# 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 January 2, 2019 6:00 PM

- A. CALL TO ORDER
- B. ROLL CALL
- C. PUBLIC COMMENT
- D. REPORTS OF THE COMMISSION
- E. CONSENT AGENDA
- F. PUBLIC HEARINGS
  - 1. Z-18-0006. Ironbound Crossing Rezoning
- G. PLANNING COMMISSION CONSIDERATIONS
- H. PLANNING DIRECTOR'S REPORT
  - 1. Planning Director's Report January 2019
- I. PLANNING COMMISSION DISCUSSION AND REQUESTS
- J. ADJOURNMENT

#### **AGENDA ITEM NO. F.1.**

#### ITEM SUMMARY

DATE: 1/2/2019

TO: The Planning Commission

FROM: Tom Leininger, Planner

SUBJECT: Z-18-0006. Ironbound Crossing Rezoning

#### **ATTACHMENTS:**

	Description	Type
D	Staff Report	Cover Memo
D	1. Proffers for G-Square Property	Exhibit
۵	2. Proffers for Mount Pleasant Church Property	Exhibit
D	3. Location Map	Exhibit
D	4. Master Plan	Exhibit
D	5. Community Impact Study	Exhibit
D	6. Design Guidelines	Exhibit
D	7. Traffic Impact Analysis	Exhibit
ם	8. Supplement to the Traffic Impact Analysis	Exhibit

#### **REVIEWERS:**

Department	Reviewer	Action	Date
Planning Commission	Holt, Paul	Approved	12/21/2018 - 8:01 AM
Planning Commission	Holt, Paul	Approved	12/21/2018 - 8:01 AM
Publication Management	Daniel, Martha	Approved	12/21/2018 - 9:01 AM
Planning Commission	Holt, Paul	Approved	12/21/2018 - 9:02 AM

#### SUMMARY FACTS

Applicants: Mr. Mark Rinaldi

Mr. Vernon Geddy, III

Land Owners: G Square Inc.

Virginia Department of Transportation

(VDOT)

Mount Pleasant Church

Proposal: To rezone a total  $\pm$  2.67 acres of land to B-

1, with proffers, for commercial, office and

institutional uses.

Location: 4007 Ironbound Road

4002 Ironbound Road

Tax Map/Parcel Nos.: 3840100002A

3840100021

Project Acreage: +/-2.67 acres

Zoning: R-8, Rural Residential

B-1, General Business with proffers

Comprehensive Plan: Mixed Use

Low-Density Residential

Primary Service Area: Inside

Staff Contact: Tom Leininger, Planner

#### PUBLIC HEARING DATES

Planning Commission: January 2, 2019, 6:00 p.m.

Board of Supervisors: February 12, 2019, 5:00 p.m. (tentative)

#### **FACTORS FAVORABLE**

- 1. Staff finds the proposal is consistent with the 2015 Comprehensive Plan, "Toward 2035: Leading the Way."
- 2. Staff finds the proposal will not negatively impact surrounding zoning and development.
- 3. The proposed proffers include commitments to adhere to Design Guidelines, Water Conservation standards and to prohibit driveways onto Monticello Avenue.
- 4. The proposal would maintain acceptable Levels of Services on surrounding roadways.

#### **FACTORS UNFAVORABLE**

1. Staff finds that there are no unfavorable factors.

#### SUMMARY STAFF RECOMMENDATION

Staff recommends that the Planning Commission recommend approval of the proposed rezoning and acceptance of the voluntary proffers.

#### PROJECT DESCRIPTION

This proposal includes the rezoning of three areas, as follows:

- A 0.74-acre portion of the Mount Pleasant Church property from R-8, Rural Residential to B-1, General Business with proffers.
- The 1.17-acre parcel owned by G Square Property to be rezoned from B-1, General Business with proffers to B-1, General Business with amended proffers.

• A 0.76-acre area of the Old Ironbound Road VDOT right-of-way will be rezoned from R-8, Rural Residential to B-1, General Business with proffers. This right-of-way will be abandoned and be included with the G Square Property to create a 1.93-acre parcel.

In Area 1, the master plan would allow up to 45,000 square feet. This could consist of up to 20,000 square feet of commercial uses and up to 25,000 square feet of office. The applicants have indicated that at this point in time there is no specific commercial or office use proposed. The applicants have included a proffer to restrict certain uses that would otherwise be permitted in B-1 by-right (Attachment No. 1, Proffer No. 2).

As specified in Section 24-11 of the Zoning Ordinance, if any commercial use or group of commercial uses meeting the following triggers are later proposed, a Special Use Permit (SUP) will be required as part of a future application:

- A commercial building or group of buildings which exceeds 10,000 square feet;
- A commercial building or group of buildings which generates a total of 100 or more peak hour trips to and from the site;
- Convenience store:
- Automobile and gasoline service stations.

While Section 24-11 provides an exemption in subsection (d)(3) for developments with detailed binding master plans, the general nature of this master plan does not meet that exemption criteria.

In Area 2, the master plan would allow up to 3,000 square feet of institutional uses. This area would accommodate parking or accessory

uses for the existing Mount Pleasant Church. Places of Public Assembly and parking lots are a permitted use in B-1.

Mount Pleasant Church is a part of this application because they have found that the proposed rezoning and development would be beneficial to them and it would allow them to make future improvements, such as a needed parking lot expansion, that are harmonious with the proposed commercial development and that would also be subject to the proposed master plan.

Proposed access to Ironbound Crossing comes from Old Ironbound Road. The applicants have proffered that there will be no vehicular access to the site from Monticello Avenue. The end of Old Ironbound Road would be modified where the existing cul-de-sac bulb would be removed and a new branch-turnaround would be constructed, with the continued ability for the church to access its property as well. The Community Impact Statement indicates that a possible interconnection between the church and G-Square Property parking areas may be considered in the future and this possible connection is depicted on the master plan.

Given the relatively small size of the site and the desire for development of this site to have enhanced architecture and other site elements that are generally consistent with the New Town form of development, the applicants are proposing a decrease in the setbacks and the landscape buffers along Monticello Avenue, Ironbound Road and Old Ironbound Road.

- The applicant is proposing the following building setback reductions:
  - Required 50-foot building setback to a 30-foot building setback along Monticello Avenue;

- Required 50-foot building setback to a 25-foot building setback along Ironbound Road and Old Ironbound Road.
- The applicant is proposing the following landscape buffer reductions:
  - o Required 50-foot landscape buffer to a 30-foot landscape buffer along Monticello Avenue;
  - o Required 50-foot landscape buffer to a 35-foot landscape buffer along Route 199;
  - Required 30-foot landscape buffer to a 15-foot landscape buffer along Ironbound Road and Old Ironbound Road.

Based on preliminary review of the building setback reduction request, staff is generally supportive of the request and finds the proposal could meet the criteria found in Section 24-392(1). Staff finds that this location is within the New Town Community Character Area (CCA) and along the Monticello Avenue Community Character Corridor (CCC). The applicant is also offering site design which meets or exceeds the Comprehensive Plan Development Standards through its proposed Design Guidelines.

Based on preliminary review of the landscape buffer reduction, for the same findings just noted, staff is generally supportive of the request and finds the proposal could meet the criteria found in Section 24-98, as the applicants have submitted proposed Design Guidelines which would be binding.

The proposed Design Guidelines and Master Plan for Ironbound Crossing were submitted to and approved by the New Town Development Review Board (DRB). Staff was notified of the DRB's approval on December 14, 2018. The applicants have committed to

DRB review of project elements for consistency with the Design Guidelines at the development plan stage through proffers.

There is an existing multi-use path along Monticello Avenue and a sidewalk along Ironbound Road. According to the pedestrian accommodation master plan, a sidewalk will be required along the north side of Old Ironbound Road. All required bicycle accommodations are already in place.

#### PLANNING AND ZONING HISTORY

The property at 4007 Ironbound Road was previously rezoned from R-8, Rural Residential and M-1, Limited Business/Industrial to B-1, General Business with proffers approved by the Board of Supervisors on March 12, 2002. The master plan allowed for the construction of a five story office building (parking was underneath the building as one of the stories).

#### SURROUNDING ZONING AND DEVELOPMENT

- The zoning of the surrounding properties to the north and west is MU, Mixed Use and R-8, Rural Residential. Properties to the south are zoned B-1, General Business and R-2, General Residential and properties to the east are zoned M-1, Limited Business/Industrial.
- The property is at the Route 199/Monticello Avenue interchange, as well as the intersection of Ironbound Road and Monticello Avenue.
- The property is generally bounded by New Town to the north, Windsormeade Marketplace and residential development to the west, Ironbound Road Mini Storage to the south and Courthouse Commons to the east.

#### **PUBLIC IMPACTS**

Anticipated Impact on Public Facilities and Services:

Streets:

- The master plan specifies commercial and office uses on the property up to a maximum square footage, as discussed above. For commercial uses, the maximum trip generation permitted by the County Zoning Ordinance without a commercial SUP is 99 vehicles per peak hour. A specific commercial use for the property has not yet been determined so the applicants have taken the approach of analyzing traffic in the Traffic Impact Analysis (TIA) for the site up to the 99 vehicles per peak hour level – if a commercial use ultimately locates on the site that would generate a higher level of traffic, then an SUP application would need to be approved and traffic impacts would be re-evaluated at that time. Office uses are exempt from the commercial SUP requirement, but the applicant has proffered to submit a TIA for any use or cumulative uses that would generate peak hour trips equal to or exceeding 100 peak hour trips and to install any traffic improvements identified by the analysis (Attachment No. 1, Proffer No. 7).
- The TIA (Attachment No. 7) analyzed the unsignalized intersection at Route 615 Ironbound Road/Route 784 Ironbound Road stub/Courthouse Commons entrance. According to the TIA, all movements at this intersection are currently operating at a Level of Service (LOS) C or better, and are anticipated to remain operating at this LOS through 2024 with development of this project.
- The TIA indicate that a right turn taper on the Ironbound Road southbound approach to Old Ironbound Road is "barely

- warranted" at the level of traffic analyzed in the study. Once a specific use is determined for the site, the applicants have proffered to verify the peak hour trip generation to determine if any turn lane improvements are warranted or not (Attachment No. 1, Proffer No. 6); if warranted, the turn lane improvements would be installed
- The TIA looked at the intersection of Monticello Avenue and Ironbound Road. The analysis indicated that the additional trips from this development would maintain adequate clearance between the northbound Ironbound Road queues at Monticello Avenue and the Route. 615 Ironbound Road/Route 784 Ironbound Road stub/Courthouse Commons entrance. The TIA did not include an analysis of the resulting LOS at this intersection since the signal at this intersection is operated by an adaptive traffic control system software; there is no currently known way to calculate LOS under this circumstance, as further described in the Supplement to the TIA dated December 13, 2018 (Attachment No. 8).
- The James City County, Williamsburg, York County Comprehensive Transportation Study, prepared in 2012, projected a LOS A-C in 2034 for Ironbound Road (segment between Strawberry Plains and Monticello Avenue) and a LOS D in 2034 for Monticello Avenue (segment between Route 199 and Ironbound at the City of Williamsburg line). In the Comprehensive Plan Table T-1, this segment of Monticello Avenue is listed as "recommended for congestion management improvement."
- VDOT has reviewed and approved the TIA.

#### Fire/Utilities:

#### Fire:

• The closest fire station in James City County to the property is Fire Station 3, located at 5077 John Tyler Highway, is approximately 2.3 miles southwest of the project site. Fire State 5, located at 3201 Monticello Avenue, is approximately 3.8 miles west of the project site.

#### Utilities:

 Project receives public water and sewer. The James City Service Authority has reviewed the application and had no objection. The applicants have proffered to provide a water conservation agreement at the site plan stage (Attachment No. 1, Proffer No. 4).

#### Environmental:

- The Stormwater and Resource Protection (SRP) Division has reviewed the proposal and has no objections. The master plan is general in nature and a particular stormwater management approach is not currently depicted; the applicants and SRP concur that the stormwater details will be worked through at the plan of development stage to meet all current regulations. There is no Resource Protection Area, natural heritage resources or special flood hazard area within the project boundaries.
- Watershed: Mill Creek.

#### Cultural/Historic:

• This project site has been previously disturbed and no impact on cultural or historic resources are expected.

#### Nearby and Surrounding Properties:

- Staff finds that this proposal is generally consistent with the character of the existing surrounding development which is generally commercial in nature. Staff also finds that design guidelines for this project which help ensure consistency in character have been approved by the New Town DRB as further described above.
- This development will be visible from Monticello Avenue, Ironbound Road and Old Ironbound Road.

#### **COMPREHENSIVE PLAN**

- The majority of the properties are designated Mixed Use (MU) New Town Area, with the roughly 10,000 square feet of previously abandoned Old Ironbound Road on the church property designated as Low-Density Residential.
- Appropriate primary uses for the New Town Mixed Use Area are a mixture of commercial, office and limited industrial with some residential as a secondary use.
- The general Mixed Use designation description states that Mixed Use areas located at or near interstate interchanges and the intersections of major thoroughfares are intended to maximize the economic development potential of these areas by providing areas primarily for more intensive commercial, office and limited industrial purposes.
- The Comprehensive Plan also designates Monticello Avenue as a CCC. Monticello is characterized as an "urban and suburban" CCC. Urban and suburban CCCs have high to moderate traffic,

commercial and some residential uses. The predominant visual character of these areas should be the built environment and the natural landscape, with parking and other auto-related areas as a secondary component.

- This area is also designated as a part of the New Town CCA. Much
  of this area was rezoned to Mixed Use under the New Town
  development master plan. This area has developed under design
  guidelines with adherence being overseen by the New Town DRB.
- Adjacent properties to the west, north and east are designated Mixed Use. Properties to the south are designated Low-Density Residential.

Staff finds the proposed project to be consistent with the elements of the Comprehensive Plan noted above. The project proposes commercial and office uses, which are consistent with the recommended primary uses, and which also are consistent with its location near the Route 199 interchange. For the CCC and CCA, the applicants have submitted design guidelines to address these standards, which have been reviewed and approved by the DRB. The applicant has committed to DRB review of project elements for consistency with the design guidelines at the development plan stage.

#### STAFF RECOMMENDATION

Staff recommends that the Planning Commission recommend approval of the proposed rezoning and acceptance of the voluntary proffers.

TL/md RZ18-6IrnbdCross

#### Attachments:

- 1. Proffers for G-Square Property
- 2. Proffers for Mount Pleasant Church Property
- 3. Location Map
- 4. Master Plan
- 5. Community Impact Statement
- 6. Design Guidelines
- 7. Traffic Impact Analysis
- 3. Traffic Impact Analysis Supplement Dated December 13, 2018

Prepared By: Vernon M. Geddy, III, Esquire (VSB#21902)

(Attorney licensed to practice law in Virginia)

Geddy, Harris, Franck & Hickman

1177 Jamestown Road Williamsburg, VA 23185

Return To: County Attorney

101-D Mounts Bay Road Williamsburg, Virginia 23185

#### **PROFFERS**

Tax Parcel: 3840100002A

THESE PROFFERS are made as of this \_\_ day of \_\_\_\_\_\_, 2019, by G - SQUARE, INC., a Virginia corporation (together with its successors and assigns, the "Owner"), COMMONWEALTH OF VIRGINIA, DEPARTMENT OF TRANSPORTATION ("VDOT") and BUSH CONSTRUCTION CORPORATION, a Virginia corporation, and lessee from Owner under a long-term land lease ("Bush").

#### **RECITALS**

- A. Owner is the owner of certain real property (the "G Square Property") in James City County, Virginia more particularly described on Exhibit A attached hereto and made a part hereof.
- B. VDOT is the owner of certain real property (the "VDOT Property") in James City County, Virginia adjacent to the G Square Property and being more particularly described on Exhibit B attached hereto and made a part hereof.
  - C. Owner is the contract purchaser of the VDOT Property.
- D. The G Square Property is now zoned B-1, with Proffers dated January 23, 2002 recorded in the Clerk's Office of the City of Williamsburg and County of James City as Instrument No. 040002694 (the "Existing Proffers"). The VDOT Property is zoned R-8.
  - E. Owner has applied for a rezoning of the G Square Property to B-1, with new Page 1 of 9

proffers, and, with the consent of VDOT, of the VDOT Property to B-1, with proffers and in connection therewith has submitted a Master Plan prepared by AES Consulting Engineers entitled "Master Plan Ironbound Crossing for Rezoning" and dated November 14, 2018 (the "Master Plan") and design guidelines entitled "Design Guidelines for Ironbound Crossing in James City County" prepared by Hopke & Associates dated November 14, 2018 (the "Design Guidelines"). The Design Guidelines have been submitted to and approved by the New Town Design Review Board ("DRB"). The G – Square Property and the VDOT Property are hereinafter called the "Property."

F. Owner desires to amend the Existing Proffers with respect to the G - Square Property and to offer to the County certain conditions on the development of the VDOT Property not generally applicable to land zoned B-1 for the protection and enhancement of the community and to provide for the high-quality and orderly development of the Property.

NOW, THEREFORE, for and in consideration of the approval by the Board of Supervisors of James City County of the applied for rezoning, Owner agrees that it shall meet and comply with all of the following conditions in developing the Property. If the applied for rezoning is not granted by the County, these Proffers shall thereupon be null and void and the Existing Proffers shall remain in effect. Upon the approval of the applied for rezoning, the Existing Proffers shall be null and void.

#### **CONDITIONS**

- 1. <u>Master Plan</u>. The Property shall be developed generally in accordance with the Master Plan determined as provided in Section 24-23(a)(2) of the Zoning Ordinance.
- 2. <u>Uses</u>. The following uses, otherwise permitted by right in the B-1 zoning district, shall not be permitted on the Property:

Contractor offices

Hotels and motels

Limousine services

Lodges, civic clubs, fraternal organizations and service clubs

Lumber and building supply

Machinery sales and service

Boat storage and servicing, repair and sale facilities

Marine businesses to include the receipt, storage and transshipment of waterborne commerce or seafood receiving, packaging or distribution

Radio and television stations and accessory antenna or towers

Taxi service

Vehicle repair and service

Vehicle and trailer sales and services

Vehicle rentals

Wholesale and warehousing

Communications facilities

Telephone exchanges and telephone switching stations

- 3. <u>Design Guidelines</u>. Development on the Property shall be generally in accordance with the Design Guidelines. All architectural elevations, building materials, colors, signage, and other project elements shall be submitted to the Planning Director and the DRB, for the Planning Director's and the DRB's review and approval for consistency with the Design Guidelines.
- 4. <u>Water Conservation</u>. The Owner shall be responsible for developing and enforcing water conservation standards to be submitted to and approved by the James City Service Authority. The standards shall address such water conservation measures as limitations and use of irrigation systems and irrigation wells, drought management plans, the use of approved landscaping materials, including drought tolerant grasses and plantings, and the use of water conserving fixtures to promote water conservation and minimize the use of public water resources, including groundwater. The standards shall be approved by the James City Service Authority prior to approval of the site plan for development of the Property.
- 5. <u>Monticello Avenue Limited Access</u>. There shall be no vehicular access from or to the Property directly from or to Monticello Avenue.

- 6. Turn Lanes at the Old Ironbound Road Intersection. Prior to site plan approval for any use on the Property (other than the branch turn around), the Owner will provide estimated peak hour trip generation figures and perform turn lane warrants analysis for Ironbound Road (Route 615) at its intersection with Old Ironbound Road (Route 784). For any site plan submitted within two years of the date of approval of the requested rezoning, such trip generation and assignment figures shall be those used in the Traffic Impact Analysis for Former Radio Station Property dated December 17, 2018 made by DRW Consultants, LLC, which Analysis is on file in the Planning Department. If warrants are met, the Owner shall install turn lane improvements at the intersection as required by the Virginia Department of Transportation ("VDOT"), or post a bond for the improvements in a form approved by the County Attorney, prior to the issuance of a certificate of occupancy for the use.
- 7. Traffic Impact Analysis and Associated Improvements. If any proposed use would cause cumulative verified peak hour trips from the Property to equal or exceed 100 peak hour trips, a traffic impact analysis shall be submitted to the County and VDOT for review and approval. Any traffic improvements identified in the approved analysis as being triggered by the proposed use and required by VDOT, shall be installed or bonded in form approved by the County Attorney by Owner prior to the issuance of a certificate of occupancy for the use.

[signatures appear on following pages]

WITNESS the following signatures an	nd seals:	
	G - SQUARE, IN	IC.
	By: Title:	
STATE OF, to-	wit:	
The foregoing instrument was acknow day of, 201_, by	$\mathbf{c}$	of G - SQUARE,
NOTARY	PURLIC	

My commission expires:\_\_\_\_\_\_.

# COMMONWEALTH OF VIRGINIA, DEPARTMENT OF TRANSPORTATION

	Ву:	
	Title:	
STATE OF CITY/COUNTY OF	, to-wit:	
day of	strument was acknowledged before me this _, 201_, by, as of F VIRGINIA, DEPARTMENT OF TRANSPORTATION	
	NOTARY PUBLIC	
My commission expires:		

# BUSH CONSTRUCTION CORPORATION

	By: Title:		_
STATE OF	, to-wit:		
2 2	nt was acknowledged before, by		f BUSH
	NOTARY PUBLIC	_	
My commission expires:			

#### Exhibit A

#### G Square Property Description

That certain piece or parcel of land shown and set out as "New Parcel 1, 1.174 AC., 51,142 SF" on the plat attached hereto entitled "Plat Showing Boundary Line Adjustment and Property Line Extinguishment Between the Parcels of James City Service Authority and G-Square, Inc." made by AES Consulting Engineers and dated 12/21/01.

#### Exhibit B

#### **VDOT Property Description**

Being as shown in RED on Sheet 8D of the plans for Route 199, State Highway Project 0199-047-F03, RW-205 on file with the Virginia Department of Transportation Richmond Central Office, and lying south of and adjacent to the proposed right of way and limited access line of Route 199 from a point 95 feet opposite Station 139+21.42 (Monticello Ave. Ext. construction baseline) to a point 98 feet opposite Station 140+09.15 (Monticello Ave. Ext. construction baseline), containing 0.318 hectare or 0.7704 acre, more or less, land; and being part of the same lands acquired from Robert T. Casey, et. al. by amended Instrument dated January 3, 2001, recorded as Instrument Number L010005794, and concluded by Final Order dated April 3, 2001, recorded as Instrument Number 010268; and from G-Square, Inc. acquired by Instrument dated January 5, 1996, recorded in Deed Book 775, at Page 600, and concluded by Final Order dated June 5, 1997, recorded as Instrument Number L970465 in the Office of the Clerk of the Circuit Court of James City County, Virginia.

Prepared By: Vernon M. Geddy, III, Esquire (VSB#21902)

(Attorney licensed to practice law in Virginia)

Geddy, Harris, Franck & Hickman

1177 Jamestown Road Williamsburg, VA 23185

Return To: County Attorney

101-D Mounts Bay Road Williamsburg, Virginia 23185

#### **PROFFERS**

Tax Parcel: part of 3840100021

THESE PROFFERS are made as of this \_ day of \_\_\_\_\_, 201\_, by WILLIE J. SAUNDERS and MILDRED LINTON, as Trustees for the MOUNT PLEASANT BAPTIST CHURCH of James City County, Virginia (collectively, together with its successors and assigns, the "Owner"),

#### RECITALS

- A. Owner is the owner of certain real property (the "Property") in James City County, Virginia more particularly described on Exhibit A attached hereto and made a part hereof.
- B. Owner has applied for a rezoning of the portion of the Property now zoned R-8 to B-1, with proffers, as shown on Exhibit B attached hereto.
- C. Owner desires to offer to the County certain conditions on the development of the Property not generally applicable to land zoned B-1 for the protection and enhancement of the community and to provide for the high-quality and orderly development of the Property.

NOW, THEREFORE, for and in consideration of the approval by the Board of Supervisors of James City County of the applied for rezoning, Owner agrees that it shall meet and comply with all of the following conditions in developing the Property.

1. <u>Master Plan</u>. The Property shall be developed generally in accordance with the Master Plan determined as provided in Section 24-23(a)(2) of the Zoning Ordinance.

- 2. <u>Uses</u>. The property shall be used only for parking and/or uses accessory to a place of public assembly (provided any required special use permit has been obtained).
- 3. <u>Monticello Avenue Limited Access</u>. There shall be no vehicular access from or to the Property directly from Monticello Avenue.
- 4. <u>Design Guidelines</u>. Development on the Property of any use shall be generally in accordance with the Design Guidelines. All architectural elevations, building materials, colors, signage, and other project elements shall be submitted to the Planning Director and the DRB, for the Planning Director's and the DRB's review and approval for consistency with the Design Guidelines.

WITNESS the following signatures and seals:

	WILLIE J. SAUNDERS, as Trustee of the
	MOUNT PLEASANT BAPTIST CHURCH
STATE OF CITY/COUNTY OF, to-wit:	
The foregoing instrument was acknowledge WILLIE J. SAUNDERS, as Trustee of MOUNT P.	ed before me this day of, 201_, by LEASANT BAPTIST CHURCH.
	NOTARY PUBLIC
My commission expires:	

MILDRED LINTON, as Trustee of the	
MOUNT PLEASANT BAPTIST CHUR	СН

STATE OF CITY/COUNTY OF, to-wit:		
The foregoing instrument was acknowledge MILDRED LINTON, as Trustee of MOUNT PLEA		_, b <u>·</u>
	NOTARY PUBLIC	-
My commission expires:		

# Exhibit A Parcel Description

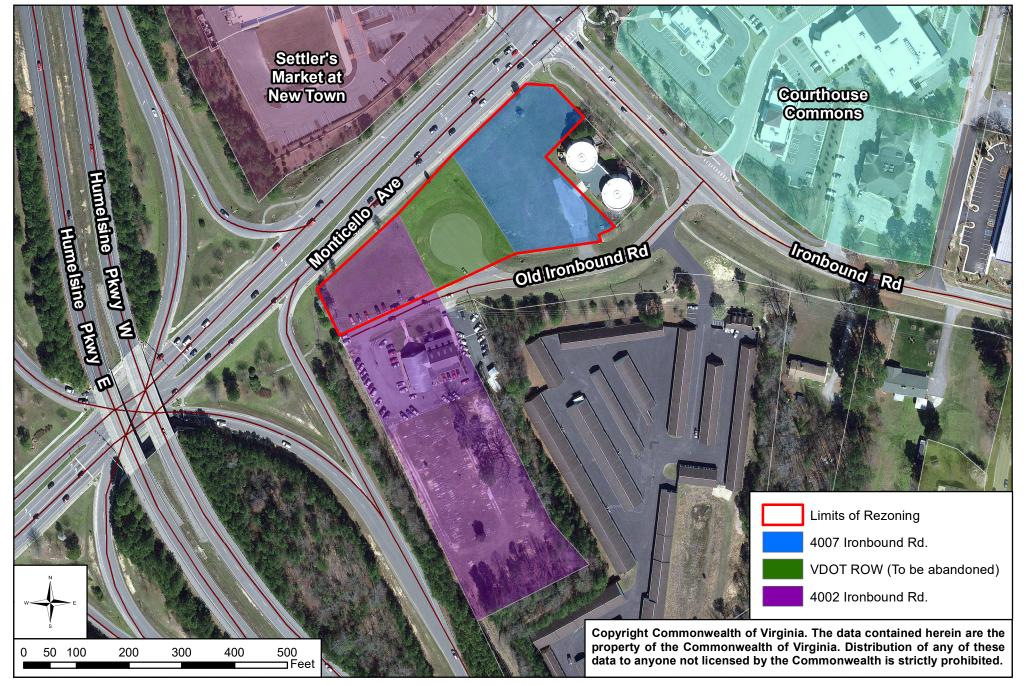
All those certain lots, pieces or parcels of land situate, lying and being in Berkeley District, James City County, Virginia, known and designated and described as Parcels "A" and "B", as shown on that certain plat entitled, "Plat showing a Parcel of land for conveyance to and other lands of Mt. Pleasant Baptist Church", dated August 15, 1980, made by Spearman & Associates, Inc., Land Surveying and duly of record in the Clerk's Office of the Circuit Court for the City of Williamsburg and County of James City, Virginia in Plat Book 36, at page 51, to which reference is here made.

LESS AND EXCEPT: A portion of the aforesaid described premises acquired by the Commonwealth of Virginia by Certificate of Deposit of record at Deed Book 749, page 873 and confirmed by the Court by Order entered June 9, 1998 as Law Order No. L980397 and recorded as Instrument No. 9800010879.

#### Exhibit B Rezoning Area

# JCC Z-18-0006 Ironbound Crossing Rezoning





# MASTER PLAN IRONBOUND CROSSING

# REZONING

JAMESTOWN DISTRICT

JAMES CITY COUNTY

**VIRGINIA** 

AES PROJECT NUMBER W10481-00 SUBMITTAL DATE: NOVEMBER 14, 2018

### **GENERAL NOTES**

1. PROPERTY OWNER:

VIRGINIA DEPARTMENT OF TRANSPORTATION

ZONING PARCEL 3

WILLIE J. SAUNDERS, TRUSTEE; MILDRED LINTON, TRUSTEE MT. PLEASANT BAPTIST CHURCH

4007 IRONBOUND ROAD WILLIAMSBURG, VIRGINIA 23188

2. PARCEL IDENTIFICATION

**ZONING PARCEL 1** 3840100002A

**ZONING PARCEL 2** 

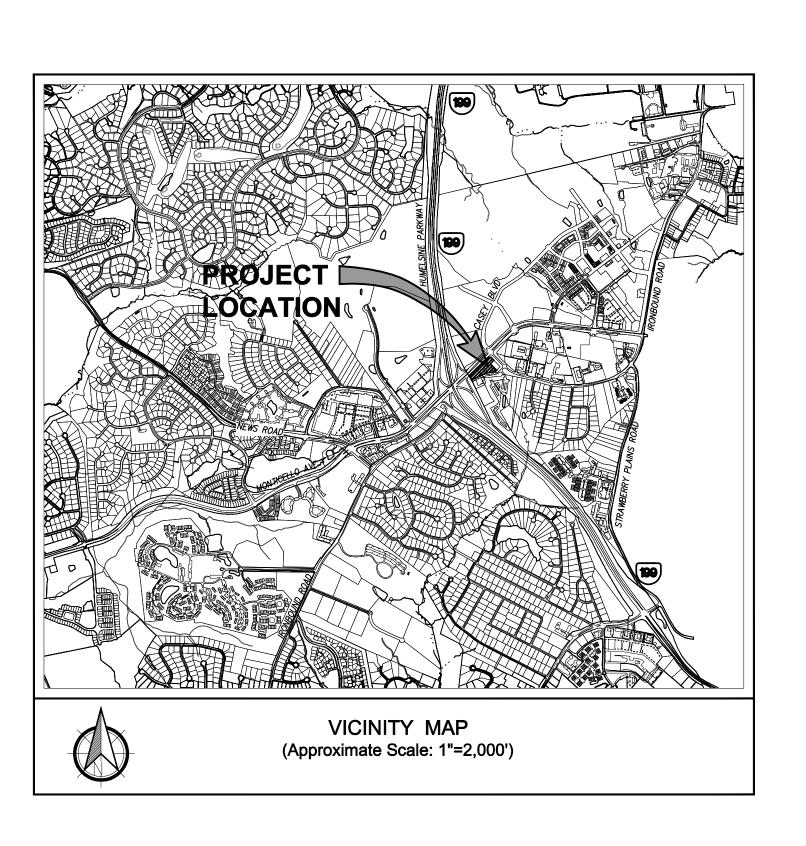
NO PARCEL I.D. ASSIGNED (WILL BECOME PART OF 3840100002A UPON ABANDONMENT)

ZONING PARCEL 3 3840100021

ADDRESS:

4002 & 4007 IRONBOUND ROAD WILLIAMSBURG, VA 23188

- 3. SITE IS ZONED GENERAL BUSINESS (B1) DISTRICT (ZONING PARCEL 1) & RURAL RESIDENTIAL DISTRICT (R8) (ZONING PARCELS 2 & 3).
- 4. SITE IS SITUATED IN THE MILL CREEK WATERSHED OF JAMES CITY COUNTY.
- 5. HYDROLOGIC UNIT CODE: JL33 (JAMES RIVER LOWER CHIPPOKES CREEK 020802060704)
- 6. BASED ON THE FEMA FLOOD INSURANCE RATE MAP FOR JAMES CITY COUNTY, VIRGINIA (MAP PANEL 51095C0138D & 51095C0119D) AS OF 12/16/15, NO PORTIONS OF THIS PROPERTY FALL WITHIN THE 100-YEAR FLOODPLAIN.
- 7. SITE AREA = 2.67 AC.  $\pm$  (116,276 S.F. $\pm$ )

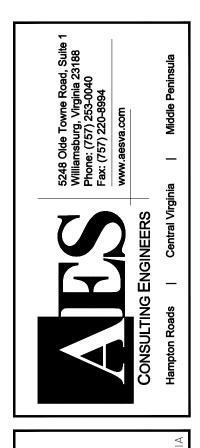


# **INDEX OF SHEETS**

**ENVIRONMENTAL INVENTORY AND EXISTING CONDITIONS** 

### **DEVELOPER INFORMATION:**

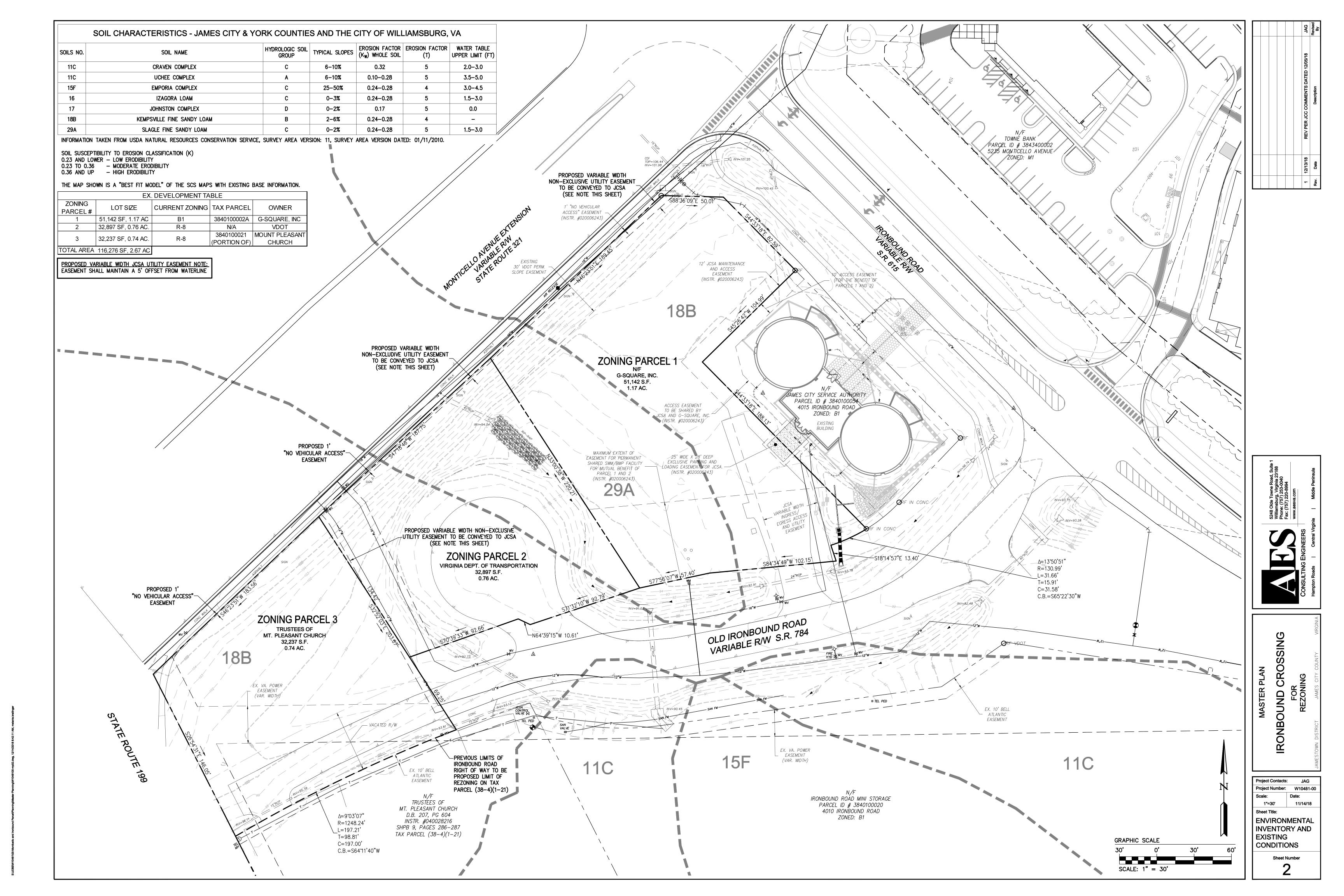
CONTACT: BUSH CONSTRUCTION CORP. 4029 IRONBOUND ROAD, SUITE 100 WILLIAMSBURG, VA 23188 MRINALDI@BUSHCOS.COM ATTN: MARK RINALDI

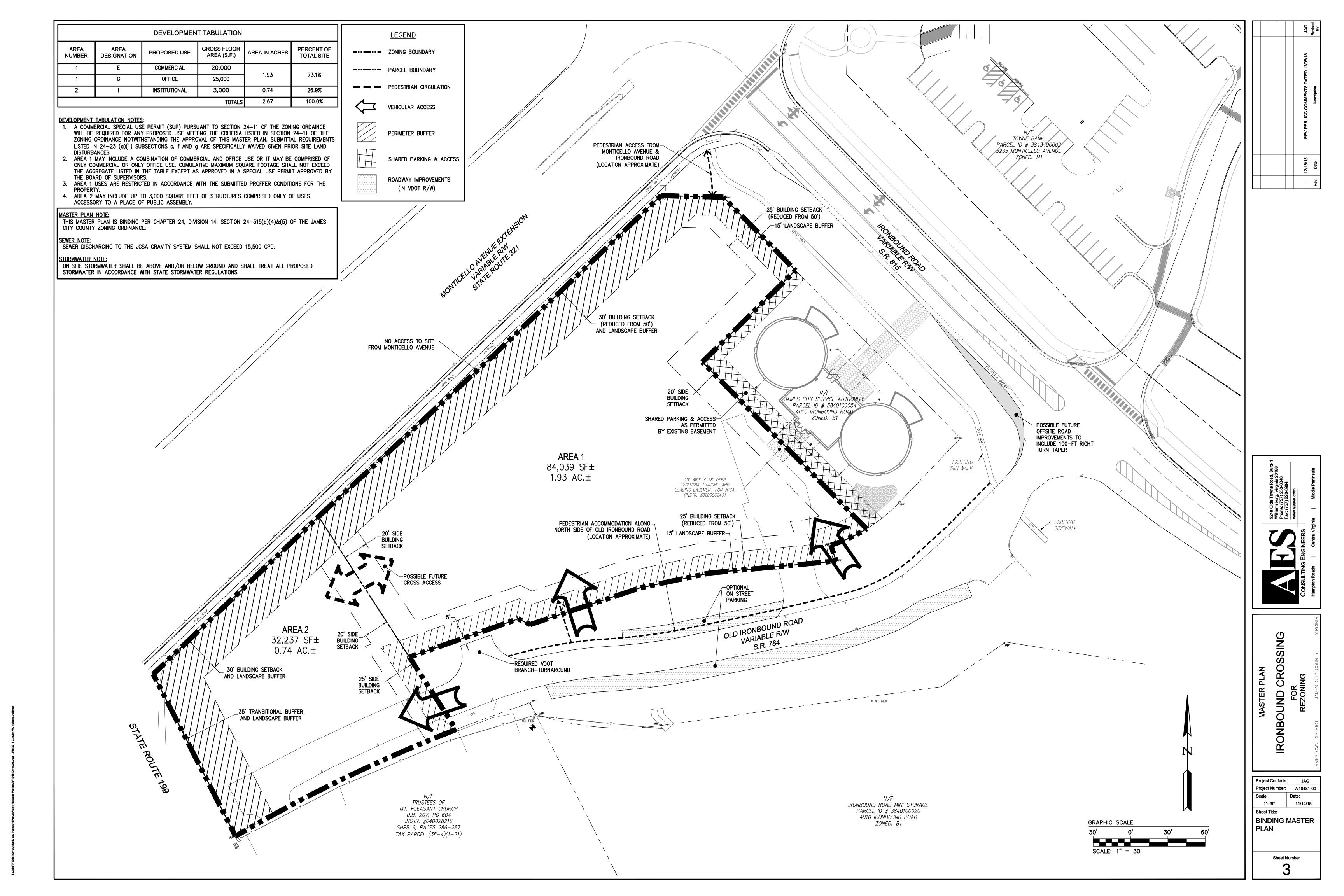


CRO OUND **IRONB**(

Project Number: W10481-00 Sheet Title: COVER SHEET

Sheet Number





# **Community Impact Statement**

for

# **Ironbound Crossing**

@

# **Monticello and Ironbound**

Prepared For

**Bush Construction Corporation** 

November 14, 2018 Revised December 12, 2018

AES Project Number: W10481-00

Prepared by:



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#### I. INTRODUCTION

On behalf of G-Square, Inc., Bush Construction Corporation, The Virginia Department of Transportation (VDOT) and the Trustees of Mt. Pleasant Baptist Church, AES Consulting Engineers is supporting the Owners and applicants in their request to rezone three zoning parcels located at 4002 (Zoning Parcel 3) and 4007 (Zoning Parcel 1) Ironbound Road and an intervening, contiguous portion of Route 784 (Old Ironbound Road) right-of-way (Zoning Parcel 2) proposed for abandonment. The subject properties are bounded by Ironbound Road to the east, Route 784 to the south, Monticello Avenue to the north, and Route 199 to the west. The site is comprised of roughly 2.7 acres of land across the 3 zoning parcels. The land is zoned a combination of R-8 residential (Church and VDOT right-of-way parcels) and B-1 business zoning (G-Square, Inc. parcel).

The purpose and intent of this zoning is threefold: (i) to amend the 17-year old master plan and associated B-1 proffers for the former WMBG radio station property (owned by G-Square, Inc, and subject to a long-term land lease to Bush Construction Corporation) for commercial development consistent with development along the Monticello Avenue corridor that has occurred in the ensuing years, (ii) to zone to B-1 with proffers, for complementary commercial use, an adjacent portion of Route 784 right-of-way that VDOT has agreed to sell to G-Square, Inc., and (iii) to zone a portion of the Mt. Pleasant Baptist Church property north of the previously abandoned Ironbound Road right-of-way (necessitated by Route 199 design and construction) to B-1 with proffers for uses accessory to the existing, historic 120+ year-old church, including an overflow parking area vital to the church during funerals, weddings and other infrequent special events. The purpose of this report is to summarize and organize the planning efforts of the project team into a cohesive package for staff review, which addresses the pertinent planning issues affecting the property while describing the probable effects of the proposed development upon existing public facilities and services, the environment, the surrounding community, and the County.

#### **Project Description**

The roughly 2.7 acres of land proposed for rezoning (the "site") is predominantly vacant and grassed with the only improvements being the remnants of Ironbound Road (now a private road) and a public-use cul-de-sac representing the termination of Old Ironbound Road to prevent its intersection with Route 199. The cul-de-sac has been deemed by VDOT to be substantially more pavement than is necessary and it will be replaced by the applicant with a simple branch turnaround meeting VDOT

standards. The approximately 0.75 acres of right-of-way encompassing the cul-de-sac is proposed for abandonment by James City County and thereafter will be certified as surplus property by the Virginia Commissioner of Highways.

The site will remain under separate ownership and operational control. The portion of 4002 Ironbound Rd. (Zoning Parcel 3) subject to rezoning will remain under the ownership of Mt. Pleasant Baptist Church. The to-be-abandoned right-of-way (Zoning Parcel 2) will be subsumed into the existing G-Square, Inc. parcel (Zoning Parcel 1). The expanded G-Square parcel will remain subject to the operational control of Bush Construction Corporation under the terms of its long-term land lease with G. Square, Inc.

Access to all properties subject to this CIS from Monticello Avenue will be prohibited. Access to the church property will continue to be from the terminus of state-maintained Old Ironbound Rd. Access to the expanded G-Square, Inc. parcel will only be from Old Ironbound Road, at two points generally as depicted on the Master Plan. Possible interconnection between the church and G-Square, Inc. parking areas may be considered in the future. Sidewalks along Ironbound Road and Monticello Avenue will remain and be complemented by connecting sidewalks to and from the development.

Design guidelines have been prepared to ensure that the architectural treatment of future building(s) on the site will complement the buildings and streetscape at Courthouse Commons, the Monticello Ave. corridor and the broader New Town development more generally. Guidelines addressing parking, circulation, landscape treatments, buffers and landscape yards, and architectural treatments are described in the design guidelines submitted with this application.

#### II. THE PROJECT TEAM

The following organizations are involved in the planning and development of the site

• Owner/Developer: G-Square, Inc./Bush Construction Corporation

• Legal Counsel: Geddy Harris Frank and Hickman – Williamsburg, Virginia

Planning: Hopke and Associates - Williamsburg, VA

Engineering: AES Consulting Engineers – Williamsburg, VA

Traffic: DRW Consultants, LLC

Environmental: Cardno

Key components of this Community Impact Study are:

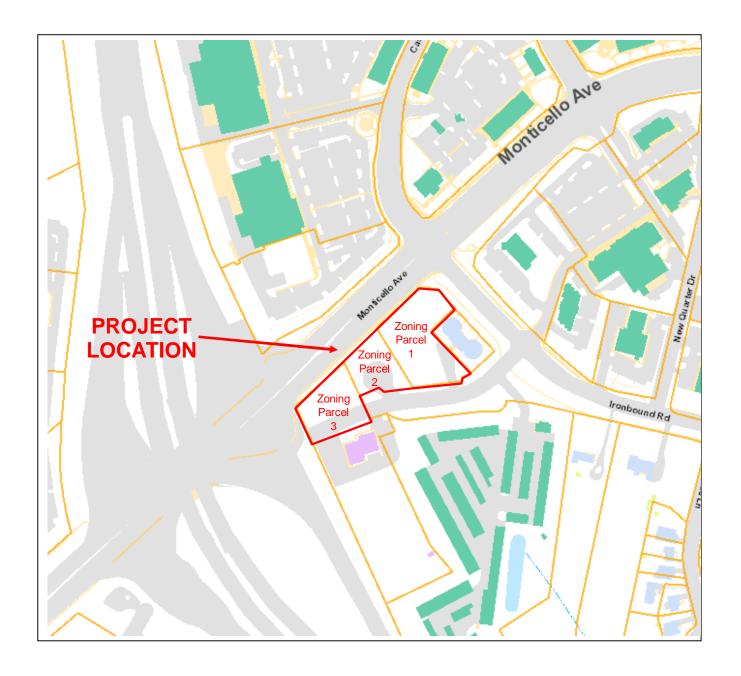
Context Map

Historical Context

• Planning Considerations and Project Description

Stormwater Analysis

Exhibit 1 - Context Map (not to scale)



#### III. HISTORICAL CONTEXT AND PLANNING CONSIDERATIONS

#### **Historical Context**

The lands subject to this proposed zoning and master plan amendment were re-configured from their pre-Route 199 condition to facilitate the extensive roadway and infrastructure improvements (including notably the twin JCSA water storage tanks) planned and implemented in connection with the construction of both Route 199 and Monticello Avenue and the New Town development. Portions of the Casey property and the former WMBG radio station property were dedicated for public use nearly 20 years ago to facilitate these important public improvements. Planning and cross-access easements required for the construction and on-going operation of the JCSA water storage tanks and future development of the G-Square, Inc, property involved significant collaboration and cooperation between JCSA, G-Square, Inc. and Bush Construction Corporation.

The Monticello Avenue alignment orphaned a portion of Casey property (now located south of Monticello Avenue) which VDOT in turn sold to Mt. Pleasant Baptist Church. Some will recall that prior to the closure of Ironbound Road for Route 199, the church had no option but to partially block traffic on Ironbound Road during larger funerals to accommodate vehicles in the procession. Upon the closure of Ironbound Road, and VDOT's construction of the Route 784 cul-de-sac, vehicle parking demand for funerals continued to overwhelm the available church parking area. For more than 15 years mourners have parked along the sides of Ironbound Road and within the cul-de-sac constructed by VDOT as part of the termination of Ironbound Road. While this arrangement has served the church for many years, it is less than ideal for a number of reasons. Not least of which is the difficulty for an aging church population parking further from the church.

During the planning in 2001 and ultimate site plan approval of the project known as "New Town Office Building" (adjacent to the JSCA water tanks) proposed a 4-story office building with underbuilding parking. Over time, the design proved to be economically infeasible as New Town grew quickly, developing with surface parking and aided by parking reduction modifications justified by the new urbanist, neo-traditional design of the New Town Master Plan placing this compact property at a competitive disadvantage as an office use. Multiple phases of New Town, the new Williamsburg-James City County Courthouse, the New Town United Methodist Church, the twin vision and cardiovascular clinics, the Post Office, Settlers Market and Courthouse Commons have set the tone

and quality expectations for this significant commercial corridor. The need to reimagine the subject site has become clear as the Monticello Avenue corridor has stabilized and matured.

Over time, VDOT concluded that the substantial cul-de-sac designed and built for the truncated Ironbound Road was more than was needed to accommodate the occasional turnaround needs of the motoring public and the even more rare snow plows. Re-purposing of formerly private lands taken for public purposes back into private ownership will allow for the return of commercial, tax revenue-generating use. The convergence and synthesis of experience, need, opportunity and collaboration involved in planning and public land acquisition over several years is now culminating in the proposed zoning which is the subject of this CIS. Expanding developable area through the State surplus of unnecessary right-of-way allows for a wider range of desirable commercial uses. More land available for parking and amenities supports financial feasibility. The dramatic evolution of the corridor since the early 2000s provides a real, no longer imagined, context for establishing complementary streetscape and building design expectations for this site that have been crafted by the same architect who designed the JCSA water tanks and the design guidelines for several of the most prominent mixed-use properties along the corridor.

Perhaps more importantly and significant is the chance to collaborate, this time with the Trustees of the historic Mt. Pleasant Baptist Church, to facilitate the conversion of lands it acquired from VDOT some 15 years ago into an all-weather, overflow parking area located more conveniently to the church building. Local and state government, the private sector and a longstanding James City County faith community can together realize greater operational efficiency in the public roadway system, increased tax-revenues from formerly non-taxed and idled property and improved conditions and experience for church members and guests attending infrequent special events. This represents a unique opportunity for a win-win-win outcome.

#### **Planning Considerations**

The site lies within the Primary Service Area (PSA) of the County. "The Primary Service Area defines areas presently served by public water and sewer, and high levels of other public services, as well as areas expected to receive such services over the next 20 years." Plans for the site are being pursued with the knowledge that water and sewer services are at or adjacent to the site and that there is ample capacity in these systems to support this project.

The Comprehensive Plan of James City County designates the majority of this project as Mixed Use within the overall area described as the New Town. The roughly 10,000 square feet of previously abandoned Old Ironbound Road right of way on the Church property is designated as Low Density Residential That portion of the site will continue to service as access to the church and may ultimately include parking. This mixed-use area is to be comprised of commercial, office, limited industrial uses with complementary residential. As with previous plans in New Town, it is our intent to have these parcels guided by a master plan, design guidelines and proffers. While not part of the original land plan for New Town, these parcels do present prominently along the entry to the corridor coming from Route 199 leading to the New Town development. The current rezoning proposal is intended to position these parcels to be developed in conjunction with prior corridor development, providing an opportunity for one or more prominent tenant(s) to occupy the space. The proposed development will be guided by a proposed Master Plan, Proffers, architectural standards and a set of design guidelines assuring compatibility with adjacent land uses, particularly those along Monticello Avenue.

#### IV. ANALYSIS OF EXISTING PUBLIC FACILITIES AND SERVICES

#### A. PUBLIC WATER AND SEWER FACILITIES

The properties addressed in this Community Impact Statement are located within the Primary Service Area (PSA) of James City County and the James City Service Authority, where public water and sanitary sewer services are generally available, and the use of these public facilities is required. Public water service is available through a JCSA 16-inch water main located along Monticello Avenue and a 12-inch water main along Ironbound Road and through the property.

At this point in time, there is no specific use proposed to generate water demands for the proposed development. However, previous water modeling of the existing 16" water distribution main has demonstrated ample capacity to provide for the water demands in this area with no discernable impact to the system.

#### B. PUBLIC SEWER FACILITIES

As stated above, the properties are located within the PSA of James City County and the James City Service Authority, where public sanitary sewer services are generally available. For this site, public sewer service is currently available from a JCSA owned force main and nearby and downstream gravity sewer system. Proposed development on the site will be required to have privately maintained sewage grinder pump station(s) on-site as was previously proposed and approved for the New Town Office Building on this site.

At this point in time, there is no specific use proposed to generate sewer demands for the proposed development. However, previous sewer modeling of the existing force main and gravity system has been completed by AES. Future development will, as is always the case, need to verify sufficient capacity within the force main and/or provide upgrades to the downstream force main system to ensure there are no impacts to existing users on the system.

#### C. FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES (EMS)

There are currently five fire stations providing fire protection and Emergency Medical Services (EMS) to James City County. The closest fire station to the subject site is Station #3 at 5077 John Tyler Highway, approximately 2.3 miles southwest of this project. The next closest fire station to the subject site is Station #5 located at 3201 Monticello Avenue, approximately 3.8 miles west of this project. These two fire stations, and the emergency medical staff available at these stations, will

provide a more than adequate response to potential emergencies. In addition, through cooperative agreements between Williamsburg, James City County, and York County, other stations may also be utilized for larger emergencies at the site.

### D. SOLID WASTE

The property will generate solid waste that will require collection and disposal to ensure a safe and healthful environment. Collection of solid waste will be by private contract with reputable haulers acting in accordance with local health standards. This waste will be transported to the James City County Solid Waste transfer station.

### E. UTILITY SERVICE PROVIDERS

Virginia Natural Gas (VNG), Dominion Virginia Power, Cox Communications and Verizon Communications provide, respectively, natural gas, electricity, and communication services 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. With new land development these utility providers are required to place all new utility service underground.

### V. ANALYSIS OF STORMWATER MANAGEMENT

A brief needs-analysis for stormwater management, meeting the general criteria of the Commonwealth of Virginia and James City County's stormwater requirements, was completed as a component of the planning for the proposed project. The goal of the stormwater management plan is to adhere to local and state stormwater requirements and provide a sustainable development utilizing the latest stormwater design techniques. In evaluating stormwater management solutions on the subject site, unique site characteristics were considered. Preliminary site investigation identified the following site characteristics to be considered in stormwater management planning:

- The project is situated within the Mill Creek Watershed of the James River.
- The property is currently cleared and vacant with a small portion of the site being paved.
- Existing Monticello Avenue roadway drainage discharging uncontrolled through the site.
- The soils in the vicinity of the site have demonstrated soils conducive to infiltration. If it can be demonstrated here, stormwater options including groundwater recharge and infiltration will be explored.

At this time the stormwater management approach has not been fully designed due to the lack of specific use however it is anticipated that the proposed development will be treated at the runoff source through a series of bioretention cells and/or within underground stormwater chambers located within the site. The design will also incorporate the existing JCSA tanks and consideration may be given to the existing roadway drainage, either to treat the water but at a minimum to safely pass the water to the downstream drainage system. The planned facilities will be designed to treat the runoff in such a way as not to create a burden on either the upstream or downstream drainage systems.

The stormwater management plan proposed for this site will protect overall downstream water quality, help preserve the natural hydrology of the watershed, and reduce the likelihood of the existing Monticello Avenue roadway drainage to cause downstream erosion to receiving channels through maintaining post-developed flows at or below pre-developed flows through on-site detention, and when and where feasible, through infiltration.

### VI. ENVIRONMENTAL AND SITE INVENTORY

### **Description of Existing Conditions**

The property is relatively flat with elevations ranging from a high of 107 near Monticello Avenue to a low of 92 within the Old Ironbound Road (Route 784) roadside ditch along the southern portions of the site. A 48" drainage pipe discharges across the site via an open drainage ditch which extends downstream and under Route 784 and then through the Ironbound Road Mini-storage Site. The site is primarily vacant, with managed grass and a paved cul-de-sac. The property is bounded by Monticello Avenue, Ironbound Road, Old Ironbound Road (Route 784) and Route 199. The site is currently accessed via Old Ironbound Road (Route 784). Properties to the east are zoned B-1 (JCSA Water Storage Facility) and M-1 (Courthouse Commons); properties to the south are zoned B-1 (Ironbound Road Mini-Storage) and R-2 (Mt. Pleasant Baptist Church and graveyard), properties to the west are zoned R-8 (Route 199 right-of-way); and properties to the north, across Monticello Avenue, are zoned MU Mixed Use.

### A. TOPOGRAPHY

The site is graded relatively flat with the exception of a 7 to 10-ft downslope along Monticello Avenue, which is protected by a 30-ft slope maintenance easement for perpetual VDOT maintenance. Sheet 2 of the Master Plan illustrates the location of these slopes at the site perimeter.

### B. SOILS

The Soil Survey of James City County, Virginia (USDA 1985) maps a few different soil types within this site. The undeveloped areas of the site are composed primarily of Kempsville and Norfolk Fine Sandy Loam which both are in hydrologic group B and are mostly low to moderate erodibility. Shrink-swell potential is low in all soils mapped within the site boundary, and the erosion hazard potential is slight in all soils. Soils in this vicinity are often suitable for infiltration practices; further assessment will be needed at site plan stage to verify opportunities for infiltration.

### C. SURFACE WATER

There is an open-air drainage ditch associated with this site, located along Ironbound Road and ringing the cul-de-sac. The remainder of the site drains by overland flow across a gently sloping, well stabilized grassy surface.

### D. FLOODPLAINS and WETLANDS

According to Flood Insurance Rate Map (FIRM) 51095C0120C, for James City County, Virginia there are no floodplains located on this site. Review of the National Wetlands Inventory (NWI) mapping and past familiarity with this site for the New Town Office Building site plan indicates the lack of wetlands on the site.

### E. VEGETATION

There is no significant vegetation on these properties.

### F. CULTURAL RESOURCES

Because of the extensive disturbance to all the property through (i) the construction of the radio station, (ii) later demolition and removal of the radio station, (iii) grading and construction of the JCSA water tanks and appurtenant accessways, utilities and drainage and (iv) the construction of Route 199 and Monticello Avenue as well as the prior tillage of the plow zone in the former Casey property (now Zoning Parcel 3) that had been farmed for decades, Staff has agreed that a cultural resources investigation is not warranted.

### G. Environmental Inventory

The subject property is currently a developed and/or previously developed site and as such there are no environmentally sensitive resources present on the subject property.

### VII. ANALYSIS OF IMPACTS TO TRAFFIC

A traffic study was performed for the subject properties with the premise that any B-1 by-right development of the site would by definition involve less than 100 peak hour trips. The traffic study is attached to this application. The study demonstrates that site traffic can be accommodated at the Rt. 615 Ironbound Road/Rt. 784 Old Ironbound Road stub/ Courthouse Commons Entrance intersection with LOS C or better for all turning movements without any traffic improvements.

Should a use be proposed on this site in excess of such traffic demand, that use would require a Special Use Permit, which will involve an updated traffic study be submitted for review with that application.

### VIII. CONCLUSION

In summary, this proposed rezoning is complementary to surrounding land uses and zoning and in conformance with the James City County Comprehensive Plan. Rezoning the R-8 portion of the church property and the to-be-abandoned Route 784 right-of-way encompassing the cul-de-sac to B-1 with Proffers and amending the current B-1 Proffers for the G-Square, Inc. property to ensure development is consistent with a master plan and guidelines will facilitate the types of commercial uses that are called for in the Comprehensive Plan and will complement the surrounding land uses. This proposed rezoning will provide additional benefits to the community as well, including:

- Improvement of the overall appearance of the County's urban and suburban environment.
- Architectural guidelines to ensure complementary vertical development with Courthouse Commons and the surrounding New Town area.
- Sidewalks providing pedestrian connectivity throughout the site and connecting to the established pedestrian corridors along Monticello Avenue and Ironbound Road.
- A planned and organized landscaping treatment to blend with existing streetscaping elsewhere along the corridor.
- Accentuate the Monticello Avenue streetscape through building and parking placement, sidewalk interconnectivity, street trees/fencing and other complimentary landscaping.
- Low Impact Development measures, if proven feasible to facilitate groundwater infiltration.
- Maintenance of Community Character by providing a compact commercial center that reduces its visual presence and scale through landscape and architectural standards established through a complete set of design guidelines.
- Collaboration between local and state government, private development and the faith community of Mt. Pleasant Baptist Church to mitigate longstanding overflow parking issues occurring during special events.
- Easily accessible business site that will benefit the surrounding community and promote economic development with a positive fiscal impact for the County. In particular, re-purposing private land that was taken for public need back into private ownership will allow for new tax revenue generation.

# **Design Guidelines**

for

## **Ironbound Crossing**

in

### James City County, Virginia

December 13, 2018



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### Introduction

These guidelines provide site planning and architectural guidance, identify context-sensitive approaches to realizing site potential and suggest strategic development opportunities for the property identified below:



The property outlined in red consists of three "zoning" parcels, all of which are proposed to be zoned B-1, with Proffers. The western most parcel is owned by Mt. Pleasant Baptist Church and is highlighted for reference. The middle parcel has been offered by VDOT for purchase by G-Square, Inc. and will be joined to the east most parcel to create a single property. All three zoning parcels will be governed by these guidelines. As required in the transaction with VDOT, the existing Old Ironbound Road cul-de-sac will be removed and a branch turn-around meeting VDOT standards will be constructed within the VDOT right-of-way before the end of state maintenance where Old Ironbound Road becomes a private road serving only the church.

Located at the intersection of Monticello Avenue and Route 199, this property is positioned within the Monticello Avenue corridor leading to the "New Town" Development of James City County, but it is not technically a part of it. Given its context, the property's ability to contribute to the sense of place that has become New Town and the Monticello Ave corridor, and to complement and enhance the built environment of New Town and the Monticello Avenue corridor, will be advanced by adherence to these guidelines.

The New Town Design Guidelines identify the parcels nearest the Monticello Avenue/199 interchange as "gateway" commercial development opportunities:

The more urban centers of New Town are appropriately located at the [through-] intersection of Monticello and Ironbound, while more regionally targeted development occurs near Monticello's intersection with Route 199. These commercial centers establish the first image and impression of New Town to those who pass by or visit from other areas in the region. The planning and design of these sites, then, becomes paramount in setting the desired character for all of the neighborhoods located in the town. [Cooper Robertson, quoted from design guidelines for Windsor Meade Shopping Center].

Since those design imperatives were first committed to print, New Town has completely built out its property along the Monticello Ave. corridor. Other parcels not formally a part of New Town have also developed, leaving the subject site as the last remaining free-standing developable acreage along the corridor. Given that the character, rhythm and quality of the corridor is now well established, development of this property should be consistent -- addressing arrival by automobile, with adequate, convenient and logical on- and off-street parking, while also promoting movement within the development and between adjacent developments by foot.

Given its acreage is significantly smaller than other planned development sites along the corridor, flexibility in site design is inherently somewhat less than those larger parcels. Nevertheless, the site should avoid the suburban patterns of development that are characterized by large setback areas, highway scaled signage and general lack of connectedness. Instead, it should more closely follow the patterns of development characterized by its closest neighbors along the corridor, namely the portion of Settler's Market closest to Rte. 199 and the portion of Courthouse Commons closest to Ironbound Road/Monticello Ave.

### Site Features and Opportunities

The property is comprised of three zoning parcels: Zoning Parcel 1 is the roughly 1.2 acre existing G-

Square, Inc. property located at the corner of Monticello Ave. and Ironbound Road. Zoning Parcel 2 is a roughly three-quarter acre area of VDOT right-of-way surrounding the existing Old Ironbound Road culde-sac proposed to be abandoned and sold to G-Square, Inc. Upon abandonment, Parcel 2 will be subsumed into Parcel 1. Zoning Parcel 3 is a roughly three-quarter acre portion of Mt. Pleasant Baptist Church located north of Old Ironbound Road beyond the end of State Maintenance (uses here will be limited to accessory uses to a place of public assembly). Together, the lands subject to these guidelines are bordered on all sides by public streets: Monticello Avenue, Ironbound Road, Old Ironbound Road and Route 199. To its east, the property wraps around the Ironbound Water Storage Facility which, although a utilitarian function, has been designed to the standards of the surrounding architecture.



Along its northern edge, Monticello Avenue is a four-lane arterial road that sits higher in elevation than the site itself. VDOT enjoys a slope maintenance easement along that property line of the site. Visibility into the site from Monticello and from the 199 overpass is downward. This will make roof design and screening of rooftop equipment a critical element of focus for the design of buildings.

Along its southern edge, Old Ironbound Road, which is a cul-de-sac road with a variable width right-of-way, aligns with an internal street of the neighboring Courthouse Commons development. As part of the agreement with VDOT to sell the land, the cul-de-sac will be removed and a branch turn-around will be constructed within the VDOT right-of-way. All vehicular traffic to the site will approach from Old Ironbound Road. Given the excessive existing right-of-way width of Old Ironbound Road, the developer is encouraged to pursue improving the street with on-street parking, which the County will credit toward buildable square footage on-site. This off-site development, although not required, is encouraged as a way to create a visual extension and practical connectivity to the Courthouse Commons development.

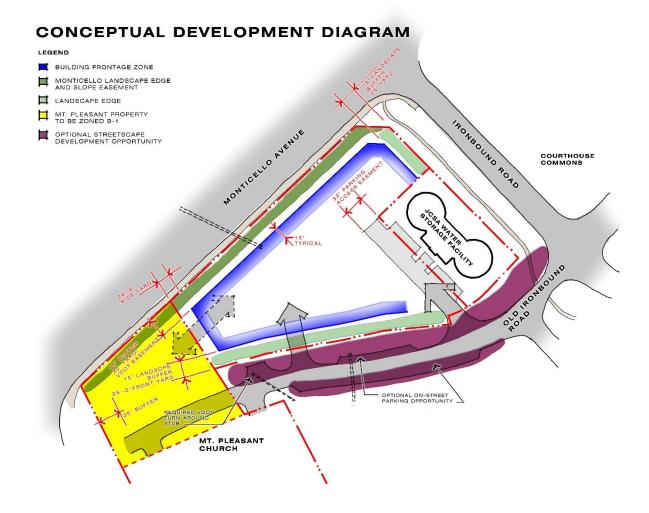


The western boundary is the Route 199 right-of-way, which is currently zoned R-8.

The eastern portion of the property abuts and partially wraps around the existing JCSA water storage facility. As part of the collaboration between the JCSA, G-Square, Inc. and Bush Construction Corporation involved in planning for the water storage facility over 15 years ago, shared parking was planned along the western side of the water storage facility. Shared access to this parking, and the G-Square, Inc. parcel, will remain generally as built (for the water storage facility) and accessed from Old Ironbound Road. Given this history and the cross-easements recorded to the mutual benefit of the parties, the developer should incorporate the parking adjacent to the water storage facility into an overall parking plan for the property, revising its layout as necessary, provided: (1) it represents no further reduction of the water storage facility yard than currently exists, and (2) does not compromise service access to the water storage building.

At the northern corner of the site, where the property wraps around the water storage facility, is the intersection of Monticello Avenue and Ironbound Road. While the configuration of this portion of the parcel does not lend itself to a large building, one or more small buildings may be feasible. The use of a portion of this area as a pocket park is encouraged, subject to evaluation of safety concerns associated with this high volume, high speed signalized intersection; it may also be suitable for monument signage to identify the parcel or major tenant.

Traversing the middle of the property northwest to southeast is an existing surface drainage pattern. Stormwater enters the site from a culvert under Monticello Avenue and leaves the site through a culvert under Old Ironbound Road. The developer is free to re-route this drainage utilizing any approved method. Recognizing that this may entail surface or subsurface drainage structures over which constructing buildings is difficult, these guidelines anticipate a lack of vertical development at that location.



#### Note:

- "Landscape Edges" are formal landscaped areas along property boundaries that may include a town-fence, retaining walls, hedges, etc.. Street trees are to be provided along Monticello, unless topography or other constraints would preclude them. These landscape edges create a foreground for building facades or, in the absence of a building façade, act to create a "hard edge" to the adjacent street.
- 2. "Frontage Zone" is an area wherein at least 75% of a building façade must reside (except as indicated below, under "Street Design"). In the absence of a building façade, a "hard edge" of landscape elements must be provided in the adjacent "Landscape Edge."
- 3. "Streetscape Development Opportunity" identifies off-street landscape, hardscape and parking which may be undertaken at the option of the developer, if approved by all jurisdictions having authority.

### Street Design

Old Ironbound Road is a remnant of Ironbound Road that existed prior to the construction of Route 199. It may also be seen as an extension of the Courthouse Commons Internal Road. Streetscape design along this Old Ironbound Road is constrained by its excessive right-of-way (ROW) width. Nevertheless, developers are encouraged by these guidelines to pursue off-site improvements and parking within the VDOT right-of-way, to the extent feasible and as may be allowed and approved by the agency. As an additional incentive to building siting along Old Ironbound Road, these guidelines designate a "Frontage Zone" for buildings along Old Ironbound Road of 25' – 40' from the right-of-way.

The Frontage Zones are areas in which 75% of the boundary facing façade of buildings must reside. This is designated to encourage the developer to enhance the streetscapes with architecturally rich treatment and, if possible, public entrances. It is recognized that not all user types which might occupy the site would lend themselves to that arrangement. For example, a Bank or Restaurant with a drive through would require vehicular travel lanes all around the building, negating the ability to pull the façade close to the property line. In such cases, these guidelines require that the landscape edge be developed with a "hard edge" that would include a structural site element, such as fencing or a wall or combination, or the equivalent. The developer will have the option of choosing one or more of the multiple frontage zones available across the site within which to site a building, depending on the nature and specific requirements of the end user. Said another way, the master plan does not intend to require that all available frontage zones will or should be occupied by building structures.

Street design along Monticello Avenue is constrained by a grade differential, high-speed traffic, and an existing multi-use bike/pedestrian trail. Given the grade change, design of this area should address issues of pedestrian safety as well as aesthetics, such as: Structures may be positioned to create a building edge along Monticello. Where absent of buildings, this site boundary should incorporate a strong, hard landscape edge, incorporating hedges, or a



complementary town fence. Street trees are to be incorporated along this edge, unless topography or other constraints would preclude them. It is recognized that achieving adequate parking may require the use retaining walls.

### **Building Placement and Massing**

#### **Arrival and Orientation**

Buildings should be organized to anticipate vehicular and pedestrian arrival to the site via Old Ironbound Road and should also anticipate pedestrian arrival from the corner of Ironbound Road and Monticello Ave. As mentioned above, the parcel configuration at the corner of these two roads may provide the developer an opportunity to create a small park (taking into account public safety concerns with high speed traffic

and potential vehicle conflicts inherent at signalized intersections), and perhaps locate project signage there as well.

One or more buildings should be organized on the site to:

- Reinforce streetscapes and street edges along Old Ironbound Road and/or Monticello Avenue,
- Create a sense of arrival for the building users and an obvious approach to the building entrance(s),
- Engage the buildings on the adjacent sites, Monticello Avenue and Old Ironbound Road with appropriate architectural development along those facades.

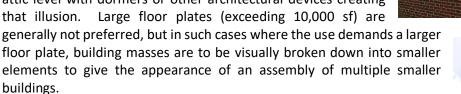
### **Building Shape and Footprint**

The sense of scale of the proposed buildings shall be in keeping with existing adjacent development. Footprints over 10,000 sf should be broken up in their massing so as to appear as multiple buildings.

Since much of the site is lower than the adjacent Monticello Avenue and well below the 199 overpass, taller buildings up to the maximum height permitted in B-1 are allowed and encouraged. Single story buildings should be designed with adequate height, roof forms, or roof screening to limit the visibility of roof level construction and mechanical equipment.

### **Architectural Character**

The use of materials and general massing of Courthouse Commons and the Water Storage facility should set the tone for the architectural character of all structures within the development. Fundamentally, building masses are to be broken down into smaller, pedestrian scaled elements. There should be a mix of sloped roof elements and parapet-roofed facades. Buildings are to have a predominantly 1-1/2 to 3 story expression; thus one-story buildings should appear to have an attic level with dormers or other architectural devices creating that illusion. Large floor plates (exceeding 10,000 sf) are



All buildings should conform to the nature of the streets and/or open spaces which they front. Variations in the building facades are required to express multi-tenant occupancies. Each building shall be designed to look attractive from all sides visible to the public. Facades should be articulated with panels, pilasters, cornices and/or other architectural devices so as to avoid long blank walls. Porticos, pediments, and other like features are encouraged to express major entrances. Landscaping elements and/or





treatments specifically designed to break up building massing are also encouraged.

Particular attention should be paid to the roof structure and visibility of the roof from adjacent roadways. Rooftop equipment screening is required, whether by screening device or architectural forms.

### Allowable Materials

All buildings are to use a similar or complementary pallet of materials as the adjacent Water Storage Facility and Courthouse Commons development. Specifically:

#### Walls:

- Brick
- Cast Stone Trim, Veneer, and/or Coping
- Wood or Cellular PVC for Trim
- Fiberglass, Aluminum, or EIFS Cornice and Fascia
- Pigmented, Textured Concrete Block is acceptable on rear and non-public facades.
- Wood or Cementitious Siding (with 5/8" or greater relief in profile or overlap)

#### Roofing:

- Slate Roofing, Simulated Slate Roofing (rubber); fiberglass asphalt roofing (300# or better); standing seam Metal (aluminum, copper, or steel).
- Gutters and Downspouts (copper or aluminum, round or box (residential Ogee shape is not acceptable).
- Flat or Low-sloped roofs may be of metal or synthetic membrane, where concealed from public view by a parapet.

#### **Building Elements:**

- Columns may be true classical pre-fabricated synthetic, or field-fabricated wood. If field-fabricated, extra attention to detailing and proportions will be required.
- Chimneys are to be of brick or stucco.
- Posts, spindles, balusters may be of painted wood or metal. Synthetics such as hard foam or cellular PVC may be utilized if adequately heavy in dimension and anchored and painted.
- Stoops and exterior steps: brick or stone (concrete may be utilized for non-public entrances where screened or not visible to the general public).
- Awnings and Canopies: canvas covered metal structure.

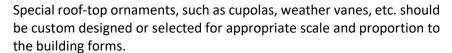
Signs: wood, painted metal, hard foam, or as otherwise allowed by James City County ordinances.

### Fenestration:

- Windows may be wood or metal, subdivided with exterior muttons.
- Storefront windows for display may be subdivided into larger panels but should not exceed 36" in dimension. Panes should be square or rectangular, oriented vertically.
- Bay windows: wood or metal with metal roofing.
- Shutters: wood or cellular pvc; shutters should be equipped with shutter hardware and be operable or give the appearance of being operable.
- Doors: wood, metal, glass; utility doors should be metal or fiberglass.



Stylistically, all buildings within the development are to retain a common identity, evocative of Federal Period American Architecture. While replica architecture is impractical and undesirable, use of materials, colors, and detailing that allude to the architecture of that period is expected. The use of porches, balconies, bays, loggias, arcades, chimneys, cupolas, dormers, and operable windows are strongly encouraged as devices that help reduce the scale of buildings, making them more approachable and village-like. The principal roof forms are to be gabled or hipped and may range between 4/12 and 12/12. Shed roofs should be 2/12 to 6/12 in slope. Flat or Low-slope roofs are acceptable for larger roof areas but should be concealed by a decorative parapet or ballustrade. Dormers may be gabled, hipped or eye-brow (but not shed-type).





Mechanical units and building utilities, such as electrical meters and panels, are to be located so as not to detract from the architecture and are to be screened. Roof-top equipment should be architecturally screened and not visible from Monticello Avenue, Ironbound Road, or Old Ironbound Road. Generally, screens should be constructed of permanent materials that relate to the building architecture, such as brick and cast stone. Where located against the property buffers, or otherwise not plainly visible from adjacent streets, utilities and mechanical units may be screened with landscaping alone. Drainage from building roofs should be channeled underground to the storm water system unless "spilling at grade" can be engineered without compromising landscaping or pedestrian areas.

## Parking and Access

Parking access and organization should be designed to limit the amount of curb, gutter and asphalt on the site and promote the ease of movement about the site by pedestrians. To that end, raised or surface patterned crosswalks, colonnades of shade trees, pedestrian scale street lights and/or formal sidewalk geometries should be incorporated to emphasize the primacy of the pedestrian over the automobile on the expanded G-Square parcel. The Parking on the church parcel designed for infrequent overflow use shall not require the same formal treatments or geometries as described for the G-Square parcel. For overflow parking on the church parcel, a less formal approach is appropriate; lighting is not warranted unless regular nighttime activities are anticipated. However, greater attention should be paid to softening views from Monticello Ave. into this overflow parking area.

### Landscape, Hardscape and Planting

Building Perimeters - Landscaping at buildings shall meet or exceed the requirements as specified in the JCC Zoning Ordinance, Division 4, Section 24-97. The use of trellis and landscape structures to facilitate the growth of live plant material immediately in front or on the buildings is strongly encouraged.

Parking layout and landscaping is to comply with the requirements of the relevant landscape standards of the James City County Ordinance (Article II, Division 4). Hedges planted to screen the parking lots from the perimeter shall be planted at an installed height of 30". The predominant



tree type used within parking lots shall be deciduous shade trees. Evergreen trees shall be provided where additional screening is desirable. All deciduous trees in parking lots shall be 2-1/2" caliper at installation.

To further link the development to the New Town community and in particular to the Courthouse Commons project, the developer is encouraged to incorporate similarly inspired design details used in New Town. For example, at pedestrian crossings and along streets, a combination of concrete pavers,

brick pavers and gray concrete can be used to emphasize points of arrival and to create a sense of hierarchy among the site elements.

Street Furnishings, including street and parking lot light fixtures, benches, trash receptacles, bike racks and bollards, shall include selections from or comparable to those items identified and/or illustrated in the New Town Streetscape Package prepared by Cooper Robertson & Partners dated May 5, 2003 and/or present within the adjacent Courthouse Commons development.



The perimeter buffer adjacent to Monticello Avenue shall

contain enhanced landscaping per the James City County Enhanced Landscape Policy, adopted April 9, 2013. Examples of enhanced landscaping could be, but are not limited to, upright evergreen plantings for screening of parking and other undesirable features, decorative fencing, benches and other pedestrian accommodations, and increased plant installation size and quantity. An enhanced landscaping narrative will be provided at the site plan phase of the project to incorporate with the use(s) on the site, which will summarize the enhanced landscape treatment for the site.

### Site Lighting

Site Lighting shall consist of two different types of fixtures:

- Lighting for parking and security this lighting is for general visibility and security and should be tall and pole-mounted (30' maximum), delivering a general lighting level as required or recommended by local law enforcement or an end user's specific site safety standards. These fixtures may be contemporary in nature and are not intended to be architectural elements in-andof themselves, but rather deliver an ambient lighting level where critical.
- Lighting for pedestrians should consist of decorative building mounted fixtures, bollard-type fixtures and/or pedestrian scaled street lamps (maximum pole height of 16'). These fixtures are intended to reinforce the overall architectural expression of the buildings and should be arranged to help guide pedestrian movement about the site.

Site light fixtures shall include selections from or comparable to those items identified and/or illustrated in the New Town Streetscape Package prepared by Cooper Robertson & Partners dated May 5, 2003 and/or present in the adjacent Courthouse Commons development.

### Signage

All signage recommendations shall be subject to the provisions of Article II, Division 3 of the James City County Ordinance.

Building mounted signs and free-standing signs will comply with James City County zoning ordinance for sign location and construction. Wall mounted signage should be integrated with and/or be properly proportionate to the architecture of the building. They are to be mounted flat upon the facade or with "stand-offs" no greater than 6".

A free-standing sign for the development, if provided, is to be located at the corner of Monticello Avenue and Ironbound Road or at the intersection of Ironbound Road and Old Ironbound Road. This sign is to be monument style and designed to promote visual unity within the development. Individual letters in signs may be internally lit. Its size and scale should be in keeping with established monument signs on the corridor (e.g. Settlers Market and Courthouse Commons).

Other signs, when illuminated, must be externally lit. "Halo" lighting of individual letter signs (where the letters are opaque but an internal light washes the background of the letters) are acceptable as externally lit signage.

Way-finding signage is encouraged, but subject to regulation by the zoning administrator per James City County Ordinance, Section 24-73. Lettering and mounting height should be sized to assist the pedestrian in finding a building entrance, or a driver of a vehicle to find a parking space. Number and size of such signage is not specifically dictated but should be kept to the minimum number necessary and clearly subservient to other site signage. Generally, lettering should not be over 4" in height, and logos of that same size are permissible but shall not dominate the message of the sign. Street signs and traffic control signs within State right-of-way will utilize the New Town, Courthouse Commons or Settler's Market models, subject to VDOT approval.





TO: Paul Holt, Director, Community Development, Planning Director, JCC

Glenn Brooks, P. E., VDOT

FROM: Dexter R. Williams, P. E.

SUBJECT: Traffic Impact Analysis For Former Radio Station Property/Ironbound

Crossing

DATE: December 17, 2018

### **INTRODUCTION**

The upper section of Exhibit 1 shows the former WMBG Radio Station Property location within the VDOT Hampton Roads District.

The lower section of Exhibit 1 shows the former Radio Station Property boundaries on a Google Earth aerial photo. The Radio Property consists of two parcels: an existing parcel owned by G Square Inc. and a section of existing VDOT right of way to be abandoned. The existing right of way to be abandoned encompasses a circular cul-de-sac of Rt. 784 Ironbound Road stub. The circular cul-de-sac is to be replaced with a branch turnaround design.

Bush Construction Corporation (Bush) is the developer of the former Radio Station Property. Bush is a long-term lessor of the G Square, Inc. property and is also the applicant to VDOT for abandonment of the existing VDOT right of way with responsibility for removing the Rt. 784 Ironbound Road stub and constructing a new branch turnaround.

The G Square property is zoned B-1, and as such could be developed with up to 99 vehicles per hour under County zoning without a Special Use Permit. When the two properties are rezoned in combination, trip generation above 99 vehicles per hour will require either a SUP or an updated traffic analysis to evaluate actual trips and possible improvements resulting from a more definitive proposed office use. Uses triggering a Commercial SUP will require an updated traffic analysis to evaluate trips and improvements from such use.

This TIA has been prepared pursuant to a written workscope dated January 2, 2107 (see enclosed Appendix Exhibit X1), which was shared with VDOT and County Staff without objection. All vehicular access to the former Radio Station Property is currently and will remain via the Rt. 784 Ironbound Road stub.

The focus of analysis is on traffic operations at the Rt. 615 Ironbound Road/Rt. 784 Ironbound Road stub/Courthouse Commons Entrance intersection (CC Entrance). This intersection is unsignalized as follows:

Traffic Impact Analysis For Former Radio Station Property December 17, 2018

- stop sign controls for the Ironbound Road stub and CC Entrance approaches
- single lane approach Ironbound Road stub (shared left/through/right movements).
- single lane approach CC entrance (shared left/through/right movements).
- single lane approach on southbound Ironbound Road (shared left/through/right movements)
- shared left/through lane and right turn lane on northbound Ironbound Road approach
- 45 mph speed limit on Ironbound Road

In addition, this study includes documentation of queuing on northbound Ironbound Road at the Monticello Avenue intersection. This includes recordation of existing queuing on the northbound Ironbound Road approach to the Monticello Avenue signal and a forecast of future queues for background traffic and for the addition of the site. Computer modeling of this queue and LOS analysis at the Monticello/Ironbound intersection requires replication of the coordinated system on Monticello Avenue. This replication is a work scope vastly outsized in scale with respect to this rezoning which does not involve an increase in allowable trip generation. It was recognized during the discussion of workscope that simulating the Monticello Avenue corridor was not justified.

### 2017 EXISTING TRAFFIC CONDITIONS

The upper row on Exhibit 2 shows AM and PM peak hour counts on the Rt. 615 Ironbound Road/Rt. 784 Ironbound Road stub/Courthouse Commons Entrance intersection (tabulated 7-9 AM and 4-6 PM peak hour counts are on Appendix Exhibit A, % Trucks calculations on Appendix Exhibit B and peak hour factor calculations are on Appendix Exhibit C).

Appendix Exhibits J1 and J2 respectively show HCS6 2017 unsignalized intersection level of service (LOS results) using Synchro, and Appendix Exhibits K1 and K2 respectively show 2017 SimTraffic queuing. LOS and 95<sup>th</sup> percentile queuing results are shown in the following table:

	2017 COUNTS - TABLE 1														
Rt. 615 Iro	Rt. 615 Ironbound Road/Rt. 784 Ironbound Road stub/Courthouse Commons Entrance														
Traffic LOS An	d Seco	onds Delay	By La	ne Group	95th %ile Q	ueues By	/ Lane Gr	oup							
		AM		PM		HCS	2010	SimTraf	fic Q&B						
					Storage Length	AM	PM	AM	PM						
EB LTR	В	11.5	С	15.1	-	3	5	44	26						
WB LTR	Α	9.2	В	11.5	-	3	25	29	52						
NB LT	Α	8.1	Α	8.6	-			7							
SB LTR	Α	7.4	Α	7.9	-	3	3 5 16 37								

All intersection LOS results are LOS C or better with the greatest queue of 52 feet for the westbound PM peak hour approach based on SimTraffic.

Queuing counts for the northbound Ironbound Road approach to the Rt. 10 signal are shown on

Traffic Impact Analysis For Former Radio Station Property December 17, 2018

Appendix Exhibit D series. Appendix Exhibits D1 and D2 show queuing 7 to 9 AM and, and Appendix Exhibits D3 and D4 show queuing for 4 to 6 PM count period. Queues are tabulated for the northbound left turn lane and the northbound left/through/right lane. PM queues are appreciably greater than the AM queues (AM queues don't exceed 100 feet in either lane).

In the PM peak hour, the northbound left/through/right turn lane (right side lane) has a 95<sup>th</sup> percentile queue for the 4 to 5 PM peak hour of 195 feet, and 95<sup>th</sup> percentile queue for the 4 to 6 PM count period of 225 feet. For the northbound left turn lane, the 95<sup>th</sup> percentile queue for the 4 to 5 PM peak hour was 170 feet, and the 95<sup>th</sup> percentile queue for the 4 to 6 PM count period was 175 feet.

Exhibit 7 shows the 4 to 6 PM 95<sup>th</sup> percentile queues in green. There is 260 feet of storage on the left turn lane (full width 210 feet plus ½ of 100-foot taper), so that existing queuing (175 feet) is 85 feet less than storage. There is 300 feet storage for the left/through/right lane (from stop bar to curb radius at CC Entrance), so that existing queuing (225 feet) is 75 feet less than existing storage.

### 2024 BACKGROUND TRAFFIC CONDITIONS

The second row on Exhibit 2 shows 2024 AM and PM peak hour background traffic on the Rt. 615 Ironbound Road/Rt. 784 Ironbound Road stub/Courthouse Commons Entrance intersection. VDOT count locations on Ironbound Road have moved in the last five years producing inconsistent trend data. Two locations on Monticello Avenue that have not moved in the last five years are shown on Exhibit 3. Neither location shows a 2017 to 2024 growth factor over 1.04. A 1.07 growth factor is used on Exhibit 3 as a default value of 1% linear traffic growth for seven years.

Appendix Exhibits J3 and J4 respectively show HCS6 2024 background traffic unsignalized intersection level of service (LOS results) using Synchro, and Appendix Exhibits K3 and K4 respectively show 2024 background traffic SimTraffic queuing. LOS and 95<sup>th</sup> percentile queuing results are shown in the following table:

	2024 BACKGROUND TRAFFIC - TABLE 2														
Rt. 615 Iro	Rt. 615 Ironbound Road/Rt. 784 Ironbound Road stub/Courthouse Commons Entrance														
Traffic LOS An	Traffic LOS And Seconds Delay By Lane Group 95th %ile Queues By Lane Group														
		AM		PM		HCS	2010	SimTraf	fic Q&B						
					Storage Length	AM	PM	AM	PM						
EB LTR	В	10.9	В	13.7	-			43	23						
WB LTR	Α	9.0	В	10.8	-	3	18	29	57						
NB LT	Α	8.0	Α	8.6	-			7							
SB LTR	Α	7.4	Α	7.8	-	3	5	16	40						

All intersection LOS results are LOS B or better with the greatest queue of 57 feet for the westbound PM peak hour approach based on SimTraffic.

For queues on northbound Ironbound Road at Monticello Avenue, the 2017 queues have been increases by a 1.07 growth factor for a 2024 background traffic estimate. For the northbound left/through/right turn lane, the 95<sup>th</sup> percentile queue for the 4 to 6 PM 2024 background traffic is 240 feet (rounded to nearest five feet). For the northbound left turn lane, the 95<sup>th</sup> percentile queue for the 4 to 6 PM 2024 background traffic is 190 feet. The 4 to 6 PM 95<sup>th</sup> percentile queues for 2024 background traffic are shown in yellow on Exhibit 7.

### RADIO STATION PROPERTY TRIP GENERATION AND DISTRIBUTION

Specific uses for the former Radio Station Property have not been determined. The maximum trip generation permitted by the County zoning ordinance without a Special Use Permit (SUP) is 99 vehicles per hour. The proposed rezoning does not include a request for SUP so 99 vehicles per hour is the assumed maximum trip generation projected for the site in this analysis.

For site traffic, 99 vehicles per hour are assigned on the third row on Exhibit 2 for the AM and PM peak hours. The distribution is 85% north on Ironbound Road to Monticello Avenue and 15% south on Ironbound Road. This approximates the distribution of trips on the Courthouse Commons entrance.

#### TOTAL 2024 TRAFFIC

Total 2024 traffic forecast is shown on the bottom row on Exhibit 2. Appendix Exhibits J5 and J6 respectively show HCS6 2024 total traffic unsignalized intersection level of service (LOS results) using Synchro, and Appendix Exhibits K5 and K6 respectively show 2024 total traffic SimTraffic queuing. LOS and 95<sup>th</sup> percentile queuing results are shown in the following table:

	2024 TOTAL TRAFFIC - TABLE 3														
Rt. 615 Iro	nbou	nd Road,	/Rt. 7	84 Ironb	ound Road stub/Cour	thouse	Comm	ons Ent	rance						
Traffic LOS An	Traffic LOS And Seconds Delay By Lane Group 95th %ile Queues By Lane Group														
		AM		PM		HCS	2010	SimTraf	fic Q&B						
					Storage Length	AM	PM	AM	PM						
EB LTR	В	12.2	С	17.4	-	10	15	55	52						
WB LTR	Α	9.1	В	10.9	•	3	18	29	52						
NB LT	Α	7.9	Α	7.8	-			13	9						
SB LTR	Α	7.4	Α	7.8	-	3	5	18	42						

All intersection LOS results are LOS C or better with the greatest queue of 55 feet for the eastbound PM peak hour approach based on SimTraffic.

The former Radio Station Property site has 42 vehicles exiting to northbound Ironbound Road to the signal at Monticello Avenue in the PM peak hour. There are 25 cycles of the Monticello/Ironbound signal in a peak hour, so former Radio Station Property traffic at the signal is about 1.7 vehicles per cycle. Assuming one additional car (25 feet) from the former Radio Station Property in each of the northbound approach lanes for each cycle produces a 2024 total

Traffic Impact Analysis For Former Radio Station Property December 17, 2018

traffic 95<sup>th</sup> percentile queue on the left turn lane of 215 feet and a 2024 total traffic 95<sup>th</sup> percentile queue on the left/through/right turn lane of 265 feet. These 2024 total traffic queues are shown in red on Exhibit 7.

There is 260 feet of storage on the left turn lane, so that total queuing (215 feet) is 45 feet less than storage. There is 300 feet storage for the left/through/right lane, so that total queuing (265 feet) is 35 feet less than storage.

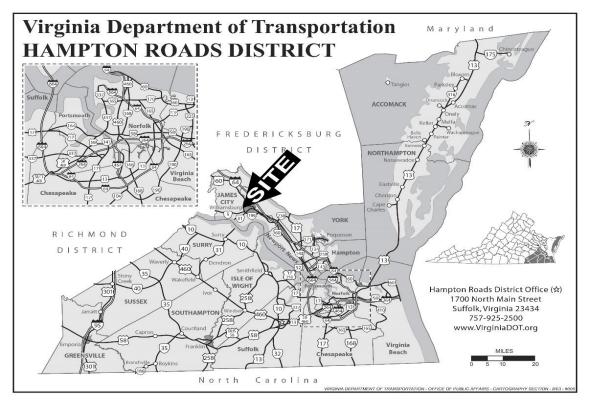
At the Rt. 615 Ironbound Road/Rt. 784 Ironbound Road stub/Courthouse Commons Entrance, a left turn lane on northbound Rt. 615 Ironbound Road at the stub is not warranted (see Exhibits 4 and 5). A southbound right turn taper on southbound Rt. 615 Ironbound Road at the stub is barely warranted (see Exhibit 6). Proffers have been submitted with this rezoning to reevaluate the need for this taper when the site plan and proposed land use are requested and completed and committed for construction if warranted before site plan approval.

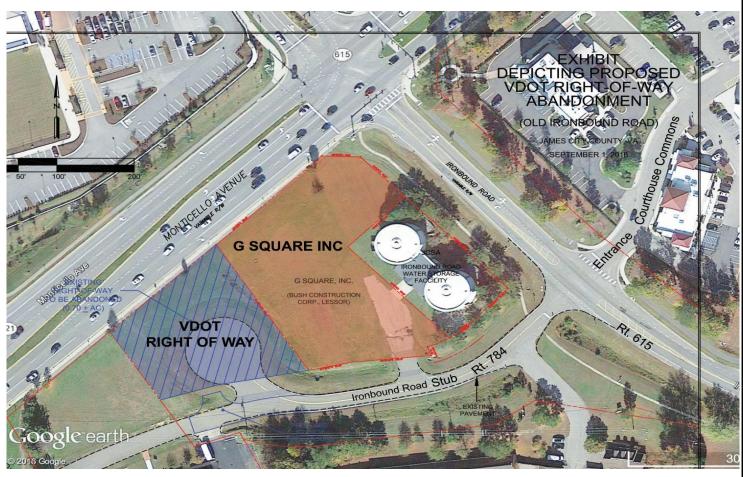
### CONCLUSIONS

The former WMBG Radio Station Property traffic can be accommodated at the Rt. 615 Ironbound Road/Rt. 784 Ironbound Road stub/Courthouse Commons Entrance intersection with LOS C or better for all turning movements without any traffic improvements. There is adequate clearance between the northbound Ironbound Road queues at Monticello Avenue and the Rt. 615 Ironbound Road/Rt. 784 Ironbound Road stub/Courthouse Commons Entrance intersection, with more than one car of storage available in each lane. A southbound right turn taper on southbound Rt. 615 Ironbound Road at the stub is barely warranted with site traffic and is proffered to be addressed and required if warranted. Site development with less than the maximum trip generation under zoning will tend to not warrant a right turn taper.

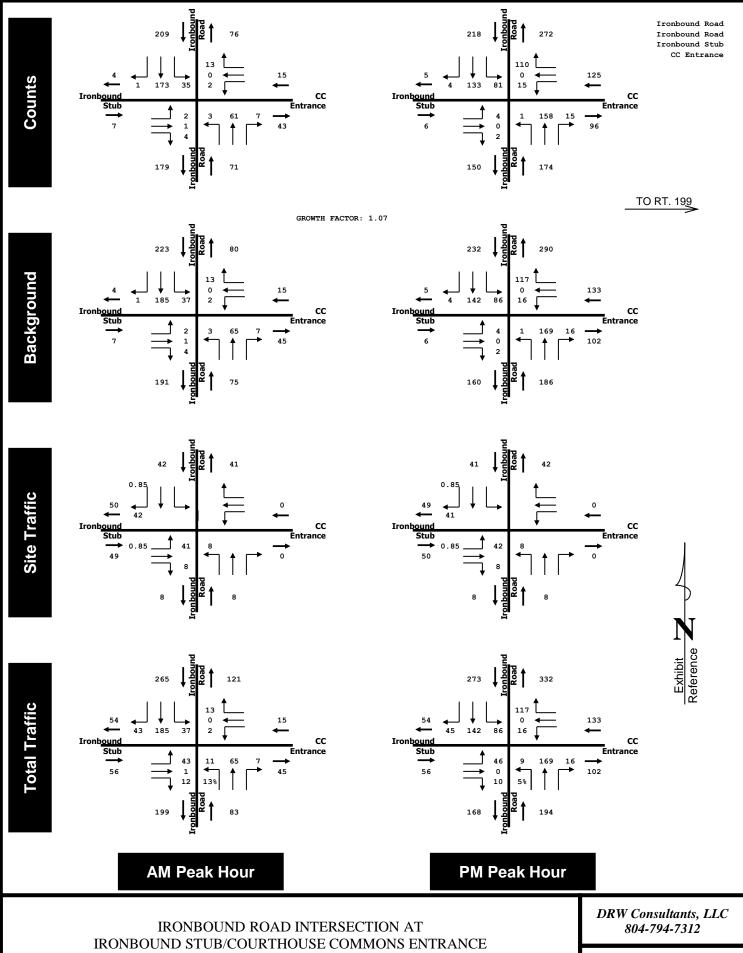
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REGIONAL AND AREA MAPS RADIO PROPERTY DRW Consultants, LLC 804-794-7312



2017 TRAFFIC COUNTS AND 2024 FORECASTS

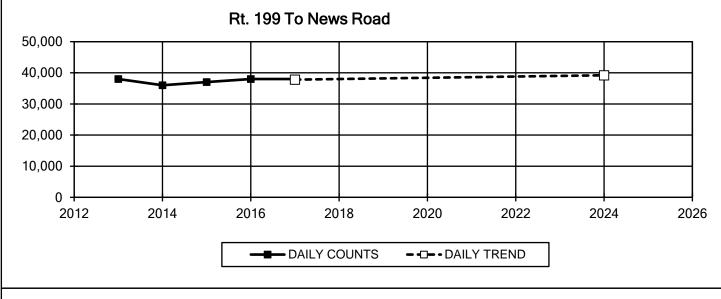
Street: Rt. 5000 Monticello Avenue

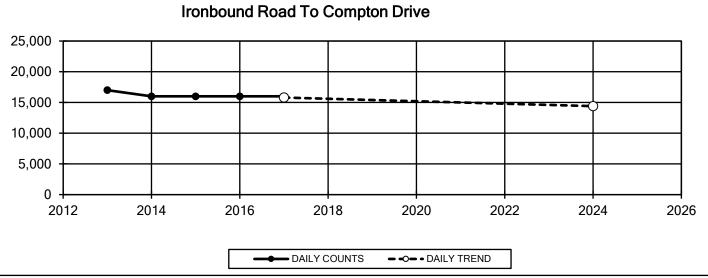
From: Rt. 199 To: News Road Street: Rt. 321 Monticello Avenue

From: Ironbound Road To: Compton Dr.

Year	DAILY COUNTS	
2013	38,000	
2014	36,000	
2015	37,000	
2016	38,000	
2017	38,000	
Year	DAILY TREND	
2017	37,800	Δ17
2024	39,200	1.04

37	DAH W COLDUNG	
Year	DAILY COUNTS	
2013	17,000	
2014	16,000	
2015	16,000	
2016	16,000	
2017	16,000	
Year	DAILY TREND	
2017	15,800	Δ17
2024	14,400	0.91

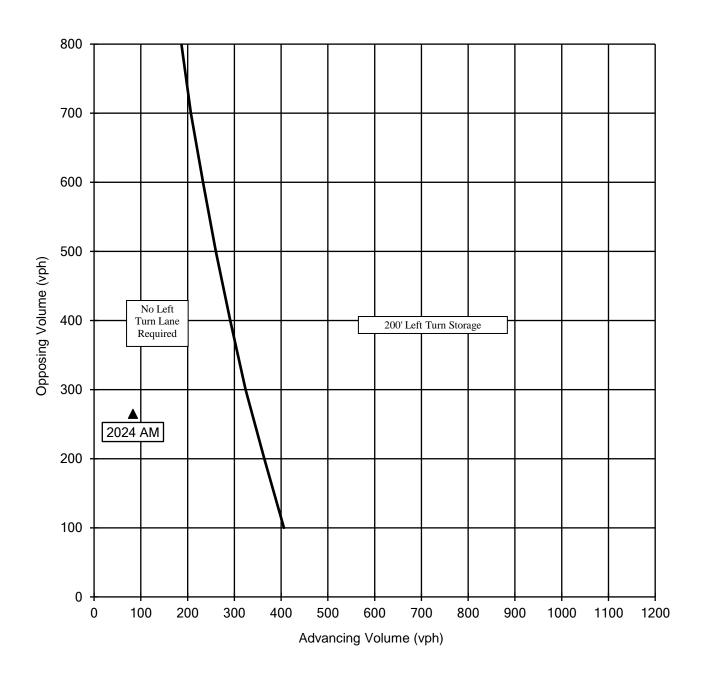




VDOT Average Annual Daily Traffic (AADT) Volume Estimates

MONTICELLO AVENUE DAILY TRAFFIC COUNTS AND TRENDS DRW Consultants, LLC 804-794-7312

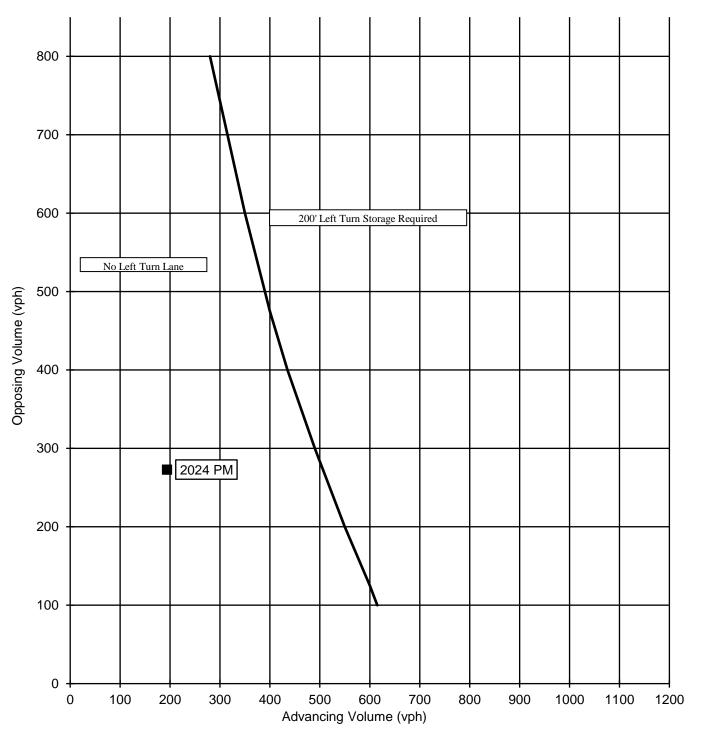
### LEFT TURN LANE WARRANT 50 mph Design Speed % Left Turns = 13%



Source: Interpolated from VDOT Road Design Manual, Appendix F, derived from Highway Research Record Number 211

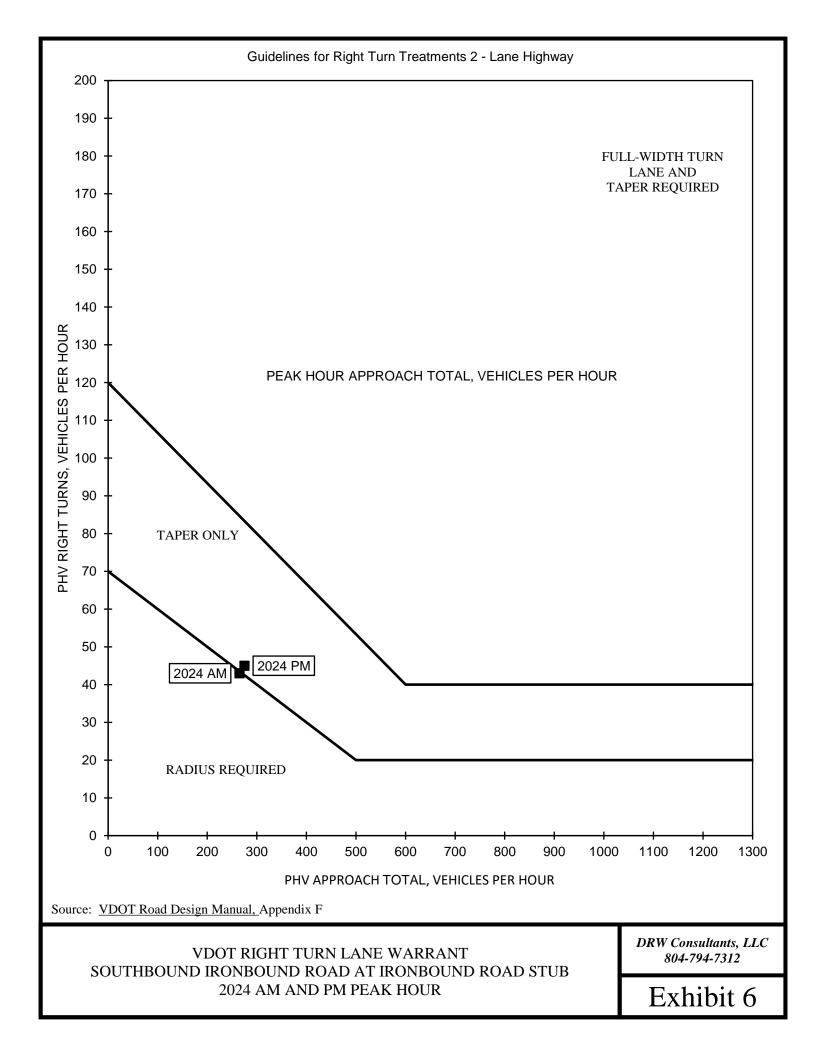
VDOT LEFT TURN LANE WARRANTS NORTHBOUND IRONBOUND ROAD AT IRONBOUND ROAD STUB 2024 AM PEAK HOUR DRW Consultants, LLC 804-794-7312

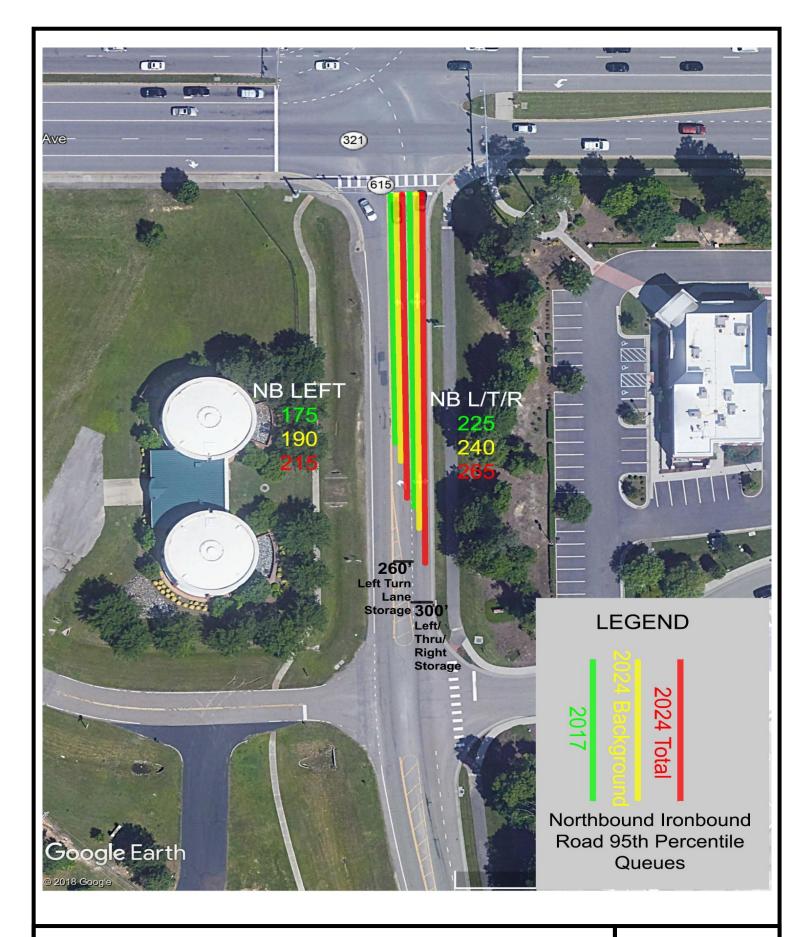




Source: VDOT Road Design Manual, Appendix F

VDOT LEFT TURN LANE WARRANTS NORTHBOUND IRONBOUND ROAD AT IRONBOUND ROAD STUB 2024 PM PEAK HOUR DRW Consultants, LLC 804-794-7312





NORTHBOUND IRONBOUND ROAD AT MONTICELLO AVENUE 95TH PERCENTILE QUEUES 4 TO 6 PM DRW Consultants, LLC 804-794-7312

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Existing	
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01-02-17 Work Scope Memo	

# Peggy Malone & Associates, Inc. (888) 247-8602

File Name: Ironbound Rd and Mini Storage Rd AM

Site Code:

Start Date : 4/11/2017

Page No : 1
Groups Printed- Car

											inted Odi										_
		Mini	Storag	je Rd			Shop	ping (	Center			Iro	nbound	d Rd							
			astbou					estbou			Northbound						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	0	0	0	0	0	1	0	0	0	1	0	10	3	0	13	3	13	0	0	16	30
07:15 AM	0	0	0	2	2	2	0	3	0	5	1	9	1	0	11	7	25	0	2	34	52
07:30 AM	0	0	0	0	0	3	0	0	1	4	0	12	0	0	12	4	35	0	0	39	55
07:45 AM	0	0	0	0	0	0	0	1	0	1	0	16	2	0	18	5	64	0	0	69	88
Total	0	0	0	2	2	6	0	4	1	11	1	47	6	0	54	19	137	0	2	158	225
08:00 AM	0			0	2.1	1	0	2	0	2	0	13	1	0	14	9	42	0	0	51	70
08:15 AM	1	0	0	0	2	1	0	4	0	3 5	1	10	1	0	12	10	32	0	0	42	60
	1	0	1	0	1	1	0	4	0	3	1	10	2	0					0		
08:30 AM	1	0	1	0	2	0	0	6	0	6	1	11	3	0	15	11	28	0	0	39	62
08:45 AM	2	0	0	0	2	1	0	2	0	3	1	18	0	0	19	12	40	4	0	56	80
Total	4	1	2	0	7	3	0	14	0	17	3	52	5	0	60	42	142	4	0	188	272
Grand Total	4	1	2	2	9	9	0	18	1	28	4	99	11	0	114	61	279	4	2	346	497
Apprch %	44.4	11.1	22.2	22.2		32.1	0	64.3	3.6		3.5	86.8	9.6	0		17.6	80.6	1.2	0.6		
Total %	0.8	0.2	0.4	0.4	1.8	1.8	0	3.6	0.2	5.6	0.8	19.9	2.2	0	22.9	12.3	56.1	0.8	0.4	69.6	

	٨	/lini Sto	rage R	.d	S	Shoppin	g Cent	er		Ironbo	und Rd						
		Eastb	ound			West	oound			North	bound			South	nbound		
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 Fro	m 07:00 AM	to 08:45 A	M - Peak	1 of 1	•												
Peak Hour for Entire In	tersection Be	gins at 07:4	45 AM														
07:45 AM	0	0	0	0	0	0	1	1	0	16	2	18	5	64	0	69	88
08:00 AM	0	1	1	2	1	0	2	3	0	13	1	14	9	42	0	51	70
08:15 AM	1	0	0	1	1	0	4	5	1	10	1	12	10	32	0	42	60
08:30 AM	1	0	1	2	0	0	6	6	1	11	3	15	11	28	0	39	62
Total Volume	2	1	2	5	2	0	13	15	2	50	7	59	35	166	0	201	280
% App. Total	40	20	40		13.3	0	86.7		3.4	84.7	11.9	i	17.4	82.6	0		
PHF	.500	.250	.500	.625	.500	.000	.542	.625	.500	.781	.583	.819	.795	.648	.000	.728	.795

# Peggy Malone & Associates, Inc. (888) 247-8602

File Name: Ironbound Rd and Mini Storage Rd AM

Site Code:

Start Date : 4/11/2017

Page No : 1
Groups Printed- Truck

											Ironbound Rd Ironbound Rd									_		
			Storag					ping C				nbound										
		E	astbou	nd			W	estbou	und		Northbound						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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	
07:30 AM	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	3	0	0	3	5	
07:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	3	1	0	4	6	
Total	1	0	0	0	1	0	0	0	0	0	1	3	0	0	4	0	6	2	0	8	13	
08:00 AM	0	0	2	0	2	0	0	0	0	0	0	7	0	0	7	0	3	0	0	3	12	
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	3	
08:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	4	0	0	4	5	
Total	0	0	2	0	2	0	0	0	0	0	1	10	0	0	11	0	8	0	0	8	21	
Grand Total	1	0	2	0	3	0	0	0	0	0	2	13	0	0	15	0	14	2	0	16	34	
Apprch %	33.3	0	66.7	0		0	0	0	0		13.3	86.7	0	0		0	87.5	12.5	0			
Total %	2.9	0	5.9	0	8.8	0	0	0	0	0	5.9	38.2	0	0	44.1	0	41.2	5.9	0	47.1		

	N	/lini Sto	rage R	d	S	Shoppin	g Cent	er		Ironbo	und Rd						
		Eastb	ound			West	oound			North	bound			South	bound		
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 Fro	om 07:00 AM	I to 08:45 A	M - Peak	1 of 1	•												
Peak Hour for Entire In	ntersection Be	egins at 07:	15 AM														
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:30 AM	1	0	0	1	0	0	0	0	0	1	0	1	0	3	0	3	5
07:45 AM	0	0	0	0	0	0	0	0	1	1	0	2	0	3	1	4	6
08:00 AM	0	0	2	2	0	0	0	0	0	7	0	7	0	3	0	3	12
Total Volume	1	0	2	3	0	0	0	0	1	10	0	11	0	9	1	10	24
% App. Total	33.3	0	66.7		0	0	0		9.1	90.9	0	i	0	90	10		
PHF	.250	.000	.250	.375	.000	.000	.000	.000	.250	.357	.000	.393	.000	.750	.250	.625	.500

File Name: Ironbound Rd and Mini Storage Rd AM

Site Code:

Start Date : 4/11/2017

Page No Groups Printed- Combined

										i i iiiicu	00111	DIFFICU									_
		Mini	Storag	je Rd			Shop	ping (	Center			Iro	nbound	d Rd			Iroi	nbound	d Rd		
		E	astbou	nd				estbou				No	orthbo	und			Sc	outhbo	und		
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	0	0	0	0	0	1	0	0	0	1	0	10	3	0	13	3	13	1	0	17	31
07:15 AM	0	0	0	2	2	2	0	3	0	5	1	10	1	0	12	7	25	0	2	34	53
07:30 AM	1	0	0	0	1	3	0	0	1	4	0	13	0	0	13	4	38	0	0	42	60
07:45 AM	0	0	0	0	0	0	0	1	0	1	1	17	2	0	20	5	67	1	0	73	94
Total	1	0	0	2	3	6	0	4	1	11	2	50	6	0	58	19	143	2	2	166	238
															1						
08:00 AM	0	1	3	0	4	1	0	2	0	3	0	20	1	0	21	9	45	0	0	54	82
08:15 AM	1	0	0	0	1	1	0	4	0	5	1	11	1	0	13	10	32	0	0	42	61
08:30 AM	1	0	1	0	2	0	0	6	0	6	1	13	3	0	17	11	29	0	0	40	65
08:45 AM	2	0	0	0	2	1	0	2	0	3	2	18	0	0	20	12	44	4	0	60	85
Total	4	1	4	0	9	3	0	14	0	17	4	62	5	0	71	42	150	4	0	196	293
C1 T1	۔	,	4	2	10	٩	0	10		20.1		112	- 11	0	120		202		2	362	521
Grand Total	41.7	0.2	22.2	167	12		0	18	1	28	6	112	11	0	129	61	293	6	2	302	531
Apprch %	41.7	8.3	33.3	16.7	2.2	32.1	0	64.3	3.6	5.0	4.7	86.8	8.5	0	242	16.9	80.9	1.7	0.6	co. 2	
Total %	0.9	0.2	0.8	0.4	2.3	1.7	0	3.4	0.2	5.3	1.1	21.1	2.1	0	24.3	11.5	55.2	1.1	0.4	68.2	

	ľ	Mini Stor Eastb		d	5	Shoppin Westl		er			und Rd bound				und Rd		
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 Fro	om 07:00 AM	I to 08:45 A	M - Peak	1 of 1	•							•					
Peak Hour for Entire In	ntersection B	egins at 07:4	45 AM														
07:45 AM	0	0	0	0	0	0	1	1	1	17	2	20	5	67	1	73	94
08:00 AM	0	1	3	4	1	0	2	3	0	20	1	21	9	45	0	54	82
08:15 AM	1	0	0	1	1	0	4	5	1	11	1	13	10	32	0	42	61
08:30 AM	1	0	1	2	0	0	6	6	1	13	3	17	11	29	0	40	65
Total Volume	2	1	4	7	2	0	13	15	3	61	7	71	35	173	1	209	302
% App. Total	28.6	14.3	57.1		13.3	0	86.7		4.2	85.9	9.9		16.7	82.8	0.5		
PHF	.500	.250	.333	.438	.500	.000	.542	.625	.750	.763	.583	.845	.795	.646	.250	.716	.803

File Name: Ironbound Rd and Mini Storage Rd PM

Site Code:

Start Date : 4/11/2017

Page No : 1
Groups Printed- Car

										ups i iii	ica o	ui									_
			Storag					ping (					nbound					nbound			
		E	astbou	nd			W	estbou	und			No	orthbo	und			Sc	outhbo	und		
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	3	0	2	0	5	2	0	26	0	28	0	33	5	0	38	27	31	3	0	61	132
04:15 PM	0	0	0	0	0	3	0	24	0	27	1	42	5	0	48	15	34	1	0	50	125
04:30 PM	1	0	0	0	1	6	0	16	0	22	0	54	3	0	57	20	31	0	0	51	131
04:45 PM	0	0	0	0	0	4	0	43	0	47	0	28	2	0	30	18	30	0	0	48	125
Total	4	0	2	0	6	15	0	109	0	124	1	157	15	0	173	80	126	4	0	210	513
05:00 PM	1	0	1	0	2	5	0	16	0	21	1	53	2	0	56	18	24	1	0	43	122
05:15 PM	1	0	1	0	2	7	0	29	0	36	2	50	4	0	56	11	21	1	0	33	127
05:30 PM	0	0	0	0	0	4	0	10	0	14	1	25	5	0	31	14	25	2	0	41	86
05:45 PM	0	1	1	0	2	2	0	13	0	15	0	24	0	0	24	14	22	2	0	38	79
Total	2	1	3	0	6	18	0	68	0	86	4	152	11	0	167	57	92	6	0	155	414
Grand Total	6	1	5	0	12	33	0	177	0	210	5	309	26	0	340	137	218	10	0	365	927
Apprch %	50	8.3	41.7	0		15.7	0	84.3	0		1.5	90.9	7.6	0		37.5	59.7	2.7	0		
Total %	0.6	0.1	0.5	0	1.3	3.6	0	19.1	0	22.7	0.5	33.3	2.8	0	36.7	14.8	23.5	1.1	0	39.4	

	N	/lini Sto	rage R	.d	S	hoppin	g Cent	er		Ironbo	und Rd			Ironbo	und Rd		
		Eastb	ound			West	oound			North	bound			South	bound		
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 Fro	om 04:00 PM	to 05:45 P	M - Peak	1 of 1													
Peak Hour for Entire In	ntersection Be	egins at 04:	00 PM														
04:00 PM	3	0	2	5	2	0	26	28	0	33	5	38	27	31	3	61	132
04:15 PM	0	0	0	0	3	0	24	27	1	42	5	48	15	34	1	50	125
04:30 PM	1	0	0	1	6	0	16	22	0	54	3	57	20	31	0	51	131
04:45 PM	0	0	0	0	4	0	43	47	0	28	2	30	18	30	0	48	125
Total Volume	4	0	2	6	15	0	109	124	1	157	15	173	80	126	4	210	513
% App. Total	66.7	0	33.3		12.1	0	87.9		0.6	90.8	8.7		38.1	60	1.9		
PHF	.333	.000	.250	.300	.625	.000	.634	.660	.250	.727	.750	.759	.741	.926	.333	.861	.972

File Name: Ironbound Rd and Mini Storage Rd PM

Site Code:

Start Date : 4/11/2017

Page No : 1
Groups Printed- Truck

										PO											
		Mini	Storag	ge Rd			Shop	ping (	Center			Iro	nbound	d Rd			Iro	nbound	d Rd		
		Е	astbou	ınd				estbo				No	orthbo	und			Sc	outhbo	und		
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	4
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	3	0	0	4	5
Total	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	1	7	0	0	8	10
05:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	3	0	0	3	5
05:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	1	0	0	0	0	0	1	1	0	0	2	0	5	0	0	5	8
Grand Total	1	0	0	0	1	0	0	1	0	1	1	2	0	0	3	1	12	0	0	13	18
Apprch %	100	0	0	0		0	0	100	0		33.3	66.7	0	0		7.7	92.3	0	0		
Total %	5.6	0	0	0	5.6	0	0	5.6	0	5.6	5.6	11.1	0	0	16.7	5.6	66.7	0	0	72.2	

	٨	/lini Sto	rage R	ld	S	hoppin	g Cent	er		Ironbo	und Rd			Ironbo	und Rd		
		Eastb	ound			West	oound			North	bound			South	bound		
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 Fro	om 04:00 PM	to 05:45 P	M - Peak	1 of 1	•												
Peak Hour for Entire In	ntersection Be	egins at 04:	15 PM														
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	4
04:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	1	1	0	0	0	0	1	3	0	4	5
05:00 PM	0	0	0	0	0	0	0	0	1	1	0	2	0	3	0	3	5
Total Volume	0	0	0	0	0	0	1	1	1	2	0	3	1	10	0	11	15
% App. Total	0	0	0		0	0	100		33.3	66.7	0		9.1	90.9	0		
PHF	.000	.000	.000	.000	.000	.000	.250	.250	.250	.500	.000	.375	.250	.625	.000	.688	.750

File Name: Ironbound Rd and Mini Storage Rd PM

Site Code:

Start Date : 4/11/2017

Page No Groups Printed- Combined

										Fillited	- Com	omeu									
		Mini	Storag	ge Rd			Shop	ping (	Center			Iro	nbound	d Rd			Iro	nbound	d Rd		
		Е	astbou	ınd				'estboi				No	orthbo	und			Sc	outhbo	und		
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	3	0	2	0	5	2	0	26	0	28	0	33	5	0	38	27	31	3	0	61	132
04:15 PM	0	0	0	0	0	3	0	24	0	27	1	42	5	0	48	15	38	1	0	54	129
04:30 PM	1	0	0	0	1	6	0	16	0	22	0	55	3	0	58	20	31	0	0	51	132
04:45 PM	0	0	0	0	0	4	0	44	0	48	0	28	2	0	30	19	33	0	0	52	130
Total	4	0	2	0	6	15	0	110	0	125	1	158	15	0	174	81	133	4	0	218	523
05:00 PM	1	0	1	0	2	5	0	16	0	21	2	54	2	0	58	18	27	1	0	46	127
05:15 PM	2	0	1	0	3	7	0	29	0	36	2	50	4	0	56	11	23	1	0	35	130
05:30 PM	0	0	0	0	0	4	0	10	0	14	1	25	5	0	31	14	25	2	0	41	86
05:45 PM	0	1	1	0	2	2	0	13	0	15	0	24	0	0	24	14	22	2	0	38	79
Total	3	1	3	0	7	18	0	68	0	86	5	153	11	0	169	57	97	6	0	160	422
Grand Total	7	1	5	0	13	33	0	178	0	211	6	311	26	0	343	138	230	10	0	378	945
Apprch %	53.8	7.7	38.5	0		15.6	0	84.4	0		1.7	90.7	7.6	0		36.5	60.8	2.6	0		
Total %	0.7	0.1	0.5	0	1.4	3.5	0	18.8	0	22.3	0.6	32.9	2.8	0	36.3	14.6	24.3	1.1	0	40	

	N	/lini Sto	rage R	ld	S	Shoppin	g Cent	er		Ironbo	und Rd			Ironbo	und Rd		
		Eastb	ound			West	oound			North	bound			South	bound		
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 Fro	om 04:00 PM	to 05:45 P	M - Peak	1 of 1	•												
Peak Hour for Entire In	ntersection Be	egins at 04:0	00 PM														
04:00 PM	3	0	2	5	2	0	26	28	0	33	5	38	27	31	3	61	132
04:15 PM	0	0	0	0	3	0	24	27	1	42	5	48	15	38	1	54	129
04:30 PM	1	0	0	1	6	0	16	22	0	55	3	58	20	31	0	51	132
04:45 PM	0	0	0	0	4	0	44	48	0	28	2	30	19	33	0	52	130
Total Volume	4	0	2	6	15	0	110	125	1	158	15	174	81	133	4	218	523
% App. Total	66.7	0	33.3		12	0	88		0.6	90.8	8.6		37.2	61	1.8		
PHF	.333	.000	.250	.300	.625	.000	.625	.651	.250	.718	.750	.750	.750	.875	.333	.893	.991

**AM PEAK HOUR** Date: Wed, 4/11/18

COUNTS CONDUCTED BY PEGGY MALONE & ASSC.

LOCATION: Ironbound Road/Ironbound Road Stub/Courthouse Commons Entrance

EB EB EB WB WB WB NB NB NB SB SB

TIME	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
TRUCKS	1	0	2	0	0	0	1	10	0	0	9	1	
TOTAL	2	1	4	2	0	13	3	61	7	35	173	1	
%TRUCKS	50%	0%	50%	0%	#####	0%	33%	16%	0%	0%	5%	100%	

PM PEAK HOUR Date: Wed, 4/11/18

COUNTS CONDUCTED BY PEGGY MALONE & ASSC.

LOCATION: Ironbound Road/Ironbound Road Stub/Courthouse Commons Entrance

	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB	
TIME	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
TRUCKS	0	0	0	0	0	1	1	2	0	1	10	0	
TOTAL	4	0	2	15	0	110	1	158	15	81	133	4	
%TRUCKS	0%	#####	0%	0%	#####	1%	100%	1%	0%	1%	8%	0%	

SB

**AM PEAK HOUR** Date: Wed, 4/11/18

COUNTS CONDUCTED BY PEGGY MALONE & ASSC.

LOCATION: Ironbound Road/Ironbound Road Stub/Courthouse Commons Entrance

PEAK HOUR FACTOR BY APPROACH

	EB	WB	NB	SB	
7:45 to 8:00	0	1	20	73	
8:00 to 8:15	4	3	21	54	
8:15 to 8:30	1	5	13	42	
8:30 to 8:45	2	6	17	40	
PHF	0.44	0.63	0.85	0.72	

Exhibit C1

**PM PEAK HOUR** Date: Wed, 4/11/18 COUNTS CONDUCTED BY PEGGY MALONE & ASSC.

LOCATION: Ironbound Road/Ironbound Road Stub/Courthouse Commons Entrance

#### PEAK HOUR FACTOR BY APPROACH

	EB	WB	NB	SB	
4:00 to 4:15	5	28	38	61	
4:15 to 4:30	0	27	48	54	
4:30 to 4:45	1	22	58	51	
4:45 to 5:00	0	48	30	52	
PHF	0.30	0.65	0.75	0.89	

Exhibit C2

Date:	4/11/2017	Observer: T. Ogg		
Intersection	Name: Ironbound Rd. &	Monticello Ave.		
AM Shift: 7:0	00-9:00 AM / PM SHIFT:		landa de la Dil	<u> </u>
	l oft /	Approacn: NB 1 lane)	Ironbound Rd.	١
Time:	# veh	distance (feet)	Left/Thru/Right (1 lane # veh	distance (feet)
7:00	1	25	1	25
	0	-	1	25
	0	-	2	50
	1	25	0	-
	0	-	2	50
	1	25	0	-
	0	-	1	25
	0	-	2	50
7:15	1	25	1	25
	0	-	2	75
	0	-	1	25
	0	-	1	25
	0	-	1	25
	1	25	0	-
7:30	1	25	1	25
	0	-	2	50
	1	25	0	-
	0	-	1	25
	1	25	3	125
	1	25	3	75
7:45	0	-	1	25
	1	25	1	25
	2	50	0	-
	1	25	2	50
	1	25	1	25
	3	75	3	100
8:00	0	-	3	100
	0	-	1	25
	2	100	2	50
	1	75	2	100
	1	25	2	75
	1	25	0	-
8:15	0	-	3	75
	1	25	0	-
	2	50	2	50
	3	100	0	-
	1	25	1	25
	1	25	1	25
8:30	0	-	2	75

Date:	4/11/2017	Observer: T. Ogg		
	Name: Ironbound Rd.			
AM Shift: 7:	00-9:00 AM / PM SHIF			
			B Ironbound Rd.	
		t (1 lane)	Left/Thru/Right (1 la	<u>{</u>
Time:	# veh	distance (feet)	# veh	distance (feet)
	1	25	1	25
	1	25	0	-
	0	-	3	100
	0	-	1	25
	2	50	0	-
	1	25	1	25
	0	-	1	25
8:45	2	50	1	25
	1	25	0	-
	1	25	0	-
	1	25	2	50
	0	-	2	50
	1	25	0	-
	1	25	1	25
	3	75	3	75
	9	5TH PERCENTILE QUE	JE AM COUNT	•
2 HOUR	2.35	83.75	3	100
7 TO 8	1.75	58.75	3	100
8 TO 9	2.65	100	3	100
Notes:	/	501 H		
	Vehicles 25', Medium Trucks			
oignalized II	ntersection: Measure all Que	eues at green light start		

<sup>3.</sup> Approach movements with more than one lane - measured queue distance of longest lane, with # of vehicles in both lanes

Date:	4/11/2017	Observer: T. Ogg			
	Name: Ironbound Rd. &				
AM Shift: 7:	00-9:00 AM / PM SHIFT:				
			B Ironbound Rd.		
<del></del> .		(1 lane)	Left/Thru/Right (1 I		
Time:	# veh	distance (feet)	# veh	distance (feet)	
4:00	1	25	5	125	
	4	100	8	200	
	3	75	4	100	
	4	100	5	125	
	8	200	6	150	
	3	75	2	50	
4:15	4	100	4	100	
	5	125	1	25	
	5	125	3	75	
	5	125	10	250	
	3	75	5	125	
	3	75	6	150	
4:30	5	125	2	50	
	1	25	5	125	
	2	50	5	125	
	4	100	6	150	
	2	50	3	75	
	1	25	5	125	
	4	100	6	150	
4:45	3	75	4	125	
	2	50	2	50	
	6	150	5	125	
	3	75	5	125	
	6	150	7	175	
	7	175	4	100	
5:00	2	50	3	100	
	5	125	11	275	
	2	50	0	0	
	6	175	6	150	
	4	100	2	50	
	4	100	9	225	
	3	75	4	100	
5:15	6	150	0	0	
	2	50	9	225	
	4	100	2	50	
	9	225	9	225	
	5	125	3	75	
	4	100	3	75	
	5	125	4	100	

Date:	4/11/2017	Observer: T. Ogg			
	Name: Ironbound Rd	& Monticello Ave.			
AM Shift: 7:0	00-9:00 AM / PM SHI	T: 4:00-6:00 PM			
		Approach: N	B Ironbound Rd.		
	Le	ft (1 lane)	Left/Thru/Right (1 I	ane)	
Time:	# veh	distance (feet)	# veh	distance (feet)	
5:30	4	100	2	50	4
	1	25	3	75	4
	1	25	3	75	4
	3	75	4	100	4
	2	50	4	100	4
	5	125	3	75	4
5:45	0	0	1	25	4
	2	50	1	25	4
	1	25	0	0	4
	5	125	3	75	4
	5	125	8	200	5
	0	0	2	50	5
		95TH PERCENTILE QUE	UE PM COUNT	•	
2 HOUR	6.5	175	9	225	
4 TO 5	6.8	170	7.8	195	
5 TO 6	6	168.75	9	225	
					$\Box$
Notes:	/alcala a OEL Madison T L	- 501 H T 751			
	/ehicles 25', Medium Truck ntersection: Measure all Qu				$\dashv$
		ne lane - measured queue dist	ance of languet lane, with	# of vohicles in both lanes	-

<sup>3.</sup> Approach movements with more than one lane - measured queue distance of longest lane, with # of vehicles in both lanes

Intersection												
Int Delay, s/veh	1.9											
•												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			र्स	- 7		4	
Traffic Vol, veh/h	2	1	4	2	0	13	3	61	7	35	173	1
Future Vol, veh/h	2	1	4	2	0	13	3	61	7	35	173	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	10	-	-	-
Veh in Median Storage	, # -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	44	44	44	63	63	63	85	85	85	72	72	72
Heavy Vehicles, %	50	0	50	0	0	0	33	16	0	0	5	100
Mvmt Flow	5	2	9	3	0	21	4	72	8	49	240	1
Major/Minor	line-2			Minor1			Major1			/loior?		
	/linor2	407		Minor1	440		Major1	^		Major2	^	^
Conflicting Flow All	434	427	241	424	419	72	241	0	0	80	0	0
Stage 1	339	339	-	80	80	-	-	-	-	-	-	-
Stage 2	95	88	-	344	339	-	4 40	-	-	-	-	-
Critical Hdwy	7.6	6.5	6.7	7.1	6.5	6.2	4.43	-	-	4.1	-	-
Critical Hdwy Stg 1	6.6	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.6	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.95	4	3.75	3.5	4	3.3	2.497	-	-	2.2	-	-
Pot Cap-1 Maneuver	458	523	693	544	528	996	1164	-	-	1531	-	-
Stage 1	586	643	-	934	832	-	-	-	-	-	-	-
Stage 2	806	826	-	676	643	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	435	502	693	518	506	996	1164	-	-	1531	-	-
Mov Cap-2 Maneuver	435	502	-	518	506	-	-	-	-	-	-	-
Stage 1	584	619	-	930	829	-	-	-	-	-	-	-
Stage 2	786	823	-	640	619	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	11.5			9.2			0.3			1.2		
HCM LOS	В			A								
Minor Lane/Major Mvm	t	NBL	NBT	NBR I	EBLn1V	VBLn1	SBL	SBT	SBR			
Capacity (veh/h)		1164	_	_	566	887	1531	_	_			
HCM Lane V/C Ratio		0.003	_	_		0.027		-	<u>-</u>			
HCM Control Delay (s)		8.1	0		11.5	9.2	7.4	0				
HCM Lane LOS		Α	A	_	11.3 B	9.2 A	Α.4	A	_			
HCM 95th %tile Q(veh)		0	-	<u>-</u>	0.1	0.1	0.1	-	_			
How sour while Q(ven)		U		_	0.1	0.1	0.1					

Intersection												
Int Delay, s/veh	4.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			ની	7		4	
Traffic Vol, veh/h	4	0	2	15	0	110	1	158	15	81	133	4
Future Vol, veh/h	4	0	2	15	0	110	1	158	15	81	133	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	10	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	30	30	30	65	65	65	75	75	75	89	89	89
Heavy Vehicles, %	0	0	0	0	0	1	100	1	0	1	8	0
Mvmt Flow	13	0	7	23	0	169	1	211	20	91	149	4
Major/Minor N	linor2		ľ	Minor1		1	Major1		ľ	Major2		
Conflicting Flow All	641	566	151	550	548	211	153	0	0	231	0	0
Stage 1	333	333	-	213	213	-	-	-	-	-	-	-
Stage 2	308	233	-	337	335	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.21	5.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.309	3.1	-	-	2.209	-	-
Pot Cap-1 Maneuver	390	436	901	449	447	832	998	-	-	1343	-	-
Stage 1	685	647	-	794	730	-	-	-	-	-	-	-
Stage 2	706	716	-	681	646	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	293	403	901	420	413	832	998	-	-	1343	-	-
Mov Cap-2 Maneuver	293	403	-	420	413	-	-	-	-	-	-	-
Stage 1	684	599	-	793	729	-	-	-	-	-	-	-
Stage 2	562	715	-	626	598	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	15.1			11.5			0			2.9		
HCM LOS	С			В								
Minor Lane/Major Mvmt		NBL	NBT	NBR I	EBLn1V	VBLn1	SBL	SBT	SBR			
Capacity (veh/h)		998	-	-	378	744	1343	-	-			
HCM Lane V/C Ratio		0.001	-	-	0.053	0.258	0.068	-	-			
HCM Control Delay (s)		8.6	0	-	15.1	11.5	7.9	0	-			
HCM Lane LOS		Α	Α	-	С	В	Α	Α	-			
HCM 95th %tile Q(veh)		0	-	-	0.2	1	0.2	-	-			

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			र्स	7		4	
Traffic Vol, veh/h	2	1	4	2	0	13	3	65	7	37	185	1
Future Vol, veh/h	2	1	4	2	0	13	3	65	7	37	185	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	_	-	10	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	50	0	50	0	0	0	33	16	0	0	5	100
Mvmt Flow	2	1	4	2	0	14	3	71	8	40	201	1
Major/Minor N	1inor2		1	Minor1			Major1		N	Major2		
Conflicting Flow All	370	367	202	361	359	71	202	0	0	79	0	0
Stage 1	282	282	-	77	77	-	-	-	-	-	-	-
Stage 2	88	85	-	284	282	-	-	-	-	-	-	-
Critical Hdwy	7.6	6.5	6.7	7.1	6.5	6.2	4.43	-	-	4.1	-	-
Critical Hdwy Stg 1	6.6	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.6	5.5	-	6.1	5.5	_	-	-	-	-	-	-
Follow-up Hdwy	3.95	4	3.75	3.5	4	3.3	2.497	-	-	2.2	-	-
Pot Cap-1 Maneuver	508	565	731	598	571	997	1205	-	-	1532	-	-
Stage 1	632	681	-	937	835	-	-	-	-	-	-	-
Stage 2	814	828	-	727	681	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	489	547	731	579	553	997	1205	-	-	1532	-	-
Mov Cap-2 Maneuver	489	547	-	579	553	-	-	-	-	-	-	-
Stage 1	630	661	-	934	832	-	-	-	-	-	-	-
Stage 2	800	826	-	701	661	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	10.9			9			0.3			1.2		
HCM LOS	В			A								
Minor Lane/Major Mvmt	+	NBL	NBT	NRR I	EBLn1V	VRI n1	SBL	SBT	SBR			
Capacity (veh/h)		1205	-	-	615	909	1532	- 100	ODIN			
HCM Lane V/C Ratio		0.003	_			0.018		_	-			
HCM Control Delay (s)		0.003	0	-	10.9	9	7.4	0				
HCM Lane LOS		A	A	-	10.9 B	A	7.4 A	A	-			
HCM 95th %tile Q(veh)		0	-		0	0.1	0.1	-				
HOW JOHN JOHNE Q(VEH)		U			U	0.1	0.1	_	_			

Intersection												
Int Delay, s/veh	3.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4		1100	4	1, DI	,,,,,,	4	7	UDL	4	UDIT
Traffic Vol, veh/h	4	0	2	16	0	117	1	169	16	86	142	4
Future Vol, veh/h	4	0	2	16	0	117	1	169	16	86	142	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	10	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	1	100	1	0	1	8	0
Mvmt Flow	4	0	2	17	0	127	1	184	17	93	154	4
Major/Minor N	linor2		1	Minor1		1	Major1		1	Major2		
Conflicting Flow All	600	545	156	529	530	184	158	0	0	201	0	0
Stage 1	342	342	-	186	186	-	-	-	-	-	_	-
Stage 2	258	203	-	343	344	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.21	5.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.309	3.1	-	-	2.209	-	-
Pot Cap-1 Maneuver	416	449	895	463	457	861	993	-	-	1377	-	-
Stage 1	677	642	-	820	750	-	-	-	-	-	-	-
Stage 2	751	737	-	676	640	-	-	-	-	-	-	-
Platoon blocked, %	00.4	44-	005	10-	100	004	000	-	-	40==	-	-
Mov Cap-1 Maneuver	334	415	895	435	423	861	993	-	-	1377	-	-
Mov Cap-2 Maneuver	334	415	-	435	423	-	-	-	-	-	-	-
Stage 1	676	594	-	819	749	-	-	-	-	-	_	-
Stage 2	639	736	-	624	593	-	<del>-</del>	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	13.7			10.8			0			2.9		
HCM LOS	В			В								
Minor Lane/Major Mvmt		NBL	NBT	NBR I	EBLn1V	VBLn1	SBL	SBT	SBR			
Capacity (veh/h)		993	-	-	422	770	1377	-	-			
HCM Lane V/C Ratio		0.001	-	-		0.188		-	-			
HCM Control Delay (s)		8.6	0	-	13.7	10.8	7.8	0	-			
HCM Lane LOS		Α	Α	-	В	В	Α	Α	-			
HCM 95th %tile Q(veh)		0	-	-	0	0.7	0.2	-	-			

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			ર્ન	7		4	
Traffic Vol, veh/h	43	1	12	2	0	13	11	65	7	37	185	43
Future Vol, veh/h	43	1	12	2	0	13	11	65	7	37	185	43
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	10	-	-	-
Veh in Median Storage	e,# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	5	0	10	0	0	0	15	16	0	0	5	5
Mvmt Flow	47	1	13	2	0	14	12	71	8	40	201	47
Major/Minor	Minor2		ľ	Minor1			Major1		N	Major2		
Conflicting Flow All	411	408	225	407	423	71	248	0	0	79	0	0
Stage 1	305	305	-	95	95	_		-	-	-	-	-
Stage 2	106	103	-	312	328	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.5	6.3	7.1	6.5	6.2	4.25	-	-	4.1	-	-
Critical Hdwy Stg 1	6.15	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4	3.39	3.5	4	3.3	2.335	-	-	2.2	-	-
Pot Cap-1 Maneuver	546	536	795	558	526	997	1245	-	-	1532	-	-
Stage 1	698	666	-	917	820	-	-	-	-	-	-	-
Stage 2	892	814	-	703	651	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	522	515	795	531	505	997	1245	-	-	1532	-	-
Mov Cap-2 Maneuver	522	515	-	531	505	-	-	-	-	-	-	-
Stage 1	691	646	-	908	812	-	-	-	-	-	-	-
Stage 2	871	806	-	670	631	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	12.2			9.1			1			1		
HCM LOS	В			Α								
Minor Lane/Major Mvm	nt	NBL	NBT	NBR I	EBLn1V	VBLn1	SBL	SBT	SBR			
Capacity (veh/h)		1245	-	-	563	893	1532	-	-			
HCM Lane V/C Ratio		0.01	-	-		0.018		-	-			
HCM Control Delay (s)		7.9	0	-	12.2	9.1	7.4	0	-			
HCM Lane LOS		A	A	-	В	Α	Α	A	-			
HCM 95th %tile Q(veh	)	0	-	-	0.4	0.1	0.1	-	-			
,												

Intersection												
Int Delay, s/veh	4.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			ની	7		4	
Traffic Vol, veh/h	46	0	10	16	0	117	9	169	16	86	142	45
Future Vol, veh/h	46	0	10	16	0	117	9	169	16	86	142	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	10	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	1	15	1	0	1	8	0
Mvmt Flow	50	0	11	17	0	127	10	184	17	93	154	49
Major/Minor N	linor2		ľ	Minor1			Major1		ľ	Major2		
Conflicting Flow All	641	586	179	574	593	184	203	0	0	201	0	0
Stage 1	365	365	-	204	204	-		-	-		-	-
Stage 2	276	221	-	370	389	_	-	-	_	_	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.21	4.25	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.309	2.335	-	-	2.209	-	-
Pot Cap-1 Maneuver	390	425	869	433	421	861	1295	-	-	1377	-	-
Stage 1	658	627	-	803	737	-	-	-	-	-	-	-
Stage 2	735	724	-	654	612	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	311	389	869	400	385	861	1295	-	-	1377	_	-
Mov Cap-2 Maneuver	311	389	-	400	385	-	-	-	-	-	-	-
Stage 1	652	579	-	796	730	-	-	-	-	-	-	-
Stage 2	621	717	-	596	565	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	17.4			10.9			0.4			2.5		
HCM LOS	С			В								
Minor Lane/Major Mvmt		NBL	NBT	NBR I	EBLn1V	VBLn1	SBL	SBT	SBR			
Capacity (veh/h)		1295	-	-	351	756	1377	-	-			
HCM Lane V/C Ratio		0.008	-	_		0.191		-	_			
HCM Control Delay (s)		7.8	0	-	17.4	10.9	7.8	0	-			
HCM Lane LOS		Α	A	-	С	В	Α	A	_			
HCM 95th %tile Q(veh)		0	-	-	0.6	0.7	0.2	-	-			

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LT	LTR
Maximum Queue (ft)	62	28	13	26
Average Queue (ft)	11	10	0	3
95th Queue (ft)	44	29	7	16
Link Distance (ft)	584	392	809	409
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)			0	
Queuing Penalty (veh)			0	

# **Network Summary**

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	39	70	54
Average Queue (ft)	6	30	12
95th Queue (ft)	26	52	37
Link Distance (ft)	584	392	409
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

# **Network Summary**

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LT	LTR
Maximum Queue (ft)	61	28	13	26
Average Queue (ft)	11	10	0	3
95th Queue (ft)	43	29	7	16
Link Distance (ft)	584	392	809	409
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)			0	
Queuing Penalty (veh)			0	

# **Network Summary**

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	34	79	54
Average Queue (ft)	5	32	13
95th Queue (ft)	23	57	40
Link Distance (ft)	584	392	409
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

# **Network Summary**

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LT	LTR
Maximum Queue (ft)	63	28	28	34
Average Queue (ft)	28	10	2	3
95th Queue (ft)	55	29	13	18
Link Distance (ft)	584	392	809	409
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)			0	
Queuing Penalty (veh)			0	

# **Network Summary**

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LT	LTR
Maximum Queue (ft)	60	60	24	55
Average Queue (ft)	27	31	1	14
95th Queue (ft)	52	52	9	42
Link Distance (ft)	584	392	809	409
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)			0	
Queuing Penalty (veh)			0	

# **Network Summary**

From: Dexter Williams

To: "Brooks, Glenn (VDOT)"; "Paul Holt"
Cc: "Mark Rinaldi"; "Vernon Geddy"

Subject: RE: Radio Property

Date: Tuesday, February 7, 2017 9:23:00 AM

Attachments: DRW 01-02-17 Radio Property TIA Scope to JCC&VDOT.PDF

#### Glenn & Paul:

I have not received any comment on the TIA scope for the Radio Property.

Please advise if you have comments or that the scope is adequate.

Paul:

Do you have a planner assigned to this project?

Thanks.

Dexter R. Williams, P.E. DRW Consultants, LLC 2319 Latham Place Midlothian, VA 23113 804-794-7312

From: Dexter Williams [mailto:dexrwil@verizon.net] Sent: Wednesday, January 11, 2017 2:38 PM

**To:** 'Brooks, Glenn (VDOT)'; 'Paul Holt' **Cc:** 'Mark Rinaldi'; 'Vernon Geddy'

**Subject:** Radio Property

Glenn:

Enclosed is workscope Radio Property per our telephone discussion.

Please confirm before we proceed.

Thanks.

Dexter R. Williams, P.E. DRW Consultants, LLC 2319 Latham Place Midlothian, VA 23113 804-794-7312



#### **MEMORANDUM**

TO: Glenn Brooks, VDOT Area Land Use Engineer

FROM: Dexter R.Williams

SUBJECT: TIA For Development Of Radio Property

DATE: January 2, 2017

This memo has been provided to define the elements of the study.

#### I. TRAFFIC COUNT AND ANALYSIS LOCATION

1. Rt. 615 Ironbound Road/Rt. 784 Ironbound stub/Courthouse Commons entrance Turning movement counts for total vehicles and truck traffic will be recorded in 15 minute intervals from 7 to 9 AM and 4 to 6 PM.

#### II. TRAFFIC ANALYSIS SCENARIOS

There are three AM and PM peak hour analysis scenarios proposed:

- 1. 2017 Existing Traffic
- 2. 2024 Background Traffic (one year build out of site plus six year forecast) plus trip assignment for GSquare Inc property 4007 Ironbound Road.
- 3. 2024 Traffic With Site Development

VDOT daily traffic Ironbound Road will be evaluated for linear regression analysis growth trend. If trend is negative, a default value of 1% average annual linear growth rate will be applied. This translates to a 1.07 growth factor applied to 2017 counts to produce 2024 background traffic.

#### III. SITE TRIP GENERATION AND DISTRIBUTION

Trip generation and distribution for the site using <u>Trip Generation Manual</u>, <u>9th Edition</u> (TGM9), by the Institute Of Transportation Engineers.

Trip distribution based on turning movements on Rt. 784 Ironbound stub at Rt. 615 Ironbound Road.

#### IV. SYNCHRO 9 ANALYSIS

1. HCM2010 unsignalized LOS and queuing.

#### V. SIMTRAFFIC ANALYSIS

- 1. Number of Intervals: Two: 10 minutes seeding, 60 minute recording
- 2. Number of Runs: Five

**EXHIBIT X2** 

#### Supplement to

September 18, 2018 Traffic Impact Analysis for Former Radio Station Property (Z-18-0006, Ironbound Crossing)

December 13, 2018

In response to County Staff comment #12 in a letter dated December 5, 2018, the Applicant offers the following supplemental information, as requested:

**Comment:** Please include information about the characteristics of the Monticello/Ironbound signal

**Response:** The Monticello/Ironbound signal is part of a coordinated system on Monticello Avenue from Ironbound Road/City of Williamsburg on the east to News Road on the west. This nine-signal coordination system on Monticello Avenue is operated by InSync adaptive traffic control system (ATCS) software. ATCS systems do not have any fixed cycle lengths or coordination like conventional coordinated systems (CCS). CCS has fixed cycle length and mainline coordination controls (typically different plans for different times of day) and can be directly replicated in analysis software by using the established signal timing plans.

With ATCS, the only way to be certain of how a coordinated system is actually performing (i.e., setting cycle length and coordination) is to get InSync reports after the fact. Then analysis software can be programmed (at least theoretically) with the actual record of cycle length and coordination for that report period. Actual experience has shown that ATCS cycle lengths, which greatly affect traffic LOS, can vary widely and produce wildly different results for different weeks, if not different days of one week. ATCS is a relatively new innovation in Hampton Roads; examples of a traffic study based on actual ATCS reports are not known to exist.

**Comment:** Why was a level of service analysis not conducted?

**Response:** A LOS analysis was not conducted because:

- LOS analysis for Monticello/Ironbound was not included in the Jan. 2, 2017 workscope reviewed with VDOT and JCC.
- This site generates less than 100 vehicles per hour, which is below the zoning threshold to require a TIA.
- Queuing analysis on northbound Ironbound at the Monticello signal was included in the study to address the adequacy of that signal to accommodate site traffic.

#### **AGENDA ITEM NO. H.1.**

#### **ITEM SUMMARY**

DATE: 1/2/2019

TO: The Planning Commission

FROM: Paul D. Holt, III, Director of Community Development and Planning

Planning Director's Report - January 2019 SUBJECT:

#### **ATTACHMENTS:**

Description Type

D Memorandum Cover Memo

Spreadsheet Listing New Applications Received Exhibit D

#### **REVIEWERS:**

Department	Reviewer	Action	Date
Planning Commission	Holt, Paul	Approved	12/19/2018 - 11:24 AM
Planning Commission	Holt, Paul	Approved	12/19/2018 - 11:25 AM
Publication Management	Daniel, Martha	Approved	12/19/2018 - 11:40 AM
Planning Commission	Holt, Paul	Approved	12/19/2018 - 1:28 PM

### PLANNING DIRECTOR'S REPORT January 2019

This report summarizes the status of selected Department of Community Development activities during the past month.

#### • Planning

➤ Monthly Case Report: For a list of all cases received in the last month, please see the attached documents.

#### **Board Action Results:**

- o December 11, 2018
  - No cases
- The Planning Division is pleased to announce the hiring of Thomas Wysong to fill the Planner II position. A life-long resident of Virginia, Thomas grew up in Richmond before attending William and Mary (BA in History) and Virginia Commonwealth University (MA in Urban and Regional Planning). Thomas has worked the past three years as the Planner for Orange County and is a member of the American Institute of Certified Planners. He is married to Erin Morris Wysong, who works as the References and Sciences Librarian for the University of Mary Washington. In his free time, Thomas enjoys fishing, reading, and serving in his church's youth ministry. We're excited to welcome him aboard!

# New Cases for January 2019

Case Type	Plan Number	Case Title	Address	Description	Assigned To	District
	C-18-0067	202 Alesa Drive Preschool	202 ALESA DR	Proposed preschool in existing church building at 202 Alesa Drive.	Haynes, Tori	Jamestown
	C-18-0112	3097 Ironbound Road Tourist Home	3097 IRONBOUND RD	Proposed short-term rental at 3097 Ironbound Road.	Haynes, Tori	Berkeley
C-18-01: C-18-01: C-18-01:	C-18-0113	7341 Richmond Road Rezoning	7341 RICHMOND RD	Proposed rezoning of 7341 Richmond Road from R2 to B1.	Leininger, Thomas	Stonehouse
	C-18-0114	2396 John Tyler Hwy. Greenhouses	2396 JOHN TYLER HWY	Proposed greenhouses and geothermal pump at 2396 John Tyler Hwy.	Ribeiro, Jose	Berkeley
	C-18-0115	127 and 123 Magruder Ave. Subdivision	127 MAGRUDER AVE	Proposed subdivision of 127 and 123 Magruder Ave.	Whyte, Scott	Roberts
	C-18-0116	2280 Lake Powell Rd Rezoning	2280 LAKE POWELL RD	Proposed rezoning of 228 Lake Powell Road from R8 to R2.	Haynes, Tori	Roberts
	C-18-0118	4704 Lady Slipper Path Fence	4704 LADY SLIPPER PATH	Proposed privacy fence in scenic easement at 4704 Lady Slipper Path.	Baruch, Alex	Jamestown
Subdivision S Subdivision S S	S-18-0083	7083 Menzels Road Minor Subdivision Lots 1-5	7083 MENZELS RD	Subdivision of lots 1-5 of 7083 Menzels Road.	Leininger, Thomas	Powhatan
	S-18-0084	7083 Menzels Road Minor Subdivision Lots 5-9	7083 MENZELS RD	Subdivision of lots 5-9 of 7083 Menzels Road.	Leininger, Thomas	Powhatan
	S-18-0085	125 & 126 Joanne Ct. BLE	126 JOANNE CT	Boundary line extinguisment between 135 & 126 Joanne Ct.	Leininger, Thomas	Stonehouse
	S-18-0088	The Promenade at John Tyler Phase 18 - Courthouse Plat	5304 JOHN TYLER HWY	Courthouse plat for The Promenade at John Tyler Phase 18.	Cook, Ellen	Berkeley
	S-18-0089	The Promenade at John Tyler Phase 19 - Courthouse Plat	5304 JOHN TYLER HWY	Courthouse plat for The Promenade at John Tyler Phase 19.	Cook, Ellen	Berkeley
	S-18-0090	3449 John Tyler Hwy. Conservation Easement Plat	3449 JOHN TYLER HWY	Easement plat for 3449 John Tyler Hwy.	Ribeiro, Jose	Berkeley
	S-18-0091	9210 Old Stage Rd. & 9131 Barhamsville Rd. BLA	9131 BARHAMSVILLE RD S	Boundary line adjusment between 9210 Old Stage Rd. and 9131 Barhamsville Rd.	Whyte, Scott	Stonehouse
SP-18 SP-18 Site Plan SP-18 SP-18 SP-18	SP-18-0110	Williamsburg Winery Veranda and Terrace SP Amend.	5800 WESSEX HUNDRED	Site plan amendment for 2 story veranda and terrace at Williamsburg Winery.	Ribeiro, Jose	Roberts
	SP-18-0125	7790 Richmond Road Screening SP Amend.	7790 RICHMOND RD	Site plan amendment for screening of storage and equipment at 7790 Richmond Rd.	Whyte, Scott	Stonehouse
	SP-18-0129	Busch Gardens - France Culinary Cart	7851 POCAHONTAS TRL	Site plan amendment for the installation of a food station at Busch Gardens.	Leininger, Thomas	Roberts
	SP-18-0134	Nice Commercial Properties LLC	129 INDUSTRIAL BLVD	Site plan for Nice Commercial Properties LLC at 129 Industrial Blvd.	Ribeiro, Jose	Stonehouse
	SP-18-0136	Jacobs Industrial Park, Parcels 8A and 8B SP Amend.	267 INDUSTRIAL BLVD	Site plan amendment for 263 and 267 Industrial Blvd.	Baruch, Alex	Stonehouse
	SP-18-0138	Pointe at Jamestown Common Area Shed	2676 SIR THOMAS WAY	Site plan amendment for a storage shed at The Pointe At Jamestown subdivision.	Baruch, Alex	Berkeley
	SP-18-0142	10039 Old Stage Road Tower Generator SP Amend.	10039 OLD STAGE RD	Site plan amendment for installing a diesel generator at 10039 Old Stage Rd.	Ribeiro, Jose	Stonehouse