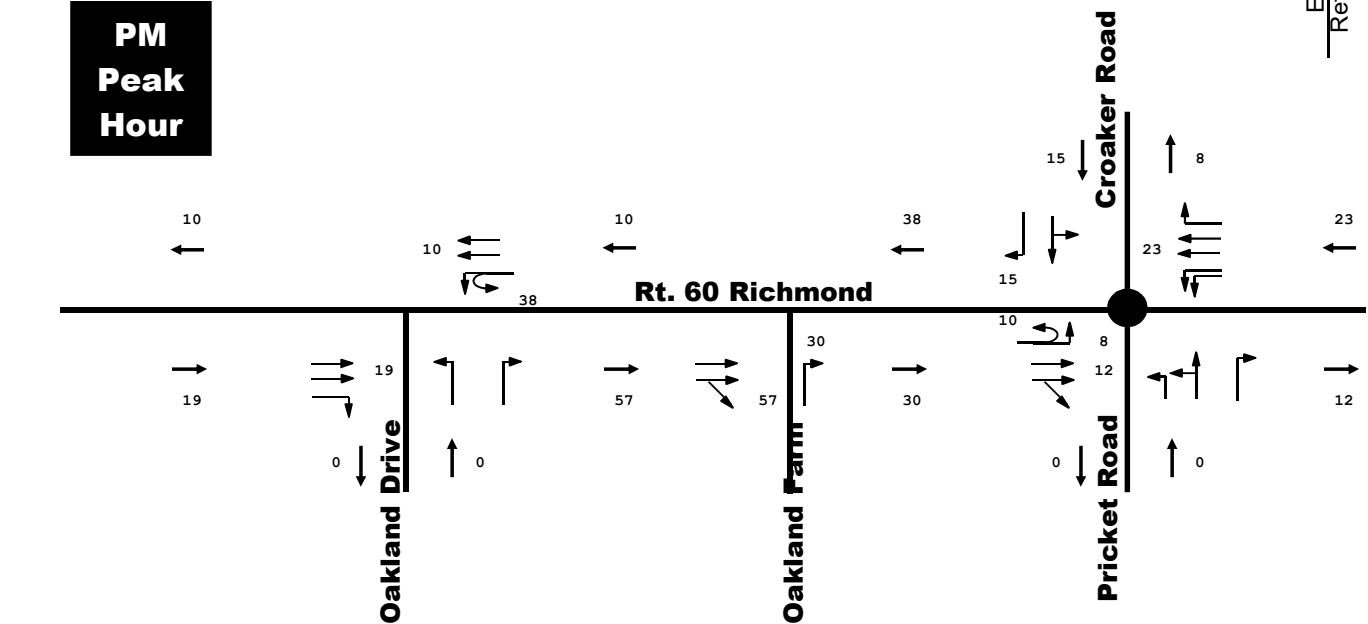
DRW Consultants, LLC
804-794-7312

Exhibit 8

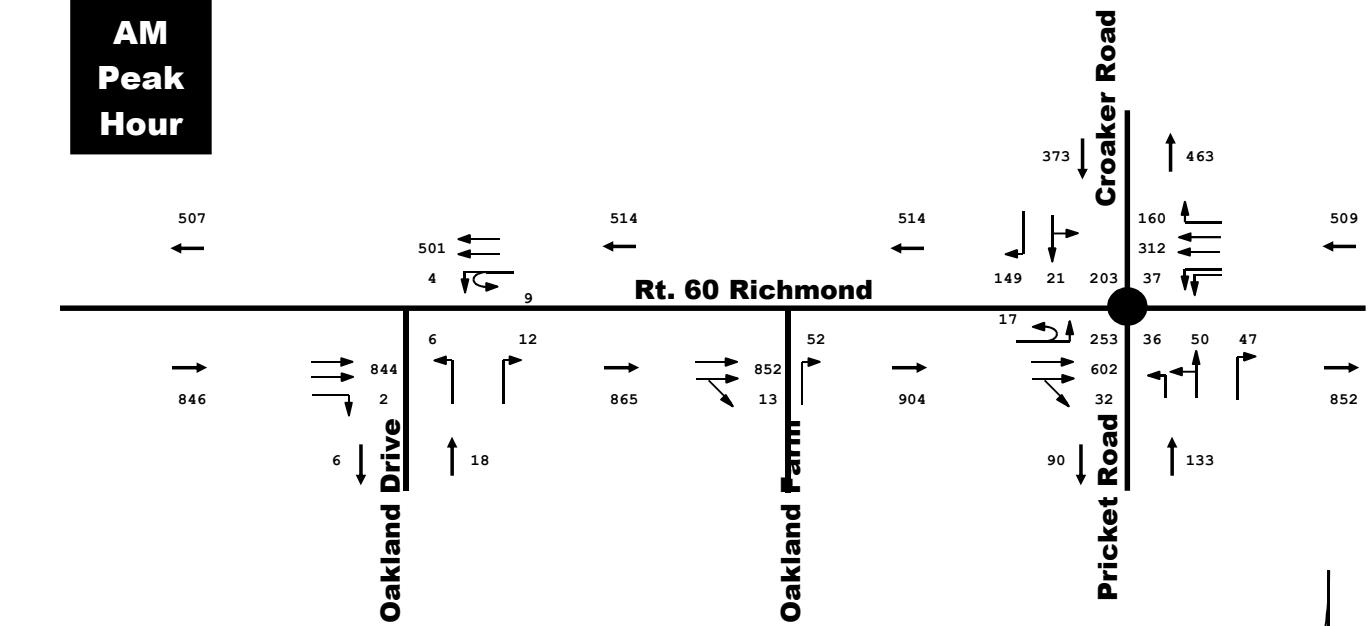
**AM
Peak
Hour**



**PM
Peak
Hour**



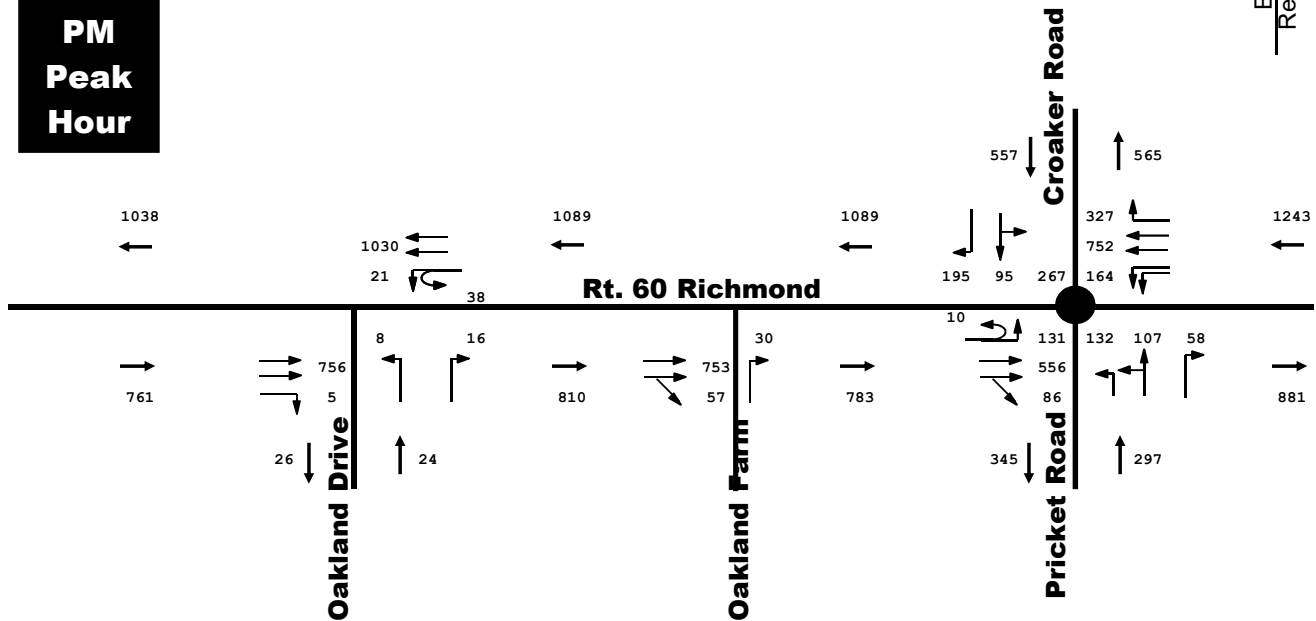
**AM
Peak
Hour**



TO
WILLIAMSBURG →

Exhibit
Reference

**PM
Peak
Hour**



2025 TOTAL PEAK HOUR TRAFFIC
WITH OAKLAND FARM APARTMENTS

DRW Consultants, LLC
804-794-7312

Exhibit 10



APPENDIX EXHIBITS

APPENDIX TABLE OF CONTENTS

APPENDIX EXHIBITS	Number
2017 Tabulated Total Traffic Counts:	AM PM
Rt. 60 Richmond Road/Croaker Road	A3 A6
Rt. 60 Richmond Road/Oakland Drive.....	B3 B6
2017 Tabulated Eastbound Left Turn Queues	AM PM
Rt. 60 Richmond Road/Croaker Road	C1 C2
2017 Counts Without Balance	AM PM
.....	D D
2017 Development Trip Distribution	AM PM
.....	E E
Turn Lane Warrants	AM PM
Rt. 60 Westbound Left Turn At Oakland Drive	F F
Rt. 60 Eastbound Right Turn At Oakland Pointe	F1 F1
HCM 2000 Signalized Intersection LOS	AM PM
Existing.....	J1 J2
Rt. 60 Richmond Road/Croaker Road	Page 1
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Rt. 60 Richmond Road/Croaker Road	Page 1
2025 With Site Existing Timing.....	J5 J6
Rt. 60 Richmond Road/Croaker Road	Page 1
2025 With Site Optimized Timing.....	J7 J8
Rt. 60 Richmond Road/Croaker Road	Page 1
Unsignalized LOS	AM PM
Existing.....	K1 K2
Rt. 60 Richmond Road/Oakland Drive.....	Page 1
2025 Background.....	K3 K4
Rt. 60 Richmond Road/Oakland Drive.....	Page 1
2025 With Site	K5 K6
Rt. 60 Richmond Road/Oakland Drive.....	Page 1
Rt. 60 Richmond Road/Site Access.....	Page 2
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Existing.....	L1 L2
Rt. 60 Richmond Road/Croaker Road	Page 1
2025 Background.....	L3 L4
Rt. 60 Richmond Road/Croaker Road	Page 1
2025 With Site – Existing Timing	L5 L6
Rt. 60 Richmond Road/Croaker Road	Page 1
2025 With Site – Optimized Timing.....	L7 L8
Rt. 60 Richmond Road/Croaker Road	Page 1
SimTraffic Queuing & Blocking Report	AM PM
Existing – 60 Minute Interval	M1 M2
Rt. 60 Richmond Road/Croaker Road	Page 1
Rt. 60 Richmond Road/Oakland Drive.....	Page 1
2025 Background.....	M3 M4
Rt. 60 Richmond Road/Croaker Road	Page 1
Rt. 60 Richmond Road/Oakland Drive.....	Page 1
2025 With Site – Existing Timing	M5 M6
Rt. 60 Richmond Road/Croaker Road	Page 1
Rt. 60 Richmond Road/Oakland Drive.....	Page 1
2025 With Site – Optimized Timing.....	M7 M8
Rt. 60 Richmond Road/Croaker Road	Page 1
Rt. 60 Richmond Road/Oakland Drive.....	Page 1

Peggy Malone & Associates, Inc.

(888) 247-8602

File Name : 1-Croaker Rd._Pricket Rd. & Richmond Rd. AM

Site Code :

Start Date : 10/10/2017

Page No : 1

Groups Printed- Car

	Richmond Rd Eastbound					Richmond Rd Westbound					Pricket Rd Northbound					Croaker Rd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	77	132	5	1	215	4	70	44	0	118	2	7	1	1	11	41	2	52	0	95	439
07:15 AM	63	109	2	0	174	5	79	43	0	127	2	11	6	0	19	41	3	24	0	68	388
07:30 AM	39	147	5	0	191	5	61	29	0	95	3	4	10	0	17	43	1	23	0	67	370
07:45 AM	25	125	5	0	155	10	59	22	0	91	5	4	3	0	12	56	6	20	0	82	340
Total	204	513	17	1	735	24	269	138	0	431	12	26	20	1	59	181	12	119	0	312	1537
08:00 AM	28	111	4	0	143	18	59	37	0	114	2	3	4	0	9	51	4	18	0	73	339
08:15 AM	29	116	2	0	147	12	50	22	0	84	1	5	6	0	12	52	5	14	0	71	314
08:30 AM	21	133	12	0	166	14	52	19	0	85	8	2	5	0	15	65	6	17	0	88	354
08:45 AM	21	110	3	0	134	12	52	24	0	88	3	9	8	0	20	57	5	22	0	84	326
Total	99	470	21	0	590	56	213	102	0	371	14	19	23	0	56	225	20	71	0	316	1333
Grand Total	303	983	38	1	1325	80	482	240	0	802	26	45	43	1	115	406	32	190	0	628	2870
Apprch %	22.9	74.2	2.9	0.1		10	60.1	29.9	0		22.6	39.1	37.4	0.9		64.6	5.1	30.3	0		
Total %	10.6	34.3	1.3	0	46.2	2.8	16.8	8.4	0	27.9	0.9	1.6	1.5	0	4	14.1	1.1	6.6	0	21.9	

	Richmond Rd Eastbound				Richmond Rd Westbound				Pricket Rd Northbound				Croaker Rd Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	77	132	5	214	4	70	44	118	2	7	1	10	41	2	52	95	437
07:15 AM	63	109	2	174	5	79	43	127	2	11	6	19	41	3	24	68	388
07:30 AM	39	147	5	191	5	61	29	95	3	4	10	17	43	1	23	67	370
07:45 AM	25	125	5	155	10	59	22	91	5	4	3	12	56	6	20	82	340
Total Volume	204	513	17	734	24	269	138	431	12	26	20	58	181	12	119	312	1535
% App. Total	27.8	69.9	2.3		5.6	62.4	32		20.7	44.8	34.5		58	3.8	38.1		
PHF	.662	.872	.850	.857	.600	.851	.784	.848	.600	.591	.500	.763	.808	.500	.572	.821	.878

Peggy Malone & Associates, Inc.

(888) 247-8602

File Name : 1-Croaker Rd._Pricket Rd. & Richmond Rd. AM

Site Code :

Start Date : 10/10/2017

Page No : 1

Groups Printed- Truck

	Richmond Rd Eastbound					Richmond Rd Westbound					Pricket Rd Northbound					Croaker Rd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	5	7	2	0	14	0	2	1	0	3	0	0	0	0	0	2	1	4	0	7	24
07:15 AM	7	9	2	0	18	1	3	1	0	5	2	1	0	0	3	3	1	3	0	7	33
07:30 AM	3	4	1	0	8	1	7	4	0	12	0	2	0	0	2	2	0	4	0	6	28
07:45 AM	2	5	1	0	8	1	3	4	0	8	1	2	0	0	3	0	1	4	0	5	24
Total	17	25	6	0	48	3	15	10	0	28	3	5	0	0	8	7	3	15	0	25	109
08:00 AM	5	6	0	0	11	0	3	4	0	7	0	1	1	0	2	1	1	3	0	5	25
08:15 AM	5	4	1	0	10	1	2	3	0	6	0	1	0	0	1	3	0	2	0	5	22
08:30 AM	1	7	0	0	8	0	4	1	0	5	1	0	0	0	1	3	0	4	0	7	21
08:45 AM	2	11	1	0	14	2	3	2	0	7	2	0	0	0	2	2	1	3	0	6	29
Total	13	28	2	0	43	3	12	10	0	25	3	2	1	0	6	9	2	12	0	23	97
Grand Total	30	53	8	0	91	6	27	20	0	53	6	7	1	0	14	16	5	27	0	48	206
Apprch %	33	58.2	8.8	0		11.3	50.9	37.7	0		42.9	50	7.1	0		33.3	10.4	56.2	0		
Total %	14.6	25.7	3.9	0	44.2	2.9	13.1	9.7	0	25.7	2.9	3.4	0.5	0	6.8	7.8	2.4	13.1	0	23.3	

	Richmond Rd Eastbound				Richmond Rd Westbound				Pricket Rd Northbound				Croaker Rd Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	7	9	2	18	1	3	1	5	2	1	0	3	3	1	3	7	33
07:30 AM	3	4	1	8	1	7	4	12	0	2	0	2	2	0	4	6	28
07:45 AM	2	5	1	8	1	3	4	8	1	2	0	3	0	1	4	5	24
08:00 AM	5	6	0	11	0	3	4	7	0	1	1	2	1	1	3	5	25
Total Volume	17	24	4	45	3	16	13	32	3	6	1	10	6	3	14	23	110
% App. Total	37.8	53.3	8.9		9.4	50	40.6		30	60	10		26.1	13	60.9		
PHF	.607	.667	.500	.625	.750	.571	.813	.667	.375	.750	.250	.833	.500	.750	.875	.821	.833

Peggy Malone & Associates, Inc.

(888) 247-8602

File Name : 1-Croaker Rd._Pricket Rd. & Richmond Rd. AM

Site Code :

Start Date : 10/10/2017

Page No : 1

Groups Printed- Car - Truck

	Richmond Rd Eastbound					Richmond Rd Westbound					Pricket Rd Northbound					Croaker Rd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	82	139	7	1	229	4	72	45	0	121	2	7	1	1	11	43	3	56	0	102	463
07:15 AM	70	118	4	0	192	6	82	44	0	132	4	12	6	0	22	44	4	27	0	75	421
07:30 AM	42	151	6	0	199	6	68	33	0	107	3	6	10	0	19	45	1	27	0	73	398
07:45 AM	27	130	6	0	163	11	62	26	0	99	6	6	3	0	15	56	7	24	0	87	364
Total	221	538	23	1	783	27	284	148	0	459	15	31	20	1	67	188	15	134	0	337	1646
08:00 AM	33	117	4	0	154	18	62	41	0	121	2	4	5	0	11	52	5	21	0	78	364
08:15 AM	34	120	3	0	157	13	52	25	0	90	1	6	6	0	13	55	5	16	0	76	336
08:30 AM	22	140	12	0	174	14	56	20	0	90	9	2	5	0	16	68	6	21	0	95	375
08:45 AM	23	121	4	0	148	14	55	26	0	95	5	9	8	0	22	59	6	25	0	90	355
Total	112	498	23	0	633	59	225	112	0	396	17	21	24	0	62	234	22	83	0	339	1430
Grand Total	333	1036	46	1	1416	86	509	260	0	855	32	52	44	1	129	422	37	217	0	676	3076
Apprch %	23.5	73.2	3.2	0.1		10.1	59.5	30.4	0		24.8	40.3	34.1	0.8		62.4	5.5	32.1	0		
Total %	10.8	33.7	1.5	0	46	2.8	16.5	8.5	0	27.8	1	1.7	1.4	0	4.2	13.7	1.2	7.1	0	22	
Car	303	983	38	1	1325	80	482	240	0	802	26	45	43	1	115	406	32	190	0	628	2870
% Car	91	94.9	82.6	100	93.6	93	94.7	92.3	0	93.8	81.2	86.5	97.7	100	89.1	96.2	86.5	87.6	0	92.9	93.3
Truck	30	53	8	0	91	6	27	20	0	53	6	7	1	0	14	16	5	27	0	48	206
% Truck	9	5.1	17.4	0	6.4	7	5.3	7.7	0	6.2	18.8	13.5	2.3	0	10.9	3.8	13.5	12.4	0	7.1	6.7

	Richmond Rd Eastbound				Richmond Rd Westbound				Pricket Rd Northbound				Croaker Rd Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	82	139	7	228	4	72	45	121	2	7	1	10	43	3	56	102	461
07:15 AM	70	118	4	192	6	82	44	132	4	12	6	22	44	4	27	75	421
07:30 AM	42	151	6	199	6	68	33	107	3	6	10	19	45	1	27	73	398
07:45 AM	27	130	6	163	11	62	26	99	6	6	3	15	56	7	24	87	364
Total Volume	221	538	23	782	27	284	148	459	15	31	20	66	188	15	134	337	1644
% App. Total	28.3	68.8	2.9		5.9	61.9	32.2		22.7	47	30.3		55.8	4.5	39.8		
PHF	.674	.891	.821	.857	.614	.866	.822	.869	.625	.646	.500	.750	.839	.536	.598	.826	.892

Truck % 8 5 26 11 5 7 20 16 0 4 20 11

Peggy Malone & Associates, Inc.

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File Name : 1-Croaker Rd._Pricket Rd. & Richmond Rd. PM

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Groups Printed- Car

	Richmond Rd Eastbound					Richmond Rd Westbound					Pricket Rd Northbound					Croaker Rd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	28	102	8	0	138	21	152	66	0	239	20	12	7	0	39	68	10	35	0	113	529
04:15 PM	21	110	10	0	141	36	136	56	0	228	25	15	5	0	45	52	15	33	0	100	514
04:30 PM	41	88	7	0	136	34	171	65	0	270	20	19	7	0	46	60	24	55	0	139	591
04:45 PM	30	120	17	0	167	27	174	80	0	281	23	27	16	0	66	52	19	47	0	118	632
Total	120	420	42	0	582	118	633	267	0	1018	88	73	35	0	196	232	68	170	0	470	2266
05:00 PM	34	129	18	0	181	29	148	77	0	254	25	12	13	0	50	63	11	32	1	107	592
05:15 PM	25	121	13	0	159	36	163	65	1	265	29	23	8	0	60	57	21	38	0	116	600
05:30 PM	23	126	12	0	161	36	134	78	1	249	34	28	3	0	65	72	22	38	0	132	607
05:45 PM	16	119	15	0	150	29	158	59	1	247	26	14	13	0	53	68	19	33	0	120	570
Total	98	495	58	0	651	130	603	279	3	1015	114	77	37	0	228	260	73	141	1	475	2369
Grand Total	218	915	100	0	1233	248	1236	546	3	2033	202	150	72	0	424	492	141	311	1	945	4635
Apprch %	17.7	74.2	8.1	0		12.2	60.8	26.9	0.1		47.6	35.4	17	0		52.1	14.9	32.9	0.1		
Total %	4.7	19.7	2.2	0	26.6	5.4	26.7	11.8	0.1	43.9	4.4	3.2	1.6	0	9.1	10.6	3	6.7	0	20.4	

	Richmond Rd Eastbound				Richmond Rd Westbound				Pricket Rd Northbound				Croaker Rd Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	30	120	17	167	27	174	80	281	23	27	16	66	52	19	47	118	632
05:00 PM	34	129	18	181	29	148	77	254	25	12	13	50	63	11	32	106	591
05:15 PM	25	121	13	159	36	163	65	264	29	23	8	60	57	21	38	116	599
05:30 PM	23	126	12	161	36	134	78	248	34	28	3	65	72	22	38	132	606
Total Volume	112	496	60	668	128	619	300	1047	111	90	40	241	244	73	155	472	2428
% App. Total	16.8	74.3	9		12.2	59.1	28.7		46.1	37.3	16.6		51.7	15.5	32.8		
PHF	.824	.961	.833	.923	.889	.889	.938	.931	.816	.804	.625	.913	.847	.830	.824	.894	.960

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Groups Printed- Truck

	Richmond Rd Eastbound					Richmond Rd Westbound					Pricket Rd Northbound					Croaker Rd Southbound						
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total	
04:00 PM	0	5	0	0	5	0	4	1	0	5	0	0	0	0	0	0	1	1	0	0	2	12
04:15 PM	0	2	0	0	2	1	3	5	0	9	0	1	1	0	2	1	0	2	0	3	16	
04:30 PM	1	1	0	0	2	1	3	2	0	6	0	0	0	0	0	0	0	3	0	3	11	
04:45 PM	1	4	0	0	5	0	7	1	0	8	0	0	1	0	1	1	0	2	0	3	17	
Total	2	12	0	0	14	2	17	9	0	28	0	1	2	0	3	2	1	8	0	11	56	
05:00 PM	1	2	0	0	3	1	1	0	0	2	1	0	0	0	1	2	0	6	0	8	14	
05:15 PM	0	1	0	0	1	1	1	1	0	3	0	1	0	0	1	0	0	3	0	3	8	
05:30 PM	0	1	0	0	1	0	2	1	0	3	0	0	0	0	0	0	0	1	0	1	5	
05:45 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	1	0	1	0	2	4	
Total	1	5	0	0	6	2	5	2	0	9	1	1	0	0	2	3	0	11	0	14	31	
Grand Total	3	17	0	0	20	4	22	11	0	37	1	2	2	0	5	5	1	19	0	25	87	
Apprch %	15	85	0	0		10.8	59.5	29.7	0		20	40	40	0		20	4	76	0			
Total %	3.4	19.5	0	0	23	4.6	25.3	12.6	0	42.5	1.1	2.3	2.3	0	5.7	5.7	1.1	21.8	0	28.7		

	Richmond Rd Eastbound				Richmond Rd Westbound				Pricket Rd Northbound				Croaker Rd Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	2	0	2	1	3	5	9	0	1	1	2	1	0	2	3	16
04:30 PM	1	1	0	2	1	3	2	6	0	0	0	0	0	0	3	3	11
04:45 PM	1	4	0	5	0	7	1	8	0	0	1	1	1	0	2	3	17
05:00 PM	1	2	0	3	1	1	0	2	1	0	0	1	2	0	6	8	14
Total Volume	3	9	0	12	3	14	8	25	1	1	2	4	4	0	13	17	58
% App. Total	25	75	0		12	56	32		25	25	50		23.5	0	76.5		
PHF	.750	.563	.000	.600	.750	.500	.400	.694	.250	.250	.500	.500	.500	.000	.542	.531	.853

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Groups Printed- Car - Truck

	Richmond Rd Eastbound					Richmond Rd Westbound					Pricket Rd Northbound					Croaker Rd Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	28	107	8	0	143	21	156	67	0	244	20	12	7	0	39	68	11	36	0	115	541
04:15 PM	21	112	10	0	143	37	139	61	0	237	25	16	6	0	47	53	15	35	0	103	530
04:30 PM	42	89	7	0	138	35	174	67	0	276	20	19	7	0	46	60	24	58	0	142	602
04:45 PM	31	124	17	0	172	27	181	81	0	289	23	27	17	0	67	53	19	49	0	121	649
Total	122	432	42	0	596	120	650	276	0	1046	88	74	37	0	199	234	69	178	0	481	2322
05:00 PM	35	131	18	0	184	30	149	77	0	256	26	12	13	0	51	65	11	38	1	115	606
05:15 PM	25	122	13	0	160	37	164	66	1	268	29	24	8	0	61	57	21	41	0	119	608
05:30 PM	23	127	12	0	162	36	136	79	1	252	34	28	3	0	65	72	22	39	0	133	612
05:45 PM	16	120	15	0	151	29	159	59	1	248	26	14	13	0	53	69	19	34	0	122	574
Total	99	500	58	0	657	132	608	281	3	1024	115	78	37	0	230	263	73	152	1	489	2400
Grand Total	221	932	100	0	1253	252	1258	557	3	2070	203	152	74	0	429	497	142	330	1	970	4722
Apprch %	17.6	74.4	8	0		12.2	60.8	26.9	0.1		47.3	35.4	17.2	0		51.2	14.6	34	0.1		
Total %	4.7	19.7	2.1	0	26.5	5.3	26.6	11.8	0.1	43.8	4.3	3.2	1.6	0	9.1	10.5	3	7	0	20.5	
Car	218	915	100	0	1233	248	1236	546	3	2033	202	150	72	0	424	492	141	311	1	945	4635
% Car	98.6	98.2	100	0	98.4	98.4	98.3	98	100	98.2	99.5	98.7	97.3	0	98.8	99	99.3	94.2	100	97.4	98.2
Truck	3	17	0	0	20	4	22	11	0	37	1	2	2	0	5	5	1	19	0	25	87
% Truck	1.4	1.8	0	0	1.6	1.6	1.7	2	0	1.8	0.5	1.3	2.7	0	1.2	1	0.7	5.8	0	2.6	1.8

	Richmond Rd Eastbound					Richmond Rd Westbound					Pricket Rd Northbound					Croaker Rd Southbound					
Start Time	Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	31	124	17	172		27	181	81	289		23	27	17	67		53	19	49	121		649
05:00 PM	35	131	18	184		30	149	77	256		26	12	13	51		65	11	38	114		605
05:15 PM	25	122	13	160		37	164	66	267		29	24	8	61		57	21	41	119		607
05:30 PM	23	127	12	162		36	136	79	251		34	28	3	65		72	22	39	133		611
Total Volume	114	504	60	678		130	630	303	1063		112	91	41	244		247	73	167	487		2472
% App. Total	16.8	74.3	8.8			12.2	59.3	28.5			45.9	37.3	16.8			50.7	15	34.3			
PHF	.814	.962	.833	.921		.878	.870	.935	.920		.824	.813	.603	.910		.858	.830	.852	.915		.952
Truck %v	2	2	0			2	2	1			1	1	2			1	0	7			

Peggy Malone & Associates, Inc.
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Groups Printed- Car

Start Time	Richmond Rd Eastbound				Richmond Rd Westbound				Oakland Dr Northbound				Int. Total
	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	
07:00 AM	208	0	0	208	2	118	1	121	1	2	1	4	333
07:15 AM	168	0	0	168	2	95	0	97	1	1	0	2	267
07:30 AM	181	1	0	182	0	92	0	92	0	4	0	4	278
07:45 AM	148	0	0	148	0	86	0	86	3	4	0	7	241
Total	705	1	0	706	4	391	1	396	5	11	1	17	1119
08:00 AM	144	0	0	144	0	81	0	81	0	2	0	2	227
08:15 AM	150	0	0	150	1	60	0	61	1	2	3	6	217
08:30 AM	164	0	0	164	0	78	0	78	0	2	0	2	244
08:45 AM	141	0	0	141	0	78	0	78	1	3	0	4	223
Total	599	0	0	599	1	297	0	298	2	9	3	14	911
Grand Total	1304	1	0	1305	5	688	1	694	7	20	4	31	2030
Apprch %	99.9	0.1	0		0.7	99.1	0.1		22.6	64.5	12.9		
Total %	64.2	0	0	64.3	0.2	33.9	0	34.2	0.3	1	0.2	1.5	

	Richmond Rd Eastbound			Richmond Rd Westbound			Oakland Dr Northbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	208	0	208	2	118	120	1	2	3	331
07:15 AM	168	0	168	2	95	97	1	1	2	267
07:30 AM	181	1	182	0	92	92	0	4	4	278
07:45 AM	148	0	148	0	86	86	3	4	7	241
Total Volume	705	1	706	4	391	395	5	11	16	1117
% App. Total	99.9	0.1		1	99		31.2	68.8		
PHF	.847	.250	.849	.500	.828	.823	.417	.688	.571	.844

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Groups Printed- Truck

Start Time	Richmond Rd Eastbound				Richmond Rd Westbound				Oakland Dr Northbound				Int. Total
	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	
07:00 AM	14	1	0	15	0	7	0	7	1	0	0	1	23
07:15 AM	18	0	0	18	0	7	0	7	0	0	0	0	25
07:30 AM	10	0	0	10	0	11	0	11	0	0	0	0	21
07:45 AM	7	0	0	7	0	7	0	7	0	0	0	0	14
Total	49	1	0	50	0	32	0	32	1	0	0	1	83
08:00 AM	11	0	0	11	0	6	0	6	0	0	0	0	17
08:15 AM	10	2	0	12	0	4	0	4	0	0	0	0	16
08:30 AM	8	0	0	8	0	10	0	10	0	0	0	0	18
08:45 AM	13	1	0	14	0	7	0	7	0	1	0	1	22
Total	42	3	0	45	0	27	0	27	0	1	0	1	73
Grand Total	91	4	0	95	0	59	0	59	1	1	0	2	156
Apprch %	95.8	4.2	0		0	100	0		50	50	0		
Total %	58.3	2.6	0	60.9	0	37.8	0	37.8	0.6	0.6	0	1.3	

	Richmond Rd Eastbound			Richmond Rd Westbound			Oakland Dr Northbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	14	1	15	0	7	7	1	0	1	23
07:15 AM	18	0	18	0	7	7	0	0	0	25
07:30 AM	10	0	10	0	11	11	0	0	0	21
07:45 AM	7	0	7	0	7	7	0	0	0	14
Total Volume	49	1	50	0	32	32	1	0	1	83
% App. Total	98	2		0	100		100	0		
PHF	.681	.250	.694	.000	.727	.727	.250	.000	.250	.830

Peggy Malone & Associates, Inc.

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Groups Printed- Car - Truck

	Richmond Rd Eastbound				Richmond Rd Westbound				Oakland Dr Northbound				
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
07:00 AM	222	1	0	223	2	125	1	128	2	2	1	5	356
07:15 AM	186	0	0	186	2	102	0	104	1	1	0	2	292
07:30 AM	191	1	0	192	0	103	0	103	0	4	0	4	299
07:45 AM	155	0	0	155	0	93	0	93	3	4	0	7	255
Total	754	2	0	756	4	423	1	428	6	11	1	18	1202
08:00 AM	155	0	0	155	0	87	0	87	0	2	0	2	244
08:15 AM	160	2	0	162	1	64	0	65	1	2	3	6	233
08:30 AM	172	0	0	172	0	88	0	88	0	2	0	2	262
08:45 AM	154	1	0	155	0	85	0	85	1	4	0	5	245
Total	641	3	0	644	1	324	0	325	2	10	3	15	984
Grand Total	1395	5	0	1400	5	747	1	753	8	21	4	33	2186
Apprch %	99.6	0.4	0		0.7	99.2	0.1		24.2	63.6	12.1		
Total %	63.8	0.2	0	64	0.2	34.2	0	34.4	0.4	1	0.2	1.5	
Car	1304	1	0	1305	5	688	1	694	7	20	4	31	2030
% Car	93.5	20	0	93.2	100	92.1	100	92.2	87.5	95.2	100	93.9	92.9
Truck	91	4	0	95	0	59	0	59	1	1	0	2	156
% Truck	6.5	80	0	6.8	0	7.9	0	7.8	12.5	4.8	0	6.1	7.1

	Richmond Rd Eastbound			Richmond Rd Westbound			Oakland Dr Northbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	222	1	223	2	125	127	2	2	4	354
07:15 AM	186	0	186	2	102	104	1	1	2	292
07:30 AM	191	1	192	0	103	103	0	4	4	299
07:45 AM	155	0	155	0	93	93	3	4	7	255
Total Volume	754	2	756	4	423	427	6	11	17	1200
% App. Total	99.7	0.3		0.9	99.1		35.3	64.7		
PHF	.849	.500	.848	.500	.846	.841	.500	.688	.607	.847

TRUCK % 7 5 0 7 17 0

Peggy Malone & Associates, Inc.

(888) 247-8602

File Name : 2-Oakland Rd. & Richmond Rd. PM

Site Code :

Start Date : 10/10/2017

Page No : 1

Groups Printed- Car

Start Time	Richmond Rd Eastbound				Richmond Rd Westbound				Oakland Dr Northbound				Int. Total
	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	
04:00 PM	140	0	0	140	3	202	0	205	0	0	0	0	345
04:15 PM	143	2	0	145	1	198	0	199	0	1	0	1	345
04:30 PM	137	0	0	137	4	246	0	250	1	2	0	3	390
04:45 PM	154	2	0	156	6	227	0	233	0	6	0	6	395
Total	574	4	0	578	14	873	0	887	1	9	0	10	1475
05:00 PM	180	0	0	180	7	200	0	207	1	2	0	3	390
05:15 PM	154	1	0	155	1	235	0	236	3	4	0	7	398
05:30 PM	173	0	0	173	5	199	0	204	0	5	0	5	382
05:45 PM	129	1	0	130	2	210	0	212	0	4	0	4	346
Total	636	2	0	638	15	844	0	859	4	15	0	19	1516
Grand Total	1210	6	0	1216	29	1717	0	1746	5	24	0	29	2991
Apprch %	99.5	0.5	0		1.7	98.3	0		17.2	82.8	0		
Total %	40.5	0.2	0	40.7	1	57.4	0	58.4	0.2	0.8	0	1	

	Richmond Rd Eastbound			Richmond Rd Westbound			Oakland Dr Northbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	137	0	137	4	246	250	1	2	3	390
04:45 PM	154	2	156	6	227	233	0	6	6	395
05:00 PM	180	0	180	7	200	207	1	2	3	390
05:15 PM	154	1	155	1	235	236	3	4	7	398
Total Volume	625	3	628	18	908	926	5	14	19	1573
% App. Total	99.5	0.5		1.9	98.1		26.3	73.7		
PHF	.868	.375	.872	.643	.923	.926	.417	.583	.679	.988

Peggy Malone & Associates, Inc.

(888) 247-8602

File Name : 2-Oakland Rd. & Richmond Rd. PM

Site Code :

Start Date : 10/10/2017

Page No : 1

Groups Printed- Truck

Start Time	Richmond Rd Eastbound				Richmond Rd Westbound				Oakland Dr Northbound				Int. Total
	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	
04:00 PM	6	0	0	6	0	6	0	6	0	0	0	0	12
04:15 PM	2	0	0	2	0	4	0	4	0	0	0	0	6
04:30 PM	2	0	0	2	0	6	0	6	0	0	0	0	8
04:45 PM	4	2	0	6	0	9	0	9	1	1	0	2	17
Total	14	2	0	16	0	25	0	25	1	1	0	2	43
05:00 PM	1	0	0	1	1	8	0	9	0	0	0	0	10
05:15 PM	2	0	0	2	0	3	0	3	1	0	0	1	6
05:30 PM	1	0	0	1	0	2	0	2	0	0	0	0	3
05:45 PM	2	0	0	2	0	2	0	2	0	0	0	0	4
Total	6	0	0	6	1	15	0	16	1	0	0	1	23
Grand Total	20	2	0	22	1	40	0	41	2	1	0	3	66
Apprch %	90.9	9.1	0		2.4	97.6	0		66.7	33.3	0		
Total %	30.3	3	0	33.3	1.5	60.6	0	62.1	3	1.5	0	4.5	

	Richmond Rd Eastbound			Richmond Rd Westbound			Oakland Dr Northbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	6	0	6	0	6	6	0	0	0	12
04:15 PM	2	0	2	0	4	4	0	0	0	6
04:30 PM	2	0	2	0	6	6	0	0	0	8
04:45 PM	4	2	6	0	9	9	1	1	2	17
Total Volume	14	2	16	0	25	25	1	1	2	43
% App. Total	87.5	12.5		0	100		50	50		
PHF	.583	.250	.667	.000	.694	.694	.250	.250	.250	.632

Peggy Malone & Associates, Inc.

(888) 247-8602

File Name : 2-Oakland Rd. & Richmond Rd. PM

Site Code :

Start Date : 10/10/2017

Page No : 1

Groups Printed- Car - Truck

	Richmond Rd Eastbound				Richmond Rd Westbound				Oakland Dr Northbound				
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
04:00 PM	146	0	0	146	3	208	0	211	0	0	0	0	357
04:15 PM	145	2	0	147	1	202	0	203	0	1	0	1	351
04:30 PM	139	0	0	139	4	252	0	256	1	2	0	3	398
04:45 PM	158	4	0	162	6	236	0	242	1	7	0	8	412
Total	588	6	0	594	14	898	0	912	2	10	0	12	1518
05:00 PM	181	0	0	181	8	208	0	216	1	2	0	3	400
05:15 PM	156	1	0	157	1	238	0	239	4	4	0	8	404
05:30 PM	174	0	0	174	5	201	0	206	0	5	0	5	385
05:45 PM	131	1	0	132	2	212	0	214	0	4	0	4	350
Total	642	2	0	644	16	859	0	875	5	15	0	20	1539
Grand Total	1230	8	0	1238	30	1757	0	1787	7	25	0	32	3057
Apprch %	99.4	0.6	0		1.7	98.3	0		21.9	78.1	0		
Total %	40.2	0.3	0	40.5	1	57.5	0	58.5	0.2	0.8	0	1	
Car	1210	6	0	1216	29	1717	0	1746	5	24	0	29	2991
% Car	98.4	75	0	98.2	96.7	97.7	0	97.7	71.4	96	0	90.6	97.8
Truck	20	2	0	22	1	40	0	41	2	1	0	3	66
% Truck	1.6	25	0	1.8	3.3	2.3	0	2.3	28.6	4	0	9.4	2.2

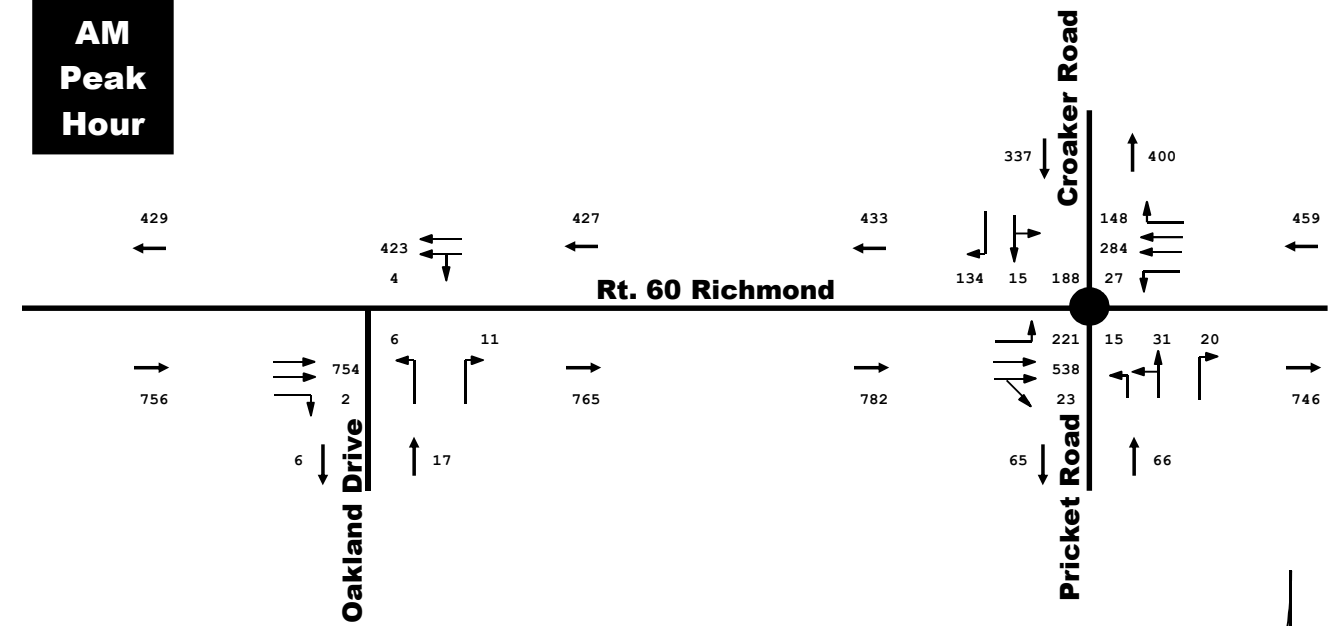
	Richmond Rd Eastbound			Richmond Rd Westbound			Oakland Dr Northbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	139	0	139	4	252	256	1	2	3	398
04:45 PM	158	4	162	6	236	242	1	7	8	412
05:00 PM	181	0	181	8	208	216	1	2	3	400
05:15 PM	156	1	157	1	238	239	4	4	8	404
Total Volume	634	5	639	19	934	953	7	15	22	1614
% App. Total	99.2	0.8		2	98		31.8	68.2		
PHF	.876	.313	.883	.594	.927	.931	.438	.536	.688	.979

TRUCK % 1 40 5 3 29 7

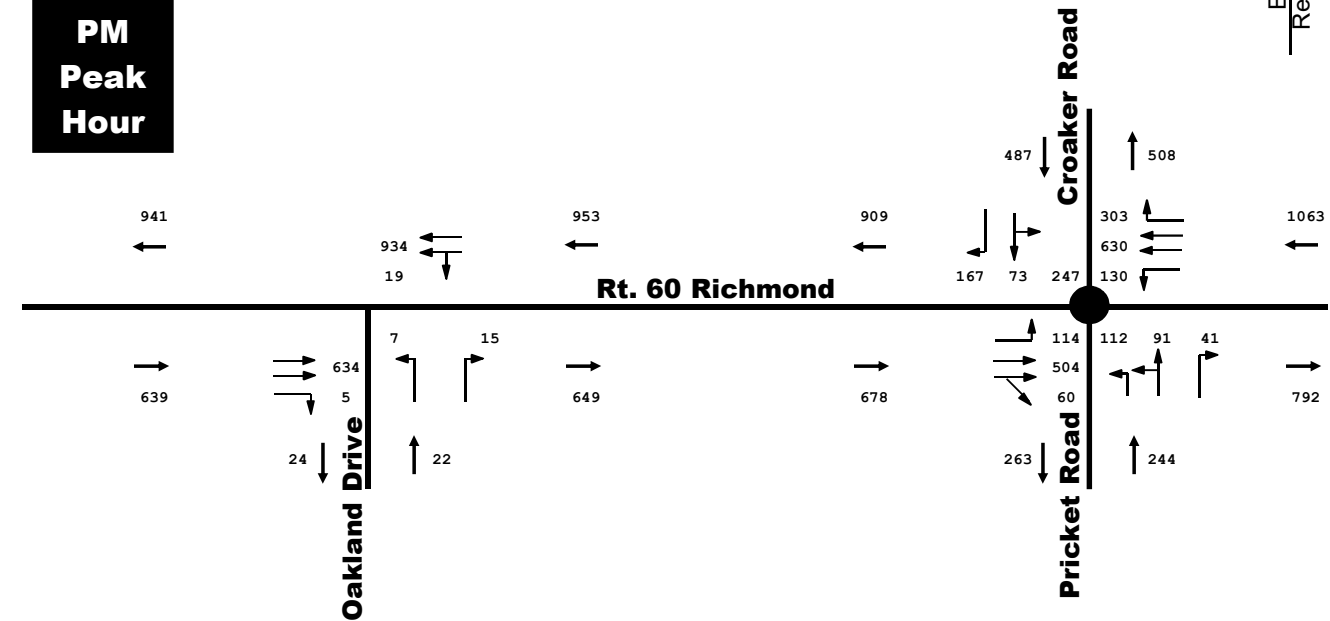
Date:	10/10/2017	Observer: K. Leigh
Intersection Name: Croaker Rd. & US60 Eastbound Left Queue		
AM Shift: 7:00-9:00 AM		
	Approach: US60 EB	
	Left (1 lane)	
Time:	# veh	distance (feet)
7:00	5	125
	6	150
	7	175
	5	125
	4	100
	8	250
	6	200
	4	100
	8	200
	5	125
	8	225
7:15	4	150
	9	250
	7	200
	6	175
	10	250
	4	100
	6	150
	5	125
	4	125
	3	75
7:30	1	25
	3	75
	2	50
	1	25
	3	100
	5	125
	3	75
	3	75
	8	250
	4	125
	4	125
	5	175
7:45	2	50
	2	50
	2	50
	2	50
	4	100
	3	100
	1	25
	1	25
	1	25
Average	4	121
PM Peak 50th Percentile	4	125
PM Peak 95th Percentile	8	250
		Exhibit C1

Date:	10/10/2017	Observer: K. Leigh
Intersection Name:		
PM SHIFT 4:00-6:00 PM		
	Approach: US60 EB	
	Left (1 lane)	
Time:	# veh	distance (feet)
4:45	1	25
	4	100
	7	175
	3	75
	1	75
	4	100
	4	100
	1	25
	5	150
5:00	7	175
	6	150
	5	125
	6	150
	2	50
	4	100
5:15	4	100
	5	125
	5	125
	2	50
	3	75
	4	100
	3	75
	3	75
5:30	1	25
	4	100
	3	75
	2	50
	2	50
	2	50
	2	50
	5	125
	4	100
Average	3	91
AM Peak 50th Percentile	4	100
AM Peak 95th Percentile	6	161
		Exhibit C2

**AM
Peak
Hour**



**PM
Peak
Hour**

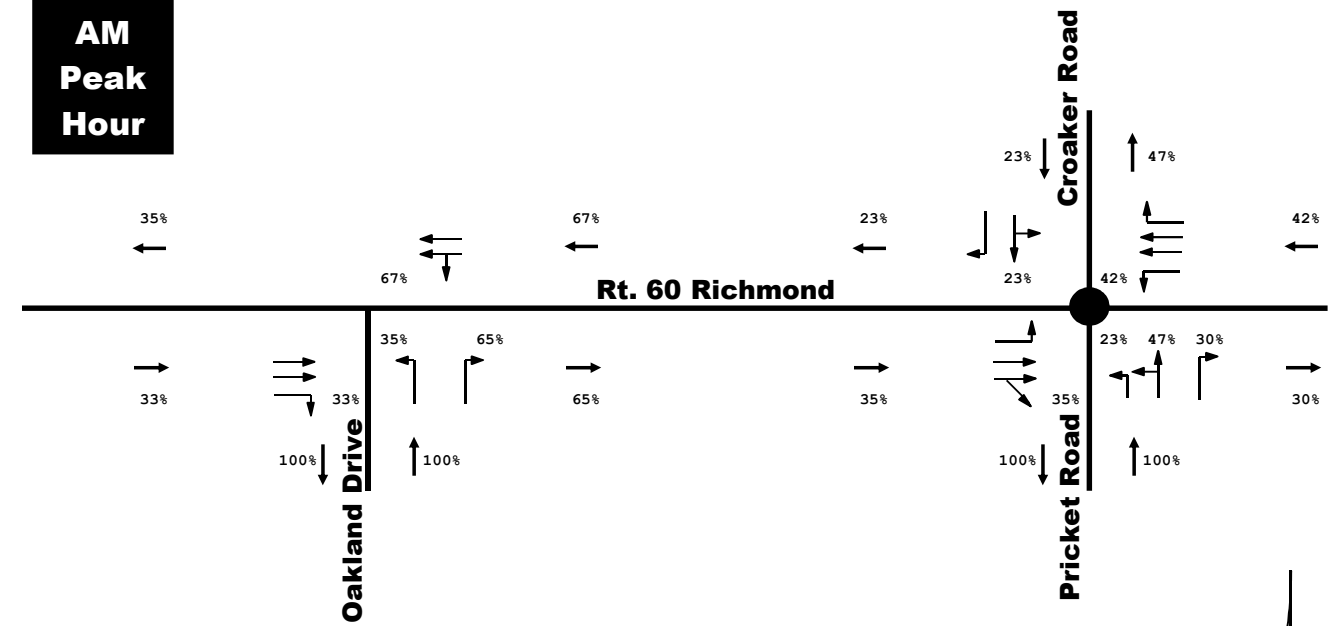


2017 PEAK HOUR COUNTS
WITHOUT BALANCE

DRW Consultants, LLC
804-794-7312

Exhibit D

**AM
Peak
Hour**



**PM
Peak
Hour**

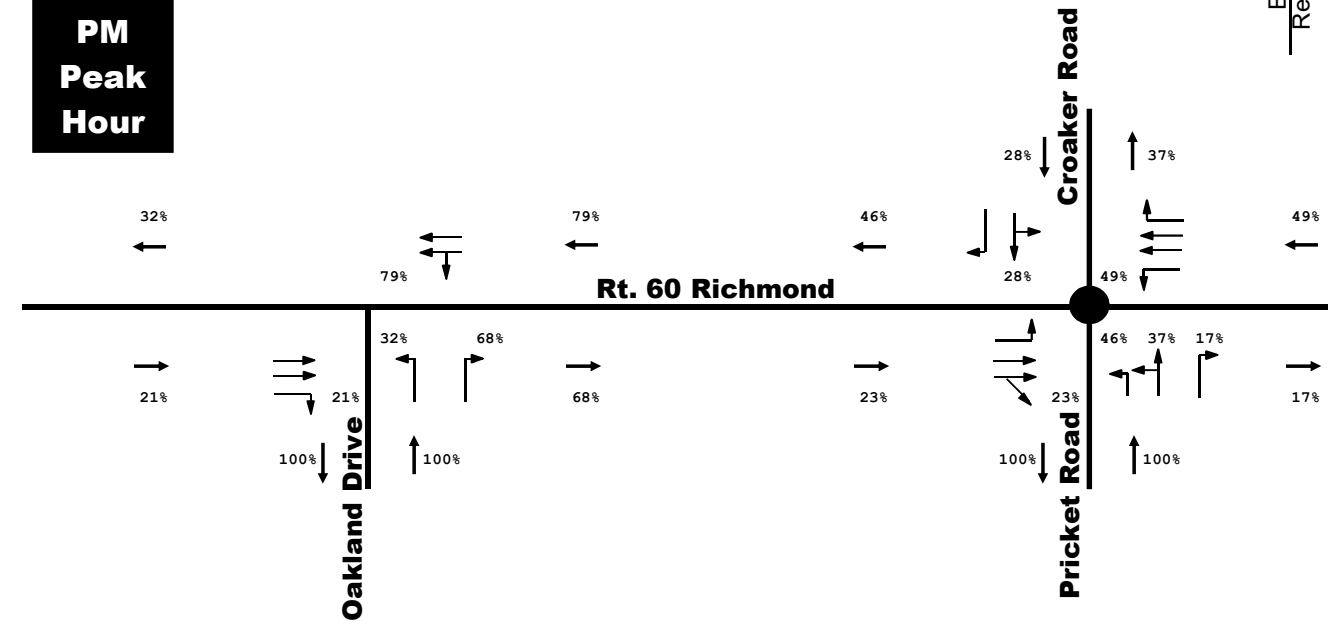


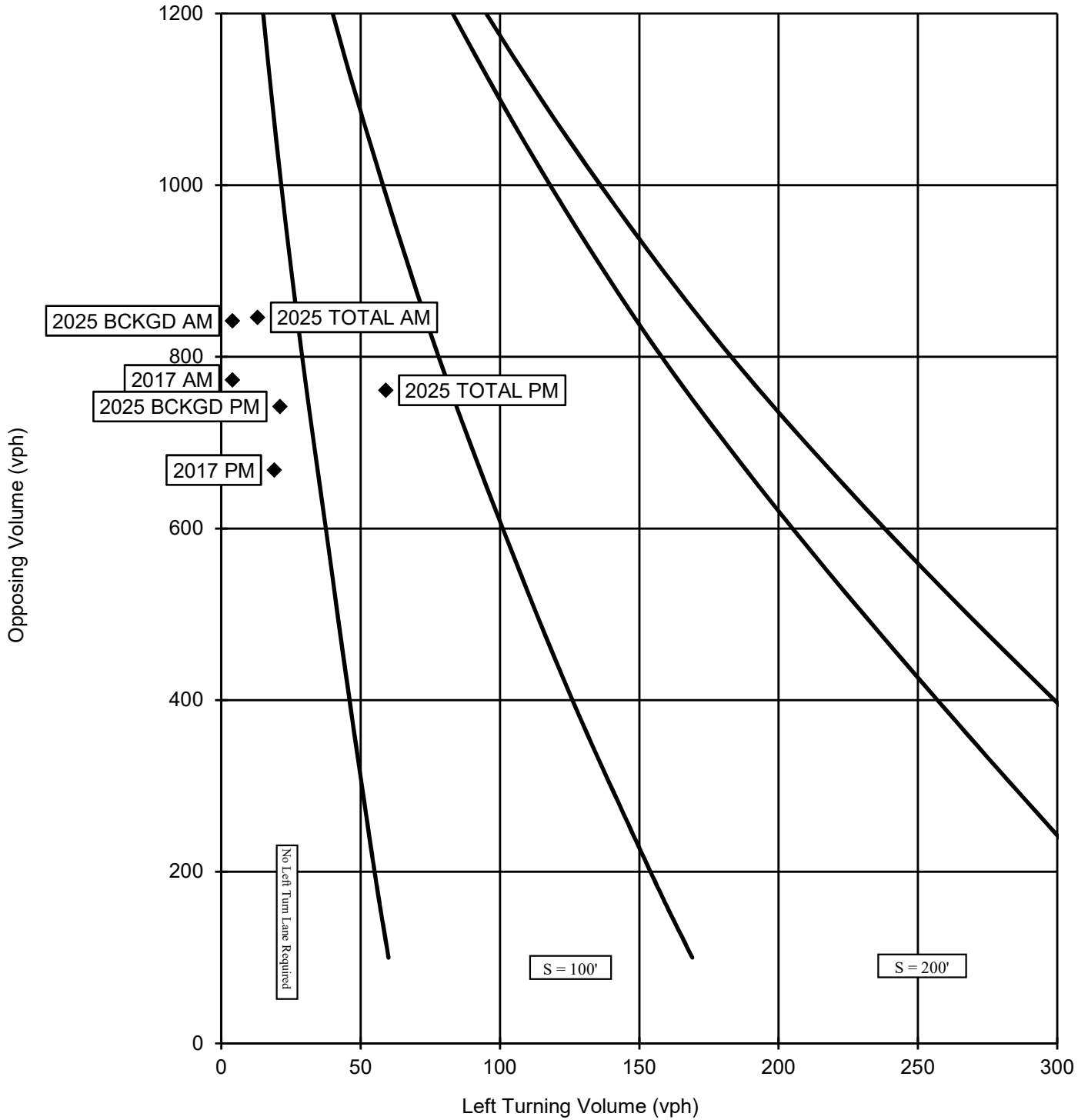
Exhibit
Reference

2017 PEAK HOUR COUNTS
TRIP DISTRIBUTION

DRW Consultants, LLC
804-794-7312

Exhibit E

LEFT TURN LANE WARRANT
FOUR LANE HIGHWAY
DIVIDED
S = Left Turn Storage



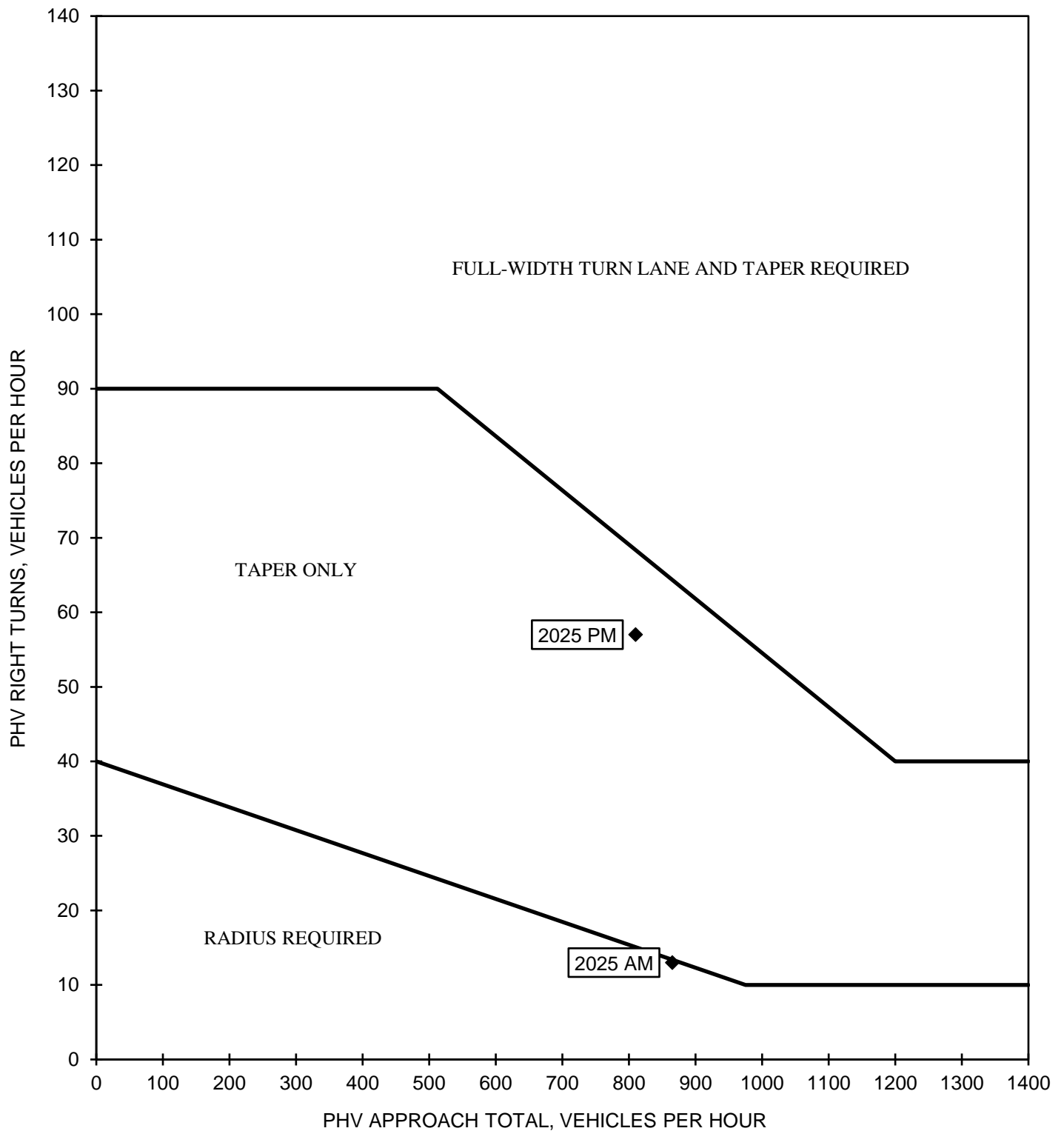
Source: VDOT Road Design Manual, Appendix C, derived from Highway Research Record Number 211

VDOT LEFT TURN LANE WARRANT
WESTBOUND LEFT TURN ON RT. 60
AT OAKLAND DRIVE

DRW Consultants, LLC
804-794-7312

Exhibit F

Guidelines for Right Turn Treatments 4 - Lane Highway



Source: VDOT Road Design Manual, Vol. 1, Page C-16, Figure C-1-9

























VDOT RIGHT TURN LANE WARRANT
FOUR LANE ROAD
RT. 60 RICHMOND ROAD EASTBOUND AT
OAKLAND FARM APARTMENTS

DRW Consultants, LLC
804-794-7312

Exhibit F1

HCM Signalized Intersection Capacity Analysis

1: Croaker Road & Rt. 60/Richmond Road
























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	221	538	23	27	284	148	15	31	20	188	15	134
Future Volume (vph)	221	538	23	27	284	148	15	31	20	188	15	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	6.0	6.0	7.5	6.0	6.0	7.0	7.0	7.0		8.0	8.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.95	0.95	1.00		1.00	1.00
Fr't	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.96	1.00
Satd. Flow (prot)	1671	3438	1282	3155	3438	1509	1429	1556	1615		1727	1455
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.96	1.00
Satd. Flow (perm)	1671	3438	1282	3155	3438	1509	1429	1556	1615		1727	1455
Peak-hour factor, PHF	0.86	0.86	0.86	0.87	0.87	0.87	0.75	0.75	0.75	0.83	0.83	0.83
Adj. Flow (vph)	257	626	27	31	326	170	20	41	27	227	18	161
RTOR Reduction (vph)	0	0	16	0	0	127	0	0	25	0	0	134
Lane Group Flow (vph)	257	626	11	31	326	43	20	41	2	0	245	27
Heavy Vehicles (%)	8%	5%	26%	11%	5%	7%	20%	16%	0%	4%	20%	11%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases			2			6			4			3
Actuated Green, G (s)	15.4	34.6	34.6	1.8	21.5	21.5	5.5	5.5	5.5		14.3	14.3
Effective Green, g (s)	15.4	34.6	34.6	1.8	21.5	21.5	5.5	5.5	5.5		14.3	14.3
Actuated g/C Ratio	0.18	0.41	0.41	0.02	0.25	0.25	0.06	0.06	0.06		0.17	0.17
Clearance Time (s)	7.0	6.0	6.0	7.5	6.0	6.0	7.0	7.0	7.0		8.0	8.0
Vehicle Extension (s)	0.2	3.5	3.5	0.2	3.5	3.5	0.2	0.2	0.2		0.2	0.2
Lane Grp Cap (vph)	303	1404	523	67	872	383	92	101	104		291	245
v/s Ratio Prot	c0.15	c0.18		0.01	0.09		0.01	c0.03			c0.14	
v/s Ratio Perm			0.01			0.03			0.00			0.02
v/c Ratio	0.85	0.45	0.02	0.46	0.37	0.11	0.22	0.41	0.02		0.84	0.11
Uniform Delay, d1	33.5	18.1	14.9	41.0	26.1	24.3	37.6	38.0	37.1		34.1	29.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	18.6	0.3	0.0	1.8	0.3	0.2	0.4	1.0	0.0		18.6	0.1
Delay (s)	52.1	18.4	15.0	42.8	26.4	24.4	38.0	39.0	37.1		52.7	29.9
Level of Service	D	B	B	D	C	C	D	D	D		D	C
Approach Delay (s)		27.8			26.7			38.2			43.7	
Approach LOS		C			C			D			D	

Intersection Summary

HCM 2000 Control Delay	31.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	84.7	Sum of lost time (s)	28.5
Intersection Capacity Utilization	60.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

1: Croaker Road & Rt. 60/Richmond Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	114	504	60	130	674	303	112	92	41	247	73	167
Future Volume (vph)	114	504	60	130	674	303	112	92	41	247	73	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	6.0	6.0	7.5	6.0	6.0	7.0	7.0	7.0		8.0	8.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.96	1.00
Satd. Flow (prot)	1770	3539	1615	3433	3539	1599	1698	1787	1583		1815	1509
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.96	1.00
Satd. Flow (perm)	1770	3539	1615	3433	3539	1599	1698	1787	1583		1815	1509
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.91	0.91	0.91	0.95	0.95	0.95
Adj. Flow (vph)	124	548	65	141	733	329	123	101	45	260	77	176
RTOR Reduction (vph)	0	0	45	0	0	234	0	0	40	0	0	138
Lane Group Flow (vph)	124	548	20	141	733	95	123	101	5	0	337	38
Heavy Vehicles (%)	2%	2%	0%	2%	2%	1%	1%	1%	2%	1%	0%	7%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases			2			6			4			3
Actuated Green, G (s)	9.6	30.0	30.0	7.1	28.0	28.0	10.3	10.3	10.3		20.9	20.9
Effective Green, g (s)	9.6	30.0	30.0	7.1	28.0	28.0	10.3	10.3	10.3		20.9	20.9
Actuated g/C Ratio	0.10	0.31	0.31	0.07	0.29	0.29	0.11	0.11	0.11		0.22	0.22
Clearance Time (s)	7.0	6.0	6.0	7.5	6.0	6.0	7.0	7.0	7.0		8.0	8.0
Vehicle Extension (s)	0.2	3.5	3.5	0.2	3.5	3.5	0.2	0.2	0.2		0.2	0.2
Lane Grp Cap (vph)	175	1096	500	251	1023	462	180	190	168		391	325
v/s Ratio Prot	c0.07	0.15		0.04	c0.21		c0.07	0.06			c0.19	
v/s Ratio Perm			0.01			0.06			0.00			0.03
v/c Ratio	0.71	0.50	0.04	0.56	0.72	0.21	0.68	0.53	0.03		0.86	0.12
Uniform Delay, d1	42.2	27.3	23.3	43.3	30.8	26.0	41.7	41.0	38.8		36.6	30.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	10.2	0.4	0.0	1.7	2.5	0.3	8.2	1.4	0.0		16.9	0.1
Delay (s)	52.5	27.7	23.4	45.1	33.3	26.3	49.9	42.4	38.8		53.5	30.6
Level of Service	D	C	C	D	C	C	D	D	D		D	C
Approach Delay (s)		31.5			32.8			45.2			45.6	
Approach LOS		C			C			D			D	
Intersection Summary												
HCM 2000 Control Delay	36.1			HCM 2000 Level of Service			D					
HCM 2000 Volume to Capacity ratio	0.76											
Actuated Cycle Length (s)	96.8			Sum of lost time (s)			28.5					
Intersection Capacity Utilization	66.6%			ICU Level of Service			C					
Analysis Period (min)	15											
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

1: Croaker Road & Rt. 60/Richmond Road


























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↱	↱	↰	↱	↱		↰	↱
Traffic Volume (vph)	239	581	32	37	307	160	36	50	47	203	21	145
Future Volume (vph)	239	581	32	37	307	160	36	50	47	203	21	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	6.0	6.0	7.5	6.0	6.0	7.0	7.0	7.0		8.0	8.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.96	1.00
Satd. Flow (prot)	1671	3438	1282	3155	3438	1509	1429	1556	1615		1723	1455
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.96	1.00
Satd. Flow (perm)	1671	3438	1282	3155	3438	1509	1429	1556	1615		1723	1455
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	260	632	35	40	334	174	39	54	51	221	23	158
RTOR Reduction (vph)	0	0	21	0	0	132	0	0	48	0	0	131
Lane Group Flow (vph)	260	632	14	40	334	42	39	54	3	0	244	27
Heavy Vehicles (%)	8%	5%	26%	11%	5%	7%	20%	16%	0%	4%	20%	11%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases			2			6			4			3
Actuated Green, G (s)	15.4	32.4	32.4	2.8	20.3	20.3	5.7	5.7	5.7		14.3	14.3
Effective Green, g (s)	15.4	32.4	32.4	2.8	20.3	20.3	5.7	5.7	5.7		14.3	14.3
Actuated g/C Ratio	0.18	0.39	0.39	0.03	0.24	0.24	0.07	0.07	0.07		0.17	0.17
Clearance Time (s)	7.0	6.0	6.0	7.5	6.0	6.0	7.0	7.0	7.0		8.0	8.0
Vehicle Extension (s)	0.2	3.5	3.5	0.2	3.5	3.5	0.2	0.2	0.2		0.2	0.2
Lane Grp Cap (vph)	307	1330	496	105	833	365	97	105	109		294	248
v/s Ratio Prot	c0.16	c0.18		0.01	0.10		0.03	c0.03			c0.14	
v/s Ratio Perm			0.01			0.03			0.00			0.02
v/c Ratio	0.85	0.48	0.03	0.38	0.40	0.12	0.40	0.51	0.03		0.83	0.11
Uniform Delay, d1	33.0	19.3	15.9	39.6	26.6	24.7	37.4	37.7	36.4		33.5	29.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	18.3	0.3	0.0	0.8	0.4	0.2	1.0	1.8	0.0		16.6	0.1
Delay (s)	51.3	19.6	15.9	40.4	27.0	24.9	38.4	39.4	36.5		50.1	29.4
Level of Service	D	B	B	D	C	C	D	D	D		D	C
Approach Delay (s)		28.3			27.3			38.1			42.0	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	31.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	83.7	Sum of lost time (s)	28.5
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			























HCM Signalized Intersection Capacity Analysis

1: Croaker Road & Rt. 60/Richmond Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	544	86	164	729	327	132	107	58	267	95	180
Future Volume (vph)	123	544	86	164	729	327	132	107	58	267	95	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	6.0	6.0	7.5	6.0	6.0	7.0	7.0	7.0		8.0	7.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.96	1.00
Satd. Flow (prot)	1770	3539	1615	3433	3539	1599	1698	1787	1583		1819	1509
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.96	1.00
Satd. Flow (perm)	1770	3539	1615	3433	3539	1599	1698	1787	1583		1819	1509
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.91	0.95	0.95	0.95
Adj. Flow (vph)	134	591	93	178	792	355	143	116	64	281	100	189
RTOR Reduction (vph)	0	0	64	0	0	242	0	0	57	0	0	168
Lane Group Flow (vph)	134	591	29	178	792	113	143	116	7	0	381	21
Heavy Vehicles (%)	2%	2%	0%	2%	2%	1%	1%	1%	2%	1%	0%	7%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	custom
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases			2			6			4			4
Actuated Green, G (s)	10.3	31.6	31.6	8.1	29.9	29.9	11.3	11.3	11.3		23.3	11.3
Effective Green, g (s)	10.3	31.6	31.6	8.1	29.9	29.9	11.3	11.3	11.3		23.3	11.3
Actuated g/C Ratio	0.10	0.31	0.31	0.08	0.29	0.29	0.11	0.11	0.11		0.23	0.11
Clearance Time (s)	7.0	6.0	6.0	7.5	6.0	6.0	7.0	7.0	7.0		8.0	7.0
Vehicle Extension (s)	0.2	3.5	3.5	0.2	3.5	3.5	0.2	0.2	0.2		0.2	0.2
Lane Grp Cap (vph)	177	1087	496	270	1029	465	186	196	174		412	165
v/s Ratio Prot	c0.08	0.17		0.05	c0.22		c0.08	0.06			c0.21	
v/s Ratio Perm			0.02			0.07			0.00			0.01
v/c Ratio	0.76	0.54	0.06	0.66	0.77	0.24	0.77	0.59	0.04		0.92	0.13
Uniform Delay, d1	45.0	29.6	25.1	46.0	33.3	27.8	44.5	43.6	40.9		38.9	41.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	15.0	0.6	0.1	4.4	3.6	0.3	15.7	3.2	0.0		26.0	0.1
Delay (s)	60.1	30.2	25.2	50.4	36.9	28.1	60.1	46.7	40.9		64.9	41.4
Level of Service	E	C	C	D	D	C	E	D	D		E	D
Approach Delay (s)		34.5			36.4			51.5			57.1	
Approach LOS		C			D			D			E	
Intersection Summary												
HCM 2000 Control Delay			41.4				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.82									
Actuated Cycle Length (s)			102.8				Sum of lost time (s)			28.5		
Intersection Capacity Utilization			70.9%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

1: Croaker Road & Rt. 60/Richmond Road

												
Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	17	253	602	32	37	312	160	36	50	47	203	21
Future Volume (vph)	17	253	602	32	37	312	160	36	50	47	203	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	6.0	6.0	7.5	6.0	6.0	7.0	7.0	7.0		8.0
Lane Util. Factor		1.00	0.95	1.00	0.97	0.95	1.00	0.95	0.95	1.00		1.00
Frt		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.96
Satd. Flow (prot)		1692	3438	1282	3155	3438	1509	1429	1556	1615		1723
Flt Permitted		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.96
Satd. Flow (perm)		1692	3438	1282	3155	3438	1509	1429	1556	1615		1723
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	275	654	35	40	339	174	39	54	51	221	23
RTOR Reduction (vph)	0	0	0	21	0	0	131	0	0	47	0	0
Lane Group Flow (vph)	0	293	654	14	40	339	43	39	54	4	0	244
Heavy Vehicles (%)	2%	7%	5%	26%	11%	5%	7%	20%	16%	0%	4%	20%
Turn Type	Prot	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA
Protected Phases	5	5	2		1	6		4	4		3	3
Permitted Phases				2			6			4		
Actuated Green, G (s)		15.4	32.7	32.7	2.8	20.6	20.6	5.8	5.8	5.8		14.4
Effective Green, g (s)		15.4	32.7	32.7	2.8	20.6	20.6	5.8	5.8	5.8		14.4
Actuated g/C Ratio		0.18	0.39	0.39	0.03	0.24	0.24	0.07	0.07	0.07		0.17
Clearance Time (s)		7.0	6.0	6.0	7.5	6.0	6.0	7.0	7.0	7.0		8.0
Vehicle Extension (s)		0.2	3.5	3.5	0.2	3.5	3.5	0.2	0.2	0.2		0.2
Lane Grp Cap (vph)		309	1335	497	104	841	369	98	107	111		294
v/s Ratio Prot		c0.17	c0.19		0.01	0.10		0.03	c0.03			c0.14
v/s Ratio Perm				0.01			0.03			0.00		
v/c Ratio		0.95	0.49	0.03	0.38	0.40	0.12	0.40	0.50	0.03		0.83
Uniform Delay, d1		34.0	19.5	15.9	39.9	26.6	24.7	37.5	37.8	36.6		33.7
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		36.9	0.3	0.0	0.9	0.4	0.2	1.0	1.4	0.0		16.6
Delay (s)		70.9	19.8	15.9	40.7	27.0	24.9	38.5	39.2	36.6		50.3
Level of Service		E	B	B	D	C	C	D	D	D		D
Approach Delay (s)			34.9			27.3			38.1			42.0
Approach LOS			C			C			D			D
Intersection Summary												
HCM 2000 Control Delay			34.5									
HCM 2000 Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			84.2									
Intersection Capacity Utilization			65.9%									
Analysis Period (min)			15									
c Critical Lane Group												
























HCM Signalized Intersection Capacity Analysis

1: Croaker Road & Rt. 60/Richmond Road

Movement	SBR
Lane Configurations	7
Traffic Volume (vph)	149
Future Volume (vph)	149
Ideal Flow (vphpl)	1900
Total Lost time (s)	8.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1455
Flt Permitted	1.00
Satd. Flow (perm)	1455
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	162
RTOR Reduction (vph)	134
Lane Group Flow (vph)	28
Heavy Vehicles (%)	11%
Turn Type	Perm
Protected Phases	
Permitted Phases	3
Actuated Green, G (s)	14.4
Effective Green, g (s)	14.4
Actuated g/C Ratio	0.17
Clearance Time (s)	8.0
Vehicle Extension (s)	0.2
Lane Grp Cap (vph)	248
v/s Ratio Prot	
v/s Ratio Perm	0.02
v/c Ratio	0.11
Uniform Delay, d1	29.5
Progression Factor	1.00
Incremental Delay, d2	0.1
Delay (s)	29.6
Level of Service	C
Approach Delay (s)	
Approach LOS	
Intersection Summary	

HCM Signalized Intersection Capacity Analysis

1: Croaker Road & Rt. 60/Richmond Road

												
Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	10	131	556	86	164	752	327	132	107	58	267	95
Future Volume (vph)	10	131	556	86	164	752	327	132	107	58	267	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	6.0	6.0	7.5	6.0	6.0	7.0	7.0	7.0		8.0
Lane Util. Factor		1.00	0.95	1.00	0.97	0.95	1.00	0.95	0.95	1.00		1.00
Frt		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.96
Satd. Flow (prot)		1770	3539	1615	3433	3539	1599	1698	1787	1583		1819
Flt Permitted		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.96
Satd. Flow (perm)		1770	3539	1615	3433	3539	1599	1698	1787	1583		1819
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.91	0.95	0.95
Adj. Flow (vph)	11	142	604	93	178	817	355	143	116	64	281	100
RTOR Reduction (vph)	0	0	0	63	0	0	233	0	0	57	0	0
Lane Group Flow (vph)	0	153	604	30	178	817	122	143	116	7	0	381
Heavy Vehicles (%)	2%	2%	2%	0%	2%	2%	1%	1%	1%	2%	1%	0%
Turn Type	Prot	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA
Protected Phases	5	5	2		1	6		4	4		3	3
Permitted Phases				2			6			4		
Actuated Green, G (s)		11.4	33.4	33.4	8.2	30.7	30.7	11.4	11.4	11.4		23.3
Effective Green, g (s)		11.4	33.4	33.4	8.2	30.7	30.7	11.4	11.4	11.4		23.3
Actuated g/C Ratio		0.11	0.32	0.32	0.08	0.29	0.29	0.11	0.11	0.11		0.22
Clearance Time (s)		7.0	6.0	6.0	7.5	6.0	6.0	7.0	7.0	7.0		8.0
Vehicle Extension (s)		0.2	3.5	3.5	0.2	3.5	3.5	0.2	0.2	0.2		0.2
Lane Grp Cap (vph)		192	1127	514	268	1036	468	184	194	172		404
v/s Ratio Prot		c0.09	c0.17		0.05	c0.23		c0.08	0.06			c0.21
v/s Ratio Perm				0.02			0.08			0.00		
v/c Ratio		0.80	0.54	0.06	0.66	0.79	0.26	0.78	0.60	0.04		0.94
Uniform Delay, d1		45.6	29.3	24.8	47.0	34.1	28.4	45.5	44.5	41.8		40.1
Progression Factor		1.00	1.03	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		18.9	0.6	0.1	4.7	4.2	0.4	16.9	3.3	0.0		30.2
Delay (s)		64.4	30.8	24.8	51.7	38.2	28.7	62.4	47.8	41.8		70.3
Level of Service		E	C	C	D	D	C	E	D	D		E
Approach Delay (s)			36.2			37.5			53.1			57.3
Approach LOS			D			D			D			E
Intersection Summary												
HCM 2000 Control Delay			42.5									HCM 2000 Level of Service D
HCM 2000 Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			104.8							28.5		
Intersection Capacity Utilization			72.5%							C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

1: Croaker Road & Rt. 60/Richmond Road

Movement	SBR
Lane Configurations	↑
Traffic Volume (vph)	195
Future Volume (vph)	195
Ideal Flow (vphpl)	1900
Total Lost time (s)	8.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1509
Flt Permitted	1.00
Satd. Flow (perm)	1509
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	205
RTOR Reduction (vph)	147
Lane Group Flow (vph)	58
Heavy Vehicles (%)	7%
Turn Type	Perm
Protected Phases	
Permitted Phases	3
Actuated Green, G (s)	23.3
Effective Green, g (s)	23.3
Actuated g/C Ratio	0.22
Clearance Time (s)	8.0
Vehicle Extension (s)	0.2
Lane Grp Cap (vph)	335
v/s Ratio Prot	
v/s Ratio Perm	0.04
v/c Ratio	0.17
Uniform Delay, d1	33.0
Progression Factor	1.00
Incremental Delay, d2	0.1
Delay (s)	33.0
Level of Service	C
Approach Delay (s)	
Approach LOS	
Intersection Summary	

HCM Signalized Intersection Capacity Analysis

1: Croaker Road & Rt. 60/Richmond Road



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↔	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕
Traffic Volume (vph)	17	253	602	32	37	312	160	36	50	47	203	21
Future Volume (vph)	17	253	602	32	37	312	160	36	50	47	203	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	6.0	6.0	7.5	6.0	6.0	7.0	7.0	7.0		8.0
Lane Util. Factor		1.00	0.95	1.00	0.97	0.95	1.00	0.95	0.95	1.00		1.00
Frt		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.96
Satd. Flow (prot)		1692	3438	1282	3155	3438	1509	1429	1556	1615		1723
Flt Permitted		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.96
Satd. Flow (perm)		1692	3438	1282	3155	3438	1509	1429	1556	1615		1723
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	275	654	35	40	339	174	39	54	51	221	23
RTOR Reduction (vph)	0	0	0	21	0	0	132	0	0	48	0	0
Lane Group Flow (vph)	0	293	654	14	40	339	42	39	54	3	0	244
Heavy Vehicles (%)	2%	7%	5%	26%	11%	5%	7%	20%	16%	0%	4%	20%
Turn Type	Prot	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA
Protected Phases	5	5	2		1	6		4	4		3	3
Permitted Phases				2			6			4		
Actuated Green, G (s)		17.9	36.3	36.3	2.6	21.5	21.5	5.8	5.8	5.8		15.2
Effective Green, g (s)		17.9	36.3	36.3	2.6	21.5	21.5	5.8	5.8	5.8		15.2
Actuated g/C Ratio		0.20	0.41	0.41	0.03	0.24	0.24	0.07	0.07	0.07		0.17
Clearance Time (s)		7.0	6.0	6.0	7.5	6.0	6.0	7.0	7.0	7.0		8.0
Vehicle Extension (s)		0.2	3.5	3.5	0.2	3.5	3.5	0.2	0.2	0.2		0.2
Lane Grp Cap (vph)		342	1411	526	92	836	367	93	102	105		296
v/s Ratio Prot		c0.17	c0.19		0.01	0.10		0.03	c0.03			c0.14
v/s Ratio Perm				0.01			0.03			0.00		
v/c Ratio		0.86	0.46	0.03	0.43	0.41	0.12	0.42	0.53	0.03		0.82
Uniform Delay, d1		34.0	19.0	15.5	42.2	28.1	26.0	39.7	40.0	38.7		35.3
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		18.0	0.3	0.0	1.2	0.4	0.2	1.1	2.3	0.0		16.0
Delay (s)		52.0	19.2	15.6	43.4	28.5	26.2	40.8	42.3	38.7		51.3
Level of Service		D	B	B	D	C	C	D	D	D		D
Approach Delay (s)			28.9			28.8			40.6			43.2
Approach LOS			C			C			D			D
Intersection Summary												
HCM 2000 Control Delay			32.5									
HCM 2000 Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			88.4									
Intersection Capacity Utilization			65.9%									
Analysis Period (min)			15									
c Critical Lane Group												























HCM Signalized Intersection Capacity Analysis

1: Croaker Road & Rt. 60/Richmond Road

Movement	SBR
Lane Configurations	7
Traffic Volume (vph)	149
Future Volume (vph)	149
Ideal Flow (vphpl)	1900
Total Lost time (s)	8.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1455
Flt Permitted	1.00
Satd. Flow (perm)	1455
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	162
RTOR Reduction (vph)	134
Lane Group Flow (vph)	28
Heavy Vehicles (%)	11%
Turn Type	Perm
Protected Phases	
Permitted Phases	3
Actuated Green, G (s)	15.2
Effective Green, g (s)	15.2
Actuated g/C Ratio	0.17
Clearance Time (s)	8.0
Vehicle Extension (s)	0.2
Lane Grp Cap (vph)	250
v/s Ratio Prot	
v/s Ratio Perm	0.02
v/c Ratio	0.11
Uniform Delay, d1	30.9
Progression Factor	1.00
Incremental Delay, d2	0.1
Delay (s)	31.0
Level of Service	C
Approach Delay (s)	
Approach LOS	
Intersection Summary	

HCM Signalized Intersection Capacity Analysis

1: Croaker Road & Rt. 60/Richmond Road

												
Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	10	131	556	86	164	752	327	132	107	58	267	95
Future Volume (vph)	10	131	556	86	164	752	327	132	107	58	267	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	6.0	6.0	7.5	6.0	6.0	7.0	7.0	7.0		8.0
Lane Util. Factor		1.00	0.95	1.00	0.97	0.95	1.00	0.95	0.95	1.00		1.00
Frt		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.96
Satd. Flow (prot)		1770	3539	1615	3433	3539	1599	1698	1787	1583		1819
Flt Permitted		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.96
Satd. Flow (perm)		1770	3539	1615	3433	3539	1599	1698	1787	1583		1819
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.91	0.95	0.95
Adj. Flow (vph)	11	142	604	93	178	817	355	143	116	64	281	100
RTOR Reduction (vph)	0	0	0	64	0	0	229	0	0	57	0	0
Lane Group Flow (vph)	0	153	604	29	178	817	126	143	116	7	0	381
Heavy Vehicles (%)	2%	2%	2%	0%	2%	2%	1%	1%	1%	2%	1%	0%
Turn Type	Prot	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA
Protected Phases	5	5	2		1	6		4	4		3	3
Permitted Phases				2			6			4		
Actuated Green, G (s)		10.9	31.8	31.8	8.1	29.5	29.5	11.1	11.1	11.1		24.0
Effective Green, g (s)		10.9	31.8	31.8	8.1	29.5	29.5	11.1	11.1	11.1		24.0
Actuated g/C Ratio		0.11	0.31	0.31	0.08	0.29	0.29	0.11	0.11	0.11		0.23
Clearance Time (s)		7.0	6.0	6.0	7.5	6.0	6.0	7.0	7.0	7.0		8.0
Vehicle Extension (s)		0.2	3.5	3.5	0.2	3.5	3.5	0.2	0.2	0.2		0.2
Lane Grp Cap (vph)		186	1087	496	268	1008	455	182	191	169		421
v/s Ratio Prot		c0.09	0.17		0.05	c0.23		c0.08	0.06			c0.21
v/s Ratio Perm				0.02			0.08			0.00		
v/c Ratio		0.82	0.56	0.06	0.66	0.81	0.28	0.79	0.61	0.04		0.90
Uniform Delay, d1		45.4	29.9	25.3	46.4	34.4	28.7	45.0	44.1	41.4		38.6
Progression Factor		1.00	1.03	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		23.4	0.7	0.1	4.7	5.2	0.4	18.3	3.7	0.0		22.0
Delay (s)		68.7	31.5	25.3	51.1	39.6	29.1	63.3	47.8	41.5		60.7
Level of Service		E	C	C	D	D	C	E	D	D		E
Approach Delay (s)			37.5			38.3			53.4			50.5
Approach LOS			D			D			D			D
Intersection Summary												
HCM 2000 Control Delay			42.0									HCM 2000 Level of Service D
HCM 2000 Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			103.5							28.5		
Intersection Capacity Utilization			72.5%							C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

1: Croaker Road & Rt. 60/Richmond Road

Movement	SBR
Lane Configurations	7
Traffic Volume (vph)	195
Future Volume (vph)	195
Ideal Flow (vphpl)	1900
Total Lost time (s)	8.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1509
Flt Permitted	1.00
Satd. Flow (perm)	1509
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	205
RTOR Reduction (vph)	156
Lane Group Flow (vph)	49
Heavy Vehicles (%)	7%
Turn Type	Perm
Protected Phases	
Permitted Phases	3
Actuated Green, G (s)	24.0
Effective Green, g (s)	24.0
Actuated g/C Ratio	0.23
Clearance Time (s)	8.0
Vehicle Extension (s)	0.2
Lane Grp Cap (vph)	349
v/s Ratio Prot	
v/s Ratio Perm	0.03
v/c Ratio	0.14
Uniform Delay, d1	31.6
Progression Factor	1.00
Incremental Delay, d2	0.1
Delay (s)	31.6
Level of Service	C
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑	↑
Traffic Vol, veh/h	771	2	4	429	6	11
Future Vol, veh/h	771	2	4	429	6	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	61	61
Heavy Vehicles, %	7	5	0	7	17	0
Mvmt Flow	907	2	5	505	10	18
Major/Minor	Major1	Major2	Minor1	Minor2	Minor3	Minor4
Conflicting Flow All	0	0	909	0	1171	455
Stage 1	-	-	-	-	908	-
Stage 2	-	-	-	-	263	-
Critical Hdwy	-	-	4.1	-	7.14	6.9
Critical Hdwy Stg 1	-	-	-	-	6.14	-
Critical Hdwy Stg 2	-	-	-	-	6.14	-
Follow-up Hdwy	-	-	2.2	-	3.67	3.3
Pot Cap-1 Maneuver	-	-	757	-	165	558
Stage 1	-	-	-	-	320	-
Stage 2	-	-	-	-	714	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	757	-	164	558
Mov Cap-2 Maneuver	-	-	-	-	259	-
Stage 1	-	-	-	-	317	-
Stage 2	-	-	-	-	714	-
Approach	EB	WB	NB	SB	WB	NB
HCM Control Delay, s	0	0.1	14.4			
HCM LOS			B			
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	259	558	-	-	757	-
HCM Lane V/C Ratio	0.038	0.032	-	-	0.006	-
HCM Control Delay (s)	19.4	11.7	-	-	9.8	0
HCM Lane LOS	C	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑	↑
Traffic Vol, veh/h	663	5	19	934	7	15
Future Vol, veh/h	663	5	19	934	7	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	93	93	69	69
Heavy Vehicles, %	1	40	5	3	29	7
Mvmt Flow	753	6	20	1004	10	22
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	759	0	1298	380
Stage 1	-	-	-	-	756	-
Stage 2	-	-	-	-	542	-
Critical Hdwy	-	-	4.2	-	7.38	7.04
Critical Hdwy Stg 1	-	-	-	-	6.38	-
Critical Hdwy Stg 2	-	-	-	-	6.38	-
Follow-up Hdwy	-	-	2.25	-	3.79	3.37
Pot Cap-1 Maneuver	-	-	829	-	122	604
Stage 1	-	-	-	-	361	-
Stage 2	-	-	-	-	477	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	829	-	115	604
Mov Cap-2 Maneuver	-	-	-	-	229	-
Stage 1	-	-	-	-	341	-
Stage 2	-	-	-	-	477	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	0.4		14.4		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	229	604	-	-	829	-
HCM Lane V/C Ratio	0.044	0.036	-	-	0.025	-
HCM Control Delay (s)	21.4	11.2	-	-	9.5	0.2
HCM Lane LOS	C	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0.1	-

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑	↑
Traffic Vol, veh/h	840	2	4	484	6	12
Future Vol, veh/h	840	2	4	484	6	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	7	5	0	7	17	0
Mvmt Flow	913	2	4	526	7	13
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	915	0	1185	458
Stage 1	-	-	-	-	914	-
Stage 2	-	-	-	-	271	-
Critical Hdwy	-	-	4.1	-	7.14	6.9
Critical Hdwy Stg 1	-	-	-	-	6.14	-
Critical Hdwy Stg 2	-	-	-	-	6.14	-
Follow-up Hdwy	-	-	2.2	-	3.67	3.3
Pot Cap-1 Maneuver	-	-	754	-	161	555
Stage 1	-	-	-	-	317	-
Stage 2	-	-	-	-	707	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	754	-	160	555
Mov Cap-2 Maneuver	-	-	-	-	256	-
Stage 1	-	-	-	-	315	-
Stage 2	-	-	-	-	707	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		14.2	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	256	555	-	-	754	-
HCM Lane V/C Ratio	0.025	0.024	-	-	0.006	-
HCM Control Delay (s)	19.4	11.6	-	-	9.8	0
HCM Lane LOS	C	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-

Intersection						
Int Delay, s/veh	0.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑	↑
Traffic Vol, veh/h	737	5	21	1020	8	16
Future Vol, veh/h	737	5	21	1020	8	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	93	93	69	69
Heavy Vehicles, %	1	40	5	3	29	7
Mvmt Flow	838	6	23	1097	12	23

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	844
Stage 1	-	-	841
Stage 2	-	-	595
Critical Hdwy	-	4.2	7.38
Critical Hdwy Stg 1	-	-	6.38
Critical Hdwy Stg 2	-	-	6.38
Follow-up Hdwy	-	2.25	3.79
Pot Cap-1 Maneuver	-	769	97
Stage 1	-	-	323
Stage 2	-	-	445
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	769	90
Mov Cap-2 Maneuver	-	-	199
Stage 1	-	-	298
Stage 2	-	-	445

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	15.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	199	567	-	-	769	-
HCM Lane V/C Ratio	0.058	0.041	-	-	0.029	-
HCM Control Delay (s)	24.2	11.6	-	-	9.8	0.4
HCM Lane LOS	C	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0.1	-

Intersection							
Int Delay, s/veh	0.3						
Movement	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	↑	↑
Traffic Vol, veh/h	844	2	9	4	501	6	12
Future Vol, veh/h	844	2	9	4	501	6	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	None
Storage Length	-	-	-	100	-	0	0
Veh in Median Storage, #	0	-	-	-	0	1	-
Grade, %	0	-	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92	92
Heavy Vehicles, %	7	5	2	0	7	17	0
Mvmt Flow	917	2	10	4	545	7	13

Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	0	0	920	919	0	1219	460
Stage 1	-	-	-	-	-	918	-
Stage 2	-	-	-	-	-	301	-
Critical Hdwy	-	-	6.44	4.1	-	7.14	6.9
Critical Hdwy Stg 1	-	-	-	-	-	6.14	-
Critical Hdwy Stg 2	-	-	-	-	-	6.14	-
Follow-up Hdwy	-	-	2.52	2.2	-	3.67	3.3
Pot Cap-1 Maneuver	-	-	374	751	-	153	554
Stage 1	-	-	-	-	-	316	-
Stage 2	-	-	-	-	-	682	-
Platoon blocked, %	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	435	435	-	148	554
Mov Cap-2 Maneuver	-	-	-	-	-	246	-
Stage 1	-	-	-	-	-	306	-
Stage 2	-	-	-	-	-	682	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	14.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	246	554	-	-	435	-
HCM Lane V/C Ratio	0.027	0.024	-	-	0.032	-
HCM Control Delay (s)	20	11.7	-	-	13.6	-
HCM Lane LOS	C	B	-	-	B	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0.1	-












Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑		↑↑		↑
Traffic Vol, veh/h	852	13	0	514	0	52
Future Vol, veh/h	852	13	0	514	0	52
Conflicting Peds. #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	926	14	0	559	0	57
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	-	-	-	463
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	546
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	546
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	0		12.4		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	546	-	-	-		
HCM Lane V/C Ratio	0.104	-	-	-		
HCM Control Delay (s)	12.4	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %ile Q(veh)	0.3	-	-	-		

Intersection								
Int Delay, s/veh	0.7							
Movement	EBT	EBR	WBU	WBL	WBT	NBL	NBR	
Lane Configurations	↑↑			↓	↑↑	↓	↓	
Traffic Vol, veh/h	756	5	38	21	1030	8	16	
Future Vol, veh/h	756	5	38	21	1030	8	16	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	-	None	-	None	
Storage Length	-	-	-	100	-	0	0	
Veh in Median Storage, #	0	-	-	-	0	1	-	
Grade, %	0	-	-	-	0	0	-	
Peak Hour Factor	88	88	92	93	93	69	69	
Heavy Vehicles, %	1	40	2	5	3	29	7	
Mvmt Flow	859	6	41	23	1108	12	23	
Major/Minor	Major1		Major2		Minor1			
Conflicting Flow All	0	0	865	865	0	1544	433	
Stage 1	-	-	-	-	-	862	-	
Stage 2	-	-	-	-	-	682	-	
Critical Hdwy	-	-	6.44	4.2	-	7.38	7.04	
Critical Hdwy Stg 1	-	-	-	-	-	6.38	-	
Critical Hdwy Stg 2	-	-	-	-	-	6.38	-	
Follow-up Hdwy	-	-	2.52	2.25	-	3.79	3.37	
Pot Cap-1 Maneuver	-	-	405	755	-	81	557	
Stage 1	-	-	-	-	-	314	-	
Stage 2	-	-	-	-	-	398	-	
Platoon blocked, %	-	-			-			
Mov Cap-1 Maneuver	-	-	473	473	-	70	557	
Mov Cap-2 Maneuver	-	-	-	-	-	168	-	
Stage 1	-	-	-	-	-	272	-	
Stage 2	-	-	-	-	-	398	-	
Approach	EB		WB		NB			
HCM Control Delay, s	0		0.8		17.1			
HCM LOS	C							
Minor Lane/Major Mvmt	NBLn1		NBLn2		EBT	EBR	WBL	WBT
Capacity (veh/h)	168		557		-	-	473	-
HCM Lane V/C Ratio	0.069		0.042		-	-	0.135	-
HCM Control Delay (s)	28		11.7		-	-	13.8	-
HCM Lane LOS	D		B		-	-	B	-
HCM 95th %tile Q(veh)	0.2		0.1		-	-	0.5	-

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑		↑↑		↑
Traffic Vol, veh/h	753	57	0	1089	0	30
Future Vol, veh/h	753	57	0	1089	0	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	818	62	0	1184	0	33
Major/Minor						
	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	409
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	592
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	592
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
	EB		WB		NB	
HCM Control Delay, s	0		0		11.4	
HCM LOS					B	
Minor Lane/Major Mvmt						
	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	592	-	-	-		
HCM Lane V/C Ratio	0.055	-	-	-		
HCM Control Delay (s)	11.4	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0.2	-	-	-		

Queues

1: Croaker Road & Rt. 60/Richmond Road

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	257	626	27	31	326	170	20	41	27	245	161
v/c Ratio	0.79	0.41	0.04	0.15	0.45	0.37	0.15	0.28	0.09	0.78	0.40
Control Delay	52.3	20.0	0.1	41.0	31.3	6.6	40.1	42.6	0.6	48.9	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.3	20.0	0.1	41.0	31.3	6.6	40.1	42.6	0.6	48.9	7.9
Queue Length 50th (ft)	123	101	0	7	76	0	9	20	0	117	0
Queue Length 95th (ft)	#286	208	0	23	127	40	29	49	0	189	36
Internal Link Dist (ft)	1267			1429			615			808	
Turn Bay Length (ft)	200		10	200		200	165		150		200
Base Capacity (vph)	327	1616	700	598	1528	773	280	305	457	519	553
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.39	0.04	0.05	0.21	0.22	0.07	0.13	0.06	0.47	0.29

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues

1: Croaker Road & Rt. 60/Richmond Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	124	548	65	141	733	329	123	101	45	337	176
v/c Ratio	0.72	0.50	0.10	0.57	0.72	0.47	0.69	0.53	0.14	0.87	0.38
Control Delay	67.8	29.8	0.3	55.9	36.7	5.8	64.7	55.3	0.9	61.8	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.8	29.8	0.3	55.9	36.7	5.8	64.7	55.3	0.9	61.8	8.5
Queue Length 50th (ft)	78	147	0	45	219	0	82	66	0	205	0
Queue Length 95th (ft)	150	220	0	85	323	66	157	132	0	#422	59
Internal Link Dist (ft)	1267			1429			615			808	
Turn Bay Length (ft)	200		10	200		200	165		150		200
Base Capacity (vph)	279	1315	716	523	1266	783	268	282	397	439	498
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.42	0.09	0.27	0.58	0.42	0.46	0.36	0.11	0.77	0.35

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues

1: Croaker Road & Rt. 60/Richmond Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	260	632	35	40	334	174	39	54	51	244	158
v/c Ratio	0.80	0.45	0.06	0.19	0.46	0.37	0.28	0.36	0.16	0.79	0.40
Control Delay	54.0	22.3	0.2	41.9	31.5	6.9	43.2	44.8	1.1	50.1	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.0	22.3	0.2	41.9	31.5	6.9	43.2	44.8	1.1	50.1	7.8
Queue Length 50th (ft)	125	137	0	9	78	0	18	27	0	117	0
Queue Length 95th (ft)	#324	228	0	29	136	46	58	73	0	216	45
Internal Link Dist (ft)		1267			1429			615		808	
Turn Bay Length (ft)	200		10	200		200	165		150		200
Base Capacity (vph)	325	1581	689	594	1519	770	278	303	455	515	551
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.40	0.05	0.07	0.22	0.23	0.14	0.18	0.11	0.47	0.29












Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues

1: Croaker Road & Rt. 60/Richmond Road

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	134	591	93	178	792	355	143	116	64	381	189
v/c Ratio	0.76	0.55	0.15	0.66	0.77	0.50	0.77	0.59	0.19	0.93	0.57
Control Delay	73.4	32.2	0.5	59.7	39.9	6.7	72.6	58.3	1.3	71.7	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.4	32.2	0.5	59.7	39.9	6.7	72.6	58.3	1.3	71.7	13.8
Queue Length 50th (ft)	91	170	0	62	252	7	101	81	0	261	0
Queue Length 95th (ft)	162	244	0	102	353	79	#190	149	0	#499	67
Internal Link Dist (ft)		1267			1429			615		808	
Turn Bay Length (ft)	200		10	200		200	165		150		200
Base Capacity (vph)	260	1226	680	489	1182	761	250	263	382	410	383
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.48	0.14	0.36	0.67	0.47	0.57	0.44	0.17	0.93	0.49












Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues

1: Croaker Road & Rt. 60/Richmond Road

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	293	654	35	40	339	174	39	54	51	244	162
v/c Ratio	0.89	0.46	0.06	0.19	0.46	0.37	0.28	0.36	0.16	0.78	0.41
Control Delay	65.2	22.5	0.2	42.2	31.5	6.8	43.5	45.1	1.1	50.0	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.2	22.5	0.2	42.2	31.5	6.8	43.5	45.1	1.1	50.0	8.2
Queue Length 50th (ft)	144	144	0	9	80	0	20	27	0	117	0
Queue Length 95th (ft)	#376	237	0	29	138	46	58	73	0	218	48
Internal Link Dist (ft)		654			1429			615		808	
Turn Bay Length (ft)	400		10	200		200	165		150		200
Base Capacity (vph)	329	1576	688	592	1514	768	277	302	454	513	550
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.41	0.05	0.07	0.22	0.23	0.14	0.18	0.11	0.48	0.29

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues

1: Croaker Road & Rt. 60/Richmond Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	153	604	93	178	817	355	143	116	64	381	205
v/c Ratio	0.80	0.54	0.15	0.66	0.79	0.51	0.78	0.60	0.20	0.95	0.43
Control Delay	76.1	32.8	0.5	60.8	41.2	7.4	74.3	59.4	1.3	76.4	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.1	32.8	0.5	60.8	41.2	7.4	74.3	59.4	1.3	76.4	10.3
Queue Length 50th (ft)	107	177	0	63	268	12	104	83	0	269	9
Queue Length 95th (ft)	m#191	252	m0	102	367	88	#190	149	0	#499	75
Internal Link Dist (ft)		654			1429			615		808	
Turn Bay Length (ft)	300		10	200		200	165		150		200
Base Capacity (vph)	255	1226	680	479	1158	745	245	258	378	402	481
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.49	0.14	0.37	0.71	0.48	0.58	0.45	0.17	0.95	0.43

Intersection Summary












95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

Queues

1: Croaker Road & Rt. 60/Richmond Road

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	293	654	35	40	339	174	39	54	51	244	162
v/c Ratio	0.81	0.44	0.05	0.20	0.48	0.34	0.28	0.36	0.14	0.78	0.36
Control Delay	51.6	21.5	0.2	48.1	36.3	2.7	48.9	50.3	0.8	53.6	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.6	21.5	0.2	48.1	36.3	2.7	48.9	50.3	0.8	53.6	3.2
Queue Length 50th (ft)	147	146	0	10	85	0	21	28	0	123	0
Queue Length 95th (ft)	289	242	0	33	172	9	66	85	0	252	11
Internal Link Dist (ft)		654			1429			615		808	
Turn Bay Length (ft)	400		10	200		200	165		150		200
Base Capacity (vph)	670	1991	820	201	870	569	186	202	421	572	638
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.33	0.04	0.20	0.39	0.31	0.21	0.27	0.12	0.43	0.25
Intersection Summary											

Queues

1: Croaker Road & Rt. 60/Richmond Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	153	604	93	178	817	355	143	116	64	381	205
v/c Ratio	0.83	0.56	0.15	0.67	0.82	0.52	0.79	0.61	0.20	0.91	0.41
Control Delay	81.0	34.7	0.5	61.4	43.8	8.5	77.2	61.2	1.4	66.5	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.0	34.7	0.5	61.4	43.8	8.5	77.2	61.2	1.4	66.5	7.6
Queue Length 50th (ft)	109	190	0	65	290	19	107	85	0	265	1
Queue Length 95th (ft)	m#216	265	m0	103	#381	100	#208	151	0	#425	60
Internal Link Dist (ft)		654			1429			615		808	
Turn Bay Length (ft)	300		10	200		200	165		150		200
Base Capacity (vph)	225	1167	657	370	1693	715	224	236	361	516	574
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.52	0.14	0.48	0.75	0.50	0.64	0.49	0.18	0.74	0.36

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

Intersection: 1: Croaker Road & Rt. 60/Richmond Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	R	L	L	T	T	R	L	LT	R
Maximum Queue (ft)	197	104	124	24	5	56	114	71	80	8	56	17
Average Queue (ft)	126	76	75	9	1	28	80	45	43	2	30	9
95th Queue (ft)	221	115	139	32	9	68	117	84	90	14	67	22
Link Distance (ft)		1278	1278				1450	1450			618	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	200			10	200	200			200	165		150
Storage Blk Time (%)	3		25	1								
Queuing Penalty (veh)	7		6	3								

Intersection: 1: Croaker Road & Rt. 60/Richmond Road

Movement	SB	SB
Directions Served	LT	R
Maximum Queue (ft)	159	54
Average Queue (ft)	112	25
95th Queue (ft)	176	57
Link Distance (ft)	797	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		200
Storage Blk Time (%)	1	
Queuing Penalty (veh)	1	

Intersection: 2: Oakland Drive & Rt. 60

Movement	WB	NB	NB
Directions Served	LT	L	R
Maximum Queue (ft)	11	17	29
Average Queue (ft)	2	6	10
95th Queue (ft)	14	28	32
Link Distance (ft)	1278	1199	1199
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 17

Intersection: 1: Croaker Road & Rt. 60/Richmond Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	R	L	L	T	T	R	L	LT	R
Maximum Queue (ft)	164	149	164	78	80	122	226	220	131	165	218	152
Average Queue (ft)	73	92	92	23	18	62	138	111	57	39	117	21
95th Queue (ft)	133	142	147	58	52	109	205	190	101	131	193	73
Link Distance (ft)		1278	1278				1450	1450			618	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	200			10	200	200			200	165		150
Storage Blk Time (%)	0		38	4			1	0		0	6	
Queuing Penalty (veh)	0		23	11			1	1		0	6	

Intersection: 1: Croaker Road & Rt. 60/Richmond Road

Movement	SB	SB
Directions Served	LT	R
Maximum Queue (ft)	840	831
Average Queue (ft)	694	491
95th Queue (ft)	980	1117
Link Distance (ft)	797	797
Upstream Blk Time (%)	56	39
Queuing Penalty (veh)	0	0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Oakland Drive & Rt. 60

Movement	WB	WB	NB	NB
Directions Served	LT	T	L	R
Maximum Queue (ft)	74	47	52	55
Average Queue (ft)	12	2	8	13
95th Queue (ft)	45	20	36	40
Link Distance (ft)	1278	1278	1199	1199
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 42

Intersection: 1: Croaker Road & Rt. 60/Richmond Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	R	L	L	T	T	R	L	LT	R
Maximum Queue (ft)	253	214	175	45	4	65	122	86	76	5	104	23
Average Queue (ft)	202	110	97	14	1	24	90	37	50	1	62	15
95th Queue (ft)	356	266	191	50	7	70	143	89	83	9	120	33
Link Distance (ft)	1278		1278				1450	1450			618	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	200			10	200	200			200	165		150
Storage Blk Time (%)	27	0	30	2							0	
Queuing Penalty (veh)	80	0	9	5							0	

Intersection: 1: Croaker Road & Rt. 60/Richmond Road

Movement	SB	SB
Directions Served	LT	R
Maximum Queue (ft)	232	125
Average Queue (ft)	175	70
95th Queue (ft)	381	253
Link Distance (ft)	797	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	200	
Storage Blk Time (%)	18	
Queuing Penalty (veh)	26	

Intersection: 2: Oakland Drive & Rt. 60

Movement	WB	NB	NB
Directions Served	LT	L	R
Maximum Queue (ft)	11	18	28
Average Queue (ft)	3	6	14
95th Queue (ft)	18	26	40
Link Distance (ft)	1278	1199	1199
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 120

Intersection: 1: Croaker Road & Rt. 60/Richmond Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	R	L	L	T	T	R	L	LT	R
Maximum Queue (ft)	173	208	217	174	128	149	245	223	175	221	309	223
Average Queue (ft)	91	106	105	32	28	75	149	123	72	86	157	37
95th Queue (ft)	150	167	171	86	79	129	219	199	126	209	254	133
Link Distance (ft)		1278	1278				1450	1450			618	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	200			10	200	200			200	165		150
Storage Blk Time (%)	0	0	42	6			1	0	0	0	19	
Queuing Penalty (veh)	0	0	36	17			2	1	0	1	23	

Intersection: 1: Croaker Road & Rt. 60/Richmond Road

Movement	SB	SB
Directions Served	LT	R
Maximum Queue (ft)	838	837
Average Queue (ft)	775	651
95th Queue (ft)	931	1169
Link Distance (ft)	797	797
Upstream Blk Time (%)	77	59
Queuing Penalty (veh)	0	0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Oakland Drive & Rt. 60

Movement	WB	WB	NB	NB
Directions Served	LT	T	L	R
Maximum Queue (ft)	84	35	46	62
Average Queue (ft)	15	1	8	17
95th Queue (ft)	54	15	33	47
Link Distance (ft)	1278	1278	1199	1199
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 81

Intersection: 1: Croaker Road & Rt. 60/Richmond Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	UL	T	T	R	L	T	T	R	L	LT	R	LT
Maximum Queue (ft)	292	221	198	40	59	114	92	73	32	93	23	229
Average Queue (ft)	224	132	106	14	26	80	42	38	8	63	14	172
95th Queue (ft)	418	329	247	43	59	132	99	82	46	114	29	283
Link Distance (ft)		662	662			1450	1450			618		797
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	400			10	200			200	165		150	
Storage Blk Time (%)	6		34	1								13
Queuing Penalty (veh)	18		11	4								20

Intersection: 1: Croaker Road & Rt. 60/Richmond Road

Movement	SB
Directions Served	R
Maximum Queue (ft)	115
Average Queue (ft)	45
95th Queue (ft)	154
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	200
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Oakland Drive & Rt. 60

Movement	WB	NB	NB
Directions Served	UL	L	R
Maximum Queue (ft)	16	21	34
Average Queue (ft)	5	4	14
95th Queue (ft)	22	24	40
Link Distance (ft)		1199	1199
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Oakland Farm & Rt. 60

Movement	NB
Directions Served	R
Maximum Queue (ft)	29
Average Queue (ft)	15
95th Queue (ft)	35
Link Distance (ft)	336
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 52

Intersection: 1: Croaker Road & Rt. 60/Richmond Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	UL	T	T	R	L	L	T	T	R	L	LT	R
Maximum Queue (ft)	188	182	190	116	125	145	238	212	156	210	293	116
Average Queue (ft)	95	105	103	28	25	81	159	134	78	72	154	27
95th Queue (ft)	169	163	163	71	76	132	230	212	139	190	247	96
Link Distance (ft)		662	662				1450	1450			618	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300			10	200	200			200	165		150
Storage Blk Time (%)			41	6			2	0	0	0	18	
Queuing Penalty (veh)			36	17			4	2	0	1	22	

Intersection: 1: Croaker Road & Rt. 60/Richmond Road

Movement	SB	SB
Directions Served	LT	R
Maximum Queue (ft)	845	365
Average Queue (ft)	754	315
95th Queue (ft)	1038	509
Link Distance (ft)	797	
Upstream Blk Time (%)	77	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		200
Storage Blk Time (%)	89	0
Queuing Penalty (veh)	174	0

Intersection: 2: Oakland Drive & Rt. 60

Movement	WB	WB	NB	NB
Directions Served	UL	T	L	R
Maximum Queue (ft)	70	26	53	46
Average Queue (ft)	27	1	7	14
95th Queue (ft)	60	19	34	40
Link Distance (ft)		558	1199	1199
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	100			
Storage Blk Time (%)	0			
Queuing Penalty (veh)	2			

Intersection: 3: Oakland Farm & Rt. 60

Movement	NB
Directions Served	R
Maximum Queue (ft)	52
Average Queue (ft)	14
95th Queue (ft)	36
Link Distance (ft)	336
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 257

Intersection: 1: Croaker Road & Rt. 60/Richmond Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	UL	T	T	R	L	L	T	T	R	L	LT	R
Maximum Queue (ft)	279	138	134	37	10	39	134	84	74	22	74	31
Average Queue (ft)	201	90	84	11	2	17	84	47	50	7	46	19
95th Queue (ft)	337	155	152	41	13	44	140	94	88	31	85	40
Link Distance (ft)		662	662				1450	1450			618	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	400			10	200	200			200	165		150
Storage Blk Time (%)	0		29	1								
Queuing Penalty (veh)	1		9	3								

Intersection: 1: Croaker Road & Rt. 60/Richmond Road

Movement	SB	SB
Directions Served	LT	R
Maximum Queue (ft)	248	59
Average Queue (ft)	140	33
95th Queue (ft)	276	63
Link Distance (ft)	797	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		200
Storage Blk Time (%)	6	
Queuing Penalty (veh)	9	

Intersection: 2: Oakland Drive & Rt. 60

Movement	WB	NB	NB
Directions Served	UL	L	R
Maximum Queue (ft)	22	17	34
Average Queue (ft)	5	4	14
95th Queue (ft)	23	20	40
Link Distance (ft)		1199	1199
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Oakland Farm & Rt. 60

Movement	NB
Directions Served	R
Maximum Queue (ft)	30
Average Queue (ft)	18
95th Queue (ft)	38
Link Distance (ft)	336
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 22

Intersection: 1: Croaker Road & Rt. 60/Richmond Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	UL	T	T	R	L	L	T	T	R	L	LT	R
Maximum Queue (ft)	230	173	169	53	134	161	278	266	174	202	291	194
Average Queue (ft)	110	102	106	26	27	78	166	142	76	79	153	28
95th Queue (ft)	202	155	160	51	84	136	242	226	137	197	247	97
Link Distance (ft)		662	662				1450	1450			618	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300			10	200	200			200	165		150
Storage Blk Time (%)	0		43	6		0	3	1	0	0	17	
Queuing Penalty (veh)	0		37	17		0	4	3	0	1	21	

Intersection: 1: Croaker Road & Rt. 60/Richmond Road

Movement	SB	SB
Directions Served	LT	R
Maximum Queue (ft)	848	365
Average Queue (ft)	742	322
95th Queue (ft)	1023	504
Link Distance (ft)	797	
Upstream Blk Time (%)	70	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		200
Storage Blk Time (%)	88	0
Queuing Penalty (veh)	172	1

Intersection: 2: Oakland Drive & Rt. 60

Movement	WB	NB	NB
Directions Served	UL	L	R
Maximum Queue (ft)	61	64	61
Average Queue (ft)	25	10	16
95th Queue (ft)	53	39	48
Link Distance (ft)		1199	1199
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Oakland Farm & Rt. 60

Movement	NB
Directions Served	R
Maximum Queue (ft)	46
Average Queue (ft)	16
95th Queue (ft)	36
Link Distance (ft)	336
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 256

Attachment 7. Richmond Road at the Croaker Road/Pricket Road Intersection

	2025 No Buildout		2025 Buildout (comparison with 2025 No Buildout)		2025 Buildout, with Optimized Signal Timing Adjustment (comparison with 2025 No Buildout)	
	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour
Overall Intersection	C	D	C	D	C	D
Eastbound Left	D	E	E (worse)	E	D	E
Eastbound Through	B	C	B	C	B	C
Eastbound Right	B	C	B	C	B	C
Westbound Left	D	D	D	D	D	D
Westbound Through	C	D	C	D	C	D
Westbound Right	C	C	C	C	C	C
Northbound Left	D	E	D	E	D	E
Northbound Left/Through	D	D	D	D	D	D
Northbound Right	D	D	D	D	D	D
Southbound Left/Through	D	E	D	E	D	E
Southbound Right	C	D	C	C (better)	C	C (better)

JCC TAX ID NOS: # 2310100002
CONSIDERATION: \$1.00

THIS DEED IS EXEMPT FROM TAXATION UNDER VIRGINIA CODE
§§ 58.1-811 (A)(3)

EASEMENT AGREEMENT

THIS EASEMENT AGREEMENT ("Agreement") is made this ____ day of January, 2018, by and between LISA JOY P. MARSTON, Trustee of the LISA JOY P. MARSTON REVOCABLE TRUST DATED September 13, 2010 (the "Grantor") and the COUNTY OF JAMES CITY, VIRGINIA, a political subdivision of the Commonwealth of Virginia, (the "County" or the "Grantee" and, together with the Grantor, the "Parties").

WITNESSETH:

WHEREAS, Grantor is the owner in fee simple of a parcel of property located at 7581 Richmond Road in James City County, Virginia and further identified as James City County Real Estate Tax Parcel Number 2310100002 as more particularly described in Exhibit A attached hereto (the "Property");

WHEREAS, the Grantor desires to ensure that development of the Property, under certain conditions, be limited to affordable housing and accessory uses as more particularly described herein and have the Property be subject to the terms, limitations, and obligations of this Agreement;

WHEREAS, Grantor desires density bonuses for development of the Property, which must be secured by a document approved by the county attorney.

NOW, THEREFORE, in consideration of the recitals and the mutual benefits, the covenants and terms herein contained, and for other good and valuable consideration, the receipt of which is hereby acknowledged, the Grantor hereby grants, conveys, covenants, and agrees as follows:

1. GRANT AND CONVEYANCE OF EASEMENT. The Grantor hereby grants and conveys to the Grantee a perpetual easement, in gross, (the "Easement") prohibiting development of the property for any use more intense than would be permitted under the County's General Agricultural, A-1, zoning district, unless:

(a) Such development is in accordance with the Virginia Housing and Development Authority's Low Income Housing Tax Credit Program, or a comparable or successor governmental program, or such other affordable housing regime as the County's Director of Planning may approve (the "Use");

(b) The buildings constructed on the Property are designed and constructed substantially consistent, subject to only minor changes, with the architectural elevations entitled “Proposed Oakland Pointe Apartments”, dated October 18, 2017, prepared by Parks-Player Architecture & Planning, LLC, a copy of which is on file with the County’s Director of Planning. Prior to site plan approval for the Use, final building elevations for the Use shall be submitted to the County’s Director of Planning for review and approval for consistency with this Section 1(b);

(c) The owner of the Property achieves EarthCraft/Viridiant gold certification, or equivalent certification as determined by the County’s Director of Planning for all buildings to be constructed on the Property, as shown on the master plan titled “Master Plan for Oakland Pointe,” prepared by AES Consulting Engineers and dated October 25, 2017 (the “Master Plan”), a copy of which is on file with the County’s Director of Planning. Proof of EarthCraft/Viridiant gold certification, or equivalent certification, shall be provided to the County’s Director of Planning within one month of issuance of a Certificate of Occupancy for the Use or such other time as is agreed to in writing in advance by the County’s Director of Planning;

(d) The owner of the Property develops water conservation standards to be submitted to and approved by the James City Service Authority prior to final site plan approval, and subsequently enforces these standards. The standards shall address such water conservation measures as limitations on the installation and use of approved landscaping design and materials to promote water conservation and minimize the use of public water resources;

(e) Any offsite traffic improvements specified in a final Traffic Impact Study for the Use, approved by the County’s Director of Planning and the Virginia Department of Transportation, are installed or, in the discretion of the County’s Director of Planning, guaranteed in accordance with Section 19-74 of the James City County Code, prior to issuance of a Certificate of Occupancy for the Use. A copy of the final Traffic Impact Study shall be on file with the County’s Director of Planning;

(f) Prior to issuance of a Certificate of Occupancy for the Use, the owner (i) constructs and agrees to maintain in good order and repair a five foot wide concrete sidewalk upon that certain property located adjacent to the Property and commonly known as 7575 Richmond Road in James City County, Virginia and further identified as James City County Real Estate Tax Parcel Number 2321100001B (the “Adjacent Parcel”) as shown generally on the Master Plan, and (ii) obtains an easement from the owner of the Adjacent Parcel for pedestrian travel over and upon such sidewalk; and

(g) The owner of the Property works with an agent of the Virginia Cooperative Extension Office (“VCEO”) or, if a VCEO agent is unavailable, a soil scientist licensed in the Commonwealth of Virginia or other qualified professional approved by the County’s Director of Planning, to conduct soil tests and to develop, based upon the results of the soil tests, a customized nutrient management plan (“Nutrient Management Plan”) for all turf areas of the Property. The Nutrient Management Plan shall be submitted to the County Stormwater and Resource Protection Director for review and approval prior to the issuance of a Certificate of Occupancy for the Use. Upon approval, the owner of the Property shall be responsible for ensuring that any nutrients applied to the turf areas on the Property be applied in accordance with the applicable Nutrient Management Plan or any updates or amendments thereto as may be approved by the County

Stormwater and Resource Protection Director.

2. MISCELLANEOUS PROVISIONS.

(a) *No public right-of-access to Property.* This Agreement does not create, and shall not be construed to create, any right of the public to enter upon or to use the Property or any portion thereof.

(b) *Continuation.* The covenants, terms, conditions, servitudes, and restrictions of this Agreement shall apply to the Property as a whole, and shall run with the land perpetually and be binding upon the parties, their successors, assigns, personal representatives, and heirs, and be considered a servitude running with the land in perpetuity; provided, however, notwithstanding any provision of this Agreement and any current or subsequent zoning classification of the Property, if, upon the last day of the sixth (6) month following the date of this Agreement, the Property may only be developed in accordance with density limitations and restrictions at least as restricted as the criteria and restrictions applicable to the James City County Zoning Ordinance A-1 zoning classification then in effect, upon written request of the Grantor, the Grantee shall initiate the process necessary to terminate the Easement. A document evidencing said termination shall be recorded in the Clerk's Office of the Circuit Court for the City of Williamsburg and the County of James City, Virginia.

(c) *Action at law inadequate remedy.* The Parties agree that monetary damages would not be an adequate remedy for the breach of any terms, conditions and restrictions herein contained, and therefore, in the event that the Grantor, their successors or assigns, violate or breach any of the terms, conditions and restrictions herein contained, the Grantee, in addition to all other remedies available at law and in equity, may institute a suit, and shall be entitled to enjoin, by *ex parte* temporary injunction and/or permanent injunction, such violation.

(d) *Failure to enforce does not waive right to enforce.* The failure of the Grantee to enforce any right, provision, covenant, restriction, term or condition of this Agreement shall not constitute a waiver of the right of the Grantee to enforce such right, provision, covenant, restriction, term or condition in the future. All rights, remedies and privileges granted to the Grantee pursuant to any term, provision, covenant, restriction, or condition of this Agreement shall be deemed to be cumulative and the exercise of any one or more thereof shall not be deemed to constitute an election of remedies, nor shall it preclude the Grantee from exercising such other privileges as may be granted by this Agreement, or at law or in equity. Furthermore, the Grantor hereby waives any defense of laches, estoppel, or prescription.

(e) *No right of enforcement by the public.* This Agreement does not create, and shall not be construed to create, any right of any member of the public exclusive of the County itself to maintain a suit for any damages against the Grantor for any violation of this Agreement.

(f) *Severability.* If any provision of this Agreement is determined to be invalid by a court of competent jurisdiction, the remainder of this Agreement shall not be affected thereby.

(g) *Recordation.* Upon execution by the Parties, this Agreement shall be recorded with the record of land titles in the Clerk's Office of the Circuit Court for the City of Williamsburg and the County of James City, Virginia.

(h) *Authority to convey easement.* The Grantor covenants that it is vested with good title to the Property and enter into this Agreement.

(i) *No Assignment.* Neither Grantee nor its successors may assign or transfer the Easement established and conveyed hereby.

(j) *Controlling law.* The interpretation and performance of this Agreement shall be governed by the laws of the Commonwealth of Virginia.

(k) *Entire agreement.* This instrument sets forth the entire agreement of the Parties with respect to this Agreement and supersedes all prior discussions, negotiations, understandings, or agreements relating to this Agreement, all of which are merged herein.

(l) *Amendments.* This Agreement may be amended only with the written consent of the Grantee and the then owner of the Property, and such amendment shall be duly recorded. Any amendment shall be at the sole discretion of the Grantee.

(Remainder of page left blank. Signature pages to follow)

[Signature Page to Easement Agreement]

WITNESS the following signature and seal:

LISA JOY P. MARSTON, Trustee of the
LISA JOY P. MARSTON REVOCABLE TRUST DATED September 13, 2010

COMMONWEALTH OF VIRGINIA

City/County of _____, to-wit:

The foregoing Agreement was signed, sworn to and acknowledged before me this _____
day of _____, 2018, by LISA JOY P. MARSTON, Trustee of the LISA JOY P. MARSTON
REVOCABLE TRUST DATED September 13, 2010, Grantor.

WITNESS my signature and notarial seal.

Notary Public

Registration # _____

Expiration Date _____

GRANTEE: THE COUNTY OF JAMES CITY, VIRGINIA

Acceptance of this Deed of Easement is approved and, pursuant to a Resolution of the Board of Supervisors of James City County, Virginia, duly adopted on the 14th day of July 2015, this conveyance is hereby accepted on behalf of Grantee.

By:
Title: County Administrator

STATE/Commonwealth of _____
City/County of _____, to-wit:

The foregoing instrument was acknowledged before me this ____ day of _____, 2018, by _____ as County Administrator of James City County, Virginia.

Notary Public

My commission expires: _____
Notary Registration No. _____

Approved as to form:

COUNTY ATTORNEY

EXHIBIT A

LEGAL DESCRIPTION

All that certain lot, piece or parcel of land containing 14.54 acres, set out and shown as Parcel B of Oakland Farm on a plat entitled "A SURVEY FOR CONVEYANCE TO SOUTHPOINT PROPERTIES 326.89 AC +/-, PARCEL A, LYING IN POWHATAN DISTRICT, JAMES CITY COUNTY, VIRGINIA", dated December 21, 1973, made by L.V. Woodson & Associates, Inc. Engineers, Surveyors and Planners, recorded in James City County Plat Book 32, page 2 on March 28, 1974 and to which plat reference is here made for a more complete description.

HEIGHT LIMITATION WAIVER

- **The R-5 Zoning District allows structures to be built up to 35 feet in height.** The request is for a 5-foot height waiver to allow building(s) to be constructed up to 40 feet in height above finished grade.
- Section 24-310(g) of the Zoning Ordinance states that structures in excess of 35 feet may be erected only upon the granting of a height limitation waiver by the Board of Supervisors, upon finding that:
 1. Structure will not obstruct light from adjacent property;
Staff finding: The structures will be located a minimum of 120 feet from any property lines. Therefore, staff finds the proposed structures will not obstruct light from adjacent property.
 2. Structure will not impair the enjoyment of historic attractions and areas of significant historic interest and surrounding developments;
Staff finding: Staff did not identify any historic attractions or areas of significant historic interest in close proximity to this project. The closest current surrounding developments are the CrossWalk Church and the Village at Candle Station, both of which would be several hundred feet from the closest structure and would be visually screened by the Resource Protection Area buffer. The other current surrounding development is the Oakland neighborhood which uses Oakland Drive as its entrance. The proposed structures may be visible from Oakland Drive, but would also be screened by the proposed perimeter buffer landscaping.
 3. Structure will not impair property values in the area;
Staff finding: The Director of Real Estate Assessments reviewed the proposal and determined that buildings will not negatively affect the surrounding property values.
 4. Structure is adequately designed and served from the standpoint of safety and the County Fire Chief finds the fire safety equipment installed is adequately designed and that the structure is reasonably well located in relation to fire stations and equipment, so as to offer adequate protection to life and property;
Staff finding: The Building Safety and Permits Division and the Fire Department have reviewed the height waiver request and did not indicate any concerns.
 5. Such structure will not be contrary to the public health, safety and general welfare.
Staff finding: Staff finds that the proposed buildings will not adversely affect the public health, safety or general welfare.

The proposed Height Limitation Waiver conditions are attached to this staff report.

Draft Height Limitation Waiver Conditions

- 1. Height Limitations:** This Height Limitation Waiver (the “Waiver”) shall be valid for a five (5) foot waiver to the height limitation requirements set forth in the James City County Zoning Ordinance to allow for the erection of buildings up to forty (40) feet above ground level (the “Buildings”) on property zoned R-5, Multifamily Residential located at 7581 Richmond Road, and further identified as James City County Real Estate Tax Map Parcel No. 2310100002. The height of the Buildings shall be calculated in accordance with the Zoning Ordinance definition for “Building, height of” in effect as of the adoption date of the Waiver.
- 2. Master Plan:** The Buildings shall be located as generally shown on the plan prepared by AES Consulting Engineers, dated October 25, 2017 and entitled “Master Plan for Oakland Pointe A Multi-Family Community.”
- 3. As-Built Survey:** An as-built survey shall be submitted to and approved by the Director of Planning for any building exceeding the permitted building height in the zoning district prior to final certificate of occupancy. The intent of this condition is to ensure compliance with the Waiver.
- 4. Severability:** The Waiver is not severable. Invalidation of any word, phrase, clause, sentence or paragraph shall invalidate the remainder.

Attachment 11: Low Income Housing Tax Credit Program Information

The low-income housing tax credit was enacted by Congress to encourage new construction and rehabilitation of existing rental housing for low-income households and to increase the amount of affordable rental housing for households whose income is at or below specified income levels. In establishing the tax credit incentive, Congress recognized that a private sector developer may not receive enough rental income from a low-income housing project to: 1) cover the costs of developing and operating the project, and 2) provide a return to investors sufficient to attract the equity investment needed for development. More specifically, the LIHTC is a dollar-for-dollar reduction in tax liability to the owner of a qualified low-income housing development for the acquisition, rehabilitation (“rehab”), or construction of low-income rental housing units. To qualify for tax credits, a development must meet a number of conditions set forth in Section 42 of the Internal Revenue Code (IRC). In particular, the development must provide low-income housing units that meet certain occupancy and rent requirements. After the state allocates tax credits to developers, the developers typically sell the credits to private investors. The private investors use the tax credits to offset taxes otherwise owed on their tax returns. The money private investors pay for the credits is paid into the projects as equity financing. This equity financing is used to fill the gap between the development costs for a project and the nontax credit financing sources, such as mortgages, that could be expected to be repaid from rental income. For a LIHTC project, a minimum of 20% of the units must be occupied by households with incomes at or below 50% of the area median gross income (AMGI), as adjusted for family size; or a minimum of 40% of the units must be occupied by households, with incomes at or below 60% of the AMGI, adjusted for family size. The owner must irrevocably elect to comply with either the 20-50 or the 40-60 tests. The gross rent charged for a low-income unit may not exceed 30% of the household’s income. The LIHTC program requires that these rent restrictions remain in place for 30 years.

Thomas Leininger

From: Adrienne <adrienne-gary@cox.net>
Sent: Tuesday, January 16, 2018 10:26 AM
To: Planning
Subject: Oakland

Dear JCC Planners:

Last week, I left a message with Jose Ribeiro but I have not heard back from him.

I am not able to attend the public hearing (2/7/18) about the Oakland apartments and wanted to express my concerns.

Here are a few of my questions and concerns about multiple families living on the property.

1. Traffic pattern - What will be done about the dangerous intersection on Route 60?

All west bound traffic to access the property would need to do a U turn and cross over Route 60. There is no turning lane and the intersection is dangerous now! More turning traffic would increase the hazards.

2. Roadside bike/walk - What will be done to make it safe to walk and bike from the apartment complex to the CVS and Food Lion?

Near the entrance to Oakland Farm, there is less than 2 feet from the east bound Route 60 lane to a 6 foot drop off. Despite this, there is a designated bike path through the Croaker intersection. Currently, it is unsafe to walk or bike along the road due to the fast moving traffic. A number of years ago, I asked the board of supervisors about making a safe path so that Oakland Estates children and other residents could walk to the store. Nothing ever happened with that, I assume due to the cost.

3. Number of units - Traffic in the Croaker intersection has significantly increased in the last few years. How much more congestion can it tolerate?

There are 2 apartment complexes near the intersection, already. More apartments are likely to built on the open North corners of the intersection.

4. Low income housing - How many low income units are available in the area?

Although no one likes "low income" housing near them, what are the county's plans for offering a limited number of affordable units.

5. Energy - What requirements does new housing have for energy efficiency and green space?

Solar or geothermal should be a part of any new building. Of course, we need to ensure that green space is preserved not only for residents recreation but also for the environment.

Please help me to understand what the county is considering and let me know how this information will be used!

Sincerely,

Adrienne Frank

Jose Ribeiro

From: Thomas Leininger
Sent: Tuesday, January 23, 2018 4:56 PM
To: Jose Ribeiro
Subject: FW: Oakland Farm Re-zoning

From: Lee Alexander [mailto:laalex1103@aol.com]
Sent: Tuesday, January 23, 2018 4:00 PM
To: Planning <planning@jamescitycountyva.gov>
Subject: Oakland Farm Re-zoning

To whom it may concern on the planning board,

I am a James City County resident, and have lived in Oakland Estates subdivision behind Oakland Farm for 25+ years. I am writing to ask that the zoning board votes no to re-zone Oakland Farm. Re-zoning Oakland Farm from A-1 rural agriculture to R-5 high density housing has a number of negatives, especially for those who live adjacent to the farm.

The entrance to Oakland Estates on route 60 is already problematic and at times dangerous to drivers primarily entering the subdivision. Thanks in part to the development of rural land west of Toano, traffic moving east on 60 has increased substantially over the years. Coming into the Oakland subdivision from 60 west becomes dangerous when those entering have to wait to cross Highway 60 east due to congestion. It is becoming increasingly common for two to three vehicles waiting to turn into Oakland subdivision (or conducting a U-turn to get back onto 60 East) to back up onto 60 west. In addition because of the topography and tall grass during the summer months it is at times difficult to determine safe crossing of 60 east. Large trucks traveling to and from Luck stone negotiating the hill at the Croker/Highway 60 intersection traffic light cause further congestion. How is this going to work when the Oakland Farm is developed for high density housing. Even with an extended turning lane on 60 west, or a separate entrance with yet another traffic light there will be traffic congestion and problems. Then there are the public buses and school buses that will need to stop to pick up riders from the new apartments. Traffic will be an issue unless the county does a major renovation of the 60 corridor in that area.

Another concern is the county infrastructure needed to support this proposed development. Even though the proposed development lies along the utility corridor, and with proffers from the developer, there will be a substantial long term cost to the county and its residents. In addition to the road issues I spoke of, there are school, water, sewage, law enforcement, and county social services issues. There are issues concerning further depletion of ground water levels and storm water runoff. I am sure these issues are being addressed, but why do we need (or want) to put such a heavy development footprint on this piece of property?

With the urban like environment being created in Norge, (i.e. Croker Station and Candle Station), come urban like problems. Increased drug problems, crime, and other social problems related to urban apartment living. This is not fear mongering or over-dramatizing the issue. It has been demonstrated over and over again in other areas, and is a real concern. Building high density apartments on Oakland Farm will exacerbate the potential for this problem. Once established, these problems will manifest within the general community. The attractiveness of upper James City County as a quiet rural community will diminish and become nothing more than a memory.

A few years back James City County sponsored a study to ask how the county could maintain its rural character. The study served to reassure residents that the county was taking steps to see that we were kept safe from the over development seen elsewhere in tidewater Virginia. If this study was serious, then how does rezoning Oakland Farm to R-5 support the rural character of James City County. This proposal if approved would go a long way to destroy any rural character left in the Norge area. Many home owners in Oakland Estates moved here originally to live quietly and raise their families in an rural setting. Why are we trying to recreate Newport News in James City County? Can we not do better? My sincere recommendation is to develop this part of the county in line with what we already have; single family residential on large lots and small business. To the extent possible, keep the farmland open and encourage different types of agriculture.

Please keep Oakland Farm zoned A-1 for now. This is not the kind of proposal that will be good for the residents in this area nor, do I believe, will it be good for the county in general. It is out of balance with the character of this part of the county.

Thanks You.

Sincerely,
Lee Alexander

Jose Ribeiro

From: Thomas Leininger
Sent: Tuesday, January 30, 2018 10:29 AM
To: Jose Ribeiro
Subject: FW: Request to build Oakland Apartments

From: Allison [mailto:aotey@lawsonenterprisesinc.com]
Sent: Tuesday, January 30, 2018 10:26 AM
To: Planning <planning@jamescitycountyva.gov>
Subject: Request to build Oakland Apartments

To Whom It May Concern,

I am a resident of Oakland Estates. I am planning on being at the public hearing scheduled for February 7, 2018, but wanted to pose some questions and concerns prior to that date. I would be interested in the County providing what the vacancy rate is for both The Village at Candle Station as well as the low-income/income based housing apartments, The Station at Norge. We have lived in Oakland Estates now for 16 years and moved to this location because of its quiet, safe and peaceful nature. I work in Property Management and know that when low-income housing is offered, often the criteria for approving residents is not as stringent – mainly the criminal background portion. When felonies are overlooked in an effort to increase the occupancy rate, all surrounding neighborhoods/communities pay the price with the potential for increased crime. This is my first and foremost concern – the possibility of the safety of our neighborhood being compromised. While I realize that crime can take place in any locale, this is certainly one way that it can bring the opportunity closer to the doorsteps of the residents of Oakland. I know that development will and has gone on in spite of what current residents say or do to oppose it. One of the most wonderful draws about James City County has always been that there is more land and green space. The reason so many come to this area is to get away from the high density and traffic issues that surrounding cities such as Newport News, Hampton and Richmond face. Unfortunately with continued development in James City County, we will soon lose what makes our county so special. I would like it to go on record that I am adamantly opposed to this development not only for the residents of Oakland Estates, but for the other residents in James City County who would like to

see the growth and development in our county slow down drastically. I thank you for your time and consideration.

Allison H. Otey

Vice President

Lawson Enterprises, Inc.

1310 Garrison Drive

Williamsburg, VA 23185

ITEM SUMMARY

DATE: 2/6/2018

TO: The Planning Commission

FROM: Savannah Pietrowski, Senior Planner

SUBJECT: SUP-0014-2017, Yard Works SUP Amendment

ATTACHMENTS:

	Description	Type
☐	Staff Report	Staff Report
☐	Location Map	Backup Material
☐	Draft SUP Conditions	Backup Material
☐	Master Plan, dated January 23, 2018	Backup Material
☐	SUP-0015-1993 Master Plan	Backup Material
☐	SUP-0015-1993 SUP Conditions	Backup Material
☐	Project Narrative provided by the applicant	Backup Material
☐	Photos of Operation	Backup Material

REVIEWERS:

Department	Reviewer	Action	Date
Planning Commission	Holt, Paul	Approved	1/31/2018 - 2:43 PM
Planning Commission	Holt, Paul	Approved	1/31/2018 - 2:13 PM
Planning Commission	Holt, Paul	Approved	1/31/2018 - 2:16 PM
Publication Management	Burcham, Nan	Approved	1/31/2018 - 2:37 PM

SPECIAL USE PERMIT-0014-2017. Yard Works SUP Amendment

Staff Report for the February 7, 2018, Planning Commission Public Hearing

SUMMARY FACTS

Applicant: Mr. Kevin Martin, Yard Works LLC

Land Owners: Williamsburg-Jamestown Airport, Short Neck LLC, Marclay LLC, Mr. Larry Waltrip and Mr. Dudley Waltrip

Proposal: A request to amend Case No. SUP-0015-1993, which was approved by the Board of Supervisors on June 7, 1993. The SUP Amendment would allow for the manufacture and sale of wood products.

Location: 3, 10, 20 and 100 Marclay Road, 164 Waltrip Lane and one additional property with no assigned address.

Tax Map/Parcel Nos.: 4820100004, 4820100004A, 4820100012, 4820100005A, 4820100005C and 4820100006

Project Acreage: +/- 49.9 acres

Zoning: Addresses 100 Marclay Road and 20 Marclay Road are zoned both R-8, Rural Residential and R-8AA, Rural Residential Airport Approach Overlay District. Addresses 3 Marclay Road and 10 Marclay Road are zoned R-8AA, Rural Residential Airport Approach Overlay District. Address 164 Waltrip Lane is zoned R-8, Rural Residential.

Comprehensive Plan: Airport and Low Density Residential

Primary Service Area: Inside

Staff Contact: Savannah Pietrowski, Senior Planner

PUBLIC HEARING DATES

Planning Commission: February 7, 2018, 7:00 p.m.

Board of Supervisors: March 13, 2018, 5:00 p.m. (tentative)

FACTORS FAVORABLE

1. With the proposed conditions, the proposal is compatible with surrounding zoning and development.
2. The proposal is consistent with the recommendations of the Comprehensive Plan adopted in 2015, *"Toward 2035: Leading the Way."*
3. The proposal would bring an existing operation into conformance with the Zoning Ordinance.

FACTORS UNFAVORABLE

With the attached Special Use Permit (SUP) conditions, staff finds that there are no unfavorable factors.

SUMMARY STAFF RECOMMENDATION

Staff recommends approval of this application, subject to the attached conditions.

This staff report is prepared by the James City County Planning Division to provide information to the Planning Commission and Board of Supervisors to assist them in making a recommendation on this application. It may be useful to members of the general public interested in this application.

SPECIAL USE PERMIT-0014-2017. Yard Works SUP Amendment

Staff Report for the February 7, 2018, Planning Commission Public Hearing

PROJECT DESCRIPTION

Mr. Kevin Martin has applied on behalf of Yard Works LLC, to amend the existing SUP on the property for the manufacture and sale of wood products.

The existing SUP, obtained by Mr. Larry Waltrip in 1993, permits the manufacture and sale of wood products on approximately 105 acres, with a tub grinder located on the 19 acres associated with Tax Map No. 4820100005C.

Yard Works LLC, has now taken over operation of the facility. As part of this transition, Yard Works LLC, has requested this SUP amendment in order to reflect the current boundaries of the operation on the master plan and allow the operation of grinding equipment in additional areas.

These revisions to the master plan remove the Williamsburg-Jamestown Airport from the SUP boundaries and decrease the total SUP acreage to approximately 49.9 acres.

Yard Works' wood manufacturing operation involves grinding wood debris and products to produce, color and bag mulch. All of these materials will be stored on site throughout the process. The proposed master plan designates areas for each of these activities, as well as a small portion of the property to be set aside for the retail sale of these products. The applicant has indicated that mulch has historically been ground on-site an average of 150 days per year.

PLANNING AND ZONING HISTORY

- On June 7, 1993, the Board of Supervisors approved SUP-0015-1993 for the manufacture and sale of wood products on approximately 105 acres.

- On July 7, 1993, the Development Review Committee approved a site plan showing the location of the tub grinder on Tax Map Parcel No. 4820100005C. While Yard Works does not use a tub grinder, as noted above, the heavy wood grinding will still take place on this property.

SURROUNDING ZONING AND DEVELOPMENT

- The properties are adjacent to the Williamsburg-Jamestown Airport.
- Surrounding Zoning Districts include:
 - R-5 to the north/north east (Williamsburg Landing)
 - R-8 and R-1 to the south (single-family dwellings)
 - R-8 to the east (Williamsburg-Jamestown Airport)
 - R-2 to the west (single-family dwellings)

COMPREHENSIVE PLAN

- Addresses 3, 10, 20 and 100 Marclay Road and 164 Waltrip Lane are designated Airport on the 2035 Comprehensive Plan Land Use Map.
- Principal suggested uses for the Airport areas include aviation, with airport related commercial and office development as clearly secondary uses. Land which is currently in use as a construction landfill and mulching operation may continue in its current or a similar use, in a limited manner consistent with state and local permits.

This staff report is prepared by the James City County Planning Division to provide information to the Planning Commission and Board of Supervisors to assist them in making a recommendation on this application. It may be useful to members of the general public interested in this application.

SPECIAL USE PERMIT-0014-2017. Yard Works SUP Amendment

Staff Report for the February 7, 2018, Planning Commission Public Hearing

- Tax Map Parcel No. 4820100006 is designated Low Density Residential on the 2035 Comprehensive Plan Land Use Map.
- Principal suggested uses for Low Density Residential areas include single-family and multifamily units, accessory units, cluster housing and recreation areas.
- Staff finds that this proposal is consistent with the Comprehensive Plan as a secondary use. Given the proposed boundaries of the SUP in relation to the Williamsburg-Jamestown Airport, use of the site for the principal suggested uses would not be precluded.
- While one property is designated Low Density Residential, the proposed boundary of the SUP would only include the existing access road. Staff finds that the exclusion of the remainder of this property provides a transition from the wood processing operation to the adjacent residential area.
- Surrounding Comprehensive Plan designations include:
 - Airport to the east (Williamsburg-Jamestown Airport)
 - Low Density Residential to the north, south and west (Williamsburg Landing and single-family dwellings)

PUBLIC IMPACTS

1. Anticipated Impact on Public Facilities and Services:

- a. *Streets.* The project is accessed via the Marclay Road public right-of-way. A condition has been proposed requiring an operation mitigation plan, which would include provisions for monitoring of Marclay Road for necessary cleaning of mud associated with the operation.

- b. *Schools/Fire/Utilities.* No impacts anticipated. There is a small existing office, which is connected to public water and sewer. This application has been reviewed by the Fire Department. Upon its recommendation, draft conditions have been included regarding stockpile size and fire safety requirements.
2. Environmental: There is a small amount of Resource Protection Area (RPA) located within the area of the existing SUP. While this amendment does not propose to remove this area from the SUP boundary, a condition has been proposed requiring the delineation of wetlands on the property and prohibiting any expansion into the RPA.
 3. Cultural/Historical: As these properties have been used for the manufacture of wood products since the 1980's, as well as a landfill which has now ceased operation, staff finds that there would be minimal ability to locate or preserve any cultural and/or historic resources.
 4. Nearby and Surrounding Properties:
 - a. *Visual Impacts:* There is an existing 50-foot buffer around the perimeter of Tax Map Parcel No. 4820100005C. A 50-foot buffer has also been proposed on Tax Map Parcel No. 4820100004A in order to minimize visual impacts to the existing residences on Lake Powell Road. Staff notes that the operation is fairly visible while driving on Marclay Road. However, the only destination past the facility is the Williamsburg-Jamestown Airport.

This staff report is prepared by the James City County Planning Division to provide information to the Planning Commission and Board of Supervisors to assist them in making a recommendation on this application. It may be useful to members of the general public interested in this application.

SPECIAL USE PERMIT-0014-2017. Yard Works SUP Amendment

Staff Report for the February 7, 2018, Planning Commission Public Hearing

- b. *Auditory Impacts:* Staff conducted a sound test of the horizontal grinder used for grinding mulch on January 26, 2018, taking decibel readings from the grinding site and several surrounding locations, including the intersection of Marclay Road and Lake Powell Road, the closest residence in Williamsburg Landing, the closest residence to the south and the airport. No noise associated with the grinding was audible from any of these locations. However, beeping from vehicles backing up was minimally audible from these locations.

PROPOSED CONDITIONS

- The full text of the proposed conditions are attached.

STAFF RECOMMENDATION

Staff recommends approval of this application, subject to the attached conditions.

SP/nb
SUP14-17YarkWksAmnd

Attachments:

1. Location Map
2. Draft SUP Conditions
3. Master Plan, dated January 23, 2018
4. SUP-0015-1993 Master Plan
5. SUP-0015-1993 SUP Conditions
6. Project Narrative provided by the Applicant
7. Photos of Operation

This staff report is prepared by the James City County Planning Division to provide information to the Planning Commission and Board of Supervisors to assist them in making a recommendation on this application. It may be useful to members of the general public interested in this application.

JCC-SUP-0014-2017, Yard Works SUP Amendment



SUP-0014-2017, Yard Works SUP Amendment

Draft SUP Conditions

1. ***Master Plan and Use:*** This Special Use Permit (the “SUP”) shall be valid for the operation of a +/- 49.90 acre facility for the manufacture and sale of wood products and accessory uses (the “Project”) on properties located at 3, 10, 20, and 100 Marclay Road, 164 Waltrip Lane, and one additional property with no assigned address, further identified as JCC Real Estate Tax Map Nos. 4820100004, 4820100004A, 4820100012, 4820100005A, 4820100005C, and 4820100006, respectively (collectively, the “Property”). The Project shall be in accordance with the “SUP-0014-2017, Yard Works SUP Amendment Master Plan” dated January 23, 2018 (the “Master Plan”), with any deviations considered per Section 24-23(a)(2) of the Zoning Ordinance, as amended.
2. ***Project Activities:*** All activities on-site shall be in accordance with the designations on the Master Plan. The “Grinding and Storage” area shall be used for the initial grinding of large wood debris using equipment such as a tub grinder or horizontal grinder. The “Processing” area shall be used for the secondary grinding of wood debris, using equipment such as a horizontal grinder, and the coloring of mulch. The “Bagging and Storage” area shall be used for the storage of mulch, topsoil, and equipment, and for the bagging of products produced onsite. The “Retail” area shall be used for sales to the general public, as more specifically defined in SUP condition #5 below, and shall contain all customer parking.
3. ***Hours of Operation:*** Hours of operations for the wood grinding equipment shall be limited to 7:00 a.m. to 7:00 p.m., Monday through Saturday.
4. ***Future Expansion:*** Any future expansion of the Project outside of the areas delineated on the Master Plan shall require an amendment to this SUP.
5. ***Retail Sales:*** The accessory retail sales area may be used for the sale of mulch and other ground cover materials, including materials such as stone, gravel and sand. The area used for the sale of ground cover materials other than mulch shall be limited to 10,000 square feet, and piles shall not exceed eight (8) feet in height.
6. ***Material Storage:*** All storage of wood products shall comply with the following requirements:
 - a. Piles shall be on solid ground or other all-weather surface.
 - b. Piles shall not exceed twenty-five (25) in height, one hundred and fifty (150) feet in width and two hundred and fifty (250) feet in length.
 - c. Piles shall be separated from adjacent piles by at least fifty (50) feet.
7. ***Fire Safety:*** The Project shall comply with the following requirements:
 - a. The accumulation of combustible waste and vegetation shall be in accordance with Chapter 3 of the Statewide Fire Prevention Code (SFPC).
 - b. Portable fire extinguishers complying with Section 906 of the SFPC and with a minimum rating of 4-A:60-B:C shall be provided on all vehicles operating on piles and at all processing equipment.

- c. Prior to final site plan approval, the owner or operator shall develop and submit for approval of the Fire Official a plan for monitoring, controlling and extinguishing spot fires.
8. Buffers: A buffer fifty (50) feet in width shall be provided on portion of JCC Real Estate Tax Map Nos. 4820100004A and 4820100005C, as shown on the Master Plan. Existing trees in the buffer areas shall be retained and any open areas shall be supplemented with additional plantings meeting the requirements of Section 24-96 of the Zoning Ordinance, as amended. The landscaping plan shall be shown as part of the site plan and shall be reviewed and approved by the Director of Planning or his designee. The landscaping shown on the approved landscape plan shall be installed within twelve (12) months of final site plan approval.
9. Lighting: A lighting plan shall be reviewed and approved by the Director of Planning or his designee prior to final approval of the site plan. Any exterior site or building lighting shall be shielded and directed downward. No glare - defined as 0.1 foot-candle or higher - shall extend outside the Property. Lights shall be operated by a motion detector or be able to be turned on as needed and shall not be routinely illuminated at night. No lighting shall be installed on structures at a height greater than twenty (20) feet above finished grade. This condition shall not apply to any lighting required by Federal or State regulations.
10. Operations Mitigation Plan: A construction mitigation plan shall be reviewed and approved by the Director of Planning or his designee prior to final site plan approval. The plan shall address:
 - a. Dust mitigation, such as water trucks, mulch, or similar methods.
 - b. Noise mitigation, such as the enforcement of hours of operation.
 - c. Road monitoring of Marclay Road, to include cleaning roadways of mud tracked onto Marclay Road from traffic associated with the Project.
11. Junk Removal: All junk, as determined by the Zoning Administrator, shall be removed from the Property prior to final Site Plan approval. "Junk" shall mean, but not be limited to, old or scrap concrete, wire, rebar, copper, brass, rope, rags, batteries, paper, trash, rubber, waste or junked, dismantled or wrecked automobiles or parts thereof, iron, steel and other ferrous or nonferrous materials. The Zoning Administrator shall verify in writing that all junk has been property removed from the Property.
12. Material Decomposition: The use of chemicals to aid in the decomposition of material shall be prohibited. No materials shall be burned on the Property.
13. Stormwater Management: Prior to final site plan approval, information regarding the functionality of any existing stormwater management facilities utilized by the Project shall be submitted to the Director of Stormwater and Resource Protection Division for review. This information shall include any existing as-built reports and/or maintenance agreements. If it is determined that the facilities are not functioning properly, proper maintenance, repairs, and/or upgrades as determined by the Director of Stormwater and Resource Protection may be required and the owner shall enter into a new maintenance agreement with the County.

14. Resource Protection Area: The location of any Resource Protection Area (RPA), RPA buffer, steep slope (i.e., slopes greater than 25 percent in grade) and/or wetland shall be identified and indicated on any site plan or development plan which is submitted to James City County for approval. No parking, storage of equipment and/or vehicles, and/or additional soil disturbance associated with the Project shall occur within fifteen (15) feet of an RPA buffer. Identification of these areas must be approved by the James City County Stormwater and Resource Protection Division prior to the issuance of preliminary site plan approval.
15. Entrances: Access to the Project from Lake Powell Road shall be limited to Marclay Road.
16. Spill Prevention: Prior to preliminary site plan approval, an operational phase stormwater pollution prevention plan/spill prevention and control plan to address the outdoor vehicle and material storage, including but not limited to oil, diesel and gasoline, shall be submitted to the Director of Stormwater and Resource Protection and the Fire Official for their respective review and approval.
17. Conservation Easement: Prior to final site plan approval, a conservation easement of approximately 9.54 acres, identified on the drawing titled "Waltrip Recycling Site Plan" dated May 28, 1993, shall be dedicated to James City County or another County approved land conservation entity. The easement shall be substantially in the form of the County's natural open space easement as approved by the County Attorney. Alternative locations may be approved by the Director of the Stormwater and Resource Protection Division or his designee. The exact boundaries of the conservation easement shall be shown on the site plan for the Project.
18. Site Plan: A site plan shall be required for the Project. Final site plan approval must be obtained within twenty-four (24) months of issuance of this SUP, or the SUP shall become void.
19. Severance Clause: This SUP is not severable. Invalidation of any word, phrase, clause, sentence or paragraph shall invalidate the remainder.

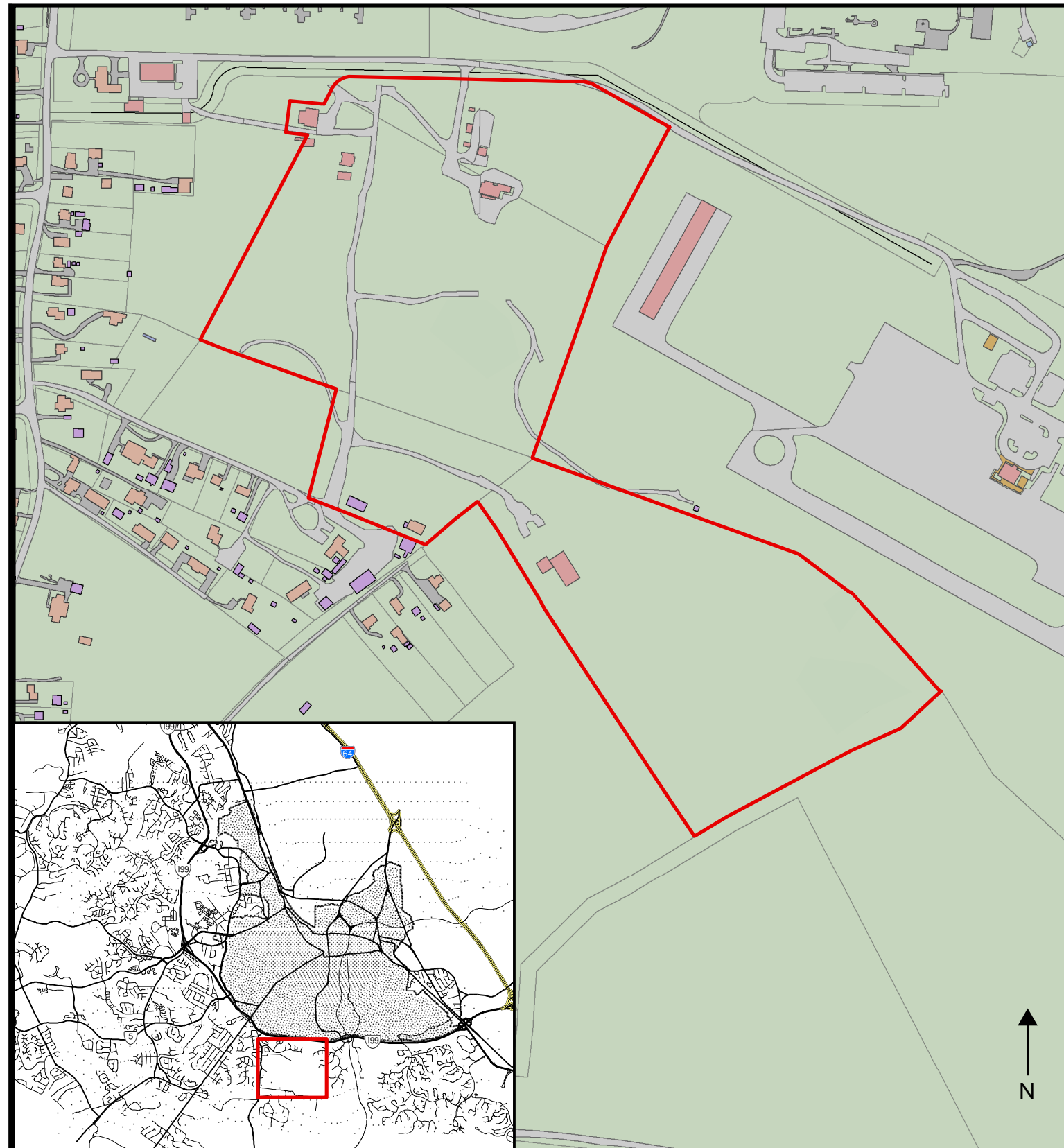
SUP-0014-2017, Yard Works SUP Amendment

This is an amendment to
JCC Case No. SUP-0015-1993.

Total SUP area following
amendment: +/- 49.90 acres.

Sheet Index

1. Cover Page
2. Existing SUP
3. SUP Boundary Changes
4. Proposed SUP



Maps Not To Scale

Properties

4820100005A

Address: 100 Marclay Road
Owner: Williamsburg-Jamestown Airport
Zoning: R-8, Rural Residential,
w/ portions Airport Approach Overlay
Comprehensive Plan: Airport

4820100012

Address: 20 Marclay Road
Owner: Short Neck LLC
Zoning: R-8, Rural Residential
w/ portions Airport Approach Overlay
Comprehensive Plan: Airport

4820100004A

Address: 10 Marclay Road
Owner: Waltrip, Larry T & Waltrip, Dudley S
Zoning: R-8, Rural Residential,
w/ Airport Approach Overlay
Comprehensive Plan: Airport

4820100004

Address: 3 Marclay Road
Owner: Marclay LLC
Zoning: R-8, Rural Residential,
w/ Airport Approach Overlay
Comprehensive Plan: Airport

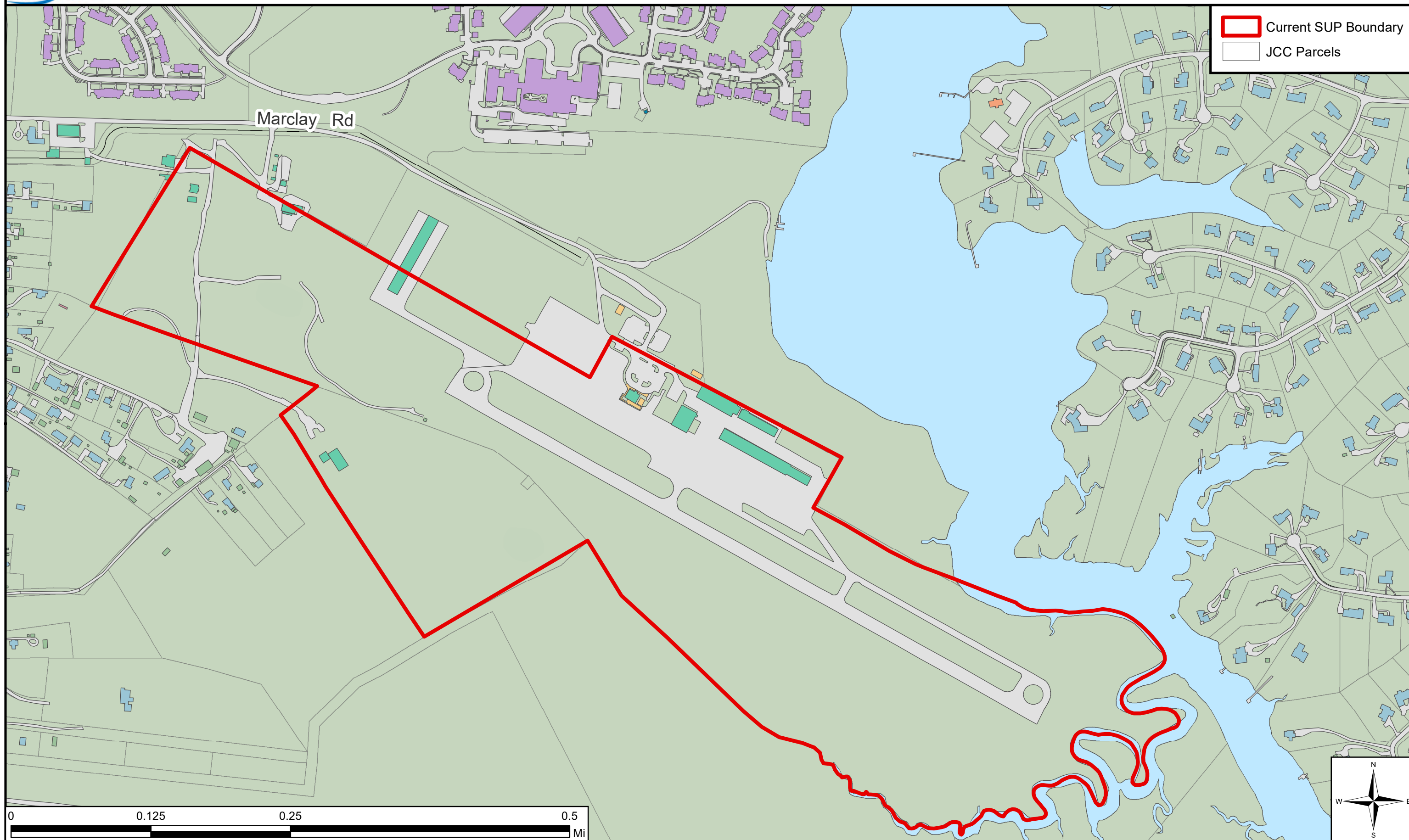
4820100005C

Address: 164 Waltrip Lane
Owner: Waltrip, Larry T
Zoning: R-8, Rural Residential
Comprehensive Plan: Airport

4820100006

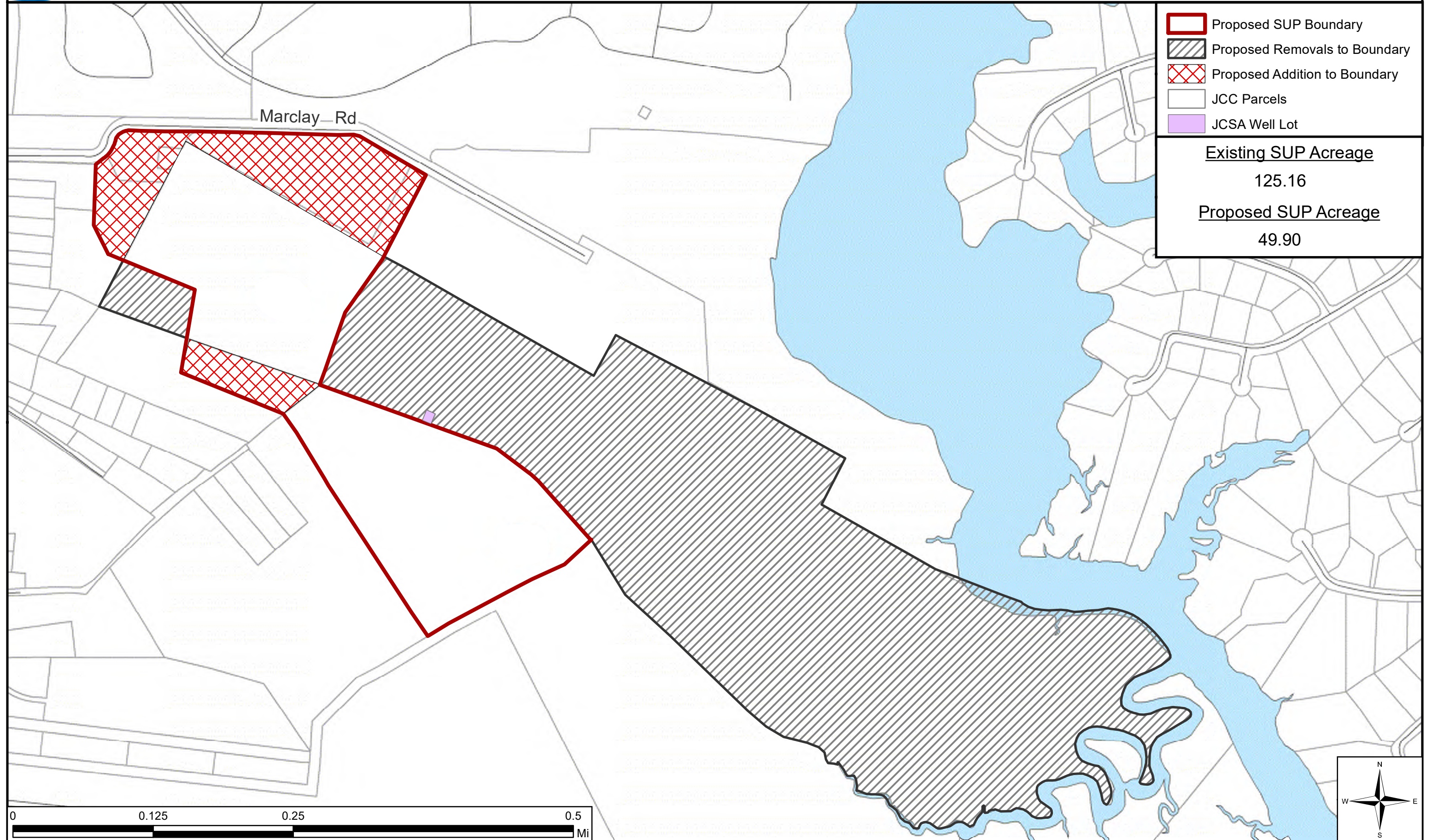
Address: (no address assigned)
Owner: Waltrip, Larry & Waltrip, Dudley S
Zoning: R-8, Rural Residential
Comprehensive Plan: Low Density Residential

Existing SUP-0015-1993, Waltrip Recycling

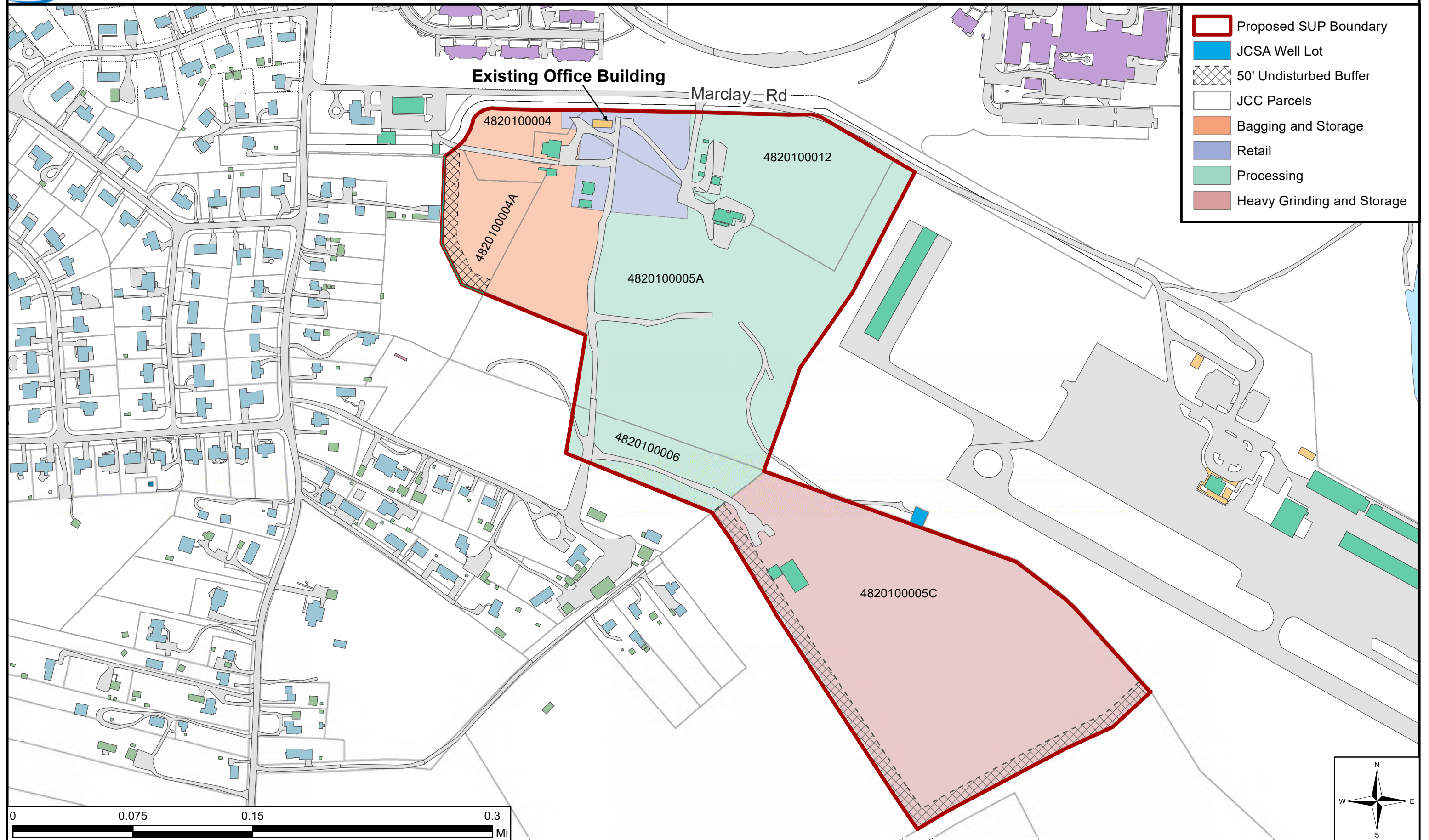




SUP-0014-2017, Yard Works SUP Amendment



SUP-0014-2017, Yard Works SUP Amendment



OWNER'S CONSENT & DEDICATION

THIS PROPERTY LINE ADJUSTMENT & LOT LINE EXTINGUISHMENT IS WITH THE
FREE CONSENT AND IN ACCORDANCE WITH THE WISHES AND DESIRES OF THE
UNDERSIGNED OWNERS AND PROPRIETORS.

BY Ethel P. Walby of Lowell, Mass.

BY James L. White BY
STATE OF VIRGINIA

I, James M. Lewis, A NOTARY PUBLIC FOR THE County OF James, DO CERTIFY THAT THE PERSONS WHOSE NAMES ARE SIGNED TO THE FOREGOING WRITING HAVE ACKNOWLEDGED THE SAME BEFORE ME IN MY CITY AND STATE AFORESAID.

GIVEN UNDER MY HAND THIS 6th DAY OF April, 1983.

SIGNATURE (NOTARY) Donald M. Lawrence
MY COMMISSION EXPIRES April 5, 1991

CLERK'S CERTIFICATE
STATE OF VIRGINIA,

IN THE CLERK'S OFFICE OF THE CIRCUIT COURT FOR THE COUNTY OF
THE 15 DAY OF August, 19 88, THIS MAP WAS
PRESENTED AND ADMITTED TO THE RECORD AS THE LAW DIRECTS.

TESTE: W. S. Sheward, CLERK.

PLAT BOOK: 49, PAGE: 24.

CERTIFICATE OF APPROVAL

THIS PROPERTY LINE ADJUSTMENT & LOT LINE EXTINGUISHMENT IS APPROVED
BY THE UNDERSIGNED IN ACCORDANCE WITH EXISTING SUBDIVISION
REGULATIONS AND MAY BE COMMITTED TO RECORD.

DATE 5/3/58 AGENT OF GOVERNING BODY

SURVEYOR'S STATEMENT

I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL OF THE REQUIREMENTS OF THE BOARD OF SUPERVISORS AND ORDINANCES OF THE COUNTY OF JAMES CITY, VIRGINIA, REGARDING THE PLATTING OF SUBDIVISIONS WITHIN THE COUNTY HAVE BEEN COMPLIED WITH.

GIVEN UNDER MY HAND THIS 17th DAY OF February, 1988.
BY: Paul L. Small

SOURCE OF TITLE

TITLE TO THE PROPERTY SHOWN HEREON IS VESTED IN
LINWOOD WALTRIP, ET ALD, PER DB 82-1848 &
WILLIAMSBURG - JAMESTOWN AIRPORT, INC.
PER DB 130-1767

By: Henry Schultz, President

ROUTE
LAKE POWELL ROAD
817

**COLLEGE
CREEK**

WILLIAMSBURG - JAMESTOWN AIRPORT, INC.

LOGAN GRAY 1 2 3



AES a professional corporation
1761 Jamestown Road, Williamsburg, Va. 23185
804-253-0040
Engineering, Planning, Surveying

**PLAT OF BOUNDARY ADJUSTMENT
BETWEEN THE PROPERTIES OF
LINWOOD WALTRIP, ET AL; AND
WILLIAMSBURG - JAMESTOWN
AIRPORT, INC.**

JAMES CITY COUNTY **VIRGINIA**



				342 p.m.	
				Recorded	by [Signature]
				In	[Initials] 6-20-78
			B B No	41	PAGE #20
				[Signature]	Clerk
No.	DATE	REVISION / COMMENT / NOTE			BY

Designed	Drawn
Scale 1" = 40'	Date 2 / 15 / 88
Project No. 7080	
Drawing No. PLAT	

PB 49 PG. 24



R E S O L U T I O N

CASE NO. SUP-15-93. MR. LARRY T. AND MS. JEAN T. WALTRIP - TUB GRINDER

WHEREAS, the Board of Supervisors of James City County has adopted by ordinance specific land uses that shall be subjected to a special use permit process; and

WHEREAS, the Planning Commission of James City County, following its public hearing on May 11, 1993, unanimously recommended approval of Case No. SUP-15-93 to allow the manufacture and sale of wood products in the R-8, Rural Residential district, on property identified as Parcel (1-5A) on James City County Real Estate Tax Map No. (48-2).

NOW, THEREFORE, BE IT RESOLVED that the Board of Supervisors of James City County, Virginia, does hereby approve the issuance of Special Use Permit No. SUP-15-93 as described herein with the following conditions:

1. The tub grinder shall be permitted to operate only between 7:00 a.m. and 7:00 p.m. Monday through Saturday.
2. Berms, a minimum of 6 feet in height, shall be placed between the tub grinder and the southeast and southwest boundaries of the 19-acre site as shown on a plan entitled "Plat of Boundary Adjustment Between the Properties of: Linwood Waltrip, et als; and Williamsburg-Jamestown Airport" prepared by AES and dated February 16, 1988. If the grinder is placed in the lower elevations on the property in an area where a berm-like effect (at least 6 feet below the grade of the property lines) is prevalent, as determined by the Development Review Committee, the requirement for a berm may be waived. The berms shall be landscaped at a minimum, in accordance with the provisions of the minimum planting standards set forth in the Zoning Ordinance, and placement and landscaping of such berms shall be approved by the Development Review Committee.
3. This special use permit shall remain in effect for a period of 24 months from the date of issuance. If within this time site plan approval and/or building plan approvals are issued, the special use permit shall remain in effect for the term of those approvals and/or permits. Issuance of a Certificate of Occupancy would preserve the rights of the special use permit.
4. A minimum 50-foot undisturbed buffer shall be provided along the southeast and southwest boundaries of the 19-acre site as shown on a plan entitled "Plat of Boundary Adjustment Between the Properties of: Linwood Waltrip, et als; and Williamsburg-Jamestown Airport" prepared by AES and dated February 16, 1988. The buffer shall be landscaped at a minimum, in accordance with the landscaping requirements of the Zoning Ordinance, and such landscaping shall be approved by the Development Review Committee.

5. All access to the operation from Lake Powell Road shall be via Marclay Road.
6. The location of the tub grinder shall be limited to the 19.015 acres shown on a plan entitled "Plat of Boundary Adjustment Between the Properties of: Linwood Waltrip, et als; and Williamsburg-Jamestown Airport" prepared by AES and dated February 16, 1988. The tub grinder shall be located so as to minimize potential adverse impacts (including, but not limited to, noise, dust, debris, odor, etc.) on adjacent properties and the final location of the tub grinder shall be approved by the Development Review Committee.



Judith N. Knudson
Chairman, Board of Supervisors

ATTEST:



David B. Norman
Clerk to the Board

<u>SUPERVISOR</u>	<u>VOTE</u>
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TAYLOR	AYE
EDWARDS	AYE
DEPUE	AYE
SISK	AYE
KNUDSON	AYE

Adopted by the Board of Supervisors of James City County, Virginia, this 7th day of June, 1993.

SUP1593.res



Narrative description of Yard Works facility

The 49.9+/- acres subject to the Special Use Permit Amendment application (the “Property”) will be used as a light manufacturing and sales center to remove and recycle waste material from the waste stream as defined by Virginia law and for the storage and sale of materials.

The Property will be used to store for use or for sale in its original and/or reprocessed from the following materials:

Wood debris, including but not limited to land clearing debris in bulk and bag form

Dirt and topsoil

The processing of material will consist of grinding and processing of wood debris and products to produce mulch from bark or with color added to mulch as needed to meet specific customer requirements and the crushing and grinding concrete and stone debris. Historically, the applicant has ground mulch an average of 150 days a year. No new land disturbance will be associated with this specially permitted use.

In addition, the Property will be used for the storage and maintenance of equipment and vehicles, including equipment necessary for reprocessing materials brought to the Facility. The stockpiles of material are stored at the Property pending processing, sale and/or delivery to customers or use by the applicant will be maintained at a height of no more than 35 feet and may be maintained at or relocated to various areas within the Property as operations require. Similarly, processing of material at the subject property may occur at various locations within the Property as circumstances may require however the storage and primary grinding of land clearing debris will be in the southeastern portion of the property farthest from adjacent residents. Mulch will be bagged in an existing building on the northwest side of the subject property, retail sales will be concentrated on the northern side of the property, and topsoil screening will take place on the northwest area where it currently exists. Stone, sand, and gravel will also be sold as accessory to our retail sale of mulch.

The subject property is currently base for operations of Yard Works LLC which has operated on the property since 2016 serving residential and well as commercial customers in the James City County and Williamsburg area. Yard Works, LLC is one of central Virginia’s largest and most respected manufacturer and seller of landscape products.

The Property is located inside a larger parcel including the Jamestown Airport such that activity is screened from adjacent landowners by trees, berms, and distance. The applicant will always strive to have good relations with its neighbors and keep noise and dust to a minimum.

This SUP Amendment will provide an appropriate and productive use of the Property and fill a need in the community to recycle and beneficially reuse the waste material which could be brought to the property and put to good use instead of filling up the areas landfills. Approving the SUP Amendment allows the Property to continue to be put to a productive use and helps meet the goal of diverting from the waste stream materials that can be reprocessed and/or recycled and put to new use.

ON-SITE PHOTOS:





OFF-SITE VISIBILITY:



View from adjacent commercial building at 3 Marclay Road



View from Williamsburg-Jamestown Airport (zoomed)

ITEM SUMMARY

DATE: 2/7/2018

TO: The Planning Commission

FROM: Paul D. Holt, III, Director of Community Development and Planning

SUBJECT: Planning Director's Report - January and February 2018

ATTACHMENTS:

	Description	Type
☐	Memo	Cover Memo
☐	Spreadsheet listing new applications received	Exhibit

REVIEWERS:

Department	Reviewer	Action	Date
Planning Commission	Holt, Paul	Approved	1/30/2018 - 4:13 PM
Planning Commission	Holt, Paul	Approved	1/30/2018 - 4:14 PM
Publication Management	Burcham, Nan	Approved	1/30/2018 - 4:15 PM
Planning Commission	Holt, Paul	Approved	1/30/2018 - 4:15 PM

PLANNING DIRECTOR'S REPORT
January and February 2018

This report summarizes the status of selected Department of Community Development activities during the past two months.

- **Planning**

- On January 24 the Planning Division, the Virginia Department of Transportation and its consultant, RK & K, held the second public workshop for the Pocahontas Trail Corridor Study. Approximately 80 people attended the workshop where the consultant presented information on conceptual alternatives and answered questions. At the end of the workshop the consultant asked the public about their preferences regarding the alternatives and specific transportation improvements. A meeting summary will be available on the Pocahontas Trail Corridor Study website by the middle of February.
- In response to a request from the Riverview Plantation Homeowners Association to determine the feasibility of implementing traffic calming measures, Tammy Rosario and Beth Klapper from Community Development, Sergeant TJ Johnson from the Police Department and Ken Shannon from the Virginia Department of Transportation met with the HOA and residents on November 29. They discussed the results of a speed study conducted earlier in the year and listened to concerns and desired measures to reduce speeding within the subdivision. Staff will review these items for their feasibility and report back to the HOA within 30 days on next steps in the traffic calming process.
- **Monthly Case Report:** For a list of all cases received in the last month, please see the attached documents.
- **Board Action Results:**
 - December 12, 2017
 - AFD-2-86-1-2017, Croaker AFD Addition, 9730 Sycamore Landing Road
Approved (5 – 0)
 - Z-0002-2017/MP-0002-2017, The Parke at Ford's Colony
Denied (4 – 1)
 - Z-0001-2017/SUP-0001-2017/MP-0001-2017/HW-0001-2017, Williamsburg Landing Marclay Road
Approved (5 – 0)
 - SUP-0005-2017, Lightfoot Marketplace SUP Amendment
Approved (5-0)
 - SUP-0006-2017, Lightfoot Marketplace Gasoline Station
Approved (5-0)
 - SUP-0007-2017, Lightfoot Marketplace Automotive Center, with applicant proposed elevations
Approved (4-1)
 - SUP-0008-2017, Lightfoot Marketplace Drive-Thru Restaurant, with applicant proposed elevations
Approved (4-1)
 - SUP-0009-2017, La Grange Parkway Expansion
Approved (5 – 0)
 - January 9, 2018
 - SUP-0013-2017, The Kensington School

Approved (5-0)

- ZO-0002-2017, Zoning Ordinance Revisions to Permit Short-Term Residential Rentals

Denied (5-0)

- SUP-0011-2017, 3001 Ironbound Road Tourist Home

Approved (5-0)

- ZO-0001-2017, Amendments to the Zoning Ordinance, Division 3, Floodplain area Regulations

Approved (5-0)

- SUP-00287-2016, Solar Electrical Generation Facility at Norge

Approved (5-0)

- Z-0004-2017, Powhatan Terrace Proffer Amendment

Approved (5-0)

- **Building Safety & Permits**

- Congratulations to Allen Turner for receiving the 2017 Board of Supervisors Chairman's Award! Allen received this award for exemplifying the County values of Collaboration, Excellence and Integrity.

- **Neighborhood Development**

- The Workforce Housing Task Force (WHTF) met on Thursday, Dec 7, 2017. They reviewed their upcoming schedule for 2018 and received copies of the Task Force's charter. The yearlong effort of the Task Force will be to develop policy proposals for the Board of Supervisors to consider.

- **Landscaping**

- Staff worked with General Services to design a replacement landscape for the 199 west median. A concept plan was developed and plants shall be ordered and installed in the spring of 2018.

New Cases for January and February 2018						
Case Type	Case Number	Case Title	Address	Description	Planner	District
Agricultural and Forestal District	AFD-04-86-1-2017-2017	Pates Neck 2018 Renewal	~	Renewal of the district for 6 years	Roberta Sulouff	01-Stonehouse
Change of Use	CU-0015-2017	4039 Ironbound, Hair Salon	4039 IRONBOUND ROAD	Change of use for 4039 Ironbound to a Hair Salon	Tom Leininger	04-Jamestown
	CU-0001-2018	8679 Pocahontas Trail, Physical Therapy	8679 POCAHONTAS TR	Change of use from a idependent living facility to a physical therapy facility.	Tom Leininger	05-Roberts
	CU-0002-2018	7346 Merrimac Trail, Office Space	7346 MERRIMAC TRAIL	Change of use from office space for storage facility to general office space.	Tom Leininger	05-Roberts
Conceptual Plan	C-0085-2017	Williamsburg Christian Retreat Dining Center	9275 BARNES ROAD	Proposed 300 person dining hall facility to support current camp and Retreat Center Operations.	Alex Baruch	01-Stonehouse
	C-0086-2017	Life Pointe Christian Church Conceptual	8851 RICHMOND ROAD	Potential BLE to create 1 parcel out of 2.	Jose Ribeiro	02-Powhatan
	C-0087-2017	150 Industrial Blvd Warehouse Concept	150 INDUSTRIAL BLVD	Construction of new 20,000 SF warehouse.	Savannah Pietrowski	01-Stonehouse
	C-0088-2017	Spoke & Art Provisions Conceptual	3449 JOHN TYLER HGWY	Phase II of the project: Expansion of structure (patio), outdoor seating, bike storage, parking, closing one of the vehicular entrances.	Jose Ribeiro	03-Berkeley
	C-0089-2017	Coleman Kennel, 9024 Barnes Road	9024 BARNES ROAD	Use portion of existing kennel structure to board up to 15 dogs not belonging to owner.	Roberta Sulouff	01-Stonehouse
	C-0001-2018	91 & 95 Brookwood Drive	91 BROOKWOOD DRIVE	Proposed removal of existing building, to be replaced with medical office	Savannah Pietrowski	05-Roberts
	C-0002-2018	Branscome and USA Waste of VA Landfills Borrow Pit Progress Report	700 BLOW FLATS ROAD	Annual progress report of mining activities as required by SUP-0009-2010 Condition #9 and SUP-0010-2010 Condition #9.	Terry Costello	05-Roberts
	C-0003-2018	2349 John Tyler Highway, Indoor Sports Facility	2349 JOHN TYLER HGWY	Indoor tennis facility with a possible indoor swimming pool.	Jose Ribeiro	03-Berkeley
Site Plan	SP-0121-2017	Williamsburg Gymnastics Fire Sprinkler System SP Amend	144 TEWNING ROAD	Relocate the fire department connection on 4" fire line.	Savannah Pietrowski	04-Jamestown
	SP-0122-2017	5301 Longhill Road Sprint Tower SP Amend.	5301 LONGHILL ROAD	Removal of 3 existing panel antennas, replace with 3 tri-band antennas. Install 4 hybriflex cables. Remove 3 combiners, relocate (3) 1900 RRH's from ground to tower. Plus install (6) 800 RRHs and (3) 2500 RRHs.	Jose Ribeiro	04-Jamestown
	SP-0123-2017	Williamsburg Landing Woodhaven Landscape and Lighting Amendment	5560 WILLIAMSBURG LANDING DR	Revisions to Phase 1 2-story small house landscape and lighting plan.	Scott Whyte	05-Roberts
	SP-0124-2017	Lightfoot Marketplace Sidewalk SP Amendment	6401 RICHMOND ROAD	Adjustments to the sidewalk at the rear of Building 2.	Jose Ribeiro	01-Stonehouse
	SP-0125-2017	6489 Richmond Road Sprint Tower Amend.	6489 RICHMOND ROAD	Remove (3) panel antennas, (3) 1900 remote radio heads, and (3) combiners. Replacing with/installing (3) Tri-Band panel antennas, (3) 800 remote radio heads, (3) 2.5 remote radio heads, and (3) hybriflex cables on the existing structure.	Alex Baruch	01-Stonehouse
	SP-0126-2017	King of Glory Lutheran Church Gravel Parking Lot Expansion	4897 LONGHILL ROAD	Site plan to add 72 gravel parking spots	Roberta Sulouff	04-Jamestown
	SP-0001-2018	Busch Gardens - Brady's Kiosk Expansion	7851 POCAHONTAS TR	Expansion of Brady's Kiosk in Busch Gardens Williamsburg.	Roberta Sulouff	05-Roberts
	SP-0002-2018	3011 Larkspur Run, Williamsburg Landing SP Amend	5700 WILLIAMSBURG LANDING DR	18' x 25' Fully Conditioned addition on rear of house (sunroom addition)	Jose Ribeiro	05-Roberts
	SP-0003-2018	Chickahominy River Front Park Dumpster Pad and Fence	1350 JOHN TYLER HGWY	Clear wooded area and install 825 square feet of crushed asphalt, and construct a 30' x 10' wooden fence to create a dumpster pad in order to relocate dumpsters at the park.	Alex Baruch	02-Powhatan
	SP-0131-2017	New Town Sec. 2 & 4, Block 3, Parcel B	5309 DISCOVERY PARK BLVD	Enclosure of the existing breezeway between buildings. An addition of 353 SF of new building, ADA ramp to building A and canopy over sidewalk adjacent to Building A.	Roberta Sulouff	04-Jamestown
	SP-0132-2017	Rawls Byrd Elementary School HVAC Renovations	112 LAUREL LANE	Renovations of the HVAC equipment for Laurel Lane Elementary School. Site improvements are limited to a new mechanical yard enclosure and sidewalk repair.	Alex Baruch	05-Roberts
	SP-0127-2017	4460 Longhill Road Verizon Tower SP Amendment	4460 LONGHILL ROAD	Removal of (9) antennas and add (6) new antennas and equipment, (6) remote radio heads and equipment/ No height will be added to tower.	Scott Whyte	02-Powhatan
	SP-0128-2017	The Settlement at Powhatan Creek Water Main Realignment	3653 SOUTH SQ	Realignment of water main.	Roberta Sulouff	03-Berkeley
	SP-0129-2017	Williamsburg Honda Vehicle Storage Lot	7059 RICHMOND ROAD	Addition of vehicle storage area, which includes pavement, curb and gutter, stormwater management facilities and associated infrastructure.	Alex Baruch	01-Stonehouse
	SP-0130-2017	Berkeley's Green Recreation Area Amendment	3051 BERKELEY'S GREEN	Replace one tennis court with basketball court.	Savannah Pietrowski	03-Berkeley
Special Use Permit	SUP-0015-2017	Jamestown High School modular trailer units	3751 JOHN TYLER HGWY	Installation of (2) modular trailer units at Jamestown High School for classroom use which will accommodate (100) additional students during the school years 2018-2023.	Alex Baruch	03-Berkeley
Subdivision	S-0038-2017	The Settlement at Powhatan Creek Ph. 3B	4101 MONTICELLO AVENUE	Extinguish access easement and relocate and dedicate new access easement.	Scott Whyte	03-Berkeley
	S-0039-2017	Greensprings West Phase VII A and B	THORNGATE DRIVE	Creation of 1 lot	Jose Ribeiro	03-Berkeley
	S-0040-2017	Captain George's BLA	36 STRATFORD RD	Property line adjustment	Jose Ribeiro	04-Jamestown
	S-0041-2017	137 and 141 Shinnecock BLA	137 SHINNECOCK	Boundary line extinguishment to turn two lots into one.	Savannah Pietrowski	04-Jamestown