

STAFFORD COUNTY

MASTER REDEVELOPMENT PLAN



VOLUME II: BOSWELL'S CORNER

OCTOBER 2009 | ADOPTED MAY 17, 2011



CMSSARCHITECTS

BOARD OF SUPERVISORS
COUNTY OF STAFFORD
STAFFORD, VIRGINIA

RESOLUTION

At a regular meeting of the Stafford County Board of Supervisors (the Board) held in the Board Chambers, Stafford County Administration Center, Stafford, Virginia, on the 17th day of May, 2011:

<u>MEMBERS:</u>	<u>YOTE:</u>
Mark Dudenhefer, Chairman	Yes
Paul V. Milde III, Vice Chairman	No
Harry E. Crisp II	Yes
Gary F. Snellings	No
Cord A. Sterling	Yes
Susan B. Stimpson	Yes
Robert "Bob" Woodson	Yes

On motion of Mr. Sterling, seconded by Mr. Crisp, which carried by a vote of 5 to 2, the following was adopted:

A RESOLUTION TO AMEND THE STAFFORD COUNTY COMPREHENSIVE PLAN IN ACCORDANCE WITH SECTION 15.2-2229 AND SECTION 15.2-2230 OF THE CODE OF VIRGINIA (1950), AS AMENDED, BY ADOPTING THE PROPOSED AMENDMENT, AS ADVERTISED, INCLUDING A NEW ECONOMIC DEVELOPMENT ELEMENT, ENTITLED "STAFFORD COUNTY MASTER REDEVELOPMENT PLAN," DATED OCTOBER, 2009, AS REVISED BY THE PLANNING COMMISSION AT ITS MEETING ON MARCH 15, 2011

WHEREAS, under Section 15.2-2229 of the Code of Virginia (1950), as amended, the Board may amend its Comprehensive Plan; and

WHEREAS, under Section 15.2-2229 of the Code of Virginia (1950), as amended, the Planning Commission (the Commission) has been directed by the Board to prepare and consider Comprehensive Plan amendments; and

WHEREAS, under Section 15.2-2230 of the Code of Virginia (1950), as amended, the Commission can review the Stafford County Comprehensive Plan to determine whether it is advisable to amend the Comprehensive Plan; and

WHEREAS, the proposed amendment to the Comprehensive Plan would amend the Comprehensive Plan by adopting a new economic development element entitled "Stafford County Master Redevelopment Plan," dated October, 2009, with recommendations for changes to existing County ordinances, policies, and procedures to serve as a framework to guide the coordinated and harmonious development of the County's four Redevelopment Areas: Boswell's Corner, the Courthouse area, Falmouth Village, and the Southern Gateway, as revised by the Commission at its meeting on March 15, 2011; and

WHEREAS, the Commission duly advertised and held a public hearing on April 20, 2011, on the proposed Comprehensive Plan Amendment, received a recommendation of County staff supporting approval of the proposed Amendment, received public testimony, decided on a 4-3 vote to recommend approval of Volume II and decided on a 5-2 vote to recommend approval of Volumes I, III, IV, V, VI, VII, VIII, IX, and X, and has forwarded its recommendation of approval of the proposed Comprehensive Plan amendment to the Board; and

WHEREAS, the Board duly advertised and held a public hearing on the proposed Comprehensive Plan Amendment on May 17, 2011, at which time public testimony was received and the above-referenced Comprehensive Plan Amendment was considered by the Board; and

WHEREAS, the Board has carefully considered the recommendations of the Commission, the recommendations of County staff, and the public testimony at the public hearing; and

WHEREAS, the Board concludes that the adoption of the proposed Comprehensive Plan Amendment, as advertised, will guide a coordinated and harmonious development of the County's four Redevelopment Areas: Boswell's Corner, the Courthouse area, Falmouth Village, and the Southern Gateway which will, in accordance with the present and probable future needs and resources of Stafford County, best promote the health, safety, morals, order, convenience, prosperity and general welfare of the citizens of Stafford County, Virginia, including the elderly and persons with disabilities; and

WHEREAS, the Board concludes that the adoption of the proposed Comprehensive Plan Amendment, as advertised, is consistent with good planning practices.

NOW, THEREFORE, BE IT RESOLVED by the Stafford County Board of Supervisors on this the 17th day of May 2011, hereby adopts the proposed Comprehensive Plan Amendment, as advertised, by approving a new economic development element, entitled "Stafford County Master Redevelopment Plan," dated October, 2009, as revised by the Commission at its meeting on March 15, 2011.

BE IT FURTHER RESOLVED that the maximum allowed dwelling units in the Boswell's Corner Redevelopment Area is modified to a maximum of 744 units.

A Copy, teste:


Anthony J. Romanello, ICMA-CM
County Administrator

AJR:WJ/f

RESEARCH & PROGRAM DEVELOPMENT

BOSWELL'S CORNER REDEVELOPMENT AREA3

ECONOMIC & MARKET ANALYSIS OVERVIEW5

REAL ESTATE MARKET & DEMAND6

 Impact of Base Closure And Realignment Commission (BRAC) 6

 Office Demand 6

 Hotel/Hospitality Demand 7

 Retail Demand 11

 Employees 12

 Office Workers 12

 Base Workers 12

 Visitors 12

 Residents 12

 Residential Demand 14

INFRASTRUCTURE & STORM WATER MANAGEMENT (SWM) ANALYSIS . 15

 Storm Water Management (SWM) Analysis 15

 Existing Impervious Analysis 16

 Regional SWM Opportunities 17

 Water/Sewer Analysis 18

 Existing Water Service 18

 Existing Sewer Service 18

 Comprehensive Plan Elements 19

 Chesapeake Bay Preservation Area (CBPA) Plan 19

 Capital Improvement Program (CIP) 19

 Falmouth Plan 20

 Groundwater 20

 Shoreline 20

 Stormwater 20

 Water Supply Plan 20

TRANSPORTATION & TRAFFIC ANALYSIS21

 Existing Roadway Network 21

 Existing Transit Services 21

 Current Planned Network 22

 FAMPO Constrained Long Range Plan (CLRP) 22

 VDOT State Highway Plan 22

 Base Realignment And Closure (BRAC) 22

 Existing Traffic Volumes 22

 Capacity of Roadway Network 23

 Levels of Service 23

 Volume to Capacity (V/C) Ratios 24

 Traffic Control Systems 25

 Accidents & Safety 25

CULTURAL & HISTORIC RESOURCES ANALYSIS27

 History of the Boswell's Corner Redevelopment Area 27

 Architecture 27

 Archaeology 27

BOSWELL'S CORNER REDEVELOPMENT AREA: SUMMARY & CONCLUSIONS29

 Economic & Market Analysis 29

 Infrastructure & Storm Water Management (SWM) Analysis 29

 Transportation & Traffic Analysis 29

 Cultural & Historic Resources Analysis 29

MOVING FORWARD30

CONCEPT MASTER REDEVELOPMENT PLAN & RECOMMENDATIONS

PUBLIC PROCESS & COMMUNITY INPUT33

 Public Workshop # 1 Conclusions 33

 Public Input: Dot Maps 34

 Visual Preference Survey 35

 Vision & Goals 35

 Vision Statement 35

 Public Workshop # 2 Conclusions 36

 Public Input Map 36

PROPOSED MASTER PLAN37

 Master Plan Highlights 38

 Open Space & Circulation 39

 Street Sections 43

 Specific Recommendations to the Elements of the Comprehensive Plan 44

 Infrastructure 44

 Transportation 45

CORE DEVELOPMENT AREA46

 Rationale for Defining This Area as the Core Development Area 46

 Action Plan 46

 Other Key Elements & Recommendations 47

 Core Development Area Financial Feasibility 48

APPENDICES

APPENDIX I

 Additional Cultural & Historic Resources: History, Growth, & Historic Preservation of the Redevelopment Area 51

APPENDIX II

 Frequently Used Acronyms 52

APPENDIX III

 Research & Program Development Bibliography 53

APPENDIX IV

 Public Workshop #1 Results 54

APPENDIX V

 Public Workshop #2 Results 63

APPENDIX VI

 Financial Feasibility: Assumptions & Methodology 68

APPENDIX VII

 Concept Master Redevelopment Plan Acknowledgments 76

LIST OF MAPS

Map 1: Boswell’s Corner Redevelopment Area Boundaries 3
 Map 2: Hotels Near Boswell’s Corner 8
 Map 3: Boswell’s Corner Retail Trade Area 11
 Map 4: Boswell’s Corner Critical Resource Protection Areas (CRPAS) . . . 15
 Map 5: Boswell’s Corner FEMA 100-Year Floodplain Limits 16
 Map 6: Boswell’s Corner Potential SWM/BMP Facilities 17
 Map 7: Boswell’s Corner Existing Water Facilities 18
 Map 8: Boswell’s Corner Existing Sewer Facilities 19
 Map 9: Boswell’s Corner Existing Roadway Network 21
 Map 10: Boswell’s Corner Existing Average Daily Traffic Volumes 22
 Map 11: Boswell’s Corner Existing Peak Hour Traffic Turning Volumes . . 23
 Map 12: Architectural Resources Within Boswell’s Corner – Priorities . . . 28
 Map 13: Areas with Potential Cultural Resources
 Within Boswell’s Corner 28
 Map 14: Boswell’s Corner Existing Conditions – Challenges. 34
 Map 15: Boswell’s Corner Existing Conditions – Strengths 34
 Map 16: Boswell’s Corner Existing Conditions – Opportunities 34
 Map 17: Boswell’s Corner Preliminary Master Plan – Public Input 36
 Map 18: Boswell’s Corner Master Redevelopment Plan. 37
 Map 19: Boswell’s Corner Open Space & Circulation Plan 39
 Map 20: Boswell’s Corner Core Development Area. 46

LIST OF TABLES

Table 1: Boswell’s Corner Summary Demographics, 2006–2028. 5
 Table 2: Stafford County-wide Employment-Based Office Demand
 Projections, 2007–2020 6
 Table 3: Boswell’s Corner Projected Office Space Demand, 2007–2020 . . . 7
 Table 4: Hotels Near Boswell’s Corner 8
 Table 5: STR Annual Performance Indicators,
 Select Properties, 2005–2008 10
 Table 6: Boswell’s Corner Projected Hotel Demand, 2012 10
 Table 7: Estimated Spending Per Worker, 2007. 12
 Table 8: Estimated Boswell’s Corner Visitors, 2007 & 2012 12
 Table 9: Boswell’s Corner Captured Retail Sales by Market 13
 Table 10: Boswell’s Corner Projected Retail Sales, 2012 13
 Table 11: Boswell’s Corner Projected Retail Demand, 2012 14
 Table 12: Boswell’s Corner Residential Demand, 2008–2030 14
 Table 13: Boswell’s Corner Existing Impervious Analysis. 16
 Table 14: Level of Service Criteria for Signalized Intersections 23
 Table 15: Level of Service Criteria for Unsignalized Intersections 23
 Table 16: Boswell’s Corner Typical Link
 Level of Service Threshold Values 24
 Table 17: Boswell’s Corner Existing Capacity Analysis Summary 25
 Table 18: Boswell’s Corner Historic Accident Analysis Expected Values . . 25
 Table 19: Boswell’s Corner Estimated Demand 37
 Table 20: Boswell’s Corner Core Development Area –
 Program Assumptions 48
 Table 21: Boswell’s Corner Core Development Area –
 Residual Land Value. 48
 Table 22: Summary of Core Development Area Annual &
 Construction Period Fiscal Benefits 48
 Table 23: Summary of Property Tax Benefits by Redevelopment Area 48
 Table 24: Summary of Core Development Area Annual &
 Construction Period Fiscal Benefits 69
 Table 25: Summary of Property Tax Benefits by Redevelopment Area 69
 Table 26: On-Site Sales and Use Tax Revenue 70
 Table 27: Resident, Office Worker, & Hotel Guest Sales Tax Revenue
 from Off-Site Spending 71
 Table 28: Core Development Area Construction Costs
 for Materials and Labor 72
 Table 29: Sales and Use Tax Revenues from Construction Period 72

LIST OF FIGURES

Figure 1: Boswell’s Corner Aerial. 4
 Figure 2: Boswell’s Corner Population & Households, 2007 5
 Figure 3: Boswell’s Corner TAZ-Based Employment Data, 2006. 5
 Figure 4: Supply & Demand Trends of Hotels Near Boswell’s Corner 9
 Figure 5: Average Daily Rates (ADR) & Occupancy Rates of Hotels Near
 Boswell’s Corner. 9
 Figure 6: Boswell’s Corner Retail Support by Market
 by Type of Retail, 2012 12
 Figure 7: Boswell’s Corner Supported Retail Space by Type, 2012. 14
 Figure 8: Boswell’s Corner Proposed Master Plan Aerial 40
 Figure 9: Boswell’s Corner Proposed Street View A 42
 Figure 10: Boswell’s Corner Proposed Street View B 42
 Figure 11: Boswell’s Corner Street Section & Plan –
 Jefferson Davis Highway (US-1). 43
 Figure 12: Boswell’s Corner Street View –
 Jefferson Davis Highway (US-1) looking north (Before). 43
 Figure 13: Boswell’s Corner Street View –
 Jefferson Davis Highway (US-1) looking north (After). 43
 Figure 14: Boswell’s Corner Street Section & Plan –
 Telegraph Road (VA-637) 43

STAFFORD COUNTY MASTER REDEVELOPMENT PLAN

The efforts of the *Phase I: Research & Program Development* and *Phase II: Concept Master Development Plan* have been combined into five separate volumes. In addition, three additional volumes contain the detailed Cultural Resources Report on each of the four redevelopment areas, as well as examples of Cultural Resources Legislation. Each volume, on each of the four redevelopment areas, stand alone along with the overall Stafford County General Research & Planning section. Each of the four redevelopment area's respective volume integrates the specific Phase I research and Phase II planning efforts. The volumes do not refer separately to Phase I or II efforts, since they are now combined into a book specific to the corresponding redevelopment area.

The volumes have been separated as follows:

VOLUME I

Stafford County: General Background Research & Planning Concepts

VOLUME II

Boswell's Corner

VOLUME III

Courthouse Area

VOLUME IV

Falmouth Village

VOLUME V

Southern Gateway

VOLUME VI

- A. Cultural Resources Report for Falmouth Village
- B. VDHR Forms for Falmouth Village

VOLUME VII

- A. Cultural Resources Report for Boswell's Corner, Courthouse Area, & Southern Gateway
- B. VDHR Forms for Boswell's Corner, Courthouse Area, & Southern Gateway

VOLUME VIII

Examples of Cultural Resources Legislation

VOLUME IX

Stafford County Traffic Data

VOLUME X

Stafford County Infrastructure Analysis

Following groundwork from the 2006 Stafford County Economic Development Strategic Plan, and using the Cunningham + Quill Architects Vision plans as a springboard, the Planning Team proposed redevelopment plans for the four areas that include: a comprehensive redevelopment plan with urban street grids, open space and parks, pedestrian friendly environments and streetscape improvements, preparing the strategic areas for increased quality commercial investment.

This Master Redevelopment Plan has been designed from the beginning as a possible addition to the Stafford County Comprehensive Plan. As such, the study and analysis needed to address a large cross section of issues including: land use patterns, regional economical support, transportation, architecture, archaeology and historic resources, civil infrastructure and flood hazards. Since each of these subjects is also included in the Comprehensive Plan, this study included assessments of all 18 elements of the Comprehensive Plan. Of these elements, two were found to be of particular significance to redevelopment: the Land Use Plan and the Transportation Plan.

The land uses presented herein are not meant to supercede land uses identified in the Stafford County Land Use Plan. The land uses and layouts depicted herein are notational and are offered as one possible layout for Comprehensive Plan uses. Residential densities are offered as potential targets for the creation of more urban environments conducive to pedestrian friendly, community based and appropriately scaled, commercial development. In no way do the residential densities referenced constitute endorsement of those densities, or endorsement at the exact locations depicted, by the governing body.

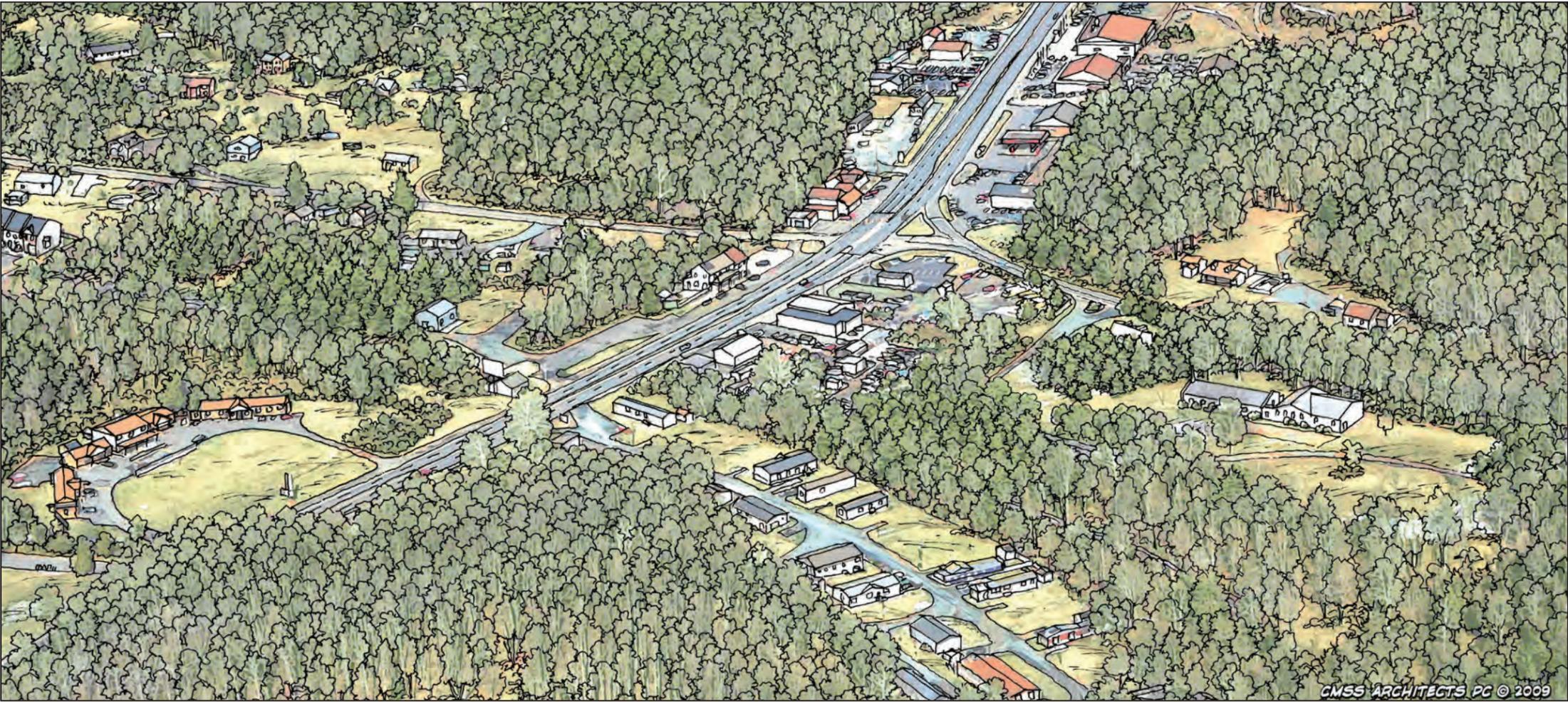
INTERIM IMPLEMENTATION STRATEGY AND REVIEW STANDARDS

Stafford County's historic development pattern has been of a low-rise suburban scale. In the recent past, individual development projects have approached mid-rise scale and form. Therefore, an interim strategy for review and approval of development projects within the Redevelopment Areas is outlined below to facilitate implementation of the recommendations contained within the Redevelopment Plans, but within a context of historical development patterns and current market dynamics. Until such time as adequate public infrastructure is in place to establish the core framework needed to realize the redevelopment visions, all rezoning or conditional use permit development proposals will be reviewed to determine if they meet the following standards for development during the interim phase:

- the development proposal either constructs or makes accommodation for planned infrastructure identified in the Redevelopment Plans.
- the development proposal includes parcels that are subdivided in a manner to accommodate the creation of blocks and the potential consolidation of properties as recommended by the Plans.
- architectural design themes contained in the development proposal will not conflict with those suggested in the Redevelopment Plans. Franchise architecture should be modified to meet Redevelopment Plans' visions.
- the development proposal is cognizant of the need for public and private open spaces that benefit private properties as well as the public.
- the development proposal uses street furniture and other pedestrian features as recommended by the Redevelopment Plans.
- the location, placement, and design of signs included in the development proposal are done in such a manner as to not detract from building architecture.

Additionally, as development codes are reviewed and modified to ensure there are limited regulatory impediments to implementing the Redevelopment Plans, incentives for by-right developments to incorporate architectural and design recommendations of the redevelopment plans will be considered.

BOSWELL'S CORNER: RESEARCH & PROGRAM DEVELOPMENT



BOSWELL'S CORNER REDEVELOPMENT AREA

Boswell's Corner is largely defined by Interstate 95 (I-95) to the west, the Marine Corps Base Quantico to the north and east, and Telegraph Road (VA-637) to the east. Jefferson Davis Highway (US-1) runs north-south through the middle of the area. This redevelopment area generally consists of roughly 354 Parcels that contain approximately 575 acres of land area. The total land area, including streets and roads is about 601 acres, representing $\pm 0.3\%$ of Stafford County's area. (Refer to Figure 1: Boswell's Corner Aerial and Map 1: Boswell's Corner Redevelopment Area Boundaries.)

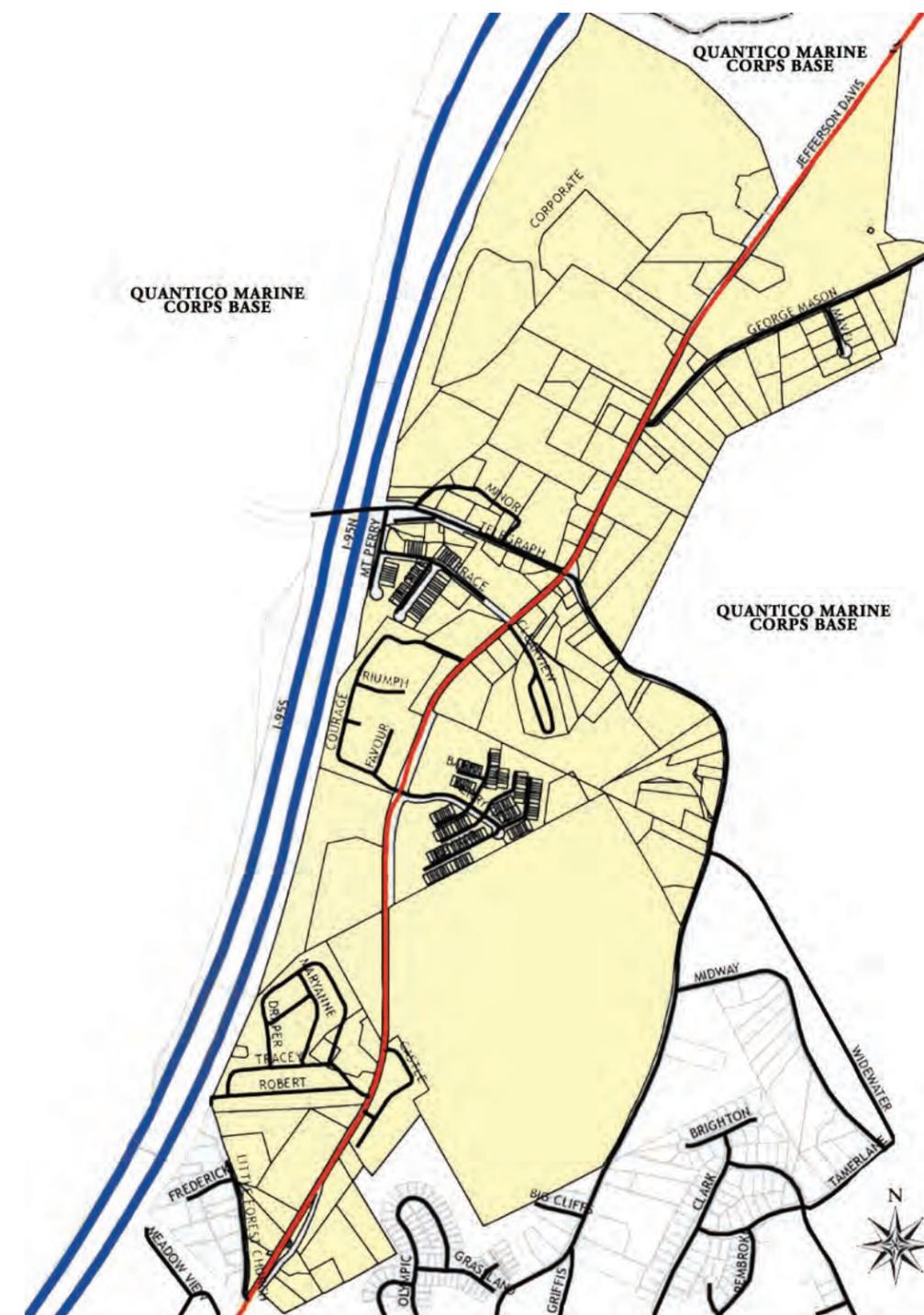
Boswell's Corner is named for a crossroads of the same name, and in many ways, the area represents a crossroads of the different groups that live in this area of Stafford County. The biggest driver for the area is Marine Corps Base Quantico and those who serve the government operations. However, there are also several housing developments in the area that will also potentially serve as demand generators for service retail.

Boswell's Corner's location in the northern part of Stafford County and proximate to Marine Corps Base Quantico and Interstate 95 (I-95) make the area attractive for redevelopment, especially with the anticipated growth at Quantico as a result of the Base Realignment and Closure (BRAC) actions.

Currently, development in the area is limited to a few service and automotive retail locations intermixed with industrial and residential. However, as of the writing of this report, two buildings of the Silver Companies Quantico Corporate Center has been completed in the northern section of the area, with the other components under construction.

Boswell's Corner was targeted for redevelopment by Stafford County upon the presentation of Stafford County's Economic Development Plan of 2006, which states that this area exists as future economic development site due to location, road access, and the Quantico Marine Corps Base, which is expected to see significant gain in employment through the BRAC process. Boswell's Corner "stands as the gateway to Stafford County from the north. Development of high quality office space and supporting retail would announce that Stafford County is an area for economic progress and not solely a bedroom community."

Map 1: Boswell's Corner Redevelopment Area Boundaries



Map ©2008 Stafford County.

Figure 1: Boswell's Corner, Aerial



Aerial Photo ©2007 Flying H Aerial Pictures

ECONOMIC & MARKET ANALYSIS OVERVIEW

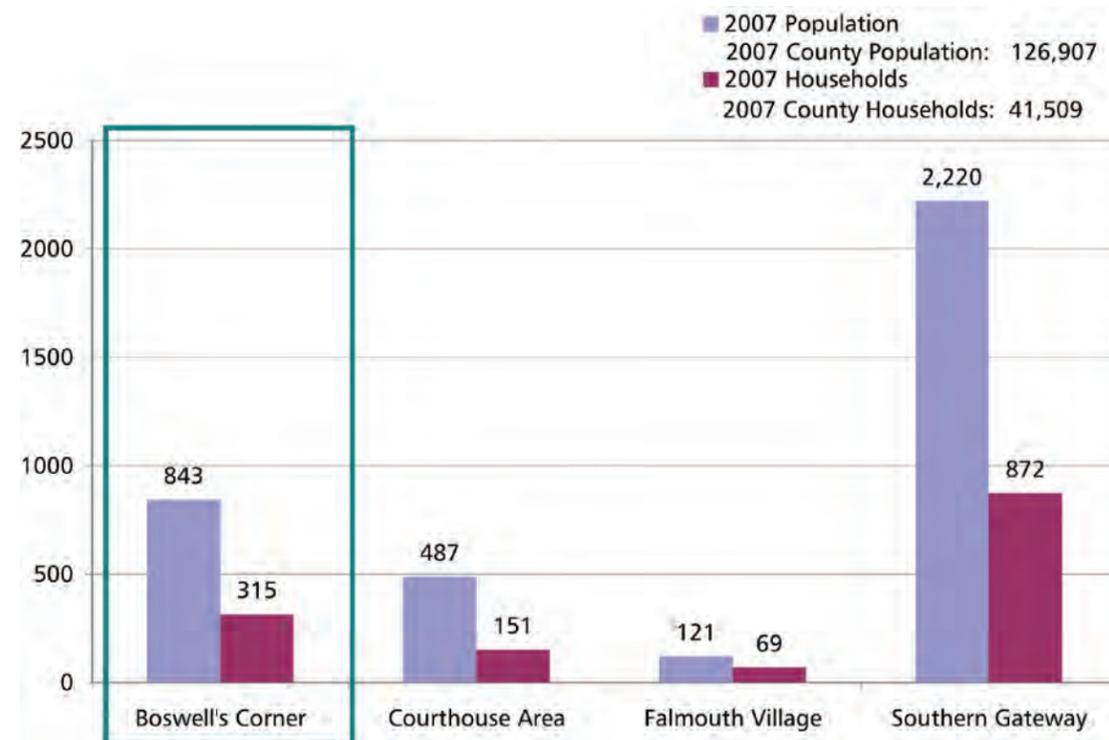
The Planning Team has examined both population data from ESRI as well as County-produced TAZ data (see Methodology section). The chart below uses ESRI data to compare the population and households of Boswell's Corner to the other redevelopment areas.

Table 1: Boswell's Corner Summary Demographics, 2006–2028

	2006	2028
Population	1,476	7,800
Households	532	2,975

Source: 2006 and 2008 data from Stafford County TAZ; Table by Economics Research Associates, 2008.

Figure 2: Boswell's Corner Population & Households, 2007

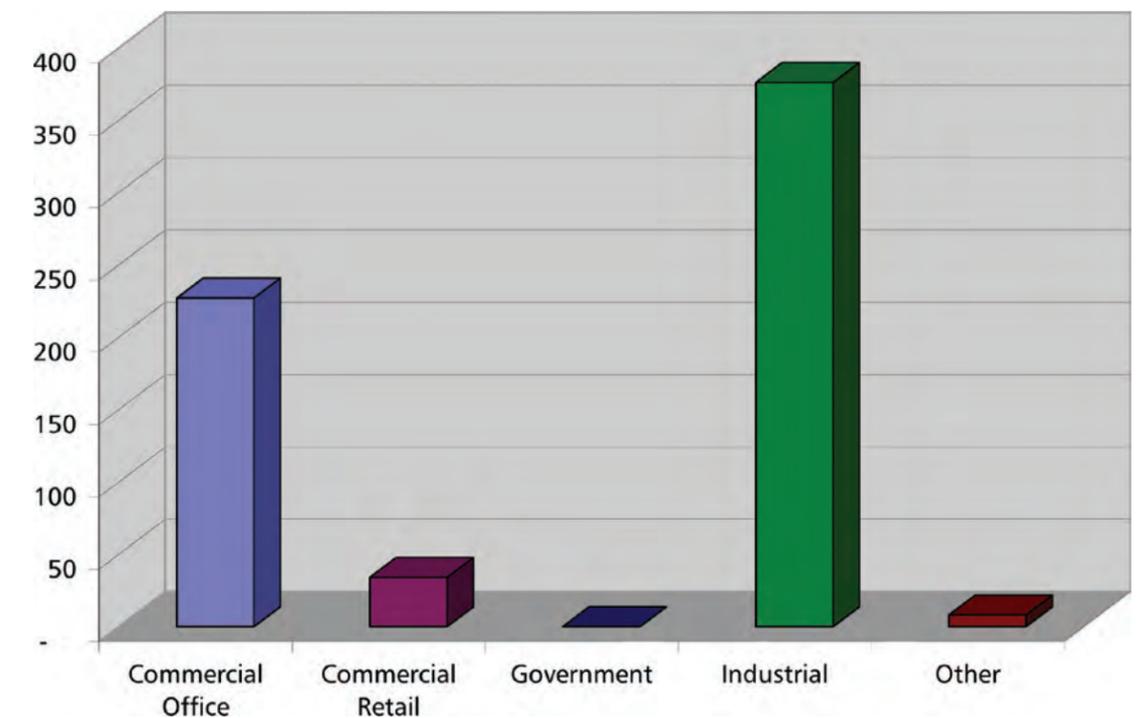


Source: ESRI; Economics Research Associates, 2008.

- ESRI's data shows that there are currently an estimated 843 persons in 315 households in the redevelopment area, which was 187 more people than the 2000 Census. Stafford County estimates the 2006 population as 1,476 in its TAZ data. (Refer to Table 1: Boswell's Corner Summary Demographics, 2006–2028.)
- According to ESRI data, by 2012, population is expected to grow to 964 persons in 362 households.
- ESRI reports approximately 60% of the population is age 25 and over, with a median age of 29.6.
- ESRI's income data shows that the average and median incomes are much lower than Stafford County at \$72,536 and \$61,390, respectively. Though these measures of income are both more than \$20,000 less than Stafford County, they still represent wealthy households.

Boswell's Corner employment according to Stafford County's TAZ data from 2006 is heavily industrial, with 376 employees classified in this category. Slightly less, at 35% of the redevelopment area's employment, is professional office employment (refer to Figure 3: Boswell's Corner TAZ-based Employment Data, 2006). The area constitutes 5% of Stafford County's industrial employment but under 1% of Stafford County's total employment.

Figure 3: Boswell's Corner TAZ-Based Employment Data, 2006



Source: 2006 Stafford County TAZ; Economics Research Associates, 2008.

REAL ESTATE MARKET & DEMAND

The Planning Team examined demand for retail, office, hospitality, and residential uses in Boswell's Corner. Below is a summary of the existing conditions and projected demand for each land use.

IMPACT OF BASE CLOSURE AND REALIGNMENT COMMISSION (BRAC)

The impact of the 2005 Base Closure and Realignment Commission (BRAC) report has been a much-discussed topic by communities nationwide in areas where bases are set to receive or lose personnel. In Stafford County, the move of the Military Department Investigative Agencies to Quantico by 2011 will bring additional workers into the area and positive opportunities for the area – particularly Boswell's Corner.

Having the Marine Corps Base Quantico within Stafford County has attracted a large amount of government contractors into nearby office space. Developers tend to build the space when they had known tenants or as build-to-suit. After the 2005 BRAC report, developers began to build speculatively (in the form of the Quantico Corporate Center and others) in Boswell's Corner and the surrounding area to provide space for the expected growth of supportive industries to the personnel and contractors at Quantico.

Staff at Quantico reports a total existing population (as of January 2006) of 6,006 military and 8,474 civilians. According to the April 2008 Environmental Impact Statement (EIS) issued by the military regarding the impact of BRAC-related changes, 1,466 live on-base, and of those commuting to the base, approximately two-thirds come from the South. According to the EIS, between 900 and 2,500 employees come from Stafford County Zip Codes (the EIS has a map, with ranges assigned to each of the zip codes, the range above corresponds to the low and high of these ranges, summed for the three Stafford Zip Codes). According to the EIS, BRAC will bring up to 3,000 new employees to the base, with none of these living on base.¹ This does not include the supplemental contractors who service the base and other industries serving the operations. Other estimates, such as the December 2007 "Community Profile" suggest an additional 4,873 personnel, including 1,210 military, 2,961 civilians, and 702 contractors will arrive.² Another presentation provided on the Quantico Web site suggests that there will be a total of 2,658 full-time staff personnel relocating and 360 student personnel. Of these, 51% live within the commuting area and another half will relocate. Of those living in the commuting area, 23% live in Prince William County and 7% live in Stafford County. Of those relocating, 39% are estimated to move to Stafford.³ A report by Delta Associates (a real estate advisory firm) and George Mason University in August 2005, suggests that in addition to approximately 3,000 direct job changes at Quantico, another 2,000 in indirect changes will occur (from non-base-specific contractors and service industry establishments).⁴

1 Final Environmental Impact Statement- Development for the Westside of Marine Corps Base Quantico. Including the 2005 Base Realignment and Closure Action, April 2008, downloaded June 2008 from <http://www.quantico.usmc.mil/activities/display.aspx?PID=2618&Section=NREA>.

2 "Community Profile," December 2007. Downloaded June 2008 from http://gostaffordva.com/download/Quantico%20Profile%20Final_with%20community%20review.pdf.

3 Marine Corps Base Quantico, "Demographic Data Overview," <http://www.quantico.usmc.mil/activities/?Section=BRAC>, downloaded June 2008.

4 Delta Associates and the Center for Regional Analysis at George Mason University, "2005 Base Realignment and Closure (BRAC) Recommendations And Their Impact on the Washington Metro Area Economy, Transportation, and Office Market," August 29, 2005.

OFFICE DEMAND

Currently, the redevelopment area has a total of 188,000 square feet of office space. Most of this is at the first two buildings of the Quantico Corporate Center, which is 140,000 square feet of Class A space. As of this writing⁵, it is in lease up (the process of a building being rented for the first time), and is approximately 50-percent leased. Space in that building is reportedly leasing for \$26 per square foot, full service, which is a rate that is competitive within Northern Virginia. The Quantico Corporate Center's campus is expected to have a total of 1 million square feet of space, including a conference center and retail square footage, to be built in phases. An additional 140,000 square foot building is now complete. Because of its location and site-readiness, this Center is poised to absorb much of the growth of Stafford's auxiliary employment as a result of BRAC.

New office space is a function of new employment.⁶ Overall, in Stafford County, projected new employment will create demand for an estimated additional 2.9 million square feet between 2007 and 2020⁷ (refer to Table 2: *Stafford County-wide Employment-Based Office Demand Projections, 2007–2020*).

Table 2: Stafford County-wide Employment-Based Office Demand Projections, 2007–2020

Employment Sector	% Office Users /1	Total Demand for New Space (in '000s of SF)			Avg. Ann'l 2007-2020
		2007-2012	2012-2015	2015-2020	
Agriculture & Farming	10%	1.19	0.77	1.19	0.24
Mining	10%	0.14	0.07	0.11	0.02
Construction	20%	14.14	8.54	14.35	2.85
Manufacturing	20%	1.33	0.84	1.40	0.27
Trans./Comm./Public Utilities	70%	(0.73)	(0.25)	(0.24)	(0.09)
Wholesale Trade	30%	51.14	30.87	51.77	10.29
Retail Trade	30%	38.95	23.31	38.85	7.78
Finance/Insurance/Real Estate	95%	478.80	320.53	596.17	107.35
Services	60%	293.58	194.46	358.47	65.12
Government	70%	40.91	24.75	40.91	8.20
Demand From New Employment:	42%	919.45	603.89	1,102.97	202.02
Plus Vacancy Adjustment: /2		68.96	45.29	82.72	15.15
Plus Cumulative Replacement Demand: /3		45.97	30.19	55.15	10.10
TOTAL DEMAND (in SF):		1,034.38	679.38	1,240.84	227.28

1/ Reflects office-using employees in each employment sector.

2/ This allows for a 7.5% frictional vacancy rate in new space delivered to the market.

3/ This represents new space required by existing businesses to replace obsolete or otherwise unusable space. This is assumed equal to 5% of demand from new employment.

Source: Woods & Poole; Economics Research Associates, 2008.

5 Since June 2008, the first building was built, a second has been started, and a third has been approved for construction.

6 For a description of office methodology, see the Demand Projection Methodology on page 37.

7 Projected new employment based upon using current available data.

Currently, the redevelopment area has approximately 11% of County office space. Because of its strategic position near Quantico, the redevelopment area could increase its share in the next 10-15 years. The Planning Team has estimated that because of its location, the redevelopment area could capture approximately 30% of Stafford County's new office space. (Refer to Table 3: *Boswell's Corner Projected Office Space Demand, 2007–2020*.) Based on employment projections, current available data, and the greater share capture of space, Boswell's Corner could support an additional 886,000 square feet of office space, an average of 68,000 square feet annually.

Table 3: Boswell's Corner Projected Office Space Demand, 2007–2020

	Stafford County	Boswell's Corner			
Total Inventory (SF)	1,674,518	188,806			
Share of Stafford County	100%	11.3%			
Employment-Based Demand					
	Avg Ann'l	2007-2012	2012-2015	2015-2020	
Stafford County	227,277	1,034,381	679,376	1,240,844	
Estimated Redevelopment Area Share of New Space		30.0%	30.0%	30.0%	
Boswell's Corner Area	68,183	310,314	203,813	372,253	

Source: Woods & Poole; CoStar Property Research; ERA AECOM, 2008.

HOTEL/HOSPITALITY DEMAND

Stafford County had \$16 million in lodging taxable sales in Stafford County in 2005, according to data collected from the Virginia Department of Revenue by the Virginia Tourism Corporation. In 2006, \$1.04 million in lodging taxes were collected, which at a tax rate of 5%, suggests lodging taxable sales of approximately \$20.7 million, a one-year increase of 5.2%.

The main drivers for hotel rooms and hospitality services in Boswell's Corner will be Marine Corps Base Quantico operations and visitors to Quantico and to the National Museum of the Marine Corps. According to a contact at Quantico responsible for organizing visitors, in FY 2007, there were 8,859 visitors to the base. Though other units arrange visitors, this office arranges the largest percentage of them.

Data provided by a representative from the National Museum of the Marine Corps suggests that the museum hosts approximately 1,400 visitors daily, with an average monthly visitation since the Museum's 2006 opening of approximately 43,700. This equates to approximately a half a million visitors annually.

For both of these generators, it is likely that many visitors are either taking day trips, or combining trips with other destinations (such as visitors to Washington, DC, staying in a hotel there, who visit the museum one day or visitors in groups to Quantico). Additionally, these numbers do not include business travelers, travelers to other regional destinations, and Interstate 95 (I-95) pass-through traffic. So, for determining the numbers of lodgings sold, it is more reliable to look at lodging demand and trends of increases in this demand.

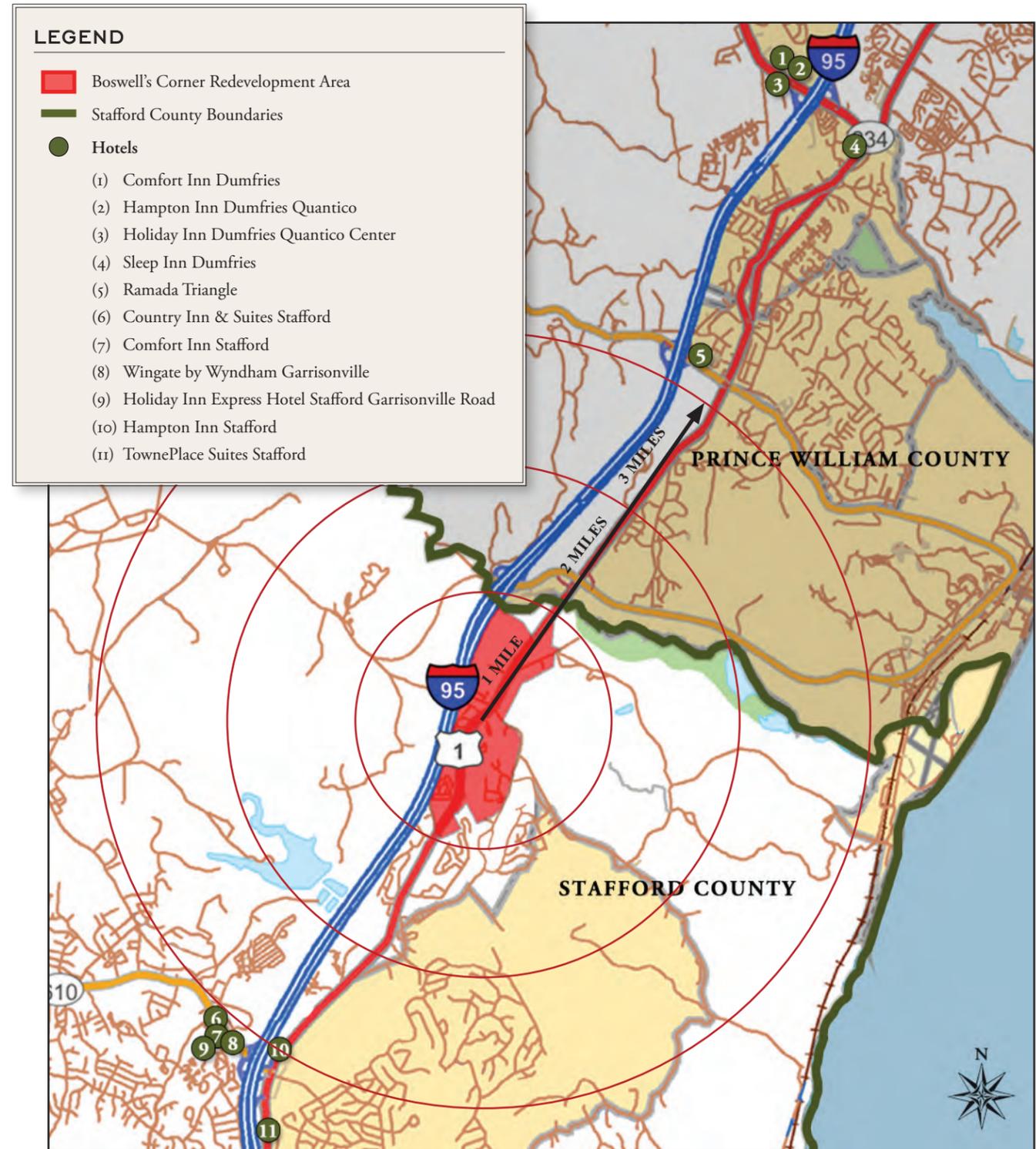
The Planning Team used Smith Travel Research to analyze the performance of the hotels closest to Boswell's Corner, listed in Table 4 (*Hotels Nearest to Boswell's Corner*) and shown on Map 2 (*Hotels Nearest to Boswell's Corner*). These hotels are all mid-range hotels and have 932 available rooms, a number that has grown by 11.7% per year over the past five years. (Refer to Figure 4: *Supply and Demand Trends of Hotels Near Boswell's Corner*.)

Table 4: Hotels Near Boswell's Corner

<i>Participating Hotels</i>	<i>No. of Rooms</i>	<i>Open Date</i>
1 Comfort Inn Dumfries	80	November 2006
2 Hampton Inn Dumfries Quantico	78	April 2000
3 Holiday Inn Dumfries Quantico Center	107	May 2007
4 Sleep Inn Dumfries	56	June 2001
5 Ramada Triangle	135	June 1973
6 Country Inn & Suites Stafford	58	September 1995
7 Comfort Inn Stafford	83	February 1997
8 Wingate by Wyndham Garrisonville	100	March 2004
9 Holiday Inn Express Hotel Stafford Garrisonville Road	54	November 1999
10 Hampton Inn Stafford	88	September 1997
11 TownePlace Suites Stafford	93	April 2007
TOTAL ROOMS	932	

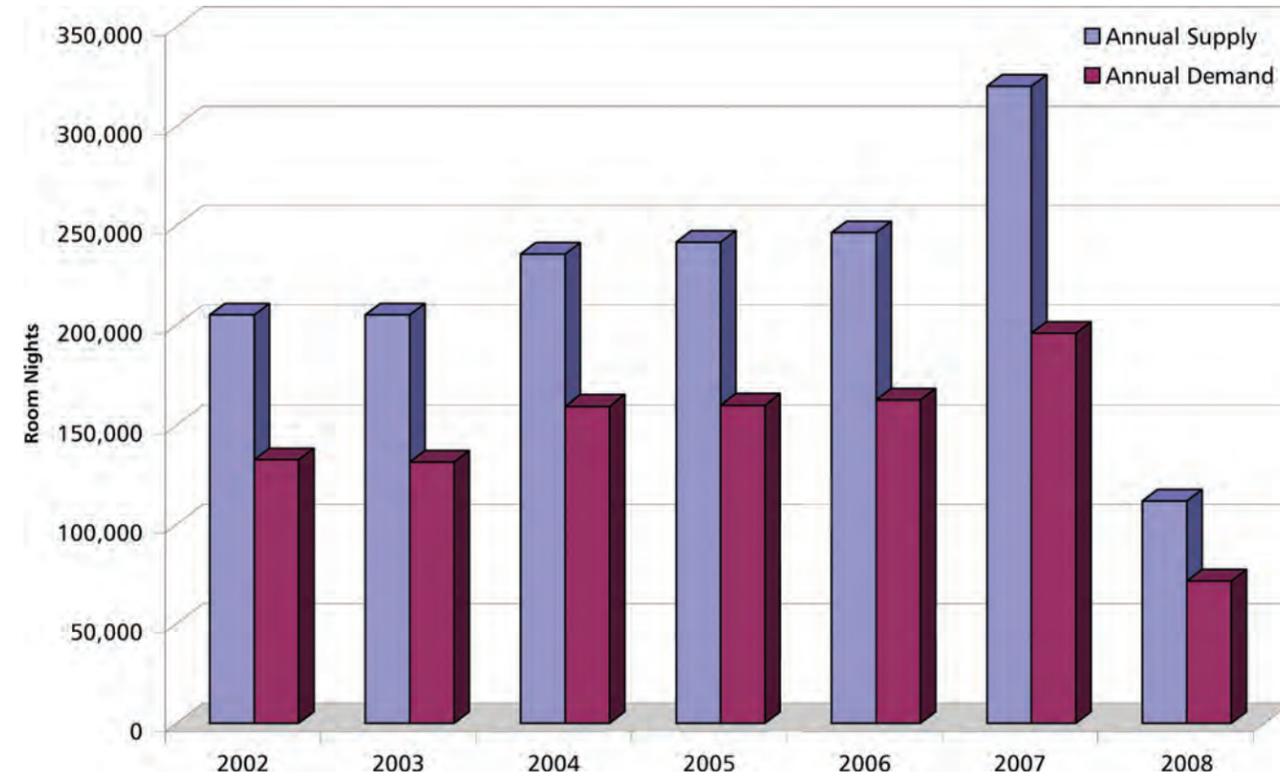
Source: Smith Travel Research; Economics Research Associates, June 2008.

Map 2: Hotels Near Boswell's Corner



Source: Smith Travel Research, June 2008; ESRI; Economics Research Associates 2008.

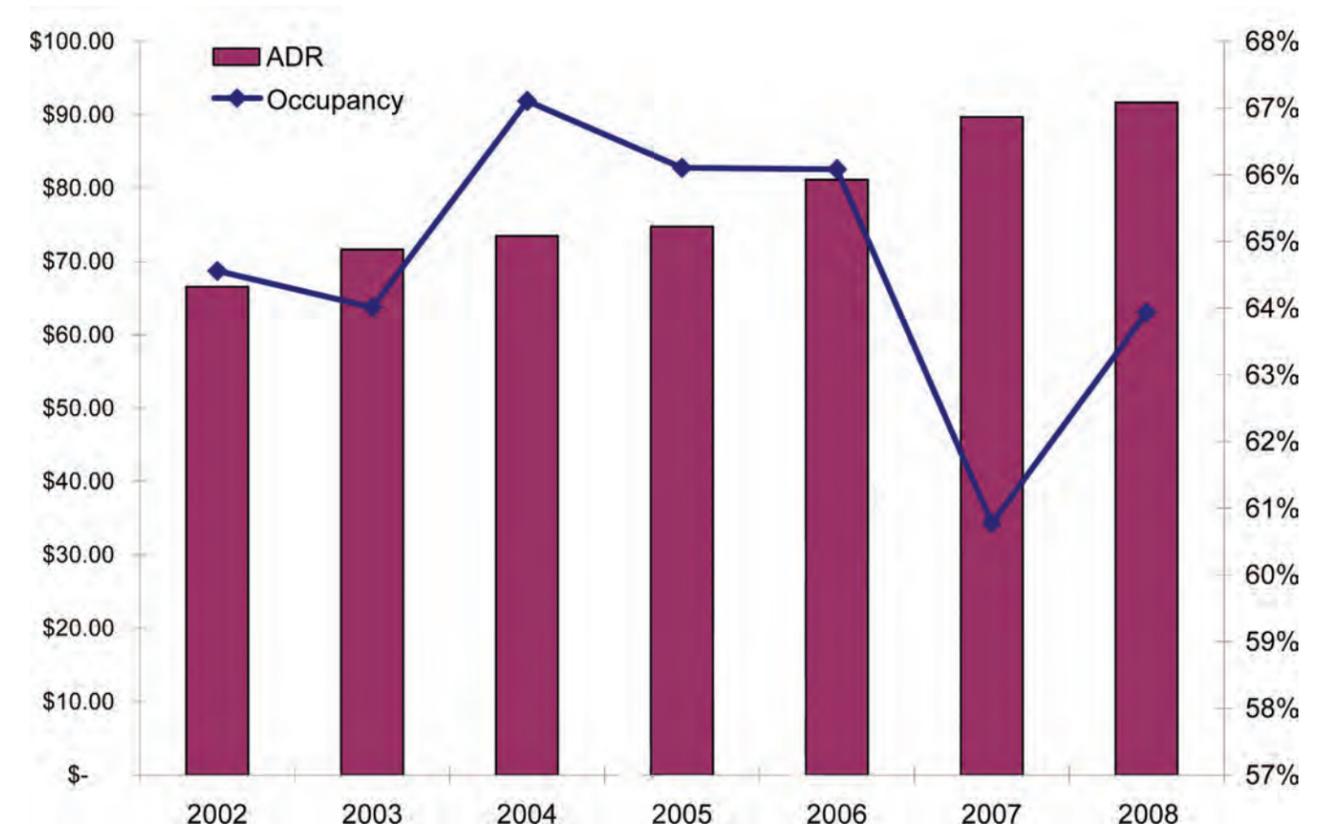
Figure 4: Supply & Demand Trends of Hotels Near Boswell's Corner



Source: Smith Travel Research; Economics Research Associates, June 2008.

A summary of hotel performance data for the listed hotels near Boswell's Corner is shown in Table 5 (*STR Annual Performance Indicators, Select Properties, 2005–YTD 2008*). The selected hotel properties have an average annual occupancy of 63.9%, a slight increase over last year, but generally reflective of trends throughout the past five years. The average daily rate has steadily risen over the past six years at a rate of 7.75%, and is currently \$91.67 per night (refer to Figure 5: *Average Daily Rates (ADR) & Occupancy Rates of Hotels Near Boswell's Corner*). This is significantly higher than the ADR of all hotels in the Fredericksburg/ Interstate 95 (I-95) market area⁸ which was \$58.58 in 2005, according to Smith Travel Research (STR). Hotels near Boswell's Corner during that year had an ADR of \$74.74.

Figure 5: Average Daily Rates (ADR) & Occupancy Rates of Hotels Near Boswell's Corner



Source: Smith Travel Research; Economics Research Associates, June 2008.

Summary hotel property performance data shows a market with steady and well met demand. While room occupancy is high, it has not increased with rising rates which indicates year-to-year has remained static.

⁸ The Fredericksburg/Interstate 95 (I-95) market area extends north to Woodbridge to south of Fredericksburg.

Table 5: STR Annual Performance Indicators, Select Properties, 2005–2008

	2005	2006	2007	YTD 2008	Annual Growth 2002-2008
Available Room nights (Supply)	241,630	246,510	320,170	111,840	11.77%
Occupied Room nights (Demand)	159,816	162,366	195,930	71,548	10.26%
Annual Occupancy (%)	66.1%	66.1%	60.8%	63.9%	-1.50%
Average Daily Rate	\$74.74	\$81.14	\$89.72	\$91.67	7.75%
Revenue/Available Room	\$49.40	\$53.80	\$54.80	\$58.98	6.16%
YEAR-TO-YEAR GROWTH					
Annual Occupancy	(1.5%)	(0.0%)	(8.0%)	5.2%	
Average Daily Rate	1.7%	8.6%	10.6%	2.2%	
Revenue/Available Room	(0.4%)	8.9%	1.9%	7.6%	

Source: Smith Travel Research, June 2008; Economics Research Associates, 2008.

Since much of the demand in this area is driven by military and military contractors, it is likely that the increase of personnel as a function of BRAC will augment demand. To attempt to determine the share of each visitor segment using the hotels, the Planning Team used numbers from a 2000 report conducted by Randall Travel Marketing for Fredericksburg Area Tourism which suggested the split of visitors at hotels at the Aquia exit (143) on Interstate 95 (I-95) was 14% Corporate, 20% Leisure/Group/Visiting Friends, 53% Government/Military, and 13% Pass Through/other. Applying these ratios to the recent annual demand (196,000) and then augmenting them by an annual average demand growth rate of 9.6% and then by 30% (BRAC personnel growth) in the corporate and military sector indicates total demand for 310,000 total roomnights. Netting out existing demand yields a total demand of 176,202 room nights. This, divided by 365 nights in a year suggests an excess demand in 2012 for 480 rooms (refer to Table 6: Boswell's Corner Projected Hotel Demand, 2012). Boswell's Corner could possibly capture between 20% and 40% of this demand, which would support 100-200 rooms, or enough for two mid-range hotels.

Table 6: Boswell's Corner Projected Hotel Demand, 2012

Travel Segment	Share by Segment /1	2007 Roomnight Demand /2	Avg. Ann'l Growth /3	2012 Projected Demand	BRAC Impact /4	2012 Demand
Corporate	14%	27,430	9.6%	43,379	30%	56,393
Leisure/Group/Visiting Friends	20%	39,186	9.6%	61,970		61,970
Government/Military	53%	103,843	9.6%	164,221	30%	213,488
Pass Through/other	13%	25,471	9.6%	40,281		40,281
Total Roomnight Demand		195,930		309,852		372,132
Less Existing Roomnight Demand						(195,930)
Net New Roomnight Demand						176,202
/ Days Per Year						365
Demand						483 rooms
Capture Potential at Boswell's Corner (20 - 40%)						100 - 190 rooms

1/ October 2000 Randall Travel Marketing survey as reported in "Current Status Report," Fredericksburg Area Tourism, located on the web at <http://www.fredericksburgva.gov/citypubs/2-Current%20Status.pdf>

2/ 2007 Demand--STR Demand Data for Boswell's Corner Hotels, June 2008.

3/ Based on trends, 2003-2007, STR data as of June 2008.

4/ Increase in BRAC personnel, per "Community Profile, Quantico MCB, Virginia," December 2007, Quantico Growth Management Committee as provided on www.gostafford.com

Source: Data Sources as noted above; Economics Research Associates, 2008.

It should be noted that the Marine Corps Museum is planning a conference center and hotel at their site as part of a Marine Corps Heritage Center. No details were available at the time of this writing as to size or mix of this project.⁹ However, this project could have the potential to change the dynamics of the local visitor market. A larger conference center hosting events too large for the on-site hotel could generate additional demand, but a larger hotel could eat up existing demand. Additionally, marketing materials for the Quantico Corporate Center mention a hotel planned as an amenity for on-site businesses. There is no further data available regarding this hotel at the time of this writing. Additionally, the hotel at the corner of Joplin Road and Jefferson Davis Highway (US-1) has been demolished. It was not included in the above analysis, but a hotel positioned near the base (similar to this hotel's location) would have a competitive advantage over those further from this demand generator.

⁹ As of April 2009, Stafford County has been informed that there might be a need for a 300-room hotel-conference center; the Marine Corps Museum is not building the hotel-conference center yet as they are waiting to see what happens with government changes and the economic downturn.

RETAIL DEMAND

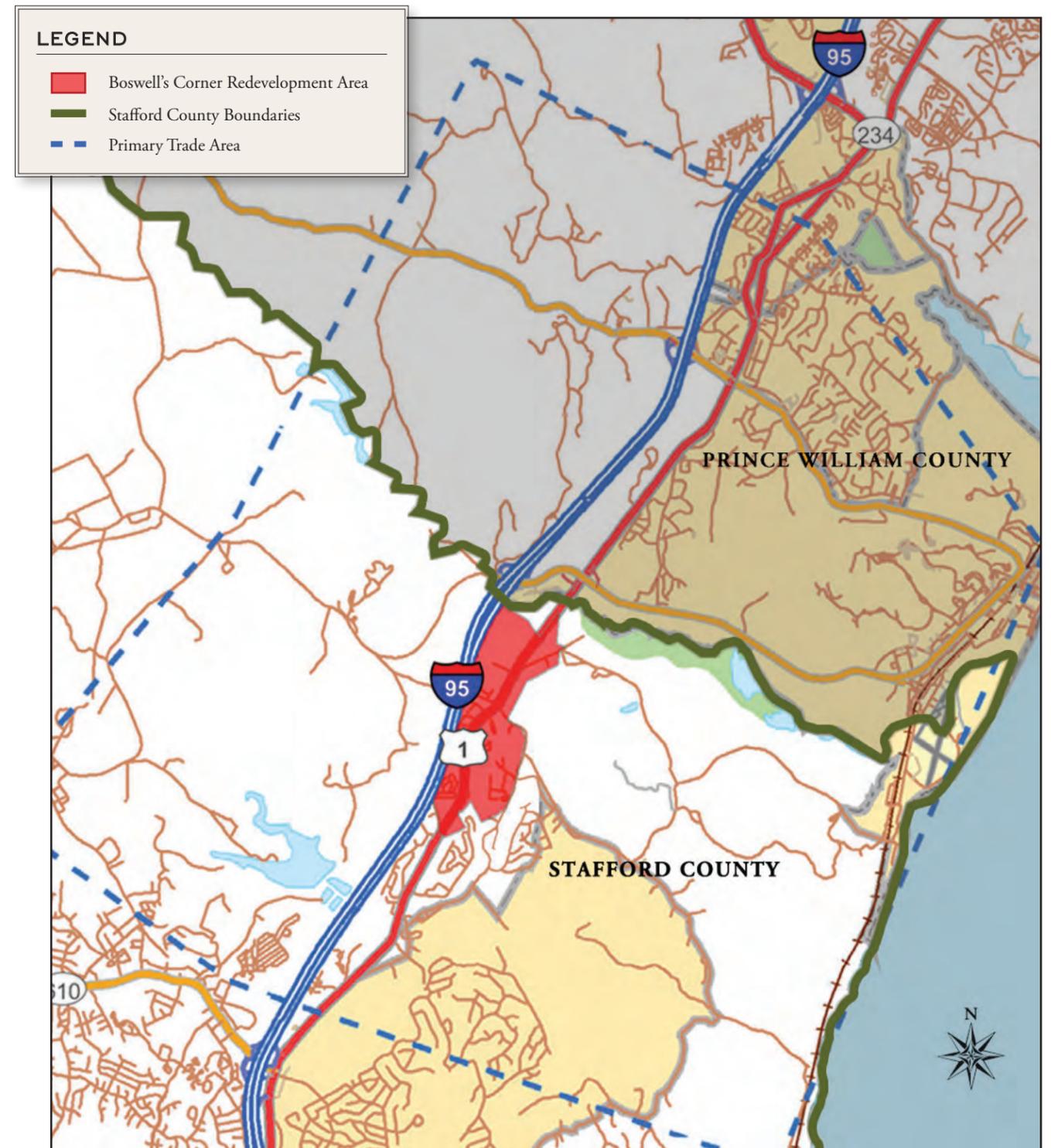
Boswell's Corner is positioned between two existing retail concentrations. To the north, approximately six minutes drive time according to Google Maps, Triangle has several aging strip centers serving existing residents and base activity. This area (extending from Joplin Road to Brady's Hill Road) is slated for extensive road improvements which has necessitated Prince William County's acquisition of 48 parcels for the required right of way. This will eliminate all of the retail and service area along this stretch. This could drive more of the services to locations in Stafford County, if adequate space and sites are available. The Globe and Laurel Restaurant, in Boswell's Corner, was a recent transplant from the Triangle area.

There are additional larger retail concentrations nearby. Further north another several minutes on Jefferson Davis Highway (US-1) from Triangle, there are several shopping centers in Dumfries (around, and just north of the intersection of Dumfries Road (VA-234)). This area has supermarkets, drug stores, fast food and sit-down restaurants, convenience stores, and a Target on Dumfries Road (VA-234) in Dumfries approximately 12 minutes driving from the redevelopment area. South from Boswell's Corner are the newer shopping centers of Stafford Marketplace and Doc Stone Commons, which feature restaurants, a Target, a Wal-Mart, a Bloom supermarket, drugstores, and other retail, and the Aquia Town Center, under renovation as of the time of this writing. These shopping centers, according to Google Maps, are approximately seven minutes from the redevelopment area. Congestion in this area likely makes the drive longer during peak commute hours.

Because of the strength and location of these retail concentrations, particularly those on Garrisonville Road with access and visibility from Interstate 95 (I-95), it is unlikely that there would be sufficient demand for substantial retail along Jefferson Davis Highway (US-1) in Boswell's Corner. Rather, additional retail will support new office workers and additional base activity and will be more community-focused. Currently, in the study area, there is limited retail, aside from an antique shop, auto service locations, a few restaurants, and a convenience store. The provision of retail on base at Quantico complicates the demand picture – the on-base commissary provides goods at prices lower than typical retail stores. There are also several restaurants, including several Subways, a McDonald's, a Domino's Pizza, and a Starbucks. The Planning Team has focused its analysis on the local "captive" markets (visitors, employees, and local residents) and pass-through traffic.

(Refer to Map 3: Boswell's Corner Retail Trade Area.)

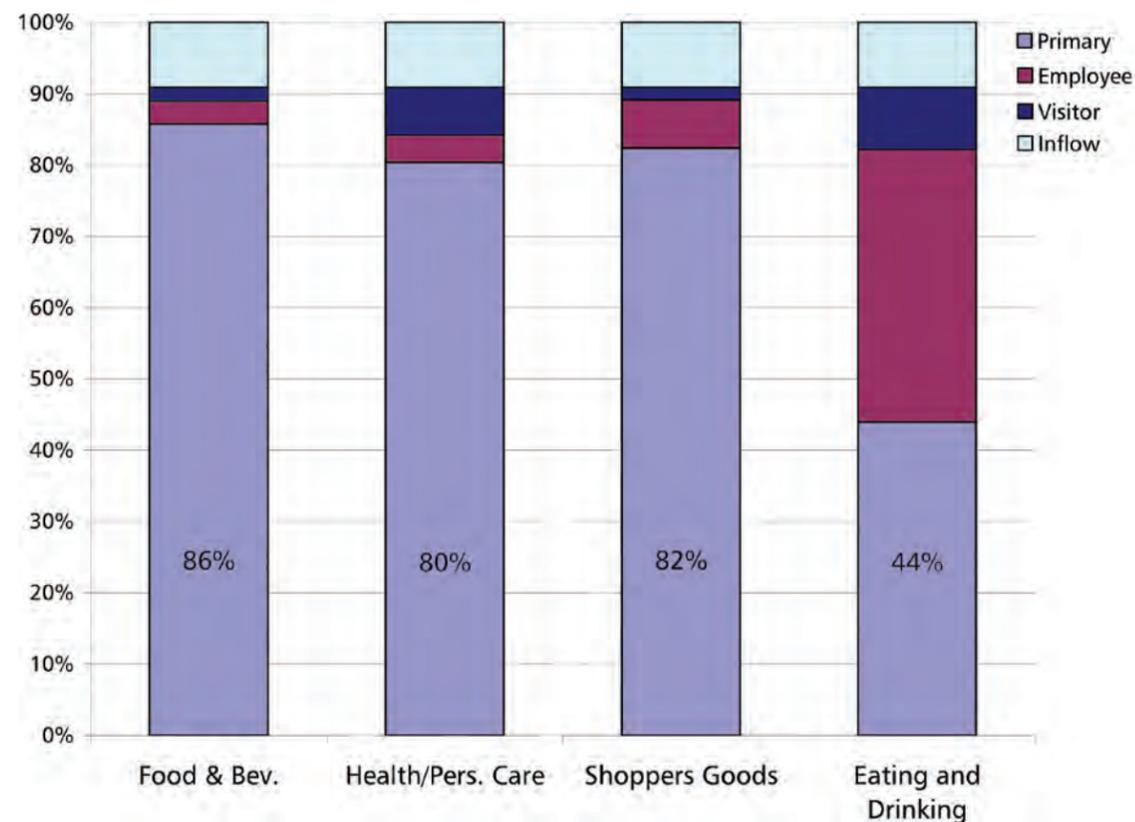
Map 3: Boswell's Corner Retail Trade Area



Source: ESRI; Economics Research Associates, 2008.

Figure 6 (*Boswell's Corner Retail Support by Market by Type of Retail, 2012*) illustrates the projected support by market, based on the analysis that follows below.

Figure 6: Boswell's Corner Retail Support by Market by Type of Retail, 2012



Employees

- Estimated Annual Average Per Employee Expenditure close to work – \$3,546 (Based on ICSC Office Worker Retail Spending Patterns and adjusted by 3% annually for inflation). (Refer to Table 7: *Estimated Spending Per Worker, 2007*.)

Office Workers

- Estimated Number, 2007 – 600¹⁰
- Estimated Number, 2012 – 1,900

Base Workers

- Number, 2007 – 15,371 military, civilians, and contractors¹¹
- Estimated Number, Post-BRAC implementation – 20,244

¹⁰ Source for this and other employment estimates used for retail demand are from the US Census Bureau Longitudinal Employer-Household Dynamics On the Map Version 3.6 unless otherwise noted)

¹¹ Source: “Community Profile, Quantico MCB, Virginia,” December 2007, Quantico Growth Management Committee as provided on www.gostafford.com

Table 7: Estimated Spending Per Worker, 2007

Category	2003	2007	% Spent Closer to Work /1	\$ Spent Closer to Work
Lunch	\$1,320	\$1,486	100%	\$1,486
Shoppers Goods	\$2,721	\$3,063	34%	\$1,041
Convenience Goods	\$2,198	\$2,474	34%	\$841
Dinner/Drinks	\$634	\$714	25%	\$178
	\$5,553	\$6,250		\$3,546

1/ % found by ICSC to be spent closer to work

Source: ICSC Office Worker Retail Spending Patterns (figures for spending in downtown with limited retail adjusted for vacation and holiday time), 2003; Economics Research Associates, 2008.

Visitors

- Estimated Boswell's Corner Visitors (2007): 409,304. Estimated to grow at an average rate of 1% annually to 2012 (refer to Table 8: *Estimated Boswell's Corner Visitors, 2007 & 2012*).
- Average Virginia traveler spent 37% of total travel expenditures shopping and eating. If same distribution is true of Stafford visitors, visitors spent \$34.6 million in 2006 in area stores and restaurants.

Table 8: Estimated Boswell's Corner Visitors, 2007 & 2012

Visitors to Quantico		8,859
Visitors to other commands in Quantico (ERA estimate)	5%	443
		9,302
Estimated visitors to Marine Museum		400,000
2007 Total Boswell's Corner Area Visitors		409,302
2012 Total Boswell's Corner Area Visitors (Assuming 1% Annual Growth)		413,395

Source: Interview with Quantico Staff; Marine Museum Press Release 2008.

Residents

The primary trade area for Boswell's Corner extends north to Graham Park Road (Dumfries Shopping Center), east to the Potomac River, south to the area just north of Garrisonville Road, and approximately 2.5 miles west. It contains the peninsula of Widewater as well as a portion of the base to the west. The Planning Team also accounted for sales coming from the wider County area, for other County visitors not included in the visitor figures, and for pass-through traffic with an inflow rate, located in tables further in the analysis.

- 2007 Primary Trade Area Population/Households: 29,966/ 9,815
- 2012 Primary Trade Area Population/Households: 35,210/ 11,749
- Total 2012 Captured Retail Expenditures in defined categories: \$31.8 million

Table 9: Boswell's Corner Captured Retail Sales by Market

Primary					
	Total Spending Potential	Less Resident Employees	Net Spending Potential	Capture Rate	Captured Spending
Food & beverage stores	\$ 57,378,604	\$ (61,345)	\$ 57,317,259	25.0%	\$ 14,329,315
Health & personal care stores	\$ 9,096,176	\$ (12,269)	\$ 9,083,907	25.0%	\$ 2,270,977
Shoppers Goods	\$ 110,338,207	\$ (2,531,391)	\$ 107,806,816	5.0%	\$ 5,390,341
Eating and Drinking	\$ 39,593,008	\$ (391,598)	\$ 39,201,411	10.0%	\$ 3,920,141
Employees					
	Total Spending Potential	Less Resident Employees	Net Spending Potential	Capture Rate	Captured Spending
Food & beverage stores	\$ 10,668,706		\$ 10,668,706	5.0%	\$ 533,435
Health & personal care stores	\$ 5,334,353		\$ 5,334,353	2.0%	\$ 106,687
Shoppers Goods	\$ 22,012,093		\$ 22,012,093	2.0%	\$ 440,242
Eating and Drinking	\$ 40,208,737		\$ 40,208,737	8.5%	\$ 3,405,198
Visitors					
	Total Spending Potential	Less Resident Employees	Net Spending Potential	Capture Rate	Captured Spending
Food & beverage stores	\$ 6,401,103		\$ 6,401,103	5.0%	\$ 320,055
Health & personal care stores	\$ 3,798,893		\$ 3,798,893	5.0%	\$ 189,945
Shoppers Goods	\$ 11,396,678		\$ 11,396,678	1.0%	\$ 113,967
Eating and Drinking	\$ 22,153,805		\$ 22,153,805	3.5%	\$ 775,383
Total					
	Total Spending Potential	Less Resident Employees	Net Spending Potential	Capture Rate	Captured Spending
Food & beverage stores			\$ 333,780,948	4.5%	\$ 15,182,805
Health & personal care stores			\$ 60,819,193	4.2%	\$ 2,567,609
Shoppers Goods			\$ 645,724,798	0.9%	\$ 5,944,549
Eating and Drinking			\$ 280,268,133	2.9%	\$ 8,100,722

Source: ESRI Business Analyst, 2007; ERA AECOM, 2008.

From the above markets' annual expenditures (refer to Table 9: Boswell's Corner Captured Retail Sales by Market), Boswell's Corner has the potential to capture \$31.8 million in sales – representing 2.5% of total expenditures. An inflow factor of 10% was added to this to account for local residents from outside the primary trade area, for visitors not included in the above visitor numbers, and for pass-through traffic. This yields a total of \$35 million in sales for redevelopment area retailers in 2012. (Refer to Table 10: Boswell's Corner Projected Retail Sales, 2012.)

Table 10: Boswell's Corner Projected Retail Sales, 2012

2012	Captured Spending from All Markets	Inflow Factor	Total Potential Captured Spending
Convenience			
Food & beverage stores	\$15,182,805	10%	\$16,701,086
Health & personal care stores	\$2,567,609	10%	\$2,824,369
	\$17,750,414		\$19,525,455
Shoppers Goods			
	\$5,944,549	10%	\$6,539,004
Eating and Drinking			
Full-Service	\$4,664,978	10%	\$5,131,476
Limited-Service	\$3,435,744	10%	\$3,779,318
Eating and Drinking	\$8,100,722	10%	\$8,910,794
Total	\$31,795,685	10%	\$34,975,253

Source: ESRI Business Analyst, 2007; Economics Research Associates, 2008.

Applying average productivity rates by type of retail suggests the ability of Boswell's Corner to support a total of up to 112,000 square feet of retail in the next five years (refer to Table 11: Boswell's Corner Projected Retail Demand, 2012), inclusive of existing retail space, which is estimated to be 25,000 square feet, based on County assessment data and visual estimation. This leaves a net demand for about 87,000 square feet.

There is demand for up to 45,000 square feet of food store space. Net of the estimated 4,000 square foot 7-Eleven, there is net new demand for 41,000 square feet. A typical modern suburban grocery store is typically larger than 50,000 square feet. Therefore, demand would be for a smaller, neighborhood grocery or specialty food store.

Demand for drugstores and health and beauty is approximately 6,000 to 8,000 square feet. As a point of reference, new full-size chain drugstores such as Walgreens or CVS are 8,000 square feet and up. There are currently no drugstores in the redevelopment area. If a nearby store goes out of business, there could be greater potential for capture of additional share to support a new chain drugstore.

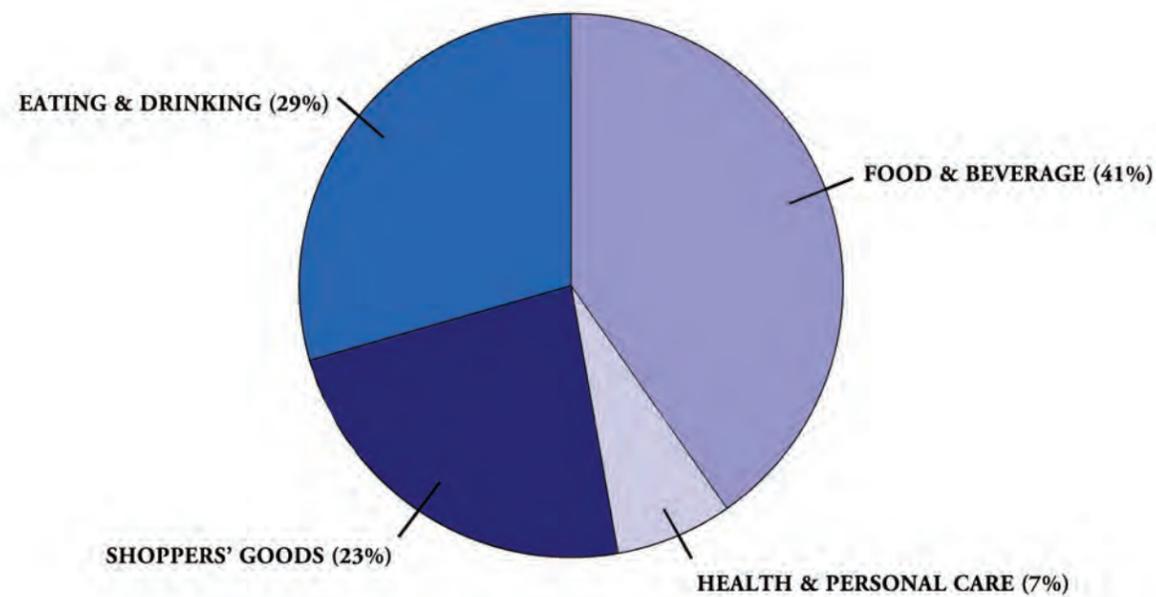
There is also sufficient demand for restaurants, comprising between 26,000 and 33,000 square feet. As a point of reference, large, full-service chain restaurants like a TGIFridays typically range between 6,000 and 8,000 square feet; fast food chains such as a freestanding McDonalds are approximately 4,000-5,000 square feet; take out restaurants can be 1,000 square feet or even smaller; and independent restaurants range from tiny 1,000 square foot restaurants to sizes competing with large national chains. Currently, there are several restaurants in the redevelopment area (Zum Rhinegarten, the Globe and Laurel, Stafford Diner, and Bella Café). These are estimated to be approximately 14,000 square feet combined, leaving net demand for approximately 12,000-19,000 square feet, or two to three additional large restaurants in the next five years. (Refer to Figure 7: Boswell's Corner Supported Retail Space by Type, 2012.)

Table 11: Boswell's Corner Projected Retail Demand, 2012

2012	Total Potential Sales	Productivity		Square Feet	
		Low	High	Low	High
Convenience					
Food & beverage stores	\$16,701,086	\$375	\$425	39,000	45,000
Health & personal care stores	\$2,824,369	\$350	\$450	6,000	8,000
	\$19,525,455	\$368	\$434	45,000	53,000
Shoppers Goods					
	\$6,539,004	\$250	\$300	22,000	26,000
Eating and Drinking					
	\$8,910,794	\$270	\$343	26,000	33,000
	\$34,975,253	\$312	\$376	93,000	112,000

Source: ESRI Business Analyst, 2007; ULI Dollars and Cents of Shopping Centers, 2007; Economics Research Associates, 2008.

Figure 7: Boswell's Corner Supported Retail Space by Type, 2012



Source: Economics Research Associates, 2008

RESIDENTIAL DEMAND

The Planning Team used the analytic methods for residential demand projections outlined in the Methodology section. Currently, the redevelopment area has just under 1% of all Stafford County households. A concerted effort by Stafford County toward denser development as well as enhanced demand for housing near the base will have the potential to increase this share. There is also the potential for replacement of some of the older housing in the area.

The Planning Team projects that of Boswell's Corner could support a total of 732 units in the coming five years, an average annual stabilized demand for 109 rental units and 36 for-sale units annually (refer to Table 12: *Boswell's Corner Residential Demand, 2008–2030*). Though capture rates vary across households by lifestyle considerations, this reflects an overall absorption of approximately 8% of County for-sale housing and 22% of rental housing.

Table 12: Boswell's Corner Residential Demand, 2008–2030

	2008	2009	2010	2011	2012	2008-2012	2012-2020	2020-2030
Total For-Sale	45	41	38	36	36	194	290	360
Total Rental	102	107	109	109	109	537	870	1090
Total Units	147	148	147	145	145	732	1160	1450

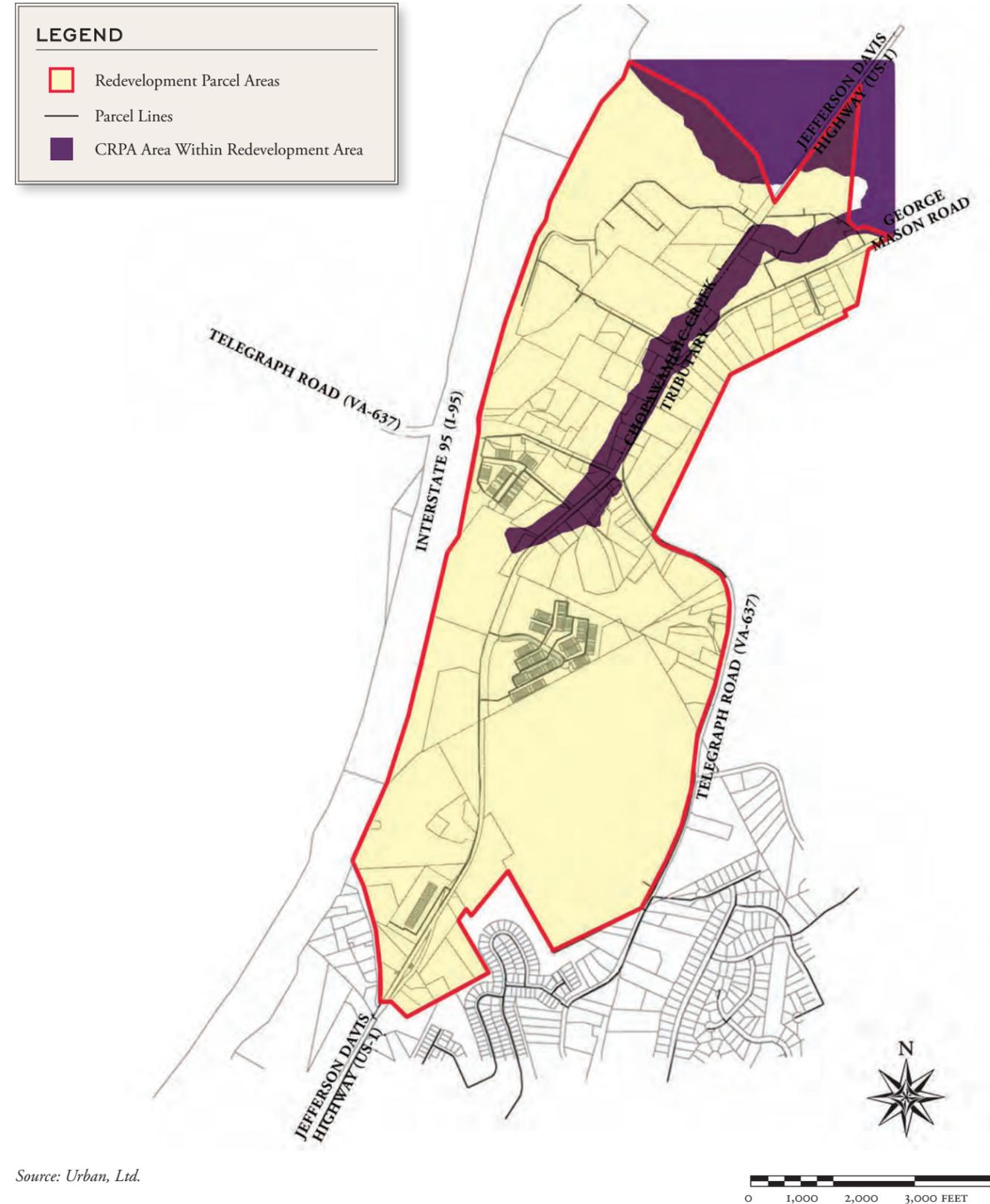
Source: Economics Research Associates, 2008

INFRASTRUCTURE & STORM WATER MANAGEMENT (SWM) ANALYSIS

STORM WATER MANAGEMENT (SWM) ANALYSIS

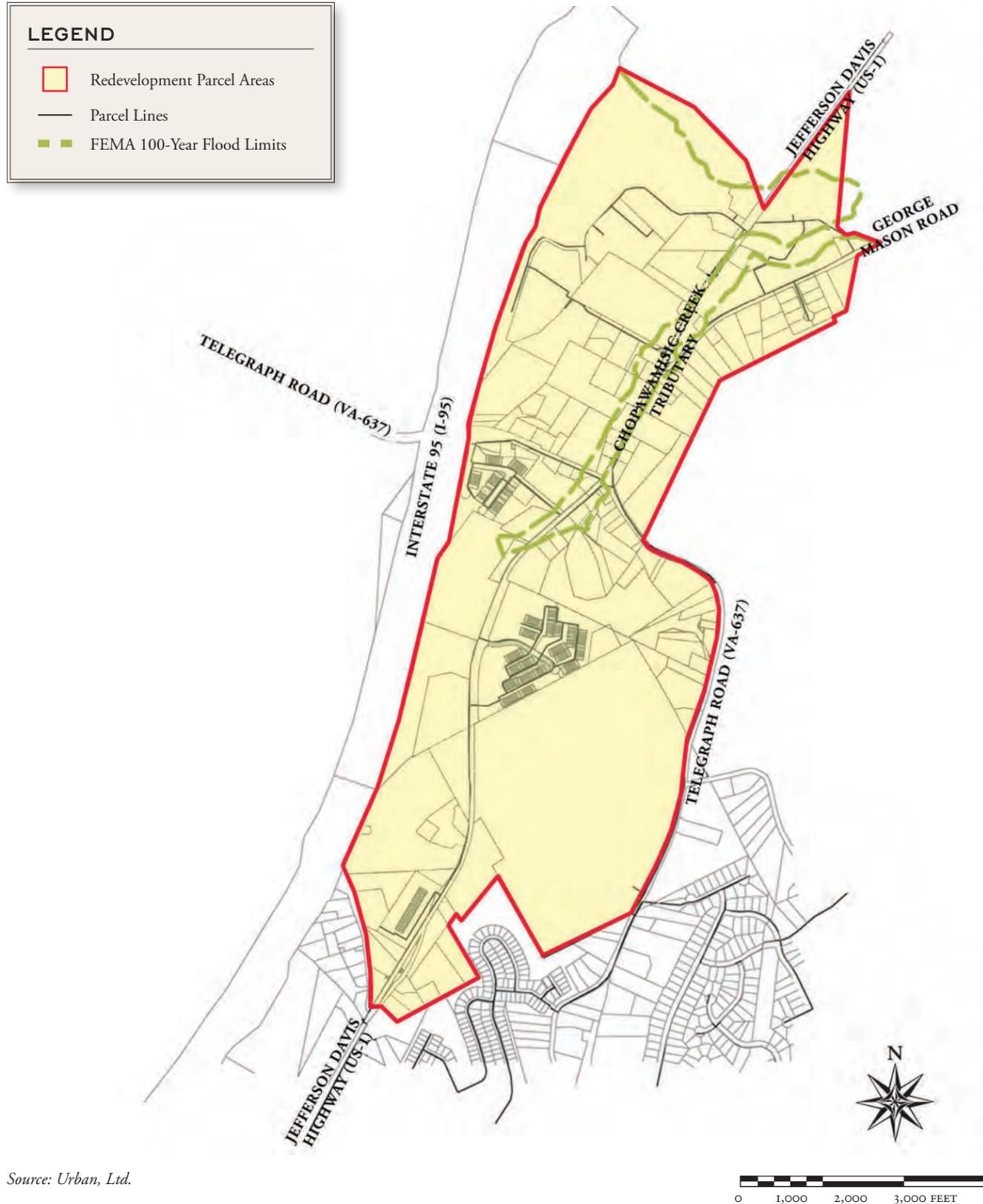
FEMA has mapped a significant 100-year floodplain through the central portion of Boswell's Corner, which roughly parallels the western side of Jefferson Davis Highway (US-1). The floodplain follows a tributary to the Chopawamsic Creek as it flows northward towards the Creek. The FEMA mapped 100-year floodplain is significant to note with respect to prospects for redevelopment in this area. FEMA requires a Letter of Map Revision (LOMR) whenever development encroaches the 100-year floodplain. Nearly any new or revised access point on the west side of Jefferson Davis Highway (US-1) will result in the need to address this issue. With the LOMR, the engineering design needs to demonstrate no detrimental effect to the 100-year water surface elevation on adjacent properties. Boswell's Corner contains no County mapped CRPA areas. (Refer to Map 4: Boswell's Corner Critical Resource Protection Areas (CRPAs) and Map 5: Boswell's Corner FEMA 100-Year Floodplain Limits.)

Map 4: Boswell's Corner Critical Resource Protection Areas (CRPAs)



Source: Urban, Ltd.

Map 5: Boswell's Corner FEMA 100-Year Floodplain Limits



Source: Urban, Ltd.

Existing Impervious Analysis

The currently allowable, existing uses within Boswell's Corner are primarily light industrial (23%) and suburban residential (23%) along with agriculture (23%), manufactured home (8%), urban commercial (7%) and various other uses as shown in Table 13 (*Boswell's Corner Existing Impervious Analysis*).

Table 13: Boswell's Corner Existing Impervious Analysis

EXISTING USE	ACRES	% IMPERVIOUS	IMPERVIOUS AREA
Agricultural	137.4	15	20.61
Convenience Commercial	30.3	90	27.27
Light Industrial	139.6	90	125.64
Manufactured Homes	50.2	35	17.57
Suburban Residential	139.2	35	48.72
Urban Commercial	41.3	90	37.17
Urban Residential	37.0	35	12.95
Subtotal	575		
Road Right-of-Way	26.1	95	24.80
Total	601.1		314.73

Based on the land uses above, the maximum existing impervious area within the redevelopment assuming full development and utilization of the land area is about 52%. A visual review of the parcels within the development indicates that a large number of parcels are either not developed or not fully developed to the maximum limits of their existing zoning or land use. Therefore, the existing impervious area calculated above represents a higher than actual quantity. Taking this into consideration, the Planning Team believes a more appropriate figure for the amount of existing impervious area within Boswell's Corner is approximately 40%.

Regional SWM Opportunities

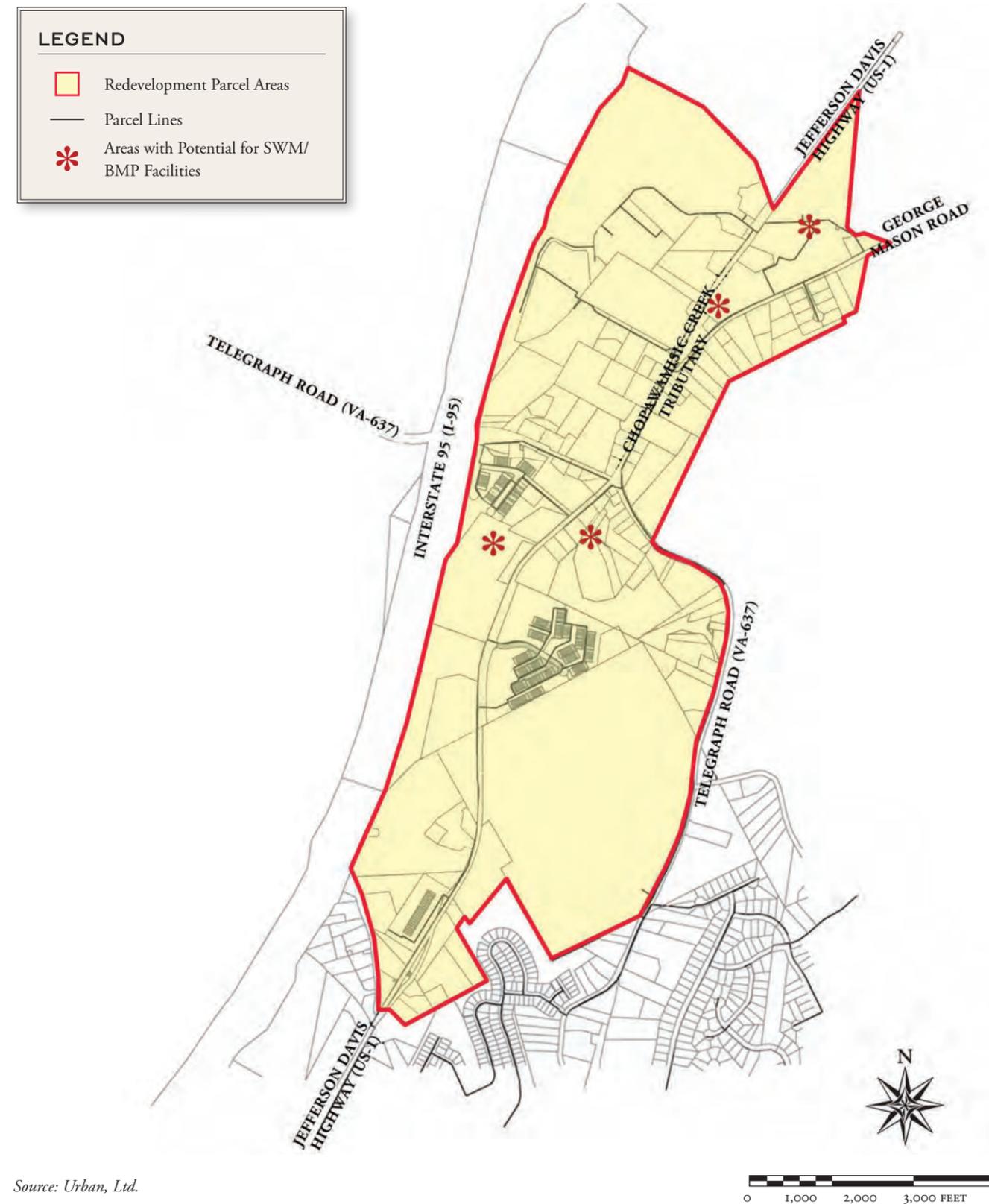
Regional SWM opportunities exist within this area, however, because of the narrow and linear layout of the roads, properties, and tributaries to the Chopawamsic Creek, the areas controlled by any potential facilities will likely be small in nature and may likely not be economical to implement as regional facilities. Each development plan should provide for its own storm water management and water quality measures. Ideally, taking a regional approach in select areas would benefit the redevelopment area by consolidating development and storm water facilities.

Regional facilities may be redundant facilities proposed by the County for added water quality benefits and to achieve a reduction in runoff within the Chopawamsic Creek watershed. They may also be facilities proposed by multiple landowners in a coordinated effort to consolidate their development and focus the storm water needs in a specific area or areas. Other added benefits of regional facilities are they can be more efficient to maintain than several smaller facilities. They may also become nice amenities to the development if planned, designed and incorporated with that in mind. Each development plan typically provides for its own storm water management and water quality measures on-site. However, taking a regional approach in select areas would benefit the redevelopment area by consolidating both development and storm water facilities. Ideally, the regional facilities could be implemented by the County and the developers within the area would have the option of using these facilities as controls for their projects.

While it may prove difficult for any individual property owner to implement a regional SWM facility due to timing and cooperation of adjacent developers whose land would drain to a proposed facility, it is in Stafford County's interest to help facilitate this approach. Stafford County may establish a mechanism by which Stafford County can implement a regional approach to SWM. Other jurisdictions have instituted a "pro-rata share" fee which is paid by the land owners or developers for increases in impervious area within a watershed. The proceeds would be used to construct new SWM facilities in the watershed or improvements along the tributary. Another option is for Stafford County to create incentives, reimbursements and/or additional concessions to land owners who elect to implement a regional storm water management design which takes into consideration the future development potential of the upstream drainage area.

Further discussion of the initial regional SWM recommendations above will be provided in the final report. The Planning Team has included a map with suggested locations where regional SWM measures may make sense. (Refer to Map 6: Boswell's Corner Potential SWM/BMP Facilities.)

Map 6: Boswell's Corner Potential SWM/BMP Facilities



Source: Urban, Ltd.

WATER/SEWER ANALYSIS

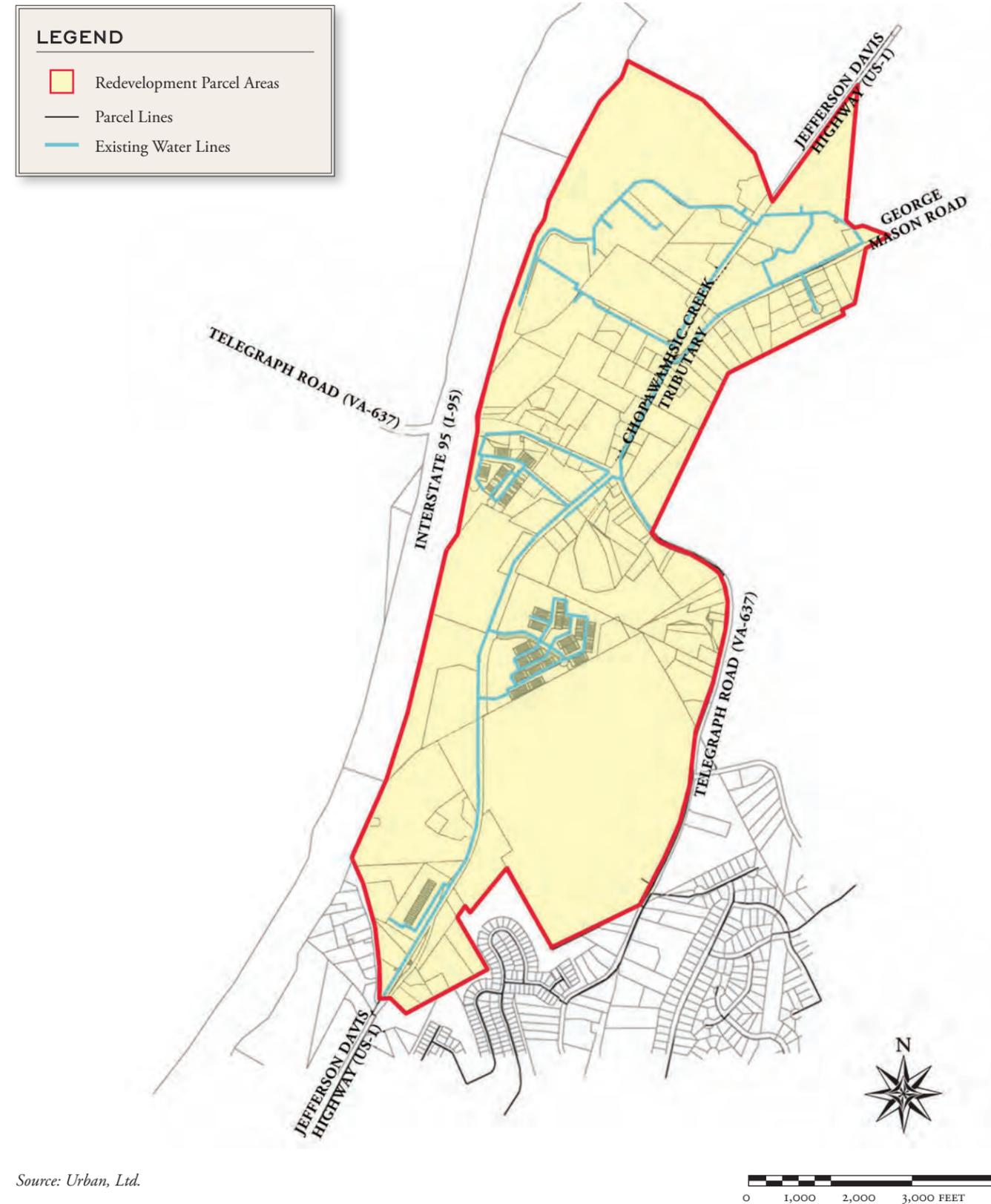
Existing Water Service

According to the Stafford County water model, Boswell's Corner is served with public water mainly along the Jefferson Davis Highway (US-1) corridor and other public streets. The existing lines vary from 6" in diameter up to 12" diameter and the area lies within the 310 pressure zone. (Refer to Map 7: Boswell's Corner Existing Water Facilities.)

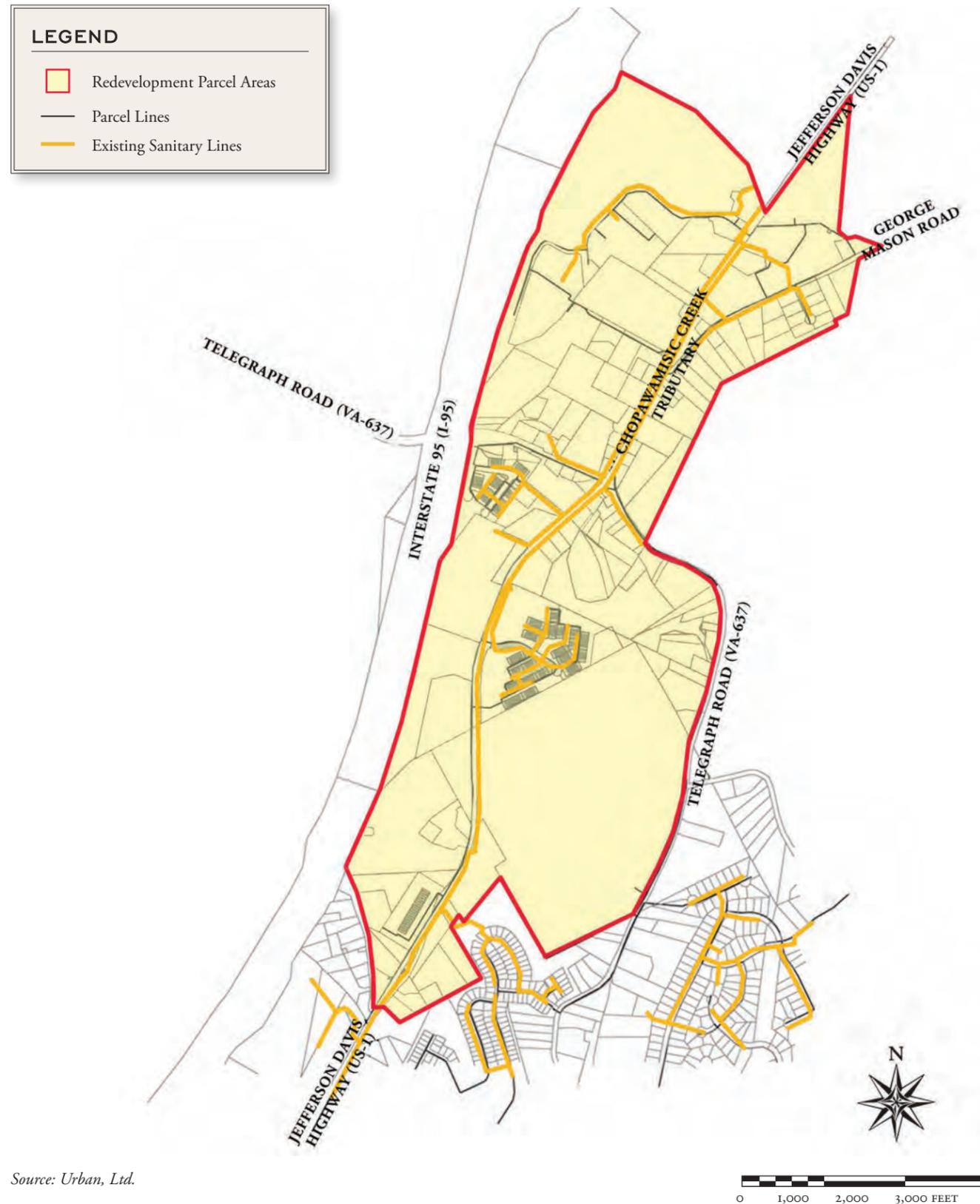
Existing Sewer Service

Approximately 75-80% of the sewage from Boswell's Corner drains in a northerly direction along the Jefferson Davis Highway (US-1) corridor in an 8" line. This line is joined by another 8" line approximately 1,500' north of the intersection of Jefferson Davis Highway (US-1) and George Mason Road. From this point, a 15" sewer main is provided to the Hilldrups pumping station. At the southern tip, a 10" gravity main leaves the area flowing in a southerly direction. (Refer to Map 8: Boswell's Corner Existing Sewer Facilities.)

Map 7: Boswell's Corner Existing Water Facilities



Map 8: Boswell's Corner Existing Sewer Facilities



Source: Urban, Ltd.

COMPREHENSIVE PLAN ELEMENTS

Chesapeake Bay Preservation Area (CBPA) Plan

The CBPA Plan is important, especially in the northern reaches of this redevelopment area. The CBPA Plan uses four categories of focus, which are as follows:

- Physical Constraints to development
- Protection of Potable Water Supply
- Shoreline Erosion Problems and Control Measures
- Public and Private access to waterfront

Of the CBPA Plan categories, the physical constraints, such as erosive soils, steep slopes, and soils with poor development properties, are the primary focus for Boswell's Corner. To maximize development, and minimize disturbance, adequate erosion controls should be installed and monitored in conjunction with development along the floodplain.

Capital Improvement Program (CIP) (FY 2007-2012)

There are no CIP currently established within the area of this sector related to SWM.

Stafford County's CIP calls for both water and sewer improvements in this area. A new 12" water main was recently constructed within the northern portion of the redevelopment area along the west side of Jefferson Davis Highway (US-1) north of Telegraph Road (VA-637). Another improvement within the sector includes increasing transmission capacity from the Smith Lake Water Treatment Plant (WTP) by constructing a new 24" main from Interstate 95 (I-95) to the 12" main along Jefferson Davis Highway (US-1). No timetable is set forth in the CIP for this improvement and it is not included in the present day water model scenario.

As part of Stafford County's Capital Improvements Plan, the Hilldrup's pumping station was recently completed and it is adequate for the current and near-term demands of this area. The Hilldrup's pumping station pumps the sewer flow in a southerly direction along the Jefferson Davis Highway (US-1) corridor to a point where it ties into a 10" gravity main.

There are no gravity mains or force mains within the redevelopment area which are presently undersized for the existing demands used as the baseline for the sewer model. Present demands are approximately 163 gallons-per-minute (gpm) through the Hilldrup's Pumping Station and approximately 266 gpm in the gravity outfall main which leaves the redevelopment boundary in the south within Jefferson Davis Highway (US-1). Outside the redevelopment area, the sewer outfall to the south does eventually flow through 2 pipes which are over capacity and under pressure flow. These are identified in the Stafford County Sewer model as pipes 10-0125 and 10-0115. The outfall also runs through the Aquia Creek pumping station prior to being treated at the Aquia Waste Water Treatment Facility.

Falmouth Plan

The Falmouth Plan component of the Comprehensive Plan is not pertinent to Boswell's Corner.

Groundwater

Boswell's Corner falls along the Fall Line between the Coastal Plain Aquifer area and the Piedmont area in the area known as the Coastal Plain Aquifer recharge zone. Throughout Stafford County, there is significantly more groundwater supply than demand. Although well usage continues to increase annually throughout Stafford County, this increase will not, as a whole, affect groundwater supplies. Due to unique geographical characteristics, certain small areas may experience a lack of groundwater during periods of heavy drought. Despite this fact, the level of groundwater supply should not directly affect the redevelopment area. Efforts should be made to minimize the impacts at the surface along the Fall Line recharge area.

Shoreline

Boswell's Corner has the Chopawamsic Creek at the very northern reach of its boundary. However, it is further upstream than areas that are characterized by tidal effects, and therefore, is not subject to additional shoreline recommendations. Although Boswell's Corner is not directly touching a shoreline preservation area, redevelopment plans shall recognize critical areas within the area that would affect water quality further downstream. The critical areas include the CBPA Plan areas which coincide with the 100-year floodplain. (*Refer to Map 4: Boswell's Corner Critical Resource Protection Areas (CRPAs).*)

Stormwater

Boswell's Corner falls outside of the five storm water watersheds studied in the Stafford Stormwater Management Plan. As such, individual storm water quantity and (as well as quality) measures should be added as new development occurs, by the respective developer. The facilities may include combination of elements such as wet/dry ponds, bioretention, structural water quality facilities. Particular to this redevelopment area is the presence of Quantico Slate. As this material dissolves into storm runoff the pH of the water becomes more acidic, which may adversely impact plant and aquatic life downstream. Because of this, it is recommended that all ponds include a clay liner to serve as a barrier between the water and the slate. Any constructed outfalls shall also include non-erosive liners which will serve as a barrier.

Water Supply Plan

The Water Supply Plan focuses primarily on the characteristics of the existing water sources throughout Stafford County and the costs and concerns associated with delivering it for human consumption. In the case of Boswell's Corner, water supply is projected to be supplied via water mains from the Stafford reservoirs. Therefore, while the Water Supply Plan is integral for reservoir planning, construction, and expansion, it is not directly significant to Boswell's Corner, which assumes that the water is readily available, based on the approved reservoir recommendations. Certain aspects of the plan, however, should be considered. If the water supply characteristics of the source reservoirs change, then it could affect water availability to Boswell's Corner.

TRANSPORTATION & TRAFFIC ANALYSIS

EXISTING ROADWAY NETWORK

The following are descriptions of each of the existing major roadways (collector streets or higher classification) located in Boswell's Corner. (Refer to Map 9: Boswell's Corner Existing Roadway Network.) Photographs of typical sections within the area are included in Volume IX (Stafford County Traffic Data).

Jefferson Davis Highway (US-1)

Jefferson Davis Highway (US-1) is a principal arterial that runs north-south within Boswell's Corner. The roadway is currently designed as a four-lane, undivided, shoulder and ditch, cross section with a posted speed limit of 45 mph. For much of its length through the area, Jefferson Davis Highway (US-1) is characterized by narrow shoulders, inadequate ditches and sections of poor horizontal and/or vertical alignments.

Telegraph Road (VA-637)

Telegraph Road (VA-637) functions as a two-lane, undivided, collector street. The roadway carries a posted speed limit of 35 mph and generally runs in the north-south direction parallel to Jefferson Davis Highway (US-1) parallel to Jefferson Davis Highway (US-1), turning east-west and crossing Jefferson Davis Highway (US-1) in Boswell's Corner. Within Boswell's Corner, Telegraph Road (VA-637) intersects Jefferson Davis Highway (US-1) under signal control.

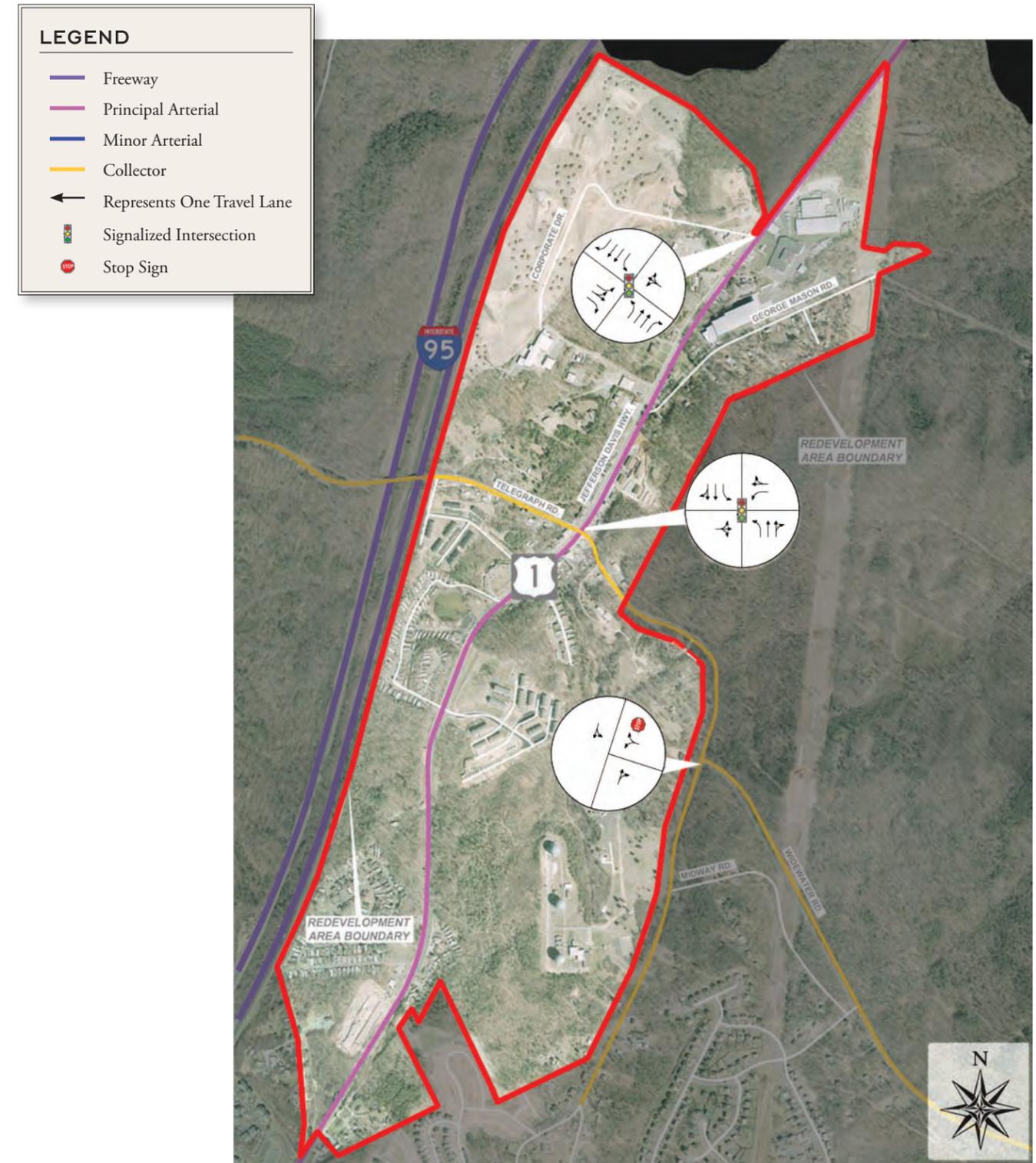
Widewater Road (VA-611)

Widewater Road (VA-611) is a two-lane, undivided, collector street that extends east from Telegraph Road (VA-637) to provide access to properties adjacent to the Potomac River. Widewater Road (VA-611) carries a posted speed limit of 50 mph with trucks restricted to a speed limit of 45 mph. The intersection of Widewater Road (VA-611) at Telegraph Road (VA-637) operates under Stop Sign control.

EXISTING TRANSIT SERVICES

No bus routes currently serve Boswell's Corner.

Map 9: Boswell's Corner Existing Roadway Network



Map ©2008 Wells + Associates.

CURRENT PLANNED NETWORK

The current Stafford County Transportation Plan (June 7, 2005) makes certain recommendations for the roadways within Boswell's Corner. A copy of the Transportation Plan is provided in Volume IX (*Stafford County Traffic Data*). These recommendations are summarized as follows:

- Upgrade Jefferson Davis Highway (US-1) to a six-lane, divided, facility
- Upgrade Telegraph Road (VA-637) to a standard two-lane facility
- Upgrade Widewater Road (VA-611) to a standard two-lane facility

FAMPO Constrained Long Range Plan (CLRP)

FAMPO's 2030 CLRP includes the following recommendations for improvements in Boswell's Corner:

- Upgrade Jefferson Davis Highway (US-1) to a six-lane, divided, facility from Widewater Road (VA-611) to Garrisonville Road.
- Upgrade Telegraph Road (VA-637) to a standard two-lane facility
- Upgrade Widewater Road (VA-611) to a standard two-lane facility

VDOT State Highway Plan

VDOT's 2025 State Highway Plan provides the following recommendation for the redevelopment area:

- Upgrade Jefferson Davis Highway (US-1) to a six-lane, divided, facility.

Base Realignment and Closure (BRAC)

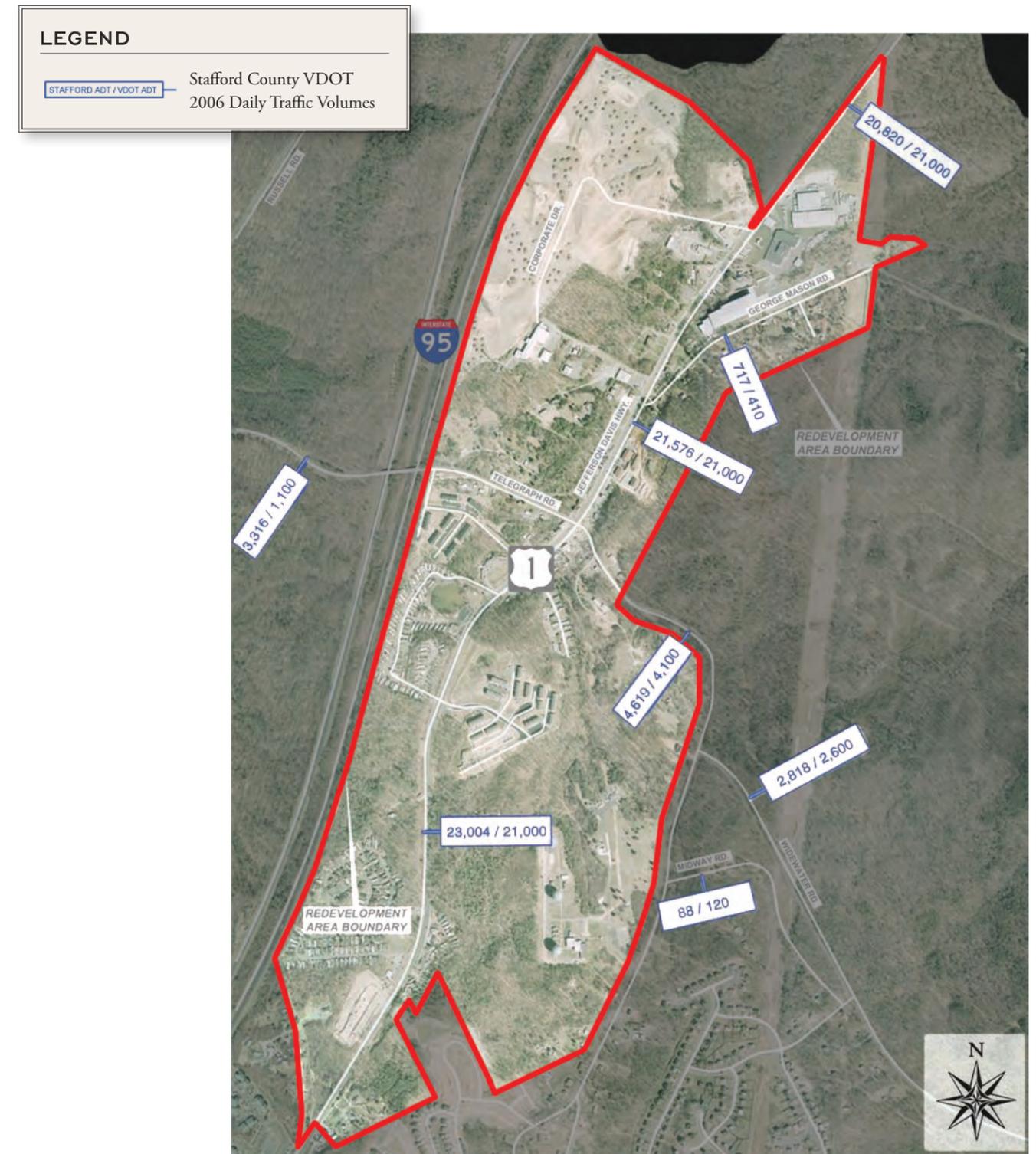
In addition, the proximity of the BRAC activity anticipated for the Marine Corps Base Quantico (MCBQ) will impact the future traffic volumes and network planning for the Boswell's Corner area. The Environmental Impact Statement (EIS) issued by the BRAC indicates that up to 5,000 additional personnel may be located at the MCBQ by 2011. The influx of vehicle trips associated with the BRAC was included in future forecasts and is documented in later phases of this study.

EXISTING TRAFFIC VOLUMES

Baseline 2006 traffic volumes for select roadways within Boswell's Corner were developed by Stafford County staff and are summarized on Map 10 (*Boswell's Corner Existing Average Daily Traffic Volumes*) and Map 11 (*Boswell's Corner Existing Peak Hour Traffic Turning Volumes*). Average daily traffic volumes within the area range up to 717 on local streets, from 2,818 to 4,619 on collector streets, and up to 23,004 on principal arterials. VDOT primary and secondary count sources were also reviewed and summarized on Map 10 (*Boswell's Corner Existing Average Daily Traffic Volumes*) along with the Stafford County volumes. It should be noted that in certain cases Stafford County and VDOT volumes differ. These discrepancies are likely a result of counts being conducted independently on different dates and/or VDOT applying factors for older volume data on certain roadway links.¹²

The peak hour traffic turning volumes are summarized on Map 11 (*Boswell's Corner Existing Peak Hour Traffic Turning Volumes*). Copies of the count data are included in Volume IX (*Stafford County Traffic Data*).

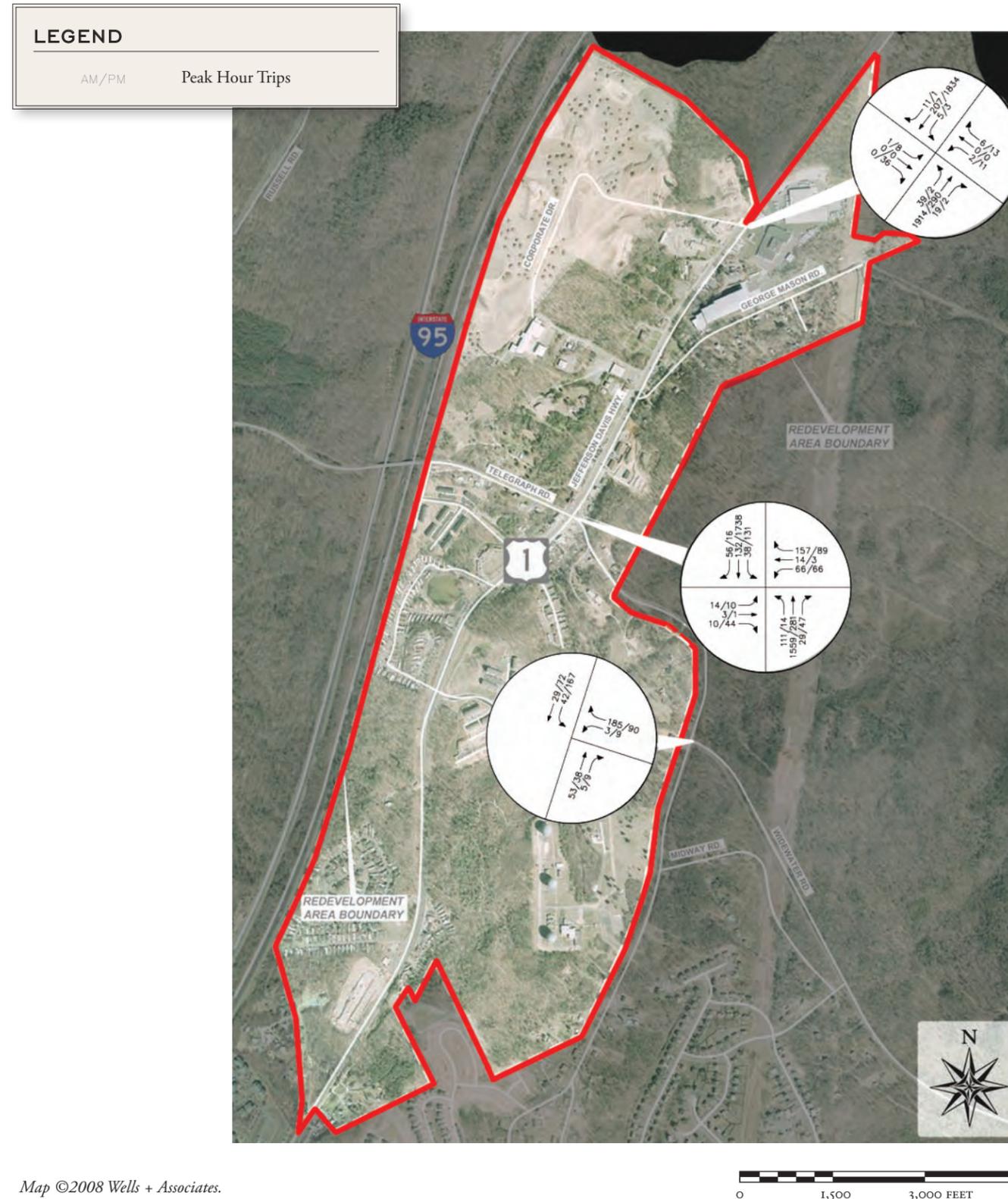
Map 10: Boswell's Corner Existing Average Daily Traffic Volumes



¹² Additional peak hour turning movement counts at key intersections within the study area were obtained from: counts conducted by Wells + Associates, Inc. on Tuesday, September 23, 2008; counts conducted by MCV Associates, Inc. on February 6, 2008 and February 7, 2008.

Map ©2008 Wells + Associates.

Map 11: Boswell's Corner Existing Peak Hour Turning Volumes



Map ©2008 Wells + Associates.

CAPACITY OF ROADWAY NETWORK

The capacity of a street is typically measured by how many vehicles per hour can be accommodated in a segment without significant delays. Capacity is a function of the number and width of lanes as well as geometric standards and/or criteria.

Levels of Service

Level of service (LOS) is a rating of how comfortable and convenient it is to drive along a road or through an intersection. Desirable levels of service occur when motorists are able to drive at their preferred safe speed. For urban streets, a typical desired level of service is “D” which assumes a few traffic stoppages but no major delays. Threshold levels of service for signalized and unsignalized intersections are summarized on Table 14 (*Level of Service Criteria for Signalized Intersections*) and Table 15 (*Level of Service Criteria for Unsignalized Intersections*).

Table 14: Level of Service Criteria for Signalized Intersections

LEVEL OF SERVICE	AVERAGE CONTROL DELAY (SEC/VEH)
A	< 10.0
B	> 10.0 and <20.0
C	> 20.0 and < 35.0
D	> 35.0 and < 55.0
E	> 55.0 and < 80.0
F	> 80.0

Source: Highway Capacity Manual 2000

Table 15: Level of Service Criteria for Unsignalized Intersections

LEVEL OF SERVICE	AVERAGE CONTROL DELAY (SEC/VEH)
A	< 10
B	> 10 and < 15
C	> 15 and < 25
D	> 25 and < 35
E	> 35 and < 50
F	> 50

Source: Highway Capacity Manual 2000

Levels of service (LOS) at select roadway links were evaluated based on Stafford County 2006 baseline traffic volumes. (Refer to Table 16: *Boswell's Corner Typical Link Level of Service Threshold Values.*)

In order to determine the LOS at key intersections, the Highway Capacity Manual 2000 methodologies as reported by Synchro 7 were used. Synchro is a macroscopic model used to evaluate the effects of changing intersection geometrics, traffic demands, traffic control, and/or traffic signal settings and to optimize traffic signal timings. The levels of service reported for the signalized intersections were taken from the Highway Capacity Manual 2000 (HCM) reports generated by Synchro and summarized in Table 17 (*Boswell's Corner Existing Capacity Analysis Summary*).

As shown on Table 17 (*Boswell's Corner Existing Capacity Analysis Summary*), the results of the capacity analysis show that both signalized intersections within Boswell's Corner operate at overall levels of service (LOS) "B" or better. All lane groups at the study intersections operate at LOS "D" or better during both weekday peak periods.

Lane groups at the Stop Sign-controlled intersection of Telegraph Road (VA-637) and Widewater Road (VA-611) operate at LOS "A" during both the weekday AM and PM peak periods.

Volume to Capacity (V/C) Ratios

The Volume to Capacity (V/C) ratio gives an indication of traffic congestion, with V being the traffic volume and C the street capacity. When the V/C ratio approaches a value of 1.0, the facility is said to be operating at theoretical capacity (or level of service "E").

For roadway links, the V/C ratio is related to levels of service (LOS) at certain daily threshold volumes. Table 16 (*Boswell's Corner Typical Link Level of Service Threshold Values*) summarizes the threshold daily traffic volumes and V/C ratio associated with each level of service grade.

The V/C ratios for select roadway links are shown on Table 16 (*Boswell's Corner Typical Link Level of Service Threshold Values*). As shown in the table the maximum V/C ratio in Boswell's Corner is 0.30 and occurs on Jefferson Davis Highway (US-1) south of Telegraph Road (VA-637). This ratio corresponds to a level of service "B."

The V/C ratios for the three study intersections are shown on Table 17 (*Boswell's Corner Existing Capacity Analysis Summary*). The overall V/C ratio of the Jefferson Davis Highway (US-1)/Corporate Drive intersection ranges from 0.78 to 0.90 for weekday peak periods.

The intersection of Jefferson Davis Highway (US-1) and Telegraph Road (VA-637) operates at an overall V/C ratio of 0.71 during the weekday AM peak period and 0.73 during the weekday PM peak period. The maximum V/C ratio for a lane group is 0.76 which occurs for the northbound thru-right movement during the AM peak hour and for the southbound thru-right movement during the PM peak hour.

Table 16: Boswell's Corner Typical Link Level of Service Threshold Values¹³

	LOS "A"	LOS "B"	LOS "C"	LOS "D"	LOS "E"
V/C	0.3	0.5	0.66	0.79	1.0
2 LANE	11,400	19,000	25,080	30,020	38,000
4 LANE	22,800	38,000	50,160	60,040	76,000
6 LANE	34,200	57,000	75,240	90,060	114,000

	Limits	ADT	Lanes	V/C	LOS
Jefferson Davis Highway (US-1)	North of Corporate Drive	20,820	4	0.27	A
Jefferson Davis Highway (US-1)	North of Telegraph Road (VA-637), South of Corporate Drive	21,576	4	0.28	A
Jefferson Davis Highway (US-1)	South of Telegraph Road (VA-637)	23,004	4	0.30	B
Telegraph Road (VA-637)	West of Jefferson Davis Highway (US-1)	3,316	2	0.09	A
Telegraph Road (VA-637)	East of Jefferson Davis Highway (US-1)	4,619	2	0.12	A
Widewater Road (VA-611)	East of Telegraph Road (VA-637)	2,818	2	0.07	A

Source: Highway Capacity Manual 2000

¹³ "Link" refers to Roadway Lanes, not intersections nor interchanges. Refer to Table 16: *Boswell's Corner Existing Capacity Analysis Summary* for Levels of Service at intersections & interchanges.

Table 17: Boswell's Corner Existing Capacity Analysis Summary ^{14 15 16}

Intersection	Traffic Control	Lane Group	Existing Levels of Service		Existing V/C Ratios		
			Weekday		Weekday		
			AM	PM	AM	PM	
1. Route 1 (Jefferson Davis Highway)/ Corporate Drive	Signal	EBL	-	D (45.0)	-	0.06	
		EBLT	D (48.2)	D (45.1)	0.06	0.08	
		EBR	-	D (44.7)	-	0.02	
		WBLTR	D (49.0)	D (48.8)	0.11	0.26	
		NBL	A (3.2)	B (12.9)	0.05	0.02	
		NBT	B (12.5)	A (6.0)	0.83	0.13	
		NBR	A (4.2)	A (5.5)	0.02	0.00	
		SBL	B (11.0)	A (5.1)	0.05	0.00	
		SBT	A (5.3)	B (15.6)	0.09	0.85	
		SBR	<u>A (5.0)</u>	<u>A (5.5)</u>	<u>0.01</u>	<u>0.00</u>	
Overall		B (11.7)	B (15.2)	0.80	0.78		
2. Route 1 (Jefferson Davis Highway)/ Telegraph Road	Signal	EBLTR	C (23.4)	C (27.9)	0.08	0.27	
		WBLT	C (25.5)	C (30.6)	0.36	0.51	
		WBR	C (27.6)	C (26.6)	0.54	0.06	
		NBL	A (4.8)	A (3.7)	0.16	0.13	
		NBTR	A (9.7)	A (3.2)	0.76	0.14	
		SBL	A (7.7)	A (3.5)	0.37	0.20	
		SBTR	<u>A (4.5)</u>	<u>A (7.7)</u>	<u>0.08</u>	<u>0.76</u>	
		Overall		B (11.0)	A (8.7)	0.71	0.73
3. Telegraph Road/ Widewater Road	Stop	WBLR	A [9.5]	A [9.4]	0.20	0.12	
		SBLT	A [4.5]	A [5.6]	0.03	0.12	

Source: Wells + Associates

14 Analysis performed using Synchro software, Version 7.
 15 Values in parentheses, (), represent signalized delay in seconds
 16 Values in brackets, [], represent unsignalized delay in seconds

TRAFFIC CONTROL SYSTEMS

Within Boswell's Corner, the majority of intersections operate under Stop Sign control. A total of two intersections are controlled by signals. These signals currently do not operate as a coordinated network.

None of the signalized intersections provide for pedestrian countdown heads or crosswalks at the approaches.

ACCIDENTS & SAFETY

Accident data were obtained from the Virginia Department of Transportation (VDOT) for the period between January 1, 2003 and December 31, 2007. The data is shown on Table 18 (*Boswell's Corner Historic Accident Analysis Expected Values*). A copy of the accident summaries as provided by VDOT is included in Volume IX (*Stafford County Traffic Data*).

The total number of accidents per type at each of the study intersections for the five-year study period is provided. A determination of "expected values" for each accident type and each location was then calculated and compared to VDOT statewide expected values. Those locations exceeding VDOT's "90th percentile and 95th percentile high" values would be considered abnormally high and may require further study by VDOT and/or Stafford County.

As shown in Table 17 (*Boswell's Corner Existing Capacity Analysis Summary*), all the study intersections were below the 90th percentile "crash" limits with the exception of the Telegraph Road (VA-637) and Widewater Road (VA-611) intersection. This intersection experienced one collision with a pedestrian during the study period, or 0.20 accidents per year. This is approximately 122% higher than the 0.09 incidents per year anticipated as being the 90th percentile limit at similar locations. In addition, the Telegraph Road (VA-637) and Widewater Road (VA-611) intersection experienced four collisions with fixed objects during the study period, or 0.80 accidents per year. This is approximately 3% higher than the 0.78 incidents per year anticipated as being the 90th percentile limit at similar locations. Based on the current characteristics of this intersection, further analysis and study is recommended, including a review of detailed accident reports.

Table 18: Boswell's Corner Historic Accident Analysis Expected Values ^{17 18}

January 1, 2003 – December 31, 2007

Intersection	Legs	ADT	Control	Years Studied
Jefferson Davis Highway (US-1) at Telegraph Road (VA-637)	4	> 20,000	Signalized	5
Telegraph Road (VA-637) at Widewater Road (VA-611)	3	< 10,000	Unsignalized	5

17 Traffic accident data obtained from the Virginia Department of Transportation - Traffic Engineering Division.
 18 Expected value data obtained from "Expected Values for Accident Analysis at Intersections" report prepared by Virginia Department of Transportation Traffic Engineering Division, May 1991.

Jefferson Davis Highway (US-1) at Telegraph Road (VA-637)

	<i>Collision Type</i>						
	Rear End	Angle	Head On	Sideswipe Same Direction	Sideswipe Opposite Direction	Pedestrian	Fixed Object
At intersection	6.00	13.00	0.00	0.00	1.00	0.00	3.00
Acc/Year	1.20	2.60	0.00	0.00	0.20	0.00	0.60
Expected Val	5.79	6.67	0.09	1.57	0.13	0.12	0.63
90%ile high	13.01	15.56	0.42	4.00	0.51	0.50	1.42
95%ile high	14.44	17.33	0.48	4.48	0.58	0.57	1.57

	<i>Collision Severity</i>		
	Property Damage Only	Injury	Fatal
At intersection	11.00	12.00	0.00
Acc/Year	2.20	2.40	0.00
Expected Val	9.92	5.29	0.05
90%ile high	21.53	9.96	0.26
95%ile high	23.83	10.88	0.30

*Telegraph Road (VA-637) at Widewater Road (VA-611)*¹⁹

	<i>Collision Type</i>						
	Rear End	Angle	Head On	Sideswipe Same Direction	Sideswipe Opposite Direction	Pedestrian	Fixed Object
At intersection	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Acc/Year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Expected Val	0.18	0.32	0.02	0.07	0.02	0.01	0.23
90%ile high	0.83	1.24	0.15	0.56	0.15	0.09	0.78
95%ile high	0.95	1.42	0.18	0.40	0.17	0.10	0.89

	<i>Collision Severity</i>		
	Property Damage Only	Injury	Fatal
At intersection	1.00	5.00	0.00
Acc/Year	0.20	1.00	0.00
Expected Val	0.56	0.42	0.02
90%ile high	1.65	1.35	0.13
95%ile high	1.86	1.52	0.15

¹⁹ Intersection contains accidents that are not included in the list of types.

CULTURAL & HISTORIC RESOURCES ANALYSIS²⁰

In June of 2008, the Planning Team conducted a Phase IA archaeological assessment and Phase I Reconnaissance Level Architectural Survey of 597.5 acres in Boswell's Corner. The Planning Team designed the survey to identify all architectural resources that may be present in the project area and to obtain sufficient information to make recommendations about the further research potential of each resource based on their potential eligibility to the National Register of Historic Places (NRHP). To accomplish this, both documentary research and architectural survey were conducted in compliance with the National Historic Preservation Act of 1966 (NHPA-PL89-665), as amended, the Archaeological and Historic Preservation Act of 1974, Executive Order 11593, and relevant sections of 36CFR660-666 and 36CFR800.

HISTORY OF THE BOSWELL'S CORNER REDEVELOPMENT AREA

The Boswell's Corner project area lies within the region referred to as Widewater, which includes the land between Chopawamsic Creek and Aquia Creek, once one of the busiest areas in the county, with boats sailing in and out of the creek hauling hundreds of tons of cordwood, fish, and sandstone quarried nearby. During the Civil War, a railroad terminal across the creek at Aquia landing served as a primary supply route for the Confederacy. Numerous farms in Widewater raised tobacco and grains. Boswell's Corner is located at the intersection of the historic Telegraph Road (VA-637) and an east-west trending "Stage Road," and is named for a family that resided and operated a store at the crossroads in the 19th century.

In 1608, when Captain John Smith ventured up the Potomac River to Aquia Creek, he mapped the locations of numerous Native American villages, including several within the present-day bounds of Stafford County. One of these "ordinary village" sites designated as "Pamacocack" appears to be located within the project area vicinity.

Jefferson Davis Highway (US-1) began as a group of short farm roads which braided into a corridor running north to south. In ancient, heavily-dissected topography such as the project area, ridges, ravines and stream valleys naturally became paths and roads. From Aquia Creek, Austin Run extends due west for about a mile before suddenly forking in three directions. One of these, probably "the South Prong of Austin's Run," as it was described in 1825, goes to Stafford Court House and may be the reason that location was chosen. A Map of 1820 shows an early section of Jefferson Davis Highway (US-1) paralleling this drainage, as does the modern alignment of Jefferson Davis Highway (US-1). The major forking of Austin's Run apparently factored into the course of Jefferson Davis Highway (US-1), which was placed to cross on the single channel below the confluence of the tributaries.

While the construction of Jefferson Davis Highway (US-1) in the 1920s had a large impact on development in the project area vicinity, the establishment of a Marine base at Quantico in 1917 had an even greater impact on the Widewater region. The Federal Government established Marine Barracks at Quantico, a small community about four miles northeast of the project area. The government condemned some 30,000 acres to expand the Quantico Marine Corps Base in 1942. The base boundary now lies just across the Chopawamsic Creek from the project area. Much of the condemned land was made of up large farms in the Widewater-Chopawamsic area, and most of these farms were leveled by the government soon after it acquired the property.

The construction of Interstate 95 (I-95) as part of the Federal Interstate Highway System in the 1950s, along with expansion of Quantico Marine Corps Base, allowed easier access to new employment opportunities. With improvements to the local road systems, this portion of Stafford County has witnessed the construction of many small communities and commercial developments. The project area includes some suburban residential development, a testament to this trend.

ARCHITECTURE

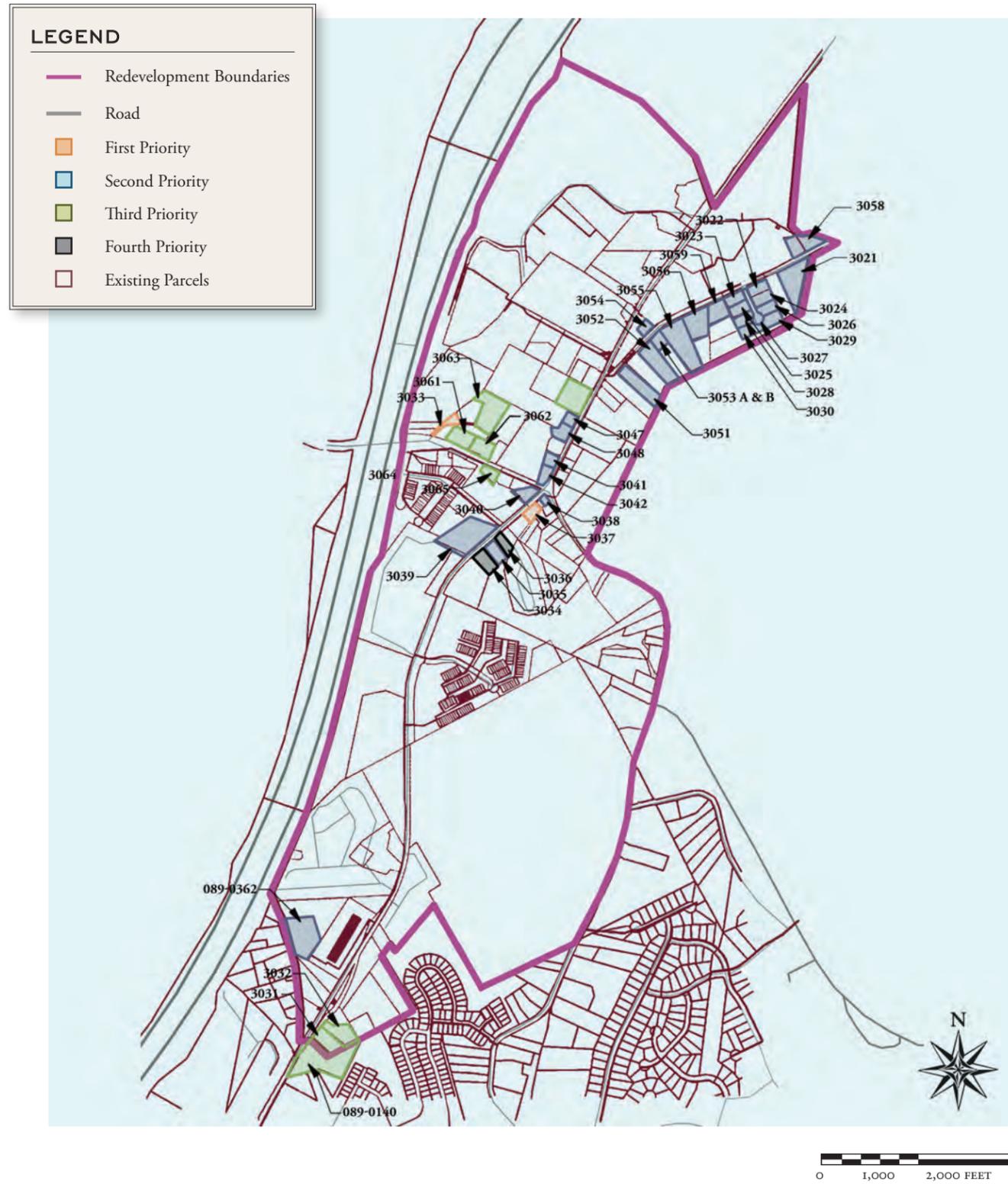
A total of two previously identified and 38 newly identified architectural resources were surveyed during this project, of which one (089-5119) was recommended potentially eligible for listing on the NRHP. However, two areas may be potentially eligible for listing on the NRHP as Historic Districts. Resources along the Jefferson Davis Highway (US-1) include a mix of structures relating to the use of the roadway as a major thoroughfare from the 19th to mid-20th centuries, including dwellings that have been converted to businesses, as well as post-World War II commercial roadside architecture associated with the expansion of automobile travel in the US. The residential neighborhoods on George Mason Road and Mavel Place are representative of post-World War II domestic architecture and are related to the expansion of the Marine Corps Base Quantico, with Mavel Place serving as a good example of non-commissioned officers housing constructed specifically for the base.

ARCHAEOLOGY

A total of eight archaeological resources have been identified within the project area. A total of 247.5 acres of the project area have been determined to have a high probability for cultural resources, and approximately 277.6 acres of the project area have been previously subjected to cultural resources surveys.

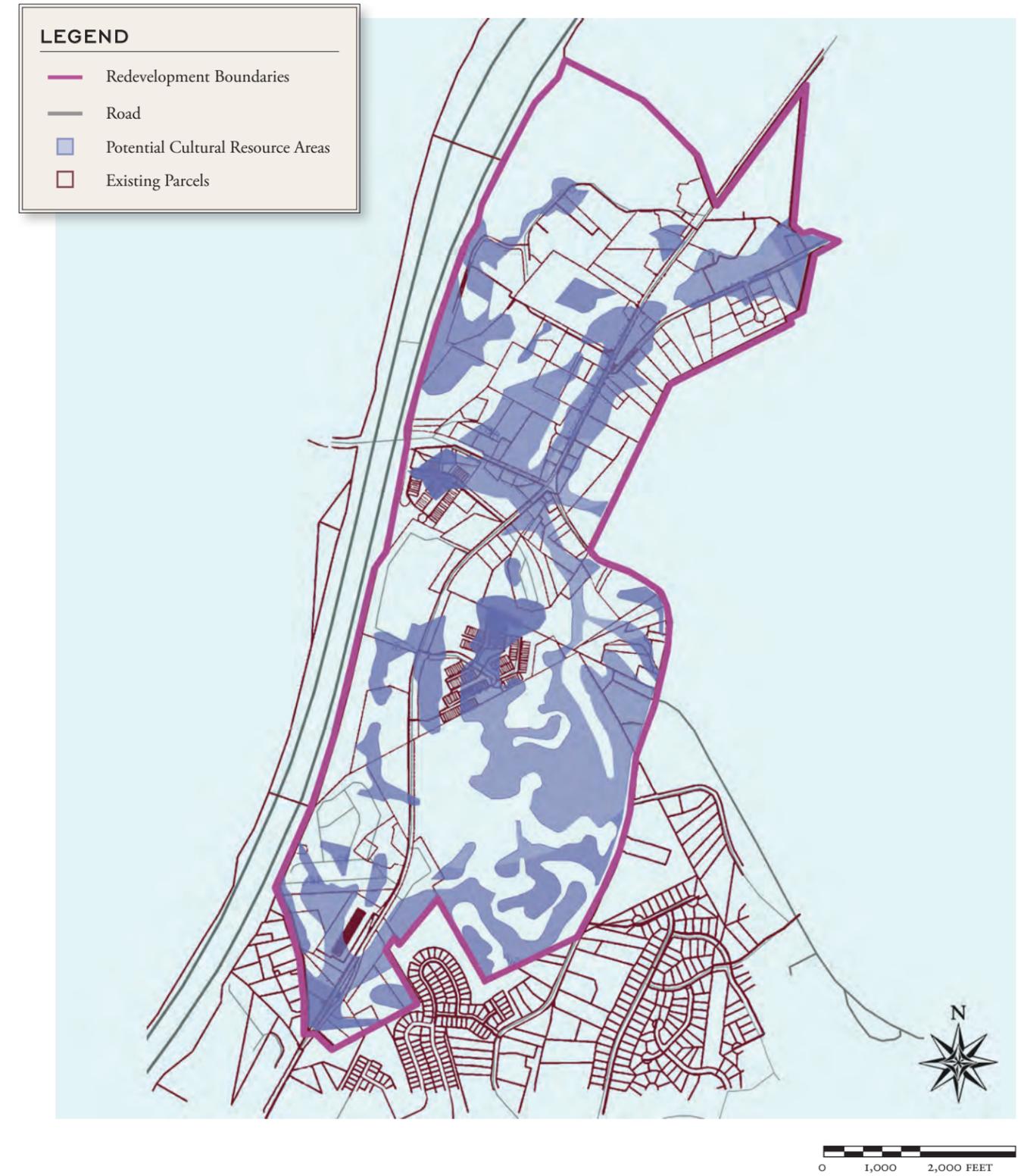
²⁰ Refer to Volume VII (Cultural Resources Report for Boswell's Corner, Courthouse Area, & Southern Gateway) for thorough detailed and graphically illustrated Architectural and Archaeological Information and Research on the history of Boswell's Corner.

Map 12: Architectural Resources Within Boswell's Corner – Priorities



Map ©2008 Cultural Resources, Inc.

Map 13: Areas with Potential Cultural Resources Within Boswell's Corner



Map ©2008 Cultural Resources, Inc.

BOSWELL'S CORNER REDEVELOPMENT AREA: SUMMARY & CONCLUSIONS

ECONOMIC & MARKET ANALYSIS

Boswell's Corner is poised to benefit from personnel enhancements at Quantico as a result of BRAC. While total estimates vary, there are estimated to be an additional 5,000 employees from the BRAC recommendations. These additional employees will add to the demand for retail, particularly restaurants, as well as for office space serving contractors not working on base and other service businesses. Nearby residents can also be served by potential retail in the area. Residents east of the area currently most likely drive to the shopping area on Garrisonville Road. Having a slightly more convenient option would enhance their opportunities, particularly if the retail offers unique or varied selection from the existing stores. Evaluating the likely demand and the nearby competition, the area could potentially support an additional 87,000 square feet of retail and a 100-190 room hotel in the next five years and an additional 886,000 square feet of office space and 1,900 housing units by 2020. Although Boswell's Corner's commercial development product is clearly not an urban one, during the design phase the Planning Team will endeavor to propose a grid system that fosters more density and interaction.

INFRASTRUCTURE & STORM WATER MANAGEMENT (SWM) ANALYSIS

From the Civil Infrastructure point of view, this area contains a major FEMA 100-year floodplain running parallel with the west side of Jefferson Davis Highway (US-1) as well as CBPA areas which pose limitations for redevelopment adjacent to Jefferson Davis Highway (US-1). Future redevelopment should focus on limiting access points and disturbance to these critical floodplain and CBPA areas.

Adequate water quality/quantity measures are important along the Chopawamsic Creek and its tributary. The timing of water/sewer CIP projects is important; Stafford County should consider programs which would allow the implementation of regional facilities to occur in an effort to consolidate the facilities as well as to provide possible redundant protection measures within the watershed. From conversations with the County's Department of Utilities, a CIP project to extend a 12" water main into the redevelopment area has already been completed.

Due to unique geographical characteristics, certain small areas may experience a lack of groundwater during periods of heavy drought. Despite this fact, the level of groundwater supply should not directly affect the redevelopment area. As development progresses, the County's water/sewer models should be updated to reflect demand/flow increases.

Certain aspects of the Stafford Water Supply Plan should be considered. Currently, there is adequate water/sewer capacity in the near term for redevelopment within the Boswell's Corner area. However, if the water supply characteristics of the source reservoirs change, then it could affect water availability to Boswell's Corner.

Physical constraints, such as erosive soils, steep slopes, and soils with poor development properties, are the primary focus for Boswell's Corner. To maximize development, and minimize disturbance, adequate erosion controls should be installed and monitored in conjunction with development along the floodplain.

Phase II of the redevelopment plan process will begin to plug in increases in demands/flows within this area so that timely decisions can be made regarding any further improvements that may be needed to support expected commercial uses in this area resulting from an increase in demand around the Quantico Marine Corps Base.

TRANSPORTATION & TRAFFIC ANALYSIS

In regard to Transportation and Traffic, the key intersections and roadway segments within Boswell's Corner currently operate at overall adequate levels of service. However, Jefferson Davis Highway (US-1) is characterized by narrow shoulders, inadequate ditches, and sections of poor, horizontal and/or vertical alignments within the study area. The transportation network currently lacks a cohesive bicycle and pedestrian network. No transit service is currently provided.

CULTURAL & HISTORIC RESOURCES ANALYSIS

From the Cultural Resources point of view, a total of two previously identified and 38 newly identified architectural resources were surveyed during this project, of which one was recommended as potentially eligible for listing on the NRHP. However, two areas may be potentially eligible for listing on the NRHP as Historic Districts. Resources along the Jefferson Davis Highway (US-1) include a mix of structures relating to the use of the roadway as a major thoroughfare from the 19th to mid-20th centuries, including dwellings that have been converted to businesses, as well as post-World War II commercial roadside architecture associated with the expansion of automobile travel in the U.S. The residential neighborhoods on George Mason Road and Mavel Place are representative of post-World War II domestic architecture and are related to the expansion of the Marine Corp Base at Quantico, with Mavel Place serving as a good example of non-commissioned officers housing constructed specifically for Quantico.

A total of eight archaeological resources have been identified within the project area. A total of 247.5 acres of the project area have been determined to have a high probability for cultural resources, and approximately 277.6 acres of the project area have been previously subjected to cultural resources surveys.

MOVING FORWARD

The Planning Team' has undertaken thorough research, review and understanding of the four redevelopment areas' existing conditions; their rich cultural resources, land use potential and regulations, current trends and the market. With the information gathered throughout this phase and with the public workshops input the Vision starts to take shape.

As a result of the Planning Team's analysis and findings, the actual mix and intensity recommended will vary from one redevelopment area to the other as they vary in size and character. Boswell's Corner, with great increase in commercial, office and Marine Corps-related activity in progress, is starting to emerge as a potentially strong northern commercial hub for the County.

As mentioned throughout this report, the Planning Team's proposal for Boswell's Corner includes an urban street grid; green spaces, parks, pedestrian friendly environments and proposed streetscape improvements for Stafford's main arteries, especially Jefferson Davis Highway (US-1), Courthouse Road (VA-630) and Warrenton Road (US-17). Planning design efforts were made to propose a grid system that fosters more density and interaction among users. Additional recommendations include the creation of wayfinding signage systems; physical improvements such as landscaping, screening and berms, and billboard management; and small business support programs and financial assistance.

The Concept Master Redevelopment Plan will take the previous conceptual visions and goals a step further, with land uses and implementation strategies for each redevelopment plan. The Planning Team's design recommendations will be made in context with the Comprehensive Plan, the Land Use Plan and in direct response to development trends and public input. It will provide a framework to address each community's vision and potential for the future of their neighborhoods and the County.

The Planning Team has determined that future development should reflect the evolution of architectural styles that is currently present through the development of design principles for new construction within the areas. In general, elements of the surrounding architecture should be included in order to promote a sense of continuity within the area, without creating a false sense of history with inaccurate representations of historic buildings. Regulation and enforcement of these guidelines will require an act of legislation.

BOSWELL'S CORNER: CONCEPT MASTER REDEVELOPMENT PLAN & RECOMMENDATIONS



PUBLIC PROCESS & COMMUNITY INPUT¹

PUBLIC WORKSHOP #1 CONCLUSIONS

Public Input: Existing Conditions

The public has stated that, with Quantico as its boundary and as the northern entry to the County, Boswells' Corner should be a Gateway. Citizens perceive the area along Jefferson Davis Highway (US-1), as being haphazardly developed, lacking character, certainly not serving as a gateway to the County. Furthermore, while they believe that Boswell's Corner is a great area to live, they feel the area lacks necessary services and convenience retail. They also see the absence of appropriate connectivity, street crossings, and sidewalks, particularly in the Jefferson Davis Highway (US-1)/Telegraph Road (VA-637) area, as a major concern.

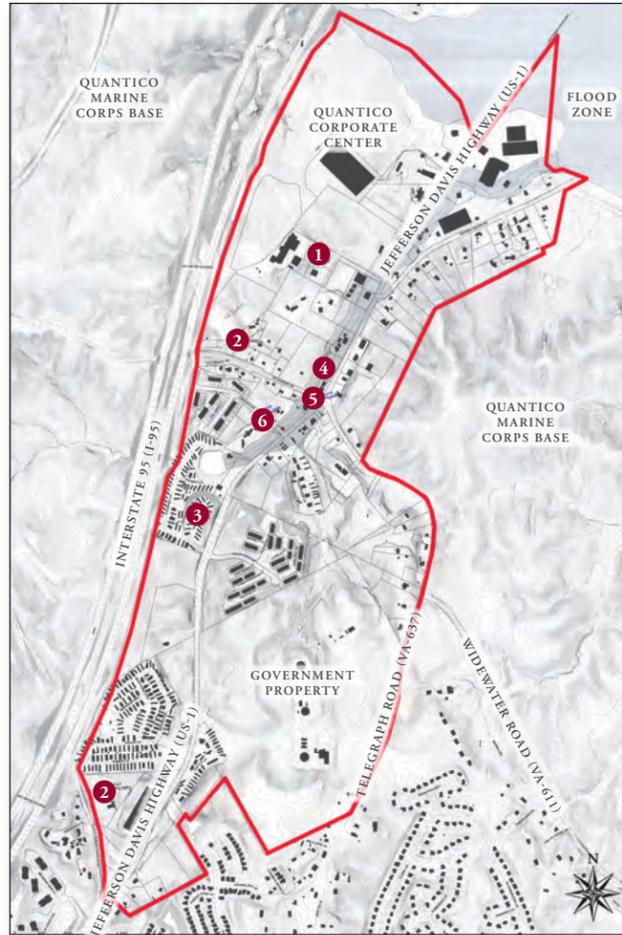
- The community realizes the abundance of vacant land offers diverse opportunities for potential development, open space and recreational venues.
- The community feels that: "This is a great area to live, but there is no access to facilities, such as grocery stores, retail store or gyms without traveling to Garrisonville Road."
- Neighbors are aware that Quantico, an asset for the area and the County, will be a driving factor in its redevelopment and suggest the County be proactive in coordinating with Quantico Marine Corps base.
- The public has concerns regarding the floodplain and identifies a pressing need for more recreational facilities and parks.
- Citizens are sensitive about the traffic and access difficulties at the intersection of Jefferson Davis Highway (US-1) and Telegraph Road (VA-637); especially the businesses facing Jefferson Davis Highway (US-1).
- Residents are interested in mixed-use that "may have a balanced mix of office and residential/multi-family residential potential." They also feel that there should be enough residential density to support a bus to VRE.
- The citizens feel that the County should have a plan in place to absorb/incorporate as many small business owners as possible.
- As a component of future development, citizens would like to see structured parking rather than on-street/parking lots. When the area becomes more densely developed, they envision the County offering shuttle services from existing commuter lots to reduce the need for parking garages.

On the following page, more specific points and public input on the existing conditions of the Boswell's Corner redevelopment area have been noted.



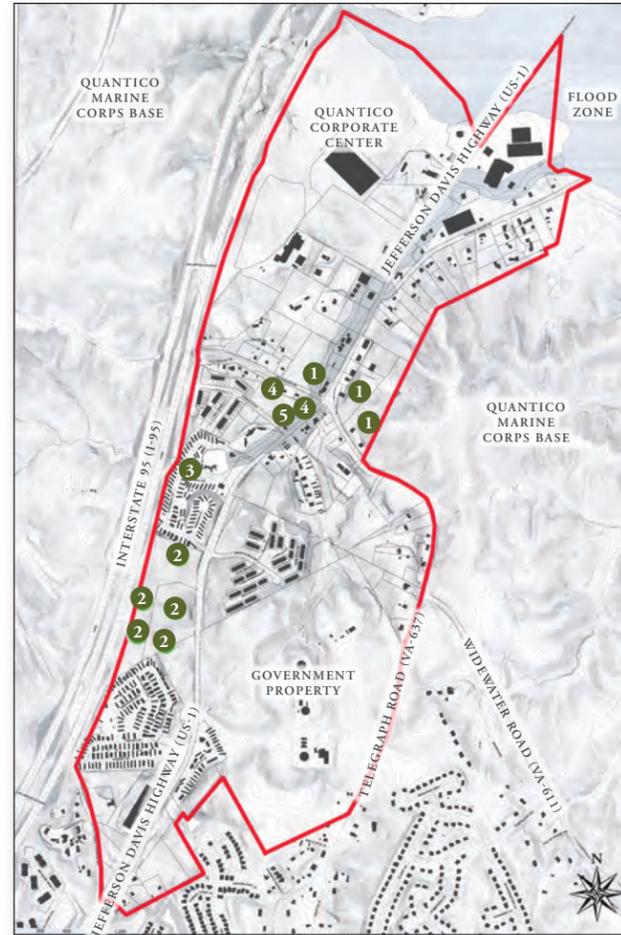
¹ For further detail of the public's preferences, refer to the Appendices, which contain the compiled results in more detail, taken from the public workshops from both Phases of the Redevelopment Plan.

Public Input: Dot Maps



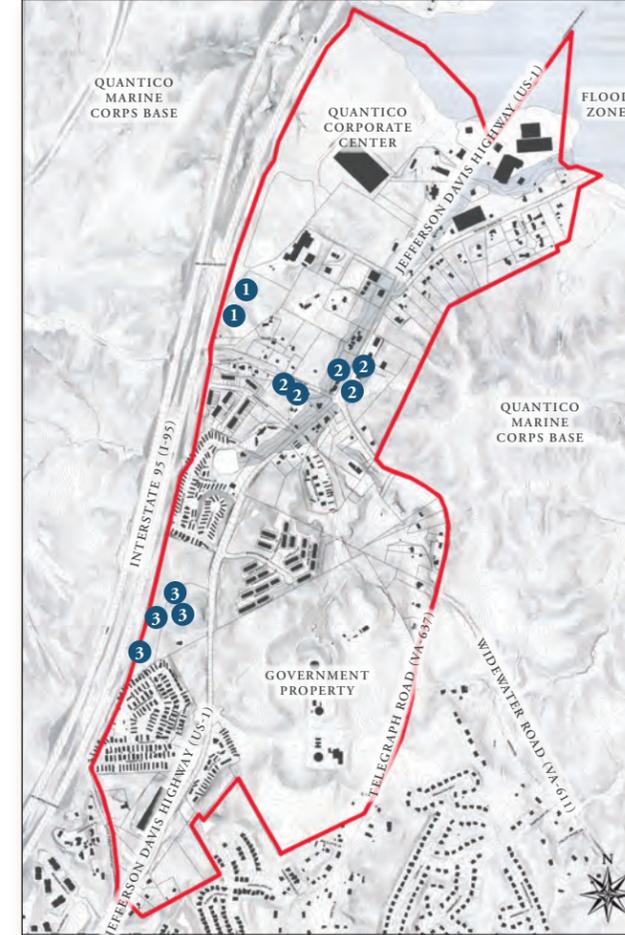
Map 14: Boswells Corner Existing Conditions – Challenges

1. Chop Shop, dump, blight in the area
2. Cemeteries that need to be removed or improved
3. Trailer park that needs to be removed or relocated
4. Waterway / Floodplain
5. Traffic at the intersection
6. Access to Jefferson Davis Highway (US-1) is difficult due to traffic (Includes all the businesses facing the street)



Map 15: Boswell's Corner Existing Conditions – Strengths

1. Retail centers / potential for infill and mixed-use retail
2. Vacant land / potential for development
3. Trailer park needs to be improved
4. Mixed-Use potential
5. Multi-family residential potential



Map 16: Boswell's Corner Existing Conditions – Opportunities

1. Open space
2. Potential for mix of uses
3. Potential development

Visual Preference Survey

Generally, the public showed to be in favor of a two-story urban mixed-use type of architecture. Most are in favor of parking garages in the back of the buildings with some favoring on-street (perpendicular and 45°) parking.

As far as open space was concerned, most attendees were in favor of smaller, landscaped, tree-lined sidewalks, gathering places, and courtyards. A majority favored open spaces, both large, park-like areas and open plazas with water features, street furniture and gathering places, such as cafes and concert areas.

The public was not strongly in favor of any parking type; although a good number favored on-street parking, with a similar number favoring landscaped parking lots. In general, the majority were in favor of tree-lined sidewalks, pavers, street furniture, small park areas, and outdoor cafés.

VISION & GOALS

The vision for the Boswell's Corner area embodies these sentiments:

- *“This area is a great area to live.”*
- *“Make it a great urban mix with educational and entertainment as well as office and upscale residential units.”*
- *“We want people to work where they live; mixed-uses-multi-family residential.”*

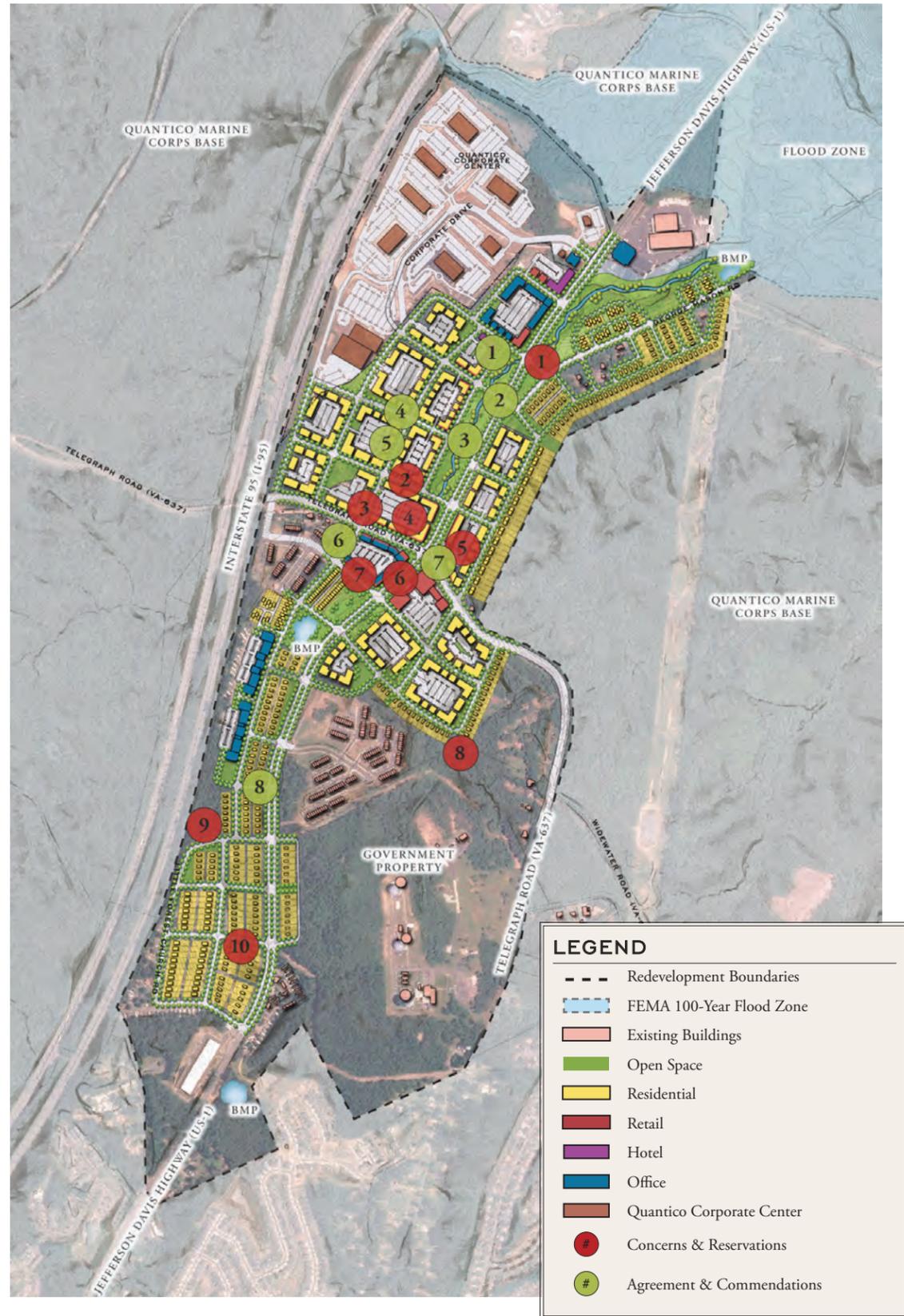
The public believes that for this to be a balanced approach, Stafford County should determine if there is enough residential to help support small businesses. The public has also stressed that they do not want more residential in the agriculture areas but rather along Jefferson Davis Highway (US-1) and Telegraph Road (VA-637), where infrastructure will be available. The public wants the area to be made more pleasing to the eye and define a unique character for Boswell's Corner. The plan should house as much of the workforce in the area as possible, and have a commuter plan which helps get people that do not live within the area to the redevelopment area, offering shuttle services to reduce the need for parking, and with enough residential to support a bus to the Virginia Railway Express (VRE).

Vision Statement

Make Boswell's Corner a great destination – pedestrian friendly with educational and entertainment venues, as well as office, retail and higher density residential neighborhoods. It should be the Northern Gateway to Stafford County.



Map 17: Boswells Corner Preliminary Master Plan – Public Input



PUBLIC WORKSHOP #2 CONCLUSIONS

Concerns & Reservations (Red Dots)

1. Some people state there should be amenities if large populations are brought in; recreational shops, libraries, community centers, playgrounds, athletic centers, etc. should be considered
2. Some people believe that this master plan is too far from reality.
3. Some individuals would like to keep as many connected cluster of mature, existing trees, reduce/ eliminate buildings that cross creek at Telegraph Road (VA-637); believing the creek park should continue uninterrupted all the way down Jefferson Davis Highway (US-1).
4. Some people would prefer to keep this area of the master plan open and allow the creek to flow through; they do not want to pipe it.
5. Some people believed that too much of the residential is spread out; they would prefer height rather than sprawl.
6. Some individuals stated the stream should not be culverted.
7. Some people brought up the point that existing property owners may not want to sell.
8. One individual noted that they did not like the single family houses wrapped around townhouses, believing they would never sell.
9. Some people noted the need for access management in this section of the master plan.
10. One individual stated that they would like to see more open space; they believed that this was too dense of a residential area. They expressed the desire to see different styles and larger lot lines.

Agreement & Commendations (Green Dots)

1. People stated the island is a good idea, but taking away land from property owners should be taken into consideration.
2. One individual believed that a fly-over pedestrian bridge might help.
3. Several people stated the Flood Plain & park were good assets.
4. People commented that residential development is needed for community/commercial growth.
5. One individual said they liked the mid-rise locations' proximity to Quantico Corporate Center.

6. Some people expressed the desire to keep this intersection, believing it has more dynamic ("four developed corners keeps a more structured feel").
7. Several people noted that condominiums and apartments were ideal for the military population.
8. Some people liked the idea of clustered groups of mixed-use commercial and higher-density housing, and how they tied into each other.

General Notes

- Downzoning is strongly encouraged for agriculture land so they will be preserved and compact development in urban areas can be promoted.
- The County does not have a "Transfer of Development Rights;" this is necessary for the master plan's development to work.
- The people would like to know if the County is planning to exercise Eminent Domain to achieve a 6-lane Jefferson Davis Highway (US-1).
- Some people requested promoting Natural (Resource) Capital.
- Some individuals did not want mature trees removed along Interstate 95 (I-95), stating they are an effective noise and visual barrier for homes.
- Some people questioned whether one Best Managed Practice (BMP) would be enough for this amount of concrete/runoff.
- Some people expressed the desire to move the parking deck (not currently on the plan) back off of the road, so to not impact creek and roadside creek park; aesthetic for a more "gateway look."
- Certain individuals noted that large forests produce oxygen, and water vapors help maintain rainfall patterns. If hundreds of acres of forest are lost, mitigating the loss of air quality and impacts to water by preserving equal forests nearby need to be considered. Conservation easement for more "natural parks."
- Some people believe land development should be done in phases, with care for preservation:
 - ◆ Slope and trees on slopes, build on top of hill and leave slopes alone, helps with visual and protecting creek and ground water
 - ◆ Recharge and absorption, especially the slope at Telegraph Road (VA-637) heading towards Interstate 95 (I-95)

PROPOSED MASTER PLAN

BOSWELL'S CORNER PROPOSED MASTER PLAN

After completion of the public workshops during the initial phase, the Planning Team integrated the public input with the results of the research and analysis to develop the Master Redevelopment Plan. This plan sets realistic goals for redevelopment that responds to market potential, land and infrastructure capacity and mostly, to the community's desires and the vision.

As a result of the findings, the actual mix and intensity recommended varies from one redevelopment area to the other as they vary in size and character. Boswell's Corner, with a great increase in commercial, office and Marine Corps-related activity in progress, is starting to emerge as a potentially strong northern commercial hub for the County.

The potential long-term density for the Boswell's Corner Area is generally larger than that in the Comprehensive Plan. According to the Stafford Comprehensive Plan, the redevelopment areas should be designed to incorporate principles of traditional neighborhood design and in order to comply with state guidelines, these areas must be able to accommodate and develop at higher commercial and mixed-use densities. This is a necessary step to achieve critical mass and a sense of place; these efforts will help to create a thriving center that integrates a mix of uses, provides balance, and crafts its own character over time, and becomes a positive impact in the area's economic factors.

The Concept Master Redevelopment Plan takes the previous conceptual visions and goals much further, with land uses and implementation strategies for each redevelopment plan. The Planning Team's design recommendations were considered in the context of Stafford County's Comprehensive Plan, and in direct response to development trends and public input. It provides a framework to address each community's vision and potential for the future of their neighborhoods and of the County. Each master plan is a community guided vision for development of each area.

Table 19: Boswell's Corner Master Plan Program

	TOTAL SF	TOTAL UNITS
Office	1,094,572	
Retail/Commercial	586,950	
Residential	1,394,698	744
Hotel	142,350	219
TOTAL	3,218,870	1,919

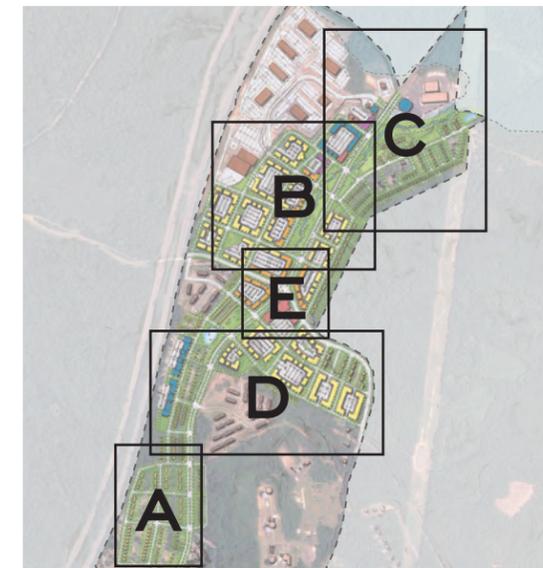
Map 18: Boswells Corner Master Redevelopment Plan





PROPOSED MASTER PLAN HIGHLIGHTS

- A. Residential areas with townhomes create the Southern Entrance to Boswell's Corner off of Jefferson Davis Highway (US-1).
- B. The central area of Boswell's Corner is also largely defined by blocks of multi-family residential, with some office and retail, and a linear park.
- C. A creek serves as a natural area around which to form a linear park between Jefferson Davis Highway (US-1) and George Mason Road at the northern gateway of the redevelopment area.
- D. The central area of Boswell's Corner, just south of the Jefferson Davis Highway (US-1) and Telegraph Road (VA-637) intersection, features multi-family residential buildings and more townhomes.
- E. Development and buildings to be constructed during the first phase of Stafford County's Master Redevelopment Plan is centered around the primary intersection in this area, at Jefferson Davis Highway (US-1) and Telegraph Road (VA-637).



PROPOSED OPEN SPACE & CIRCULATION PLAN

Open spaces, parks, pedestrian friendly environments and streetscape improvements were sought for Stafford's main arteries, especially Jefferson Davis Highway (US-1) and Telegraph Road (VA-637) in the Boswell's Corner Redevelopment Area. Planning design efforts have been made to foster a grid system, density and interaction among users.

Providing and promoting recreational opportunities in the Boswell's Corner redevelopment area also becomes a signature, gateway to Stafford County:

- A much-needed passive recreation feature is proposed in the form of a linear park taking advantage of the Chopawamsic creek, which with an enhanced natural floodway creates a natural setting area and allows for a place to stop, exchange and contemplation.
- Additional small parks and green open spaces are incorporated throughout Boswell's Corner.



Map 19: Boswells Corner Open Space & Circulation Plan



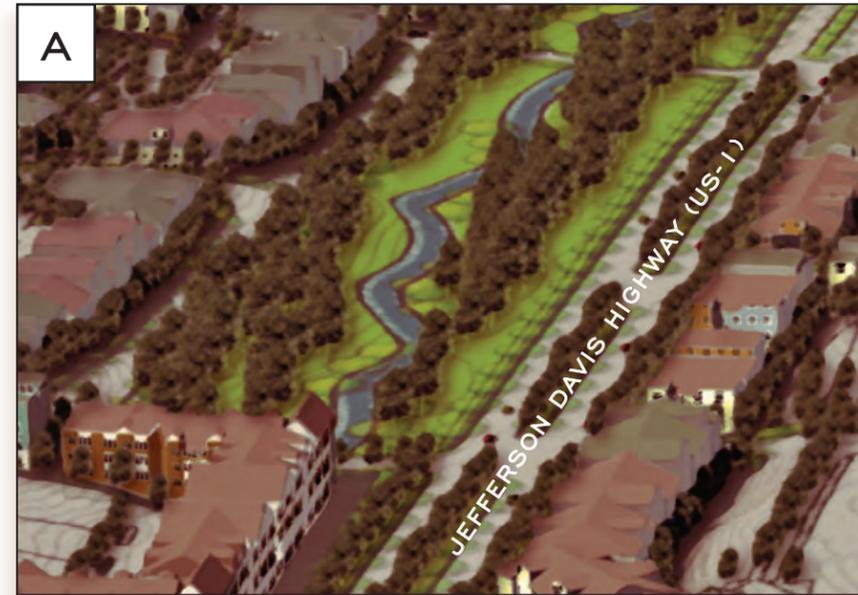
Figure 8: Boswell's Corner Proposed Master Plan Aerial



Aerial rendering of the heart of Boswell's Corner at the intersection of Jefferson Davis Highway (US-1) and Telegraph Road (VA-637): Multi-family residential and a linear park characterize this particular redevelopment area.

**PROPOSED MASTER PLAN
AERIAL HIGHLIGHTS**

- A. *The existing Chopawamisc Creek creates a natural setting for a linear park on the left, providing an amenity along Jefferson Davis Highway (US-1) for the community.*
- B. *Green and open space central to adjacent residential blocks create a balance between the residential and mixed-use blocks at the heart of Boswell's Corner.*
- C. *Four mixed-use blocks at the central intersection of Jefferson Davis Highway (US-1) and Telegraph Road (VA-637) create opportunities for retail and office space, as scheduled for the Core Development Area in the overall Master Redevelopment Plan.*





PROPOSED MASTER PLAN STREET VIEWS

Figure 9: Boswell's Corner Proposed Master Plan Street View A

Looking southwards down Jefferson Davis Highway (US-1), a linear park on the right serves as a place for people to meet or stop during a walk to local shops and businesses.

Figure 10: Boswell's Corner Proposed Master Plan Street View B

Looking southwest down Telegraph Road (VA-637) at its intersection with Jefferson Davis Highway (US-1), the redevelopment area's major east-west and north-south arteries, respectively, serve as a natural location for mixed-use opportunities.



PROPOSED MASTER PLAN STREET SECTIONS

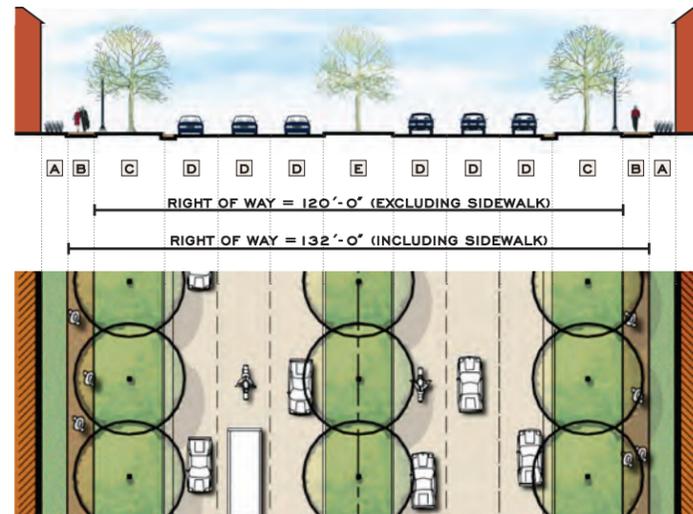


Figure 11: Boswell's Corner Street Section & Plan – Jefferson Davis Highway (US-1)

A. Browse/Planting/Seating Area	6' – 0"
B. Sidewalk	6' – 0"
C. Landscape Area & Curb	16' – 0"
D. Thru Lane	12' – 0"
E. Raised Median	16' – 0"



Figure 12: Boswell's Corner Street View – Jefferson Davis Highway (US-1) looking north: Before



Figure 13: Boswell's Corner Street View – Jefferson Davis Highway (US-1) looking north: After

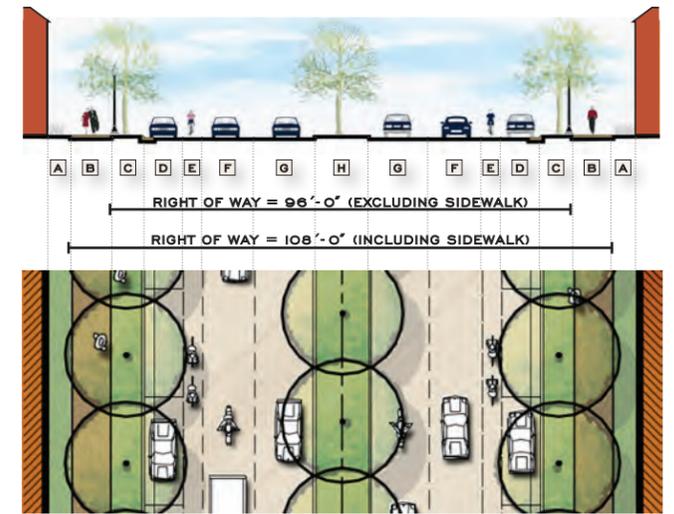


Figure 14: Boswell's Corner Street Section & Plan – Telegraph Road (VA-637)

A. Browse/Planting/Seating Area	5' – 0"
B. Sidewalk	6' – 0"
C. Landscape Area & Curb	7' – 0"
D. On-Street Parking	8' – 0"
E. Bike Lane	4' – 0"
F. Thru Lane	11' – 0"
G. Thru Lane	12' – 0"
H. Raised Median	12' – 0"

RECOMMENDATIONS TO ELEMENTS OF THE COMPREHENSIVE PLAN: INFRASTRUCTURE

CHESAPEAKE BAY PRESERVATION AREA (CBPA) PLAN

While there are no mapped CBPAs within the redevelopment area, we advise that care must be taken when developing around the existing FEMA 100-yr floodplain areas adjacent to Jefferson Davis Highway (US-1). The redevelopment plan envisions a linear stream valley park along most of this area – which is a significant amenity upgrade from the present condition in this area. The County may wish to consider additional protections, such as a CBPA, along this floodplain area. This would help by establishing additional standards for development in this area with the goal of best preventing erosion and pollutants from traveling downstream to the Chopawamsic Creek. A secondary benefit of additional regulations in this area would be the limit the number of street crossings of this floodplain area with access to Jefferson Davis Highway (US-1).

CAPITAL IMPROVEMENTS PROGRAM (CIP)

As any upgrades are added under the SWM Protection Plan and Water/Sewer Plan the CIP should be updated with the timing and cost of these improvements.

GROUNDWATER MANAGEMENT PLAN

Within Boswell's Corner, there are no specific recommendations. Existing groundwater supply is adequate and increase in impervious area will be at least partially offset by eliminating many private wells by providing the public water supply to these areas.

STORMWATER MANAGEMENT (SWM) PROTECTION PLAN

Boswell's Corner lies outside of the 5 main watersheds studied under the SWM Protection Plan. Quantico Slate is present in this area which could dissolve into storm runoff resulting in a more acidic pH which may adversely impact plant and aquatic life. It is recommended that all ponds provide a clay liner to help serve as a barrier between the slate and the runoff. Any constructed outfalls should also include non-erosive liners as barriers.

WATER & SEWER PLAN

Water System

The Planning Team's analysis identified no specific water system degradations due to the Core Development Area. Only minor changes to pipe velocities, headloss, and junction pressures were noted – none of which resulted in the addition of any deficient pipes in the system. No further improvements are recommended.

Sewer Pump Stations

- **Hilldrup Pump Station**
A-213 constructs Hilldrup Pump Station @ 0.64 MGD (444 gpm)
A-213 has been completed per phone call with Stafford County Department of Utilities
 - ◆ Ex. flow = 163 gpm
 - ◆ Core Development Area flow = 494 gpm > 444 gpm
- **Conclusion:** Upgrades to the recently constructed Hilldrup Pump Station will be required. Pump Station will need to handle a minimum 494 gpm.
- **Aquia Creek Pump Station**
A-212 expands the Aquia Creek Pump Station from 2.88 MGD to 4.68 MGD (2000 gpm to 3250 gpm)
A-212 was originally planned for 2008/2009 but has been pushed back according to a 2014 per phone call with Stafford County Department of Utilities
 - ◆ Ex. Flow = 1815 gpm
 - ◆ Core Development Area flow = 2147 gpm > 2000 gpm;
 - ◆ Core Development Area flow with upgraded Pump Station = 2147 gpm < 3250 gpm
- **Conclusion:** Existing pump station is not adequate to handle Core Development Area flows. Upgraded pump station will be adequate to handle Core Development Area flows. Planned construction for A-212 needs to be moved back closer to the original planning date of 2010.
- **Gravity Sewer**
 - No gravity sewer is shown to flow at pressure flow, although seven pipes smaller than 15" are shown to have a q/Q greater than 0.5. The worst case is a q/Q = 0.763.
 - Six of the seven pipes that fail in the Core Development Area are the 8"–10" gravity mains upstream of the A-42 CIP improvements.

- Fixing these pipes would require a minimum upgrade of 976' of 10" gravity sewer to 12" gravity sewer, and 72' of 8" gravity sewer to 10" gravity sewer.
 - ◆ **Note:** only fixing these pipes would result in places where a 12" pipe flows downstream to a 10" pipe. Based on slope, the 10" will have adequate capacity. However, Stafford County may elect to upgrade additional lines to maintain a consistency in size among downstream sewer mains.
- The one other gravity main that fails is Pipe # (42, A-42), part of the A-42 CIP improvement. The Planning Team feels this pipe size is incorrectly specified as 10" diameter in the model supplied by Stafford County. Both the upstream and downstream pipe runs are 18", and the CIP improvement A-42 makes no mention of any 10" gravity sewer runs. If this is an 18" gravity main, adequate capacity will be provided. If not: we recommend an upgrade to at least a 12" pipe. This results in an upgrade of 111' of gravity sewer main.

WATER SUPPLY PLAN

There are no specific recommendations for Boswell's Corner. The proposed redevelopment is expected to extend the public water supply system within these areas. The public water source reservoirs and storage facilities should continued to be monitored to ensure the highest quality public water possible. The redevelopment should have a net positive effect on the quality of water supply available to private well sites due to the implementation of additional BMP facilities as well as the replacement of some uses which adversely affect water quality (mainly industrial and some agricultural uses).

RECOMMENDATIONS TO ELEMENTS OF THE COMPREHENSIVE PLAN: TRANSPORTATION

TRANSPORTATION PLAN

The proposed redevelopment plan for Boswell's Corner has been designed to meet the objectives of the Plan. Implementation strategies should be developed in furtherance of the Plan's policies. A discussion of each of the County's transportation objectives, as proposed, relative to Boswell's Corner is provided below:

Maintain a safe road system.

The roadway network in Boswell's Corner should be designed and developed to provide a hierarchal system of interconnected streets and to recognize the dual purpose and functionality of Jefferson Davis Highway (US-1).

Jefferson Davis Highway (US-1) is the primary arterial through the redevelopment area. Jefferson Davis Highway (US-1) is a principal arterial roadway that extends south from the Capital Beltway (I-495) in Fairfax County, through Prince William County to Stafford County and points south. Jefferson Davis Highway (US-1) through the Boswell's Corner area is constructed as a four-lane, undivided, shoulder and ditch section with a posted speed limit of 45 mph.

In order to manage increased congestion in the future, the County should work with VDOT in developing a comprehensive access management plan for this critical corridor with an emphasis on consolidating parcel access and locating new access points in a manner that will enable safe and efficient vehicle progression along Jefferson Davis Highway (US-1). Full movement intersections should be located in general accordance with VDOT's access management standards.

Provide & maintain a multi-modal public transit system.

As outlined in the Research and Program Development Report, no bus routes currently serve the Boswell's Corner area. With the proposed redevelopment of the area and the changes associated with the Quantico BRAC and the ongoing development of Quantico Corporate Center, the County should request future developers commit to transportation demand management programs with the goal of reducing single occupant vehicle trips through incentivizing car/van pools, flexible work schedules, etc.

Additionally, land use controls can be used to create environments that are peaceful between pedestrians and automobiles. Certain automobile oriented uses, such as service stations, drive-in banks etc, are more appropriately located outside the "core" area.

The County should consider expanding the Highway Corridor (HC) overlay district along Jefferson Davis Highway (US-1) to include the redevelopment area in order to regulate access to/from such uses. Driveways to such uses should be located outside major pedestrian corridors.

Create a system of sidewalks, bike paths, and trails to provide non-motorized transportation alternatives.

Sidewalks and trails should be provided along both sides of all streets in order to foster and encourage walking and biking. Additionally, pedestrian and bike connections should be provided through properties.

Create better patterns of traffic flow and circulation.

The proposed redevelopment plan for Boswell's Corner reflects, in concept, a grid of streets oriented to/from Jefferson Davis Highway (US-1). Stafford County should plan ahead by stipulating maximum block lengths and perimeters in their codes and designating vital public street connections that must be made as the land develops. The development of secondary or parallel streets along highways can also help in meeting community-wide transportation needs. Where public street connections are not practical, local codes should require the development of bicycle and pedestrian connections and internal private streets that mimic public streets and meet the block standard.

Existing intersections should be redesigned and reconstructed as needed to improve approach alignment, sight distance, and potential new turn lanes for improved levels of service.

The current Stafford County Transportation Plan (June 7, 2005) recommends certain improvements for the roadways within the Boswell's Corner redevelopment area:

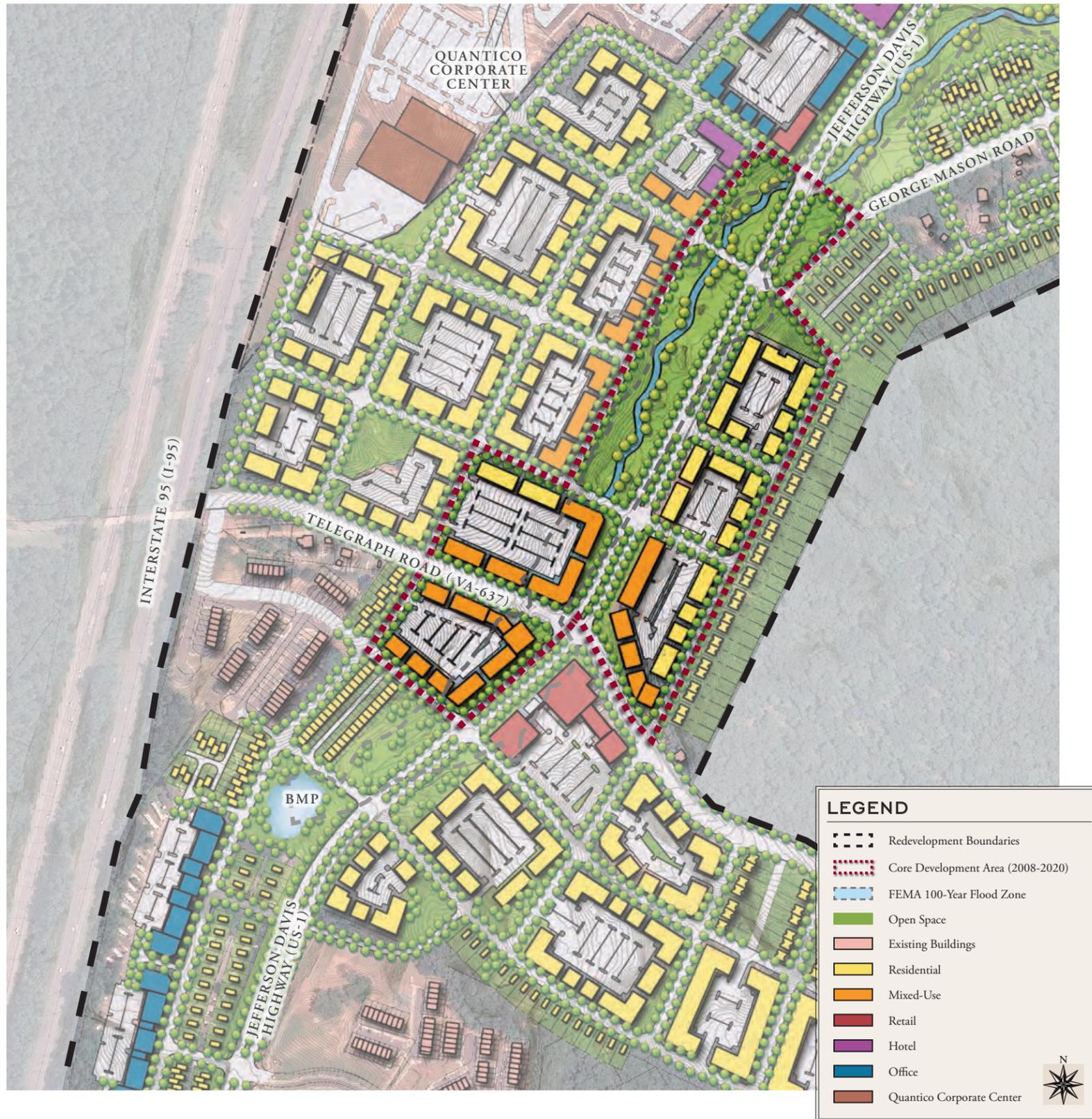
- Upgrade Jefferson Davis Highway (US-1) to a six-lane, divided, facility
- Upgrade Telegraph Road (VA-637) to a standard two-lane facility
- Upgrade Widewater Road (VA-611) to a standard two-lane facility

In the absence of more detailed analyses reflecting the build out of the Boswell's Corner area, the potential for a six-lane Jefferson Davis Highway (US-1) should be retained as part of the Plan.

As outlined in the Research and Program Development report, volume to capacity ratio's (V/C) at critical intersections along the Jefferson Davis Highway (US-1) corridor within Boswell's Corner ranged from 0.71 to 0.80 under existing conditions. Mainline Jefferson Davis Highway (US-1) V/C ratios were somewhat less at 0.5 or below. However, with additional development, V/C ratios will increase both at key intersections and along the links.

Additionally, within the area, there are limited connections to Interstate 95 (I-95). As a result, office users to/from both Quantico and the Quantico Corporate Center will still need to use Jefferson Davis Highway (US-1). A wide median should be installed within the area in order to provide pedestrian refuge as well as physically restrict certain street connections to right-in/right-out locations only. It is therefore recommended that the roadway be reconstructed in initial phases as a four-lane, median divided facility with turn lanes only at major intersections such as Telegraph Road (VA-637). Right-of-way reservations for a potential six-lane section should be sought from developing properties pending additional detailed sub-area analyses outside the scope of assessment.

Map 20: Boswell's Corner Core Development Area



CORE DEVELOPMENT AREA

RATIONALE FOR DEFINING THIS AREA AS THE CORE DEVELOPMENT AREA

This initial phase of development creates a sense of place at the intersection of Telegraph Road (VA-637) and Jefferson Davis Highway (US-1). It provides an identity for Boswell's Corner, previously poorly defined. This initial defined area, given its location, will have a maximum positive impact on this area and should provide the highest return to the County for its investments. It is highly likely that there will be multiple phases and developers within this initial core area.

Other anticipated developments, including Quantico Corporate Center, may occur simultaneously with this preliminary core initiative. These should not only be encouraged, but guided, so they are in accordance with the desired development type and vision expressed for Boswell's Corner.

ACTION PLAN

In order for development to occur in this initial target area, the following initiatives *must* be implemented:

1. Create a Form Based Code for Boswell's Corner to establish the criteria for redevelopment to achieve the goals and vision for this area. The Form Based Code should address the entire area of Boswell's Corner, not just the initial phase.¹

During the development of the form based code, the County planning staff can develop an interim overlay district for this area. This will allow development to not only proceed, but proceed in accordance with the vision & goals established herein.

2. Develop the branch of the Chopawamsic Creek, along the Jefferson Davis Highway (US-1), as a park and regional storm water facility (SWF). It is not practical or desirable for each individual development to develop their own SWF. Consider additional protections, such as the CBPA, along this floodplain area and establish additional standards for development with the goal of preventing erosion and pollutants from traveling downstream to Chopawamsic Creek.

Limit the number of street crossings of this floodplain area with access to Jefferson Davis Highway (US-1).

Offer incentives, such as reduced fees, tax abatements, expedited reviews, and infrastructure improvements.

¹ Refer to Volume I (Stafford County Overview), under Urban Systems Implementation.

3. Initiate the infrastructure improvements noted earlier in more detail. In summary, they are:
 - a. Upgrade the Hilldrup Pump Station
 - b. Expand the Aquia Creek Pump Station (A-212)
 - c. Upgrade gravity sewer lines
4. Plan for the streetscape improvements to Telegraph Road (VA-637) and Jefferson Davis Highway (US-1) to allow for new eventual right-of-ways. Within, the Core Development Area, these streetscapes should be implemented as development proceeds.

OTHER KEY ELEMENTS & RECOMMENDATIONS

- Implement streetscape improvements to Jefferson Davis Highway (US-1) through Boswell's Corner street section between Corporate Drive and Terrace Drive with six lanes-divided with median and landscaping. Please refer to Boswell's Corner Master Plan's Street Sections for specific recommendations.
- Establish an incentives program that will encourage homeowners on George Mason Road to upgrade/renovate their homes in a sensitive manner.
 - ◆ Sensitively insert new housing similar in scale with these cottages.
- Commercial Development should be fostered at the intersection of Telegraph Road (VA-637) / Jefferson Davis Highway (US-1)
- Work with the developer of Quantico Corporate Park to better integrate their future development with the proposed development pattern proposed for Boswell's Corner.
- The redevelopment should have a net positive effect on the quality of water supply available to private well sites due to the implementation of additional BMP facilities, as well as the replacement of some uses that adversely affect water quality (mainly industrial and some agricultural uses).
- Identify potential locations for pedestrian crossings; begin feasible pedestrian improvements in conjunction with early roadway or development initiatives.
- Establish a commuter link in the Core Development Area to the VRE Station to reduce automobile dependence.



CORE DEVELOPMENT AREA: FINANCIAL FEASIBILITY

The Core Area redevelopment program for Boswell's Corner included 826,560 of gross building area on 44.51 acres, including 123,624 square feet of office space, 196,922 square feet of retail, 171,980 square feet of hotel space (110 keys), and 334,034 square feet of multifamily residential space (299 units). ERA used the efficiency rates to arrive at a net rentable square footage for each of these uses.

Table 20: Boswell's Corner Core Development Area – Program Assumptions

Redevelopment Area	Boswell's Corner Redevelopment Area						
Site Area (acres)	44.51						
PROGRAM AND PSF COSTS							
	Rooms/ Units	Avg Unit Size	GBA	NRA	Avg Ann'l Abs	Total Parking	
Office	n/a	n/a	123,624	105,080	40,000	247	
Retail	<u>% of retail</u>						
General Retail	70%	n/a	137,845	124,061	50,000	414	
Restaurant	30%	n/a	59,077	53,169	10,000	177	
Hotel	110	1,329	171,980	146,183	n/a	110	
Residential	<u>% of mf</u>						
Rental Apartments	70%	209	233,824	222,133	100	209	
Condominiums	30%	90	100,210	95,200	100	90	
Total			826,560	745,826		1,247	
LAND & INFRASTRUCTURE COSTS							
Horizontal							
Site Improvements	\$250,000 Per Acre						
Linear Park	\$425,000 Total						
Demolition Costs	\$162,000 Allocated						

Source: CMSS; Economics Research Associates, 2009.

Using this program, and the other assumptions discussed earlier, at infrastructure costs of \$250,000 per acre, plus an allocation for park construction and demolition, the total development cost would be approximately \$122.4 million, or \$148 per square foot of gross building area. The project IRR would be 15.3%. At a discount rate of 12%, the residual land value of the total development would be approximately \$456,000 per acre.

Table 21: Boswell's Corner Core Development Area Residential Land Value

NET PRESENT VALUE ANALYSIS	
NPV of Net Cash Flow	\$129,556,280
NPV of Development Costs	(\$109,260,873)
RESIDUAL LAND VALUE	\$20, 295, 407
\$PSF of Built Scenario	\$24.55
\$PSF of Developable Land Area	\$10.47
\$Per Acre of Developable Land Area	\$455,974

Notes: Net Present Value @ 12.0%

Source: Economics Research Associates, 2009.

Table 22: Summary of Core Development Area Annual & Construction Period Fiscal Benefits

ANNUAL				
Redevelopment Area	Property Tax ¹	On-Site Sales & Use Taxes ²	Off-Site Sales & Use Taxes ²	Total
Boswell's Corner	\$1,027,926	\$1,488,293	\$131,525	\$2,647,745
Courthouse Area	\$1,217,035	\$1,549,669	\$252,716	\$3,019,419
Falmouth Village	\$146,663	\$291,546	\$18,597	\$456,807
Southern Gateway	\$800,238	\$883,460	\$108,387	\$1,792,086
Total	\$3,191,862	\$4,212,969	\$511,225	\$7,916,057
CONSTRUCTION PERIOD				
Redevelopment Area	Construction Materials Sales Tax	Sales & Use Taxes on Construction Worker Spending ²	Total	
Boswell's Corner	\$477,251	\$92,269	\$569,520	
Courthouse Area	\$565,052	\$109,243	\$874,295	
Falmouth Village	\$72,725	\$14,060	\$86,785	
Southern Gateway	\$383,483	\$74,140	\$457,623	
Total	\$1,498,512	\$289,712	\$1,788,224	

¹Construction Cost (not including land) is used as a proxy for full market value. Using 2009 Rates, per County website @ \$0.84 per \$100.00 value. It is assumed that all construction construction purchases are made in Stafford as often, jurisdictions charge taxes on materials even if they are purchased elsewhere.

²Includes local retail sales tax of 1%, meals tax of 4%, and hotel tax of 5%, as appropriate.

Source: Stafford County Commissioner of the Revenue; ERA, 2009.

Table 23: Summary of Property Tax Benefits by Redevelopment Area

Use	Value ¹	County Tax ²
Boswell's Corner	\$1,22,372,178	\$1,027,926
Courthouse Area	\$144,885,069	\$1,217,035
Falmouth Village	\$17,459,910	\$146,663
Southern Gateway	\$95,266,451	\$800,238

¹Construction Cost (not including land) is used as a proxy for full market value

²Using 2009 rates, per County website @ \$0.84 per \$100.00 value.

Source: Stafford County Commissioner of the Revenue; ERA, 2009.

BOSWELL'S CORNER: APPENDICES



APPENDIX I

CULTURAL & HISTORIC RESOURCES: HISTORY, GROWTH, & HISTORIC PRESERVATION OF THE BOSWELL'S CORNER REDEVELOPMENT AREA

The independent investigation of Boswell's Corner and the other redevelopment areas has derived a collection of architectural and archeological significant properties. Some properties are part of the National Registry of Historic Places while others have the potential of being so designated. Three separate volumes, compiled by Cultural Resources, Inc., document each of the four redevelopment areas as well as additional references of Cultural Resources Legislation. The following is a list of each volume and what they contain.

- Volume VI: Cultural Resources Report for Falmouth Village
 - A. The history and growth of the redevelopment area.*
 - B. VDHR Forms and Documentation of properties within Falmouth Village.*

- Volume VII: Cultural Resources Report for Boswells Corner, the Courthouse Area, and Southern Gateway
 - A. The history and growth of Boswell's Corner, Courthouse Area, and the Southern Gateway redevelopment areas.*
 - B. VDHR Forms and Documentation of properties within Boswell's Corner, the Courthouse Area, and the Southern Gateway Redevelopment Areas..*

- Volume VIII: Examples of Cultural Resources Legislation
 - Best practices for historic preservation.*

APPENDIX II

FREQUENTLY USED ACRONYMS

ADA	Americans with Disabilities Act	FRED	Fredericksburg Regional Transit	TIF	Tax Increment Financing
ADR	Average Daily Rate	FY	Fiscal Year	TND	Traditional Neighborhood Development
BRAC	Base closure And Realignment Commission	GDP	Generalized Development Plan	UDA	Urban Development Area
BMP	Best Managed Practice	GIS	Geographical Information System	USA	Urban Service Area
CBPA	Chesapeake Bay Protection Area	HABS	Historic American Building Survey	USD	Urban Service District
CIP	Capital Improvement Program	LOMR	Letter of Map Revision	VATC	Virginia Tourism Corporation
CLRP	Constrained Long Range Plan	LOS	Level of Service	v/c	Volume to Capacity
CRPA	Critical Resource Protection Area	LRMA	Land Resource Management Area	VDCR	Virginia Department of Conservation & Recreation
EIS	Environmental Impact Statement	MRIS	Metropolitan Regional Information Systems	VDHR	Virginia Department of Historic Resources
EMS	Emergency Medical Service	NRHP	National Register of Historic Places	VDOT	Virginia Department of Transportation
E&S	Erosion & Sediment	PRV	Pressure Reducing Valve	VSMP	Virginia Stormwater Management Permit
FAMPO	Fredericksburg Area Metropolitan Planning Organization	PUD	Planned Urban Development	VEC	Virginia Employment Commission
FAR	Floor Area Ratio	SWM	Storm Water Management	VRE	Virginia Railway Express
FEMA	Federal Emergency Management Agency	SWOT	Strengths, Weaknesses, Oppotunities, & Threats	WHPP	Wildlife Habitat Protection Plan
FIRE	Finance, Insurance, & Real Estate	TAZ	Traffic Analysis Zone	WIA	Workforce Investment Area

APPENDIX III

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APPENDIX IV

BOSWELL'S CORNER PUBLIC WORKSHOP #1

On January 24, 2009, the County of Stafford and its planning team lead by CMSS Architects conducted a public workshop for the Boswell's Corner portion of the Stafford County Master Redevelopment Plan. This workshop was a formal presentation, planning process, and activities that sought to obtain public input on the future of the area. The following report documents the workshop process and the results from the public input surveys.

The workshop was held at the Hilldrup building in Boswell's Corner on Saturday, January 24, 2009, from 10:00 am till 12:00 pm.

PUBLIC WORKSHOP #1 AGENDA

1. Introduction by Brad Johnson, Redevelopment Director
2. CMSS team presentation (PowerPoint)
 - a. Introduction of the Planning Team.
 - b. Brief description of the Boswell's Corner Redevelopment Areas.
 - c. Recap on the "Vision" plan from 2006 (C&Q)
 - d. Explanation of Planning Process; Consultant's Findings (Cultural, Market-Economic, Infrastructure & Transportation issues).
 - e. Planning Process and Public Input;
 - i. Master Redevelopment Plan: building upon the "Vision" Plans
 - ii. Project phases
 - f. Public Participation / Emphasis on the importance of Public Input
 - i. Recap on Public Forums: public input/citizens concerns
 - ii. Public participation vital to the success of the master plan
3. Hands-On activities, encouraging discussion/input
 - a. After discussion and review of the above-mentioned surveys each table's representative will present conclusions and comments for review.
 - i. The attendees were asked to place red, blue, and green dots on maps.
 - b. The attendees were given a short questionnaire to fill in.
 - c. The attendees were given a Visual Preference survey to fill in.
4. End of Boswell's Corner Public Workshop.

PUBLIC WORKSHOP #1 ACTIVITIES

A total of thirty-one (31) people attended the Boswell's Corner Public Workshop, not including the Planning Team, County staff and members of the Board of Supervisors. After the introductory presentation, the public was free to move among the tables, boards, maps and participate in the activities conducted at them. Many people stayed around the table moderators to inform the planning team of the various issues they would like to see addressed. Others placed dots on the maps to bring attention to specific sites, identifying strengths, opportunities and weaknesses in the area. Public comments are found at the bottom of each map, in reference to numbers as indicated on the map.

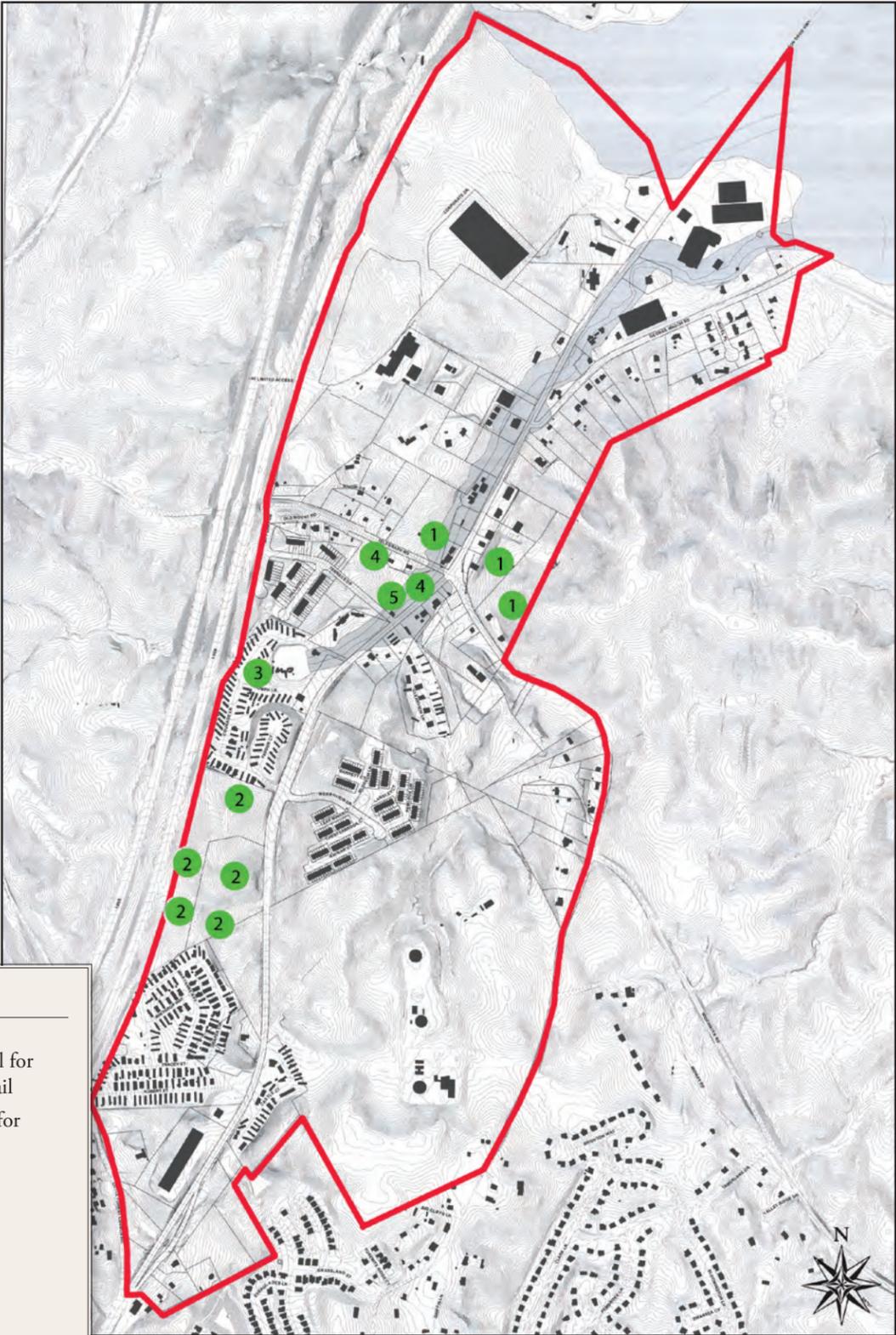
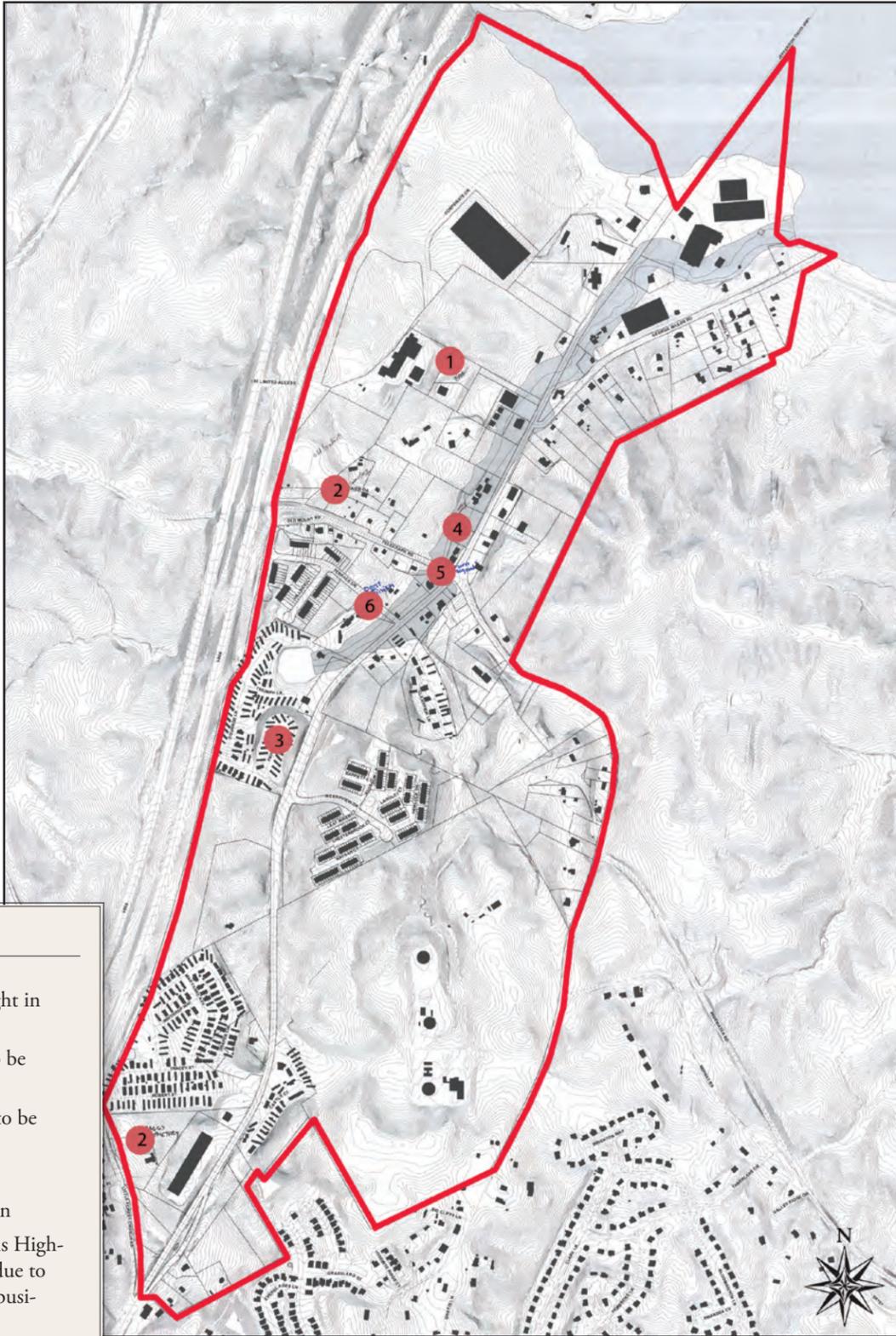
Dot Maps

Three maps were mounted on a wall so the residents and stakeholders would identify and highlight three specific criteria. A moderator from the planning team was close by to encourage attendees to place color dots on the three maps as follows;

- Red dots — Challenges
- Blue dots — Strengths
- Green dots — Opportunities

BOSWELL'S CORNER DOT MAP: CHALLENGES

BOSWELL'S CORNER DOT MAP: STRENGTHS



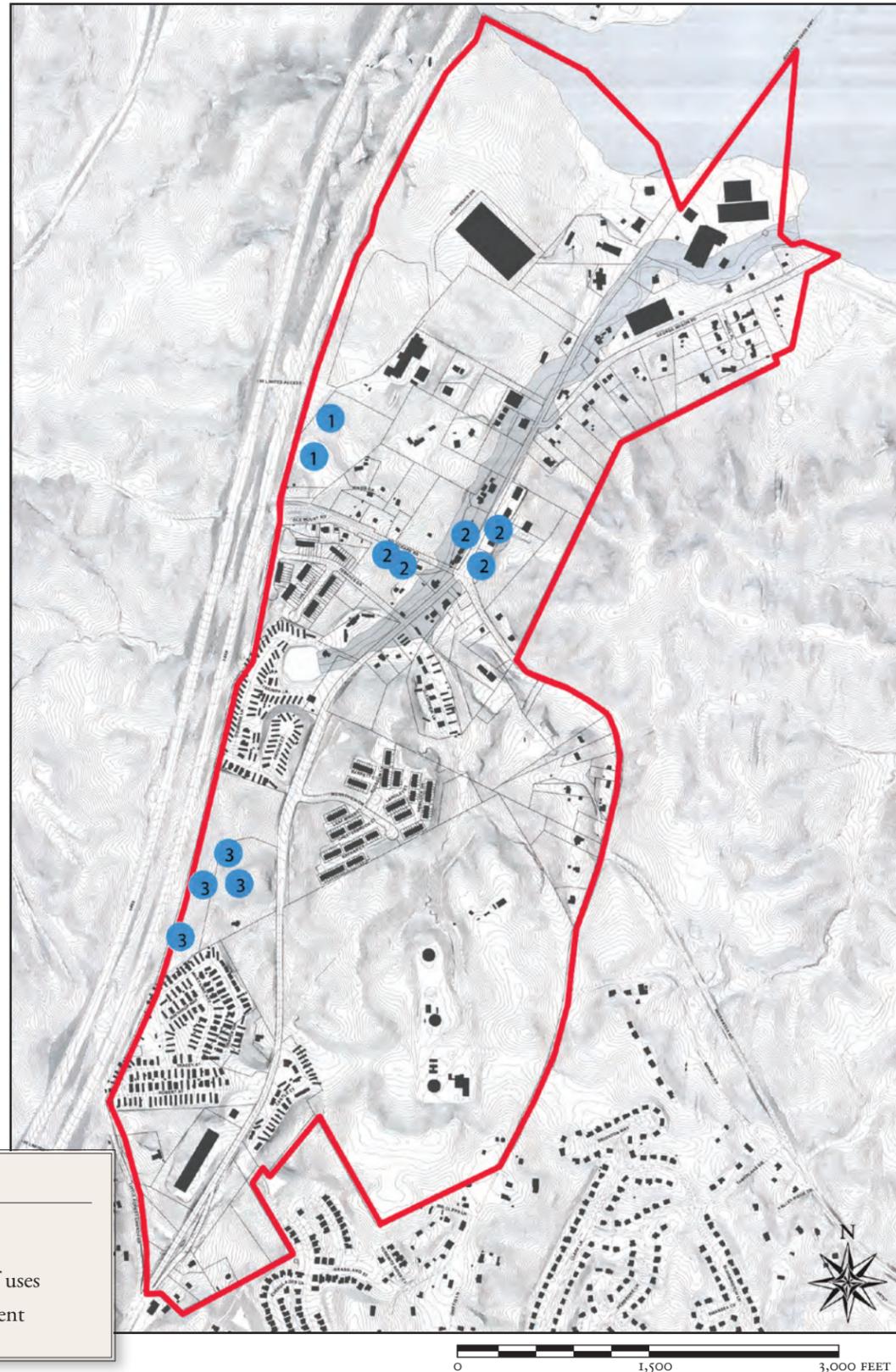
LEGEND

- 1 Chop Shop, dump, blight in the area
- 2 Cemeteries that need to be removed or improved
- 3 Trailer park that needs to be removed or relocated
- 4 Waterway / Floodplain
- 5 Traffic at the intersection
- 6 Access to Jefferson Davis Highway (US-1) is difficult due to traffic (Includes all the businesses facing the street)

LEGEND

- 1 Retail centers / potential for infill and mixed-use retail
- 2 Vacant land / potential for development
- 3 Trailer park needs to be improved
- 4 Mixed-Use potential
- 5 Multi-family residential potential

BOSWELL'S CORNER DOT MAP: OPPORTUNITIES



LEGEND

- 1 Open space
- 2 Potential for mix of uses
- 3 Potential development

PUBLIC INPUT SURVEY QUESTIONNAIRES

Each person was also asked to fill out two survey questionnaires. The first survey contained questions that encouraged the public to write their opinion on the topic, while the second a numeric gauge to evaluate their preference or dislike for various images. Both surveys were consolidated into a table and graph respectively.

Notes on Survey Questionnaires

- ◆ 31 people attended workshop
- ◆ 18 submitted questionnaire surveys
- ◆ Many questionnaire surveys submissions were repetitive
- ◆ The following is all the individual findings (repeated answers have been consolidated)

PUBLIC INPUT SURVEY QUESTIONNAIRE 1: QUALITATIVE ANALYSIS

Q: What neighborhood do you live in?

A. Falmouth, Brookstone, Hillside terrace, Aquia Harbor, George Mason, & Mavel Place

Q: What do you like most about Boswell's Corner?

- A. It is historical and has no density
- A. There are small communities, shops, and has a small town feel.
- A. It would be nice if future planning would figure out how to keep them, while allowing for high density residential.
- A. Any changes should include some standards for development
- A. Address the question "how will it look?"
- A. There is great access to the traffic light via Telegraph Road (VA-637).
- A. Another asset is the location of Quantico Corporate Center as well as proximity to Quantico and Northern Virginia.
- A. It is south of the beltway, a business place that will allow Stafford residents that worked in [Washington] DC to work in Stafford County.

Q: What do you dislike the most about Boswell's Corner?

- A. People disliked the strip look with all the small old shops, used car dealers, and the poor aesthetics.
- A. There is nothing in the area for residents and it is all a mass of clutter and looks dirty.
- A. The major flaw is that there are limited businesses and services offered.
- A. This area is full of dilapidated stores and used car dealer shops that dominate the location.
- A. Too many car lots along Jefferson Davis Highway (US-1) and the rush hour traffic. It gives the area a "Sanford and Son" look full of old, underdeveloped, shops, and stores, such as pawn shops.
- ◆ Some people feel businesses need to be brought into the area through state and county incentives.

Q: What do you feel is the greatest asset in the area?

- A. This area is the northern most location of Stafford County near Interstate 95 (I-95) and is close to Quantico, Jefferson Davis Highway (US-1), and Northern Virginia.
- A. The area has a small town feel where everyone knows everyone.
- A. Improvements can be made to improve the landscaping for small businesses as well as turn signals at intersections to control traffic.

Q: What do you feel is the biggest challenge in the area?

- A. Consolidation of old homes and obtrusive paint on buildings
- A. Forcing out businesses that currently exist
- A. Residential access during certain times of the day
- A. Incorporating the existing businesses/churches
- A. Creek, waterway, flood plain, and protection of watersheds,
- A. Traffic congestion from uncontrolled poorly planned population growth
- A. Coordinated (local, state, and corporate) growth that work
- A. Bring sustainable quality business to Stafford County
- A. [Stafford County and Consultants] being honest with the property owners working with VDOT; having answers

Q: What do you see happening to this area in the future?

- A. Improvements made to the gateway to Quantico base and its service area, and more compact development making the place more suited to a live and work experience.
- A. The place will become an old town with walking areas to businesses; businesses that have been updated with beautiful landscaping.
- A. I hope for planned development that brings jobs to the area and more people.
- A. They see modernization in the horizon involving commercial and office development with a nice planned looking growth.
- A. Others see traffic congestion and higher taxes caused by too much growth, too fast, while some do not see much at the current pace while everyone gets screwed on their homes.
- A. Many people see the area remaining as a place of commute, assuming most will live outside the area, commute in.
- A. Public-Private developers will force an urban environment instead of suburban, making us into Fairfax in a good way.

Q: What land use do you want to see occur in the area?

- A. Balanced mix of office, retail, warehouse, residential, and office
- A. Some limited retail/some residential so folks can walk to work.
- A. Some high density residential and transportation that does not require a car
- A. Need the density to support a bus for example
- A. Much stricter rules for planning, business and supporting infrastructure

- A. Modernization into a live and work experience with family oriented living
- A. Sustain current residential properties and diversify some of the businesses.

Q: What land use do you not want to see occur in the area?

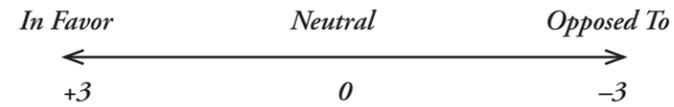
- A. Big box mall and residential
- A. Less strict rules for planning
- A. We need commercial but this is not the place for only commercial
- A. This is perfect for high density residential for all income levels
- A. Do not want to kill small business opportunity but enhance it with the growth
- A. Chop shop, junk yard, used car lots, pawn shops
- A. Only commercial no residential, more urban development

Survey Questionnaire: General Comments

- Make it a great urban mix with educational and entertainment as well as office and upscale residential units.
- There needs to be enough residential to support even at rush hour bus to VRE.
- This plan may have all the balanced of mix of office to residential.
- We want people to work where they live.
- Figure out type of market you will cater to, Quantico will be a driving factors more coordination with Quantico marine core base.
- This area is a great area to live, but there is no access to facilities, such as grocery stores, retail stores, gyms without traveling to Garrisonville Road.
- If this is a balanced approach than do we have enough residential to help support small businesses, as well as day and night use?
- We don't want more residential in the agriculture areas so we should put it here where infrastructure will be available.
- They want the area to be made more pleasing to the eye and not an eye sore it currently is.
- The plan should house as much of the workforce as you can in the area and have a commuter plan that gets people in the area that do not live here.
- Offer shuttle services from existing commuter lots to reduce the need for parking garages.
- Future planning should have a plan to absorb and incorporate as many small businesses owners as possible, and increase recreation facilities and parks.
- *All studies:* planning budgets frozen with action halted until VDOT plans are revealed stop wasting tax payers monies until infrastructure is in place. One person expressed the opinion that the presentation should give more guidelines on what you wanted them to do, the home owners are not planners and do not understand the concept of seeing a vision, they only see and hear what the county is cramming down their throats. They would like a plan to provide community more education on the overall plan. The people feel they need more facts and figures to help with the process.
- One individual expressed "maintaining direct access to Telegraph Road (VA-634) from my development, forcing us to try to access Jefferson Davis Highway (US-1) without a light at the bottom of Jefferson Davis Highway (US-1) would be dangerous and devastating to our investment."

PUBLIC INPUT SURVEY QUESTIONNAIRE 2: QUANTITATIVE ANALYSIS

The second series of survey questions was a quantitative approach to analyzing public’s perceptions of the area. Various topics were established to gauge the people’s interest in the redevelopment efforts. People were asked whether they agree or disagree with each topic, and how much so.



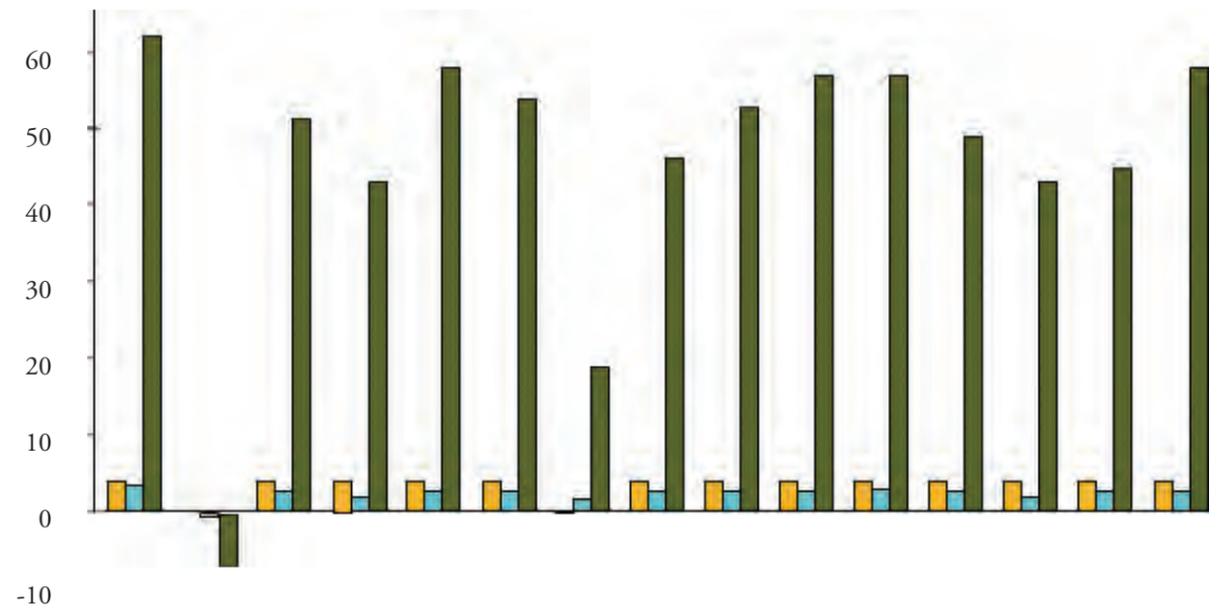
Notes on Boswell’s Corner Surveys

- ◆ 31 people attended workshop
- ◆ 18 submitted questionnaire surveys

Three calculations were made, in order to eliminate any bias.

- ◆ **Mode:** Number given the most often by the public, max mode 3
- ◆ **Average:** Sum divided by total number surveys returned, max average of 3
- ◆ **Sum:** Total number of results given by the public, 18 surveys returned, yielding max sum of 54

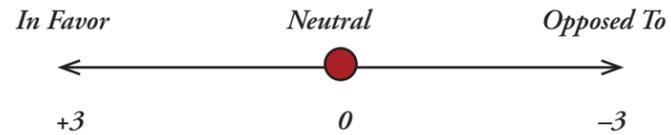
#	Topic	Mode	Average	Sum
1	Streets and roads need to be more pedestrian friendly.	3	2.56	46
2	Buildings should be closer to streets to create a better defined community.	0	-0.28	-5
3	Buildings need to relate to one another in material and height.	3	2.11	38
4	There needs to be provisions for bicycles.	3	1.78	32
5	Green areas and parks need to be integrated into the plan.	3	2.39	43
6	There needs to be better street lighting.	3	2.22	40
7	Sidewalks need to be wider to allow for outdoor dining.	0	0.78	14
8	I need the ability to walk from home to work, shop and entertainment.	3	1.89	34
9	It would be a good idea for a transit connection to local VRE.	3	2.17	39
10	There is need for adequate parking.	3	2.33	42
11	Landscaping and trees should be integrated into streetscape.	3	2.33	42
12	Open space is important for the area.	3	2.00	36
13	Traffic calming measures must be improved.	3	1.78	32
14	I feel safe in our neighborhood.	3	1.83	33
15	I am interested in new ideas to improve safety and walkability of the area.	3	2.39	43



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Mode	3	0	3	3	3	3	3	0	3	3	3	3	3	3	3
Average	2.56	-0.28	2.11	1.78	2.39	2.22	0.78	1.89	2.17	2.33	2.33	2.00	1.78	1.83	2.39
Sum	46	-5	38	32	43	40	14	34	39	42	42	36	32	33	43

PUBLIC INPUT VISUAL PREFERENCE SURVEY

The final survey was purely graphic and measured the public perception on various visual topics for future development. People were asked whether they were in favor of or opposed to certain photographic images of numerous topics. Their input was made quantitative so statistical analysis could be conducted similar to the qualitative analysis as demonstrated with Questionnaire 2.



Notes on Boswell's Corner Surveys

- ◆ 31 people attended workshop
- ◆ 18 submitted visual preference surveys

Three calculations were made, in order to eliminate any bias.

- ◆ **Mode:** Number given the most often by the public, max mode 3
- ◆ **Average:** Sum divided by total number surveys returned, max average of 3
- ◆ **Sum:** Total number of results given by the public, 21 surveys returned yielding max sum of 63

Other methods of eliminating bias:

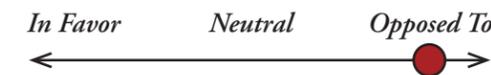
- ◆ Non-contextual pictures were included to allow for negative response
- ◆ Similar buildings were included to allow for refined responses

Visual topics included:

- ◆ Architecture
- ◆ Landscape
- ◆ Open Space and Parks
- ◆ Parking
- ◆ Streetscape

ARCHITECTURE IMAGE SAMPLES

Sum	-63
Mode	-3
Average	-3.00



Sum	0
Mode	0
Average	0



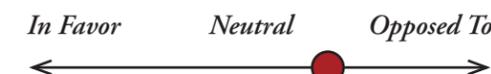
Sum	36
Mode	3
Average	1.71



Sum	27
Mode	3
Average	1.29



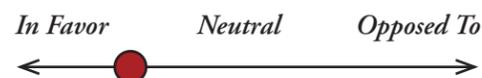
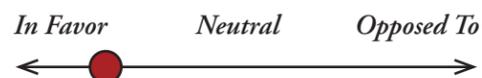
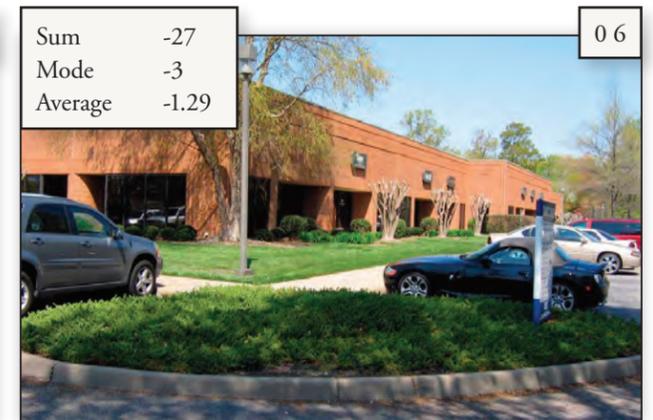
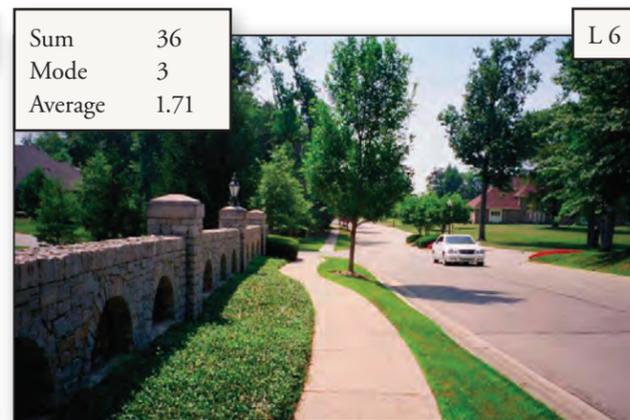
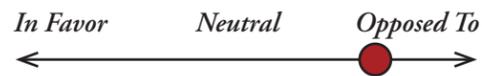
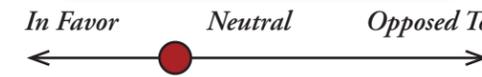
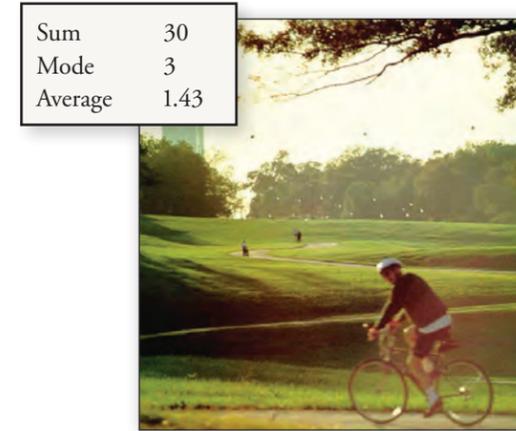
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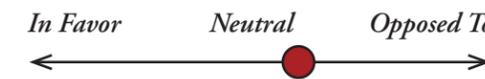
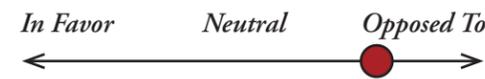


LANDSCAPE IMAGE SAMPLES



PARKING IMAGE SAMPLES

STREETSCAPE IMAGE SAMPLES



BOSWELL'S CORNER PUBLIC WORKSHOP#1: CONCLUSIONS

The final, tangible product of this process is the following comprehensive program. Based on a broad consensus view of the various development challenges, community assets, and potential opportunities as identified by the community and stakeholders, this program establishes community goals, a future role for the area, and, ultimately, a vision of how the area could integrate into the whole of Stafford County that will form the basis for a Master Redevelopment Plan.

As a strategy to re-engineer a growing, congested, yet largely disconnected area of the county, the community vision will guide the development of the master plan. For that the planning team needed to hear from the public their opinion on strengths and weaknesses and external conditions –opportunities and/or threats.

The community workshop provided a wealth of input from residents and land and business owners on the future of the Courthouse Area. The following section summarizes those thought and opinions and will provide a valuable framework during the next phase of planning.

Boswell's Corner Area

The public has stated that, with Quantico as its boundary and as the northern entry to the County, Boswells' Corner should be a Gateway. Citizens perceive the current entry point, the area along Jefferson Davis (US-1), as a blighted area, while Boswell's Corner offers a nicer character, even though it cannot be seen from the main roads. However, the public feels that the area currently lacks the elements to be such an entry point. Furthermore, while they believe that Boswell's Corner is a great area to live, they feel the area lacks necessary services and convenience retail. They also see the absence of appropriate connectivity, street crossings, and sidewalks, particularly in the Jefferson Davis (US-1)/Telegraph Road (VA-637) area, as a major concern.

The community realizes the abundance of vacant land offers diverse opportunities for potential development, open space and recreational venues.

- ◆ The community feels that “This is a great area to live, but there is no access to facilities, such as grocery stores, retail store or gyms without traveling to Garrisonville Road”.
- ◆ Neighbors are aware that Quantico, an asset for the area and the County, will be a driving factor in its redevelopment and suggest the County be proactive in coordinating with Quantico Marine Corps base.
- ◆ The public has concerns regarding the floodplain and identifies a pressing need for more recreational facilities and parks.
- ◆ Citizens are sensitive about the traffic and access difficulties at the intersection of Jefferson Davis (US-1) and Telegraph Road (VA-637); especially the businesses facing Jefferson Davis (US-1).
- ◆ Residents are interested in mixed-use that “may have a balanced mix of office and residential/multi-family residential potential.” They also feel that there should be enough residential density to support a bus to VRE even at rush hour.
- ◆ The citizens feel that the County should have a plan in place to absorb/incorporate as many small business owners as possible.
- ◆ As a component of future development, citizens would like to see structured parking rather than on-street/parking lots. When the area becomes more densely developed, they envision the County offering shuttle services from existing commuter lots to reduce the need for parking garages.

VISUAL SURVEY RESULTS

Architecture Preference

- ◆ Generally, the public showed to be in favor of a two-story urban mixed-use type of architecture. Most are in favor of parking garages in the back of the buildings with some favoring on-street (perpendicular and 45-degree) parking.

Landscape Preference

- ◆ Most attendees said to be in favor of smaller, landscaped, tree-lined sidewalks, gathering places, and courtyards.

Open Space & Parks Preference

- ◆ A large number of the public said to favor open spaces, both large, park-like areas and open plazas with water features, street furniture and gathering places, such as cafes and concert areas.

Parking Preference

- ◆ The public did not show to be strongly in favor of any parking type; although a good number said to be in favor of on-street parking, a similar number said to favor landscaped parking lots.

Streetscape Preference

- ◆ In general, the majority of the public said to be in favor of tree-lined sidewalks, pavers, street furniture, small park areas, and outdoor cafes.

VISION STATEMENT

The vision for the Boswell's Corner area embodies these sentiments:

“This area is a great area to live.”

“Make it a great urban mix with educational and entertainment as well as office and upscale residential units.”

“We want people to work where they live; mixed-uses-multi-family residential.”

The public believes that for this to be a balanced approach, Stafford County should determine if there is enough residential to help support small businesses, as well as day and night uses. The public has also stressed that they do not want more residential in the agriculture areas but rather along Jefferson Davis Highway (US-1) and Telegraph Road (VA-637), where infrastructure will be available. The public wants the area to be made more pleasing to the eye and not the eye sore it currently is. The plan should house as much of the workforce in the area as possible, and have a commuter plan which helps get people that do not live within the area to the redevelopment area, offering shuttle services from existing commuter lots to reduce the need for parking garages, and with enough residential to support even at rush hour a bus to VRE.

APPENDIX V

BOSWELL'S CORNER PUBLIC WORKSHOP #2

On April 30, 2009, Stafford County and the CMSS Planning Team hosted a second public workshop for the Boswell's Corner redevelopment area, focusing on the proposed planning efforts for this area. The workshop included a digital presentation of the project background, an analysis of findings and a summary of the previous workshop's preferences as expressed by the residents in the redevelopment area. It also included activities that sought to obtain public input on the area's draft master plan. The following report documents the workshop process and the results from the public input questionnaires.

The workshop was held at the Hildrup Moving and Storage building at 4022 Jefferson Davis Highway on Thursday, April 30, 2009, from 7:00 p.m. til 9:00 p.m.

PUBLIC WORKSHOP #2 AGENDA

1. Introduction by Brad Johnson, Stafford County Redevelopment Director
2. CMSS Planning Team Digital Presentation
 - a. Review of Resources & Input
 - i. Comprehensive Plan: Land Use Plan
 - ii. Economic Development Report
 - iii. Cunningham + Quill's "Vision" plan from 2006
 - iv. Public Comments & Preferences from the first round of Public Workshops
 1. Community Goals
 2. Vision Statement
 - b. Present Draft Master Plan
 - c. Next Steps
3. Hands-on Activities, encouraging Discussion & Input
 - a. Review Draft Master Plans and Comments
 - b. Respond to Short Questionnaire
4. Conclusion & Summary

PUBLIC WORKSHOP #2 ACTIVITIES

In order to gather public input on the Proposed Master Plan for the redevelopment area area, following the initial presentation at the Boswell's Corner Workshop, the public was free to participate in the activities conducted at each table. Many people gathered with the table moderators to share with the Planning Team their concerns and the various issues they would like to see addressed. Each table discussed the Proposed Master Plan for each redevelopment area.

Participants placed green dots on the plan to highlight positive comments and red dots to highlight concerns. The public's comments follow, referencing the numbers as indicated on the corresponding maps.

Table Discussion for the Boswell's Corner Public Workshop included:

- 30"× 36" Black & White existing condition map for Boswell's Corner
- A quarter mile radius pedestrian walking circle template
- 30"× 36" Colored Proposed Master Plan depicting landscape, traffic improvements, building and land use proposals for Boswell's Corner
- Written questionnaire on general and specific issues of the Proposed Master Plan for Boswell's Corner
- Red and Green dots;
 - ◆ Red dots to note important concerns, reservations, and disagreements
 - ◆ Green dots to note agreements, commendations, and positive feedback
- Written comments (provided in *General Notes* section) for Boswell's Corner

PUBLIC INPUT & TABLE DISCUSSIONS

Please refer to the *Boswell's Corner: Preliminary Master Plan (Buildings Colored by Use)*.

General Notes

- If this development is left in the hands of the private sector, it will never look like how it is planned; If is left in the hands of the public sector, public ownership will help regulate this plan.
- Downzoning is strongly encouraged for agriculture land so they will be preserved and compact development in urban areas can be promoted.
- The County does not have a “Transfer of Development Rights;” this is necessary for the master plan’s development to work.
- The people would like to know if the County is planning to exercise Eminent Domain to achieve a 6-lane Jefferson Davis Highway (US-1).
- The County does not have Impact Fees, as they were voted down by the Board of Supervisors.
- Some people requested promoting Natural (Resource) Capital.
- Some individuals did not want mature trees removed along Interstate 95 (I-95), stating they are an effective noise and visual barrier for homes.
- Some people questioned whether one Best Managed Practice (BMP) would be enough for this amount of concrete/run off.
- Some people expressed the desire to move the parking deck (not currently on the plan) and back off of the road, so to not impact creek and roadside creek park; more aesthetic for a “gateway look.”
- People had questions about how three lanes would merge into two lanes on Courthouse Road (VA-630) if not done together. They believe that the work should be synchronized through Aquia Creek (being the transition area).
- Certain individuals noted that large forests produce oxygen, and water vapors help maintain rainfall patterns. If hundreds of acres of forest are lost, mitigating the loss of air quality and impacts to water by preserving equal forests nearby need to be considered. Conservation easement for more “natural parks.”
- Some people believe land development should be done in phases, with care for preservation:
 - ◆ Slope and trees on slopes, build on top of hill and leave slopes alone, helps with visual and protecting creek and ground water
 - ◆ Recharge and absorption
 - ◆ Especially the slope at Telegraph Road (VA-637) heading towards Interstate 95 (I-95)

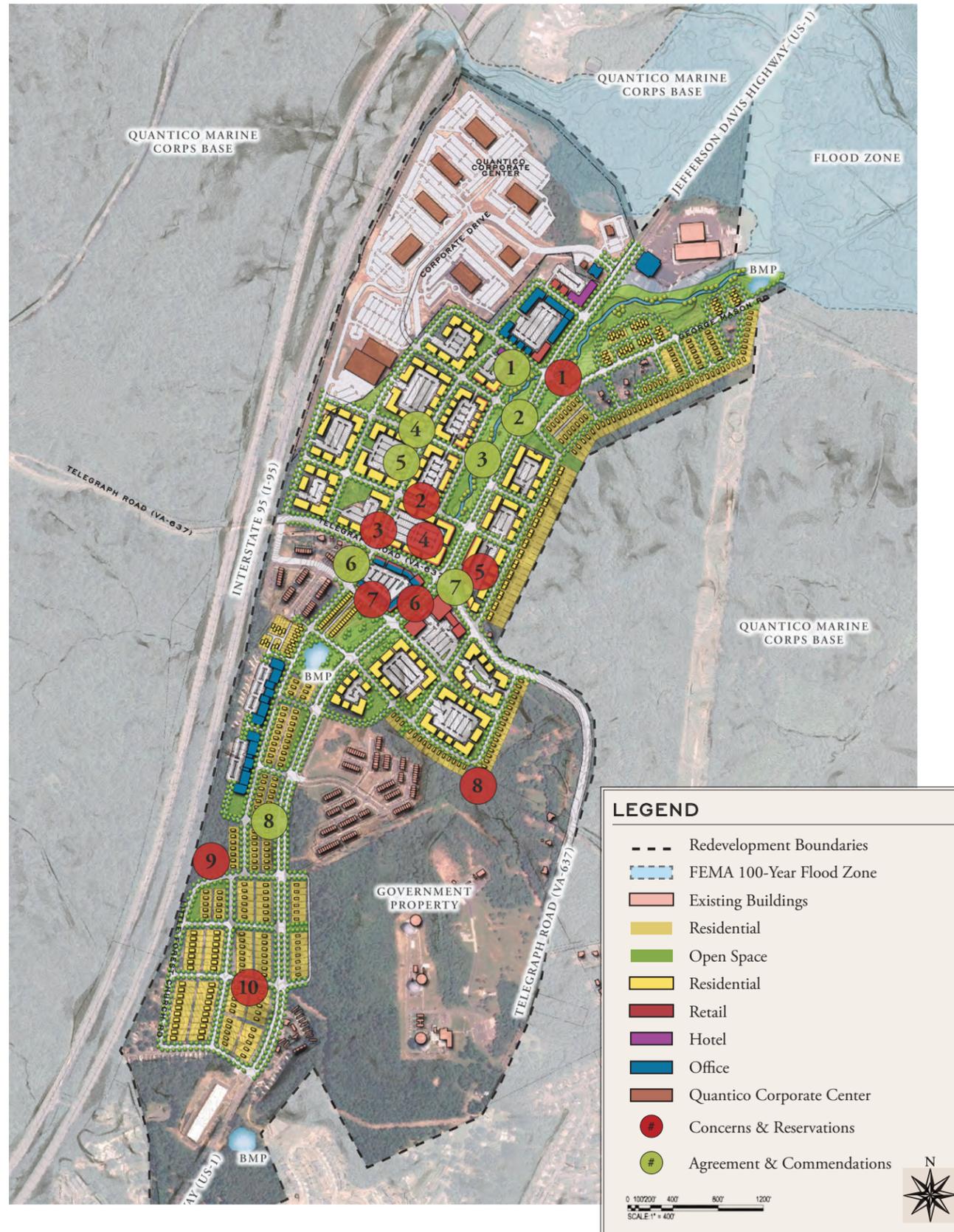
MASTER PLAN PUBLIC INPUT

Concerns & Reservations (Red Dots)

1. Some people state there should be amenities if large populations are brought in; recreational shops, libraries, community centers, playgrounds, fields, athletic centers, etc. should be considered
2. Some people believe that this master plan is too far from reality.
3. Some individuals would like to keep as many connected cluster of mature, existing trees, reduce/eliminate buildings that cross creek at Telegraph Road (VA-637); believing the creek park should continue uninterrupted all the way down Jefferson Davis Highway (US-1).
4. Some people would prefer to keep this area of the master plan open and allow the creek to flow through; they do not want to pipe it.
5. Some people believed that too much of the residential is spread out; they would prefer height rather than sprawl.
6. Some individuals stated that the stream should not be culverted.
7. Some people brought up the point that existing property owners may not want to sell.
8. One individual noted that they did not like the single family houses wrapped around townhouses, believing they would never sell.
9. Some people noted the need for access management in this section of the master plan.
10. One individual stated that they would like to see more open space ; they believed that this was too dense of a residential area. They expressed the desire to see different styles and larger lot lines.

Agreement & Commendations (Green Dots)

1. People stated that the island is a good idea, but taking away land from property owners should be taken into consideration.
2. One individual believed that a fly-over pedestrian bridge might help.
3. Several people stated the Flood Plain and park were good assets.
4. People commented that residential development is needed for community/commercial growth.
5. One individual said they liked the mid-rise locations’ proximity to Quantico Corporate Center.
6. Some people expressed the desire to keep this intersection, believing it has more dynamic (“four developed corners keeps a more structured feel”).
7. Several people noted that condominiums and apartments were ideal for the military population.
8. Some people liked the idea of clustered groups of mixed-use commercial and higher-density housing, and how they tied into each other.



PUBLIC INPUT SURVEY QUESTIONNAIRE: PART 1

Notes about the Boswell's Corner Questionnaire:

- ◆ 25 attended
- ◆ 13 surveys returned
- ◆ Repeated comments consolidated

What do you think about the following proposed solutions?

1. The design improvements and widening of Jefferson Davis Highway (US-1) and Telegraph Road (VA-637)?

- ◆ "Good to plan for 6 lanes while starting with 4; there should be a major focus on this corner."
- ◆ "Like the idea of a tree-lined median"
- ◆ "Jefferson Davis Highway (US-1) does need widening"
- ◆ "Like the idea."
- ◆ "Okay with it"
- ◆ "I like it"
- ◆ "Yes"
- ◆ "Very good!"

2. The plan for the four corners of the intersection of Jefferson Davis Highway (US-1) and Telegraph Road (VA-637)?

- ◆ "Good, but put more retail and less residential on the corner."
- ◆ "Okay with it"
- ◆ "Great!"
- ◆ "Good"
- ◆ "Yes, Don't object"
- ◆ "Excellent!"
- ◆ "Proposed plan doesn't seem to consider accommodating current businesses"
- ◆ "Need to consider existing landowners' uses and wishes"
- ◆ "I think this is a good plan; controls traffic, gives the area a balanced feel"
- ◆ "Too intense, too dense—need to keep creek un-culverted and with existing mature trees; do not disturb forested slope"

3. The retail options and residential diversity are closely related, are you comfortable with the amount of retail and residential shown?

- ◆ “Yes” (7 times)
- ◆ “Yes, I think I would enjoy walking up and down shops”
- ◆ “Seems like a lot of structures for the space but like lots of interaction of housing, office and retail”
- ◆ “Yes, as long as is done well”
- ◆ “Good”
- ◆ “Yes, except viability of units above commercial shops as homes”
- ◆ “I believe this area will emerge as a primarily retail area because of the proximity to business parks”

4. Would you prefer to have more retail and correspondingly more residential? Or would you prefer less residential and less retail options?

- ◆ “Okay, both just make it better than it is!”
- ◆ “Probably slightly more residential but thought-out and well landscaped”
- ◆ “Less residential – less retail – more office”
- ◆ “I think there is a good balance”
- ◆ “Okay”
- ◆ “Yes”
- ◆ “You need condo density to make retail work”
- ◆ “Yes, more retail and corresponding more residential”
- ◆ “No opinion”
- ◆ “Undecided”

5. Streetscape patterns and street grids?

- ◆ “Grids are good but would rather have more height and gain green space and parks”
- ◆ “Old-fashioned lights—wide sidewalks”
- ◆ “Okay”
- ◆ “Yes”
- ◆ “Fine”
- ◆ “Okay with”
- ◆ “N/A”
- ◆ “Hard to envision pedestrian crossings and safety considerations in this area”
- ◆ “I think this is a real challenge. It would be wise to move the “town center” away from Jefferson Davis Highway (US-1).”
- ◆ “Grids make for better pedestrian environment”
- ◆ “Excellent! “
- ◆ “Looks good”

6. The height and density of the plan?

- ◆ “Go higher with more green space, less single family and more townhomes”
- ◆ “Okay—like some height but not really tall buildings”
- ◆ “No more than three stories”
- ◆ “Good scale”
- ◆ “Fine “
- ◆ “Okay”
- ◆ “Yes” (2 times)
- ◆ “N/A”
- ◆ “2-3 stories may be a stretch”

7. The proposed linear park and the amount of open space?

- ◆ “Needs work, more open space”
- ◆ “Make linear park continuous around the area so citizens could bike up and down Jefferson Davis Highway (US-1) and around – across. Also, protect creek!”
- ◆ “Fine”
- ◆ “Okay” (2 times)
- ◆ “Good”
- ◆ “Yes” (2 times)
- ◆ “Great solution!”
- ◆ “I think is good”
- ◆ “N/A”
- ◆ “Like use of flood plain with parks”
- ◆ “I think you should consider open parks in the center of the main town center; allow employees to sit outside or walk on lunch break.”

8. The architectural design examples?

- ◆ “Okay. But it will change based on who is brought in.”
- ◆ “Like the examples. Biggest issue is I don’t want the large, tall trees to come down west of Jefferson Davis Highway (US-1)—they block a tremendous amount of noise!”
- ◆ “Good—traditional”
- ◆ “Fine”
- ◆ “Great!”
- ◆ “Yes”
- ◆ “Good”
- ◆ “N/A”
- ◆ “Changing the character to that of Norfolk examples may not be feasible; need to consider smaller towns as examples—Fredericksburg, etc.”

PUBLIC INPUT SURVEY QUESTIONNAIRE: PART 2

1. Do you feel the plan has a balanced mix of uses?

- ◆ “For the proximity to Northern Virginia and Quantico the residential, business and retail seem to be a good mix for a self-contained community.”
- ◆ “Yes” (5 times)
- ◆ “Yes, good balance of office, retail and residential”

2. Do you think that the plan has adequate open plazas and parks?

- ◆ “Yes” (4 times)
- ◆ “Could use more parks”
- ◆ “No. I would rather sacrifice the large square footage density for open space –less single family, more townhomes.”
- ◆ “Need pockets of open space and amenities such as pools, parks, courts, tot lots, etc.”

3. Do you have any comments and suggestions to improve the plan?

- ◆ “Check the need for schools; if this many residential- how is current capacity? And any other needs like fire stations and library”
- ◆ “More consideration for current owners who want to remain”
- ◆ “Any ‘public’ transportation link modes -trolleys, buses, etc.?”
- ◆ “Find mechanism to mitigate loss of trees, air quality, and climate change impacts by preserving forests on rest of the peninsula.”
- ◆ “I would like to be put in contact with the principals concerning the sale of my property for this project.”
- ◆ “N/A”

BOSWELL'S CORNER PUBLIC WORKSHOP#2: CONCLUSIONS

While the first workshop provided a great deal of information for planning of the redevelopment areas, this second workshop measured how the plans addressed the public's concerns. Overall, the majority of the public approved of the plans, clearly giving a positive response to most of the questions asked about the plans. Additional information was provided in these workshops, which will allow the planning team to make specific improvements and enhancement to the draft master plans that favor both residents and businesses of Stafford County.

APPENDIX VI

FINANCIAL FEASIBILITY: ASSUMPTIONS & METHODOLOGY

Note: The findings herewith are the result of the Planning Team's assumptions and their recommendations based thereon are typical for a master redevelopment study of this magnitude. It is also understood that the market will drive the master plan implementation. Stafford County does not have plans for consolidating land to directly implement the plan.

Economic Research Associates (ERA) constructed a financial pro forma development model to analyze the potential gross residual land value from the proposed Core Development Area development program for each of the redevelopment areas.

The results of the analysis indicate the maximum amount per acre a developer could pay for the land.

Aside from the assumptions by category below, all redevelopment area analyses assume, per discussions with County representatives that:

- The entire Core Development Area program (as summarized by master plan drawings and accompanying tables) is developed in one phase, in year 0 of the development pro forma. (Although in reality this may be multi-phased, the end results will be similar.)
- The Financial feasibility analysis for the master plan is for a ten year period from 2010-2020, with assumed reversion in year 10

Additional assumptions are outlined below in the attached tables and explained below as appropriate.

Efficiency ratios, which represent the percentage of built space which is usable (versus space that is dedicated to circulation or building core that is not rentable), are based on industry experience of buildings that are newer and more efficient. They vary slightly by type – from 85–95%.

Vertical Development Costs are a cost per square foot figure for building the building (not internal streets or other site infrastructure). These were garnered from R.S. Means, an industry standard for cost estimation with adjustments based on the experience in the market of the Master Planning Team Members. They include both hard and soft costs.

Tenant Fit Out costs are costs to finish interior spaces specifically for tenants' needs. These are based on local rental surveys as well as discussions with the Master Planning Team Members and are adjusted upward for inflation.

Parking annual maintenance costs are based on industry averages. Based on discussions with the Master Planning Team Members, it is assumed that all developer-provided parking is on surface lots.

A percentage of the total cost is often added to development costs as Contingency costs for unforeseen overruns and expenses.

The *Developer fee* in this analysis is represented as a percentage, and is a stand in for the minimal amount of profit for the developer. The general contractor fees and other fees are included in the vertical development costs.

Operating assumptions provide the backbone of the revenues and expenses which create the value of the development. These include rents, other revenues, and operating expenses such as utilities. The sources for these are noted on the associated table.

Other assumptions include the stabilized occupancy rate (which is the occupancy rate at which most buildings are considered "full" to allow for tenant turnover and other factors), an assumed percentage of units or space that will be presold/preleased, and loss on unsold units. These variables are based on industry experience.

The program used for each redevelopment area is based on information provided by the Master Planning Team. ERA used numbers of square feet, units, and parking spaces by type (designated as either multifamily residential, office, retail). Average unit sizes are calculated by dividing total square feet by the total number of units. ERA further distributed the residential between rental apartments or condominiums, and the retail between general retail and restaurants (because restaurants have a higher construction cost and greater tax implications). This distribution, and the annual absorption, is professional judgment based on ERA's experience with similar projects, the findings of the market study, and consideration for the likeliest market position for the redevelopment area. Because of the conceptual nature of the plan, these represent best guess estimates.

Each area's analysis begins with an estimation of construction and development costs. The vertical construction costs are the result of the per square foot costs multiplied by the gross building area (GBA). By contrast, the tenant improvements use the net rentable area (NRA). Parking was calculated on a per-space basis (\$2,500 per space for surface lots). Additional horizontal costs (infrastructure and site work) are added on a per acre basis. The Master Planning Team members provided ERA with the horizontal cost data, at \$250,000 per acre, which is assumed to provide the necessary on-site parking. Additional infrastructure costs were added to the Boswell's Corner Redevelopment Area for a linear park. A 5% contingency and 4% developer fee were added to the total vertical and horizontal costs.

ERA then prepared a pro forma operating statement analysis by land use type (office, retail, restaurant, hotel, rental apartment, and for sale condominiums, as applicable for the redevelopment area). These found the net operating income of each use by taking the total revenue minus the total expenses. The resulting net operating income (NOI) was capitalized at prevailing capitalization rates to find an approximation of sale value, less a 5% cost of sale (for marketing of the property).

This is unleveraged, meaning it does not represent the cost of money to the developer (financing). In a subsequent step, ERA performs a cash flow analysis to find the net costs and revenues to the developer. The net present value of the revenue at a discount rate of 12% minus the net present value of the construction costs at the same rate represents the residual land value for each area's development. Again, it is important to note that this analysis only represents development of the program for the Core Development Areas. The full step-by-step analyses for each redevelopment area can be found in the Appendix tables.

FISCAL OVERVIEW

This fiscal overview is intended to give an estimate of the tax revenues generated by the proposed Core Development Area in the four redevelopment areas. This is not intended to be a net fiscal analysis, which would consider sources and uses of funds and the costs associated with the development. The fiscal overview examines the property values of the new investment (using construction costs as a proxy for assessed value) and any county infrastructure investments, and determines the corresponding revenues for Stafford County in the following tax categories, using the most recently available rates from the County (as of the FY 2010 budget):

- **Real Property Tax:** \$0.84 per every \$100 of assessed value. Construction costs are used as a proxy for assessed value in this analysis.
- **Retail Sales Tax:** The state collects 1% for local jurisdictions. The analysis includes retail sales taxes collected for on-site spending, for resident retail sales that happen off-site, and for construction materials bought in the County.
- **Meals Tax:** The County collects 4% dedicated to the School Board, in addition to the 1% local sales tax and 4% state sales tax. Again, this is estimated for both on-site spending, and for resident spending off-site in the County.
- **Transient Occupancy Tax:** The County currently collects (in addition to the retail sales tax) 5% transient occupancy tax – 2% for the general fund and 3% for tourism development. This is estimated for the redevelopment areas, where a hotel is planned in the Core Development program.

Stafford County also collects personal property, business property, machinery and equipment, and BPOL taxes (starting in 2010).¹ Because these vary by value of equipment and by revenue levels, they would require too many unknown assumptions to compute with a reliable accuracy.

As a summary, the total impacts of all four redevelopment areas during the construction period would be \$1.8 million, including \$1.5 million in sales taxes on construction materials, and \$290,000 in sales and use taxes from construction worker spending. Annually, the Core Development program for all four redevelopment areas would benefit the County with \$3.2 million in property taxes, \$4.2 million in on-site sales and use taxes, and \$511,000 in off-site sales and use taxes for a total of \$7.9 million annually. These summary figures are shown in Table 24 (*Summary of Core Development Area Annual and Construction Period Fiscal Benefits*), and the methodology and results for each of the impacts are in the following section. As a typical assumption for a financial/fiscal analysis on a master redevelopment plan, it does not include adjacent property value increases due to redevelopment.

Table 24: Summary of Core Development Area Annual and Construction Period Fiscal Benefits

ANNUAL				
Redevelopment Area	Property Tax ¹	On-Site Sales & Use Taxes ²	Off-Site Sales & Use Taxes ²	Total
Boswell's Corner	\$1,027,926	\$1,488,293	\$131,525	\$2,647,745
Courthouse Area	\$1,217,035	\$1,549,669	\$252,716	\$3,019,419
Falmouth Village	\$146,663	\$291,546	\$18,597	\$456,807
Southern Gateway	\$800,238	\$883,460	\$108,387	\$1,792,086
Total	\$3,191,862	\$4,212,969	\$511,225	\$7,916,057

CONSTRUCTION PERIOD			
Redevelopment Area	Construction Materials Sales Tax	Sales & Use Taxes on Construction Worker Spending ²	Total
Boswell's Corner	\$477,251	\$92,269	\$569,520
Courthouse Area	\$565,052	\$109,243	\$874,295
Falmouth Village	\$72,725	\$14,060	\$86,785
Southern Gateway	\$383,483	\$74,140	\$457,623
Total	\$1,498,512	\$289,712	\$1,788,224

¹Construction Cost (not including land) is used as a proxy for full market value. Using 2009 Rates, per County website @ \$0.84 per \$100.00 value. It is assumed that all construction construction purchases are made in Stafford as often, jurisdictions charge taxes on materials even if they are purchased elsewhere.

²Includes local retail sales tax of 1%, meals tax of 4%, and hotel tax of 5%, as appropriate.

Source: Stafford County Commissioner of the Revenue; ERA, 2009.

REAL PROPERTY

As described above, real estate is taxed at a rate of \$0.84 for every \$100 of assessed value. For this study, the construction cost of the new development is used as the assessed value. The same values as were used for the feasibility study are used for the fiscal analysis. The per square foot costs were estimated using published rates by building type from RS Means adjusted using the industry experience of the Master Planning Team and ERA.

A summary of the results by redevelopment area follow. It is important to note that this does not represent a net impact (existing uses and their impact are not removed, and the costs of County services to these new uses are not represented).

Table 25: Summary of Property Tax Benefits by Redevelopment Area

Use	Value ¹	County Tax ²
Boswell's Corner	\$1,22,372,178	\$1,027,926
Courthouse Area	\$144,885,069	\$1,217,035
Falmouth Village	\$17,459,910	\$146,663
Southern Gateway	\$95,266,451	\$800,238

¹Construction Cost (not including land) is used as a proxy for full market value

²Using 2009 rates, per County website @ \$0.84 per \$100.00 value.

Source: Stafford County Commissioner of the Revenue; ERA, 2009.

¹ BPOL is on business revenues, not retail sales, and it is not computed on gross sales, but is dependent on the number of businesses and how much each earn.

SALES AND USE

ERA calculated sales and use taxes both for the annual sales of on-site retail, restaurants, and hotels; for the estimated expenditures of residents (annual, at buildout of the Core Development Area), office workers, and construction workers (for the construction period) throughout the County (exclusive of on-site sales to these groups); and for the sales tax on construction materials.

On Site

Retail sales tax of 1% is imposed upon all retail sales. Sales tax rates to the Commonwealth of Virginia differ by type of sale (some food products food and non-prescription drugs are taxed at lower rates than other retail goods).

Retail sales for the various developments were estimated by taking the total rents used in the financial feasibility pro forma and dividing by 10%. 10% is the industry benchmark for the percentage of revenues spent on rent.

Meals in the County are taxed at 5% – 4% Meals and 1% sales tax. Restaurant sales were calculated using the same benchmark as retail – assuming rents represented 10% of sales.

Hotel stays in the county are taxed for transient occupancy tax at 5% and 1% for sales tax. ERA used room revenue – as assessed in the financial pro forma analysis – as a basis for sales. Other sales in the hotel are assumed to be mostly food sales, and are taxed as meals (5% total).

The results of all on-site sales and use are found in Table 26 (*On-Site Sales and Use Tax Revenue*).

Table 26: On-Site Sales and Use Tax Revenue

Boswell's Corner			
Use	Est. Sales /1	County Tax Rate /2	County Tax
Retail			
General Retail	\$37,886,778	1%	\$378,868
Restaurant	\$16,435,827	5%	\$821,791
Hotel			
Hotel--Rooms	\$4,793,905	6%	\$287,634
Hotel--Other	\$2,518,298	5%	\$125,915
Total	\$59,116,510		\$1,488,293
Courthouse			
Use	Est. Sales /1	County Tax Rate /2	County Tax
Retail			
General Retail	\$81,856,566	1%	\$818,566
Restaurant	\$14,622,062	5%	\$731,103
Total	\$96,478,628		\$1,549,669
Southern Gateway			
Use	Est. Sales /1	County Tax Rate /2	County Tax
Retail			
General Retail	\$46,665,884	1%	\$466,659
Restaurant	\$8,336,033	5%	\$416,802
Total	\$55,001,917		\$883,460
Falmouth			
Use	Est. Sales /1	County Tax Rate /2	County Tax
Retail			
General Retail	\$4,810,024	1%	\$48,100
Restaurant	\$4,868,923	5%	\$243,446
Total	\$9,678,947		\$291,546

1/ Sales are estimated assuming rents represent 10% of sales (benchmark for retail operations)

2/ Sales Tax rate is 1% for localities in Virginia; to this is added 5% rooms tax for hotel rooms and 4% meals tax for restaurants and hotel's "other" revenue.

Source: Stafford County Commissioner of the Revenue; Virginia Department of Taxation; ERA, 2009.

Resident and Office Worker Annual Retail Sales and Meals

New households, hotels, and office space will bring new daytime populations to Stafford County. To quantify the impact of these populations on sales taxes, ERA used the following methodologies:

Residents: ERA took the number of projected households (based on the new units in the Core Development Area) and estimated retail sales by category based on 2009 ESRI spending per household for the County. It was assumed that between 50% and 80% of total sales would be spent within the County (not counting sales on-site which are counted separately in the analysis).

Office workers: to estimate employees in proposed office space, ERA assumed an average of 250 square feet per employee. To estimate retail sales, ERA used information published by the International Council of Shopping Centers on office worker spending patterns. This is the same data used in ERA's market analysis work for the redevelopment areas. It was assumed 70% of all employees' workday spending would be captured in the County (excluding on-site purchases).

Hotel visitors: Boswell's Corner is the only redevelopment area to have a proposed hotel in the Core Development Area. To estimate visitor spending, ERA multiplied the number of rooms (110) by the estimated occupancy rate (70%) and multiplied the result by 365 to find the yearly room nights. Using spending data by the Virginia Travel Corporation (VTC), ERA calculated approximate total visitor group spending and estimated that of this, 40% would be captured within the County off-site.

The results of this analysis are shown in Table 27 (*Resident, Office Worker, & Hotel Guest Sales Tax Revenue from Off-Site Spending*).

Table 27: Resident, Office Worker, & Hotel Guest Sales Tax Revenue from Off-Site Spending

Boswell's Corner		
	County Sales	County Tax
Households	\$3,577,048	\$65,974
Hotel Visitors	\$533,510	\$14,983
Office Workers	\$2,352,000	\$50,568
Courthouse		
	County Sales	County Tax
Households	\$8,479,637	\$156,396
Office Workers	\$4,480,000	\$96,320
Southern Gateway		
	County Sales	County Tax
Households	\$4,701,604	\$86,715
Office Workers	\$1,008,000	\$21,672
Falmouth		
	County Sales	County Tax
Households	\$681,912	\$12,577
Office Workers	\$280,000	\$6,020

Source: Stafford County Commissioner of the Revenue; Virginia Department of Taxation; ERA, 2009.

Construction Period Sales and Use Taxes

For the construction period sales and use taxes, ERA assessed two components: construction of the Core Development Area program and additional infrastructure improvements by the County for the Core Development. There were assumed to be additional infrastructure needs in the Falmouth and Southern Gateway areas, based on information provided to ERA by the civil infrastructure members of the Master Planning Team. Both these infrastructure costs and construction costs of the development program were broken down into hard and soft costs. As a benchmark, costs break down to approximately 65% hard costs and 35% soft costs. Hard costs include the cost of construction—including materials and the labor to construct the building; soft costs include costs such as financing and architecture. Hard costs can subsequently be divided into labor and materials costs. The cost of labor represents approximately 40% of total hard costs, with materials making up the balance.

For sales county-wide from these construction workers, ERA took the total costs of labor, and using standard retail benchmarks based on the U.S. Bureau of Labor Statistics Consumer Expenditure Survey, assumed that these workers will spend 28% of income on general retail purchases and 6% on meals in restaurants. Of these, ERA estimated that half of all spending would be in Stafford.

Additionally, developers would pay sales tax on building materials purchased for construction. It is assumed sales tax for Stafford would be levied on 100% of the materials. The total construction-period impacts are shown by redevelopment area in Table 29 (*Sales and Use Tax Revenues from Construction Period*).

Table 28: Core Development Area Construction Costs for Materials and Labor

Boswell's Corner			
Use		Development Program	Other Infrastructure Expenditures
Total		\$122,372,178	n/a
Estimated Hard Costs	65%	\$79,541,916	n/a
Estimated Soft Costs	35%	\$42,830,262	n/a
Estimated Hard Costs		\$79,541,916	n/a
Estimated Materials Costs	60%	\$47,725,149	n/a
Estimated Labor Costs	40%	\$31,816,766	n/a
Courthouse			
Use		Development Program	Other Infrastructure Expenditures
Total		\$144,885,069	n/a
Estimated Hard Costs	65%	\$94,175,295	n/a
Estimated Soft Costs	35%	\$50,709,774	n/a
Estimated Hard Costs		\$94,175,295	n/a
Estimated Materials Costs	60%	\$56,505,177	n/a
Estimated Labor Costs	40%	\$37,670,118	n/a
Southern Gateway			
Use		Development Program	Other Infrastructure Expenditures
Total Construction Costs		\$95,266,451	\$3,062,585
Estimated Hard Costs	65%	\$61,923,193	\$1,990,680
Estimated Soft Costs	35%	\$33,343,258	\$1,071,905
Estimated Hard Costs		\$61,923,193	\$1,990,680
Estimated Materials Costs	60%	\$37,153,916	\$1,194,408
Estimated Labor Costs	40%	\$24,769,277	\$796,272
Falmouth			
Use		Development Program	Other Infrastructure Expenditures
Total		\$17,459,910	\$1,187,585
Estimated Hard Costs	65%	\$11,348,942	\$771,930
Estimated Soft Costs	35%	\$6,110,969	\$415,655
Estimated Hard Costs		\$11,348,942	\$771,930
Estimated Materials Costs	60%	\$6,809,365	\$463,158
Estimated Labor Costs	40%	\$4,539,577	\$308,772

Source: Urban, Ltd.; ERA, 2009.

Table 29: Sales and Use Tax Revenues from Construction Period

Boswell's Corner		
	Development Program	Other Infrastructure Expenditures
Sales Taxes from Materials	\$477,251	n/a
<u>Construction Worker Spending</u>		
General Sales Taxes	\$44,543	n/a
Restaurant	\$47,725	n/a
Courthouse		
	Development Program	Other Infrastructure Expenditures
Sales Taxes from Materials	\$565,052	n/a
<u>Construction Worker Spending</u>		
General Sales Taxes	\$52,738	n/a
Restaurant	\$56,505	n/a
Southern Gateway		
	Development Program	Other Infrastructure Expenditures
Sales Taxes from Materials	\$371,539	\$11,944
<u>Construction Worker Spending</u>		
General Sales Taxes	\$34,677	\$1,115
Restaurant	\$37,154	\$1,194
Falmouth		
	Development Program	Other Infrastructure Expenditures
Sales Taxes from Materials	\$68,094	\$4,632
<u>Construction Worker Spending</u>		
General Sales Taxes	\$6,355	\$432
Restaurant	\$6,809	\$463

Source: Urban, Ltd.; Stafford County Commissioner of the Revenue; ERA, 2009.

FINANCIAL IMPLEMENTATION CONSIDERATIONS & TOOLS

Implementation of the development programs will be highly depended on:

- Availability of infrastructure appropriate to the land uses and scale;
- Availability of financing for the specific development or land uses proposed (including the timing of economic recovery of capital markets);
- Ability of each specific market (retail, residential, office, etc.) to absorb space as it is developed (greatly linked to the availability of qualified tenants).

To address the issue of infrastructure implementation, development plans should start in the locations within each redevelopment area that already has adequate infrastructure for the proposed uses, while planning for eventual growth over a period of 10 to 30 years (30 years being a common period for infrastructure bonds). Issues of financing availability are linked to the individual developer, whether there is a public financing mechanism that can be used to cover infrastructure or other costs (thus lowering the amount of financing required) such as tax-increment financing (TIF) or enterprise funds that might be available. Market absorption was addressed in the market analysis of the redevelopment areas.

At the time of the development of this plan, the residential, retail and office market opportunities are limited, with the possible exception of medical-related office and supporting retail in the Courthouse Area. As Marine Corps Base Quantico expands, additional market support will improve for office and supportive retail and residential development in Boswell's Corner.

While grant funds and programs for commercial redevelopment are limited, the tools listed below are an example of organizations, funds and programs that may be available for use in the various redevelopment areas.

ECONOMIC DEVELOPMENT SUPPORT – STAFFORD COUNTY

Economic Development Authority

The Stafford Economic Development Authority (EDA) is a Board-appointed commission of the county that assists the Board of Supervisors in attracting and financing industry and commerce. The Stafford EDA and the State of Virginia provide incentives to businesses based on the return on investment that they will bring to the community. Incentives include industrial revenue bonds, a loan guaranty program, capital access program and work force training. The EDA would seem to be a logical key actor in the implementation of the redevelopment program, along with local economic development organizations.

The Economic Development Authority (EDA), in cooperation with the Virginia Electronic Commerce Technology Center (VECTEC), offers 50/50 E-commerce Grant Funds for small businesses expansion.

TECHNOLOGY ZONES

Virginia cities, counties and towns have the ability to establish, by ordinance, one or more technology zones to attract growth in targeted industries. Each jurisdiction designs and administers its own program. According to the enabling legislation (Virginia Code 58.1-3850), this enables jurisdictions to grant tax incentives and provide certain regulatory flexibility.

Tax incentives may be provided for up to ten years and may include:

- Reduction of permit fees
- Reduction of user fees
- Reduction of any type of gross receipts tax.

In addition to tax incentives, the jurisdiction can also provide regulatory flexibility such as special zoning, a special permitting process, exception from certain ordinances, or other incentives. These are also binding for a period of ten years. Having a technology zone does not preclude the County from also taking advantage of an enterprise zone program.

ECONOMIC AND BUSINESS DEVELOPMENT TOOLS – COMMONWEALTH OF VIRGINIA

Tax-Increment Financing (TIF)

Tax Increment Financing (TIF) is an economic development tool available for use in Virginia designed to stimulate economic activity within specific geographic boundaries. A TIF district is effective for redeveloping areas, encouraging private investment in areas with limited prospects for growth, and improving areas where a much higher quality of development is desired. A key element of the TIF is a “but for” statement – that the economic benefits of the new private development would not otherwise occur (“but for”) without the public investment within the TIF district. TIF is most often used to support bonds used for infrastructure improvements. The calculation of funds available is based on the difference between a baseline assessed value and a projected future assessed value after improvements. Use of a TIF district should be carefully planned so as to not over estimate the potential increment and to accurately anticipate development absorption and market values.

Virginia Small Business Financing Authority

The Virginia Small Business Financing Authority (VSBFA) provides debt financing assistance to established, existing, Virginia-based businesses, entrepreneurs, and to qualifying businesses wishing to expand into Virginia. The VSBFA's financing programs include:

1. ***Economic Development Loan Fund (EDLF):*** The Economic Development Loan Fund (EDLF), funded by the federal Economic Development Administration (EDA), offers gap financing between private debt financing and private equity. Funds are available to economic development authorities and qualifying new and expanding businesses that are creating new jobs or saving “at risk” jobs in qualified underserved and distressed areas of Virginia as defined by the EDA. Funds are also available to Virginia businesses which derive 15% or more of their revenues from defense-dependent activities and can demonstrate economic hardship related to defense downsizing. Funds can be used for the acquisition of land and buildings, construction or improvements to facilities and the purchase of machinery and equipment. Funds can also be used to assist defense-dependent businesses transition to private sector markets. The maximum loan available from the EDLF for each project is limited to \$1,000,000 or 40% of the total project cost, whichever is less.
2. ***Loan Guaranty Program:*** Through the Loan Guaranty Program, the Virginia Small Business Financing Authority will guarantee a portion of a loan or line of credit extended by a commercial bank to a qualified Virginia business. With a guaranty from VSBFA, the bank benefits by reducing its risk in lending to the Virginia business, and the business benefits by accessing financing it would not otherwise have been able to obtain. The maximum guaranty under the program is 75% of the loan or line of credit up to a maximum

guaranty of \$500,000. The program can be used to provide a guaranty for a short-term line of credit or a term loan of up to three years in duration. Applications for the Loan Guaranty Program are made by the bank requesting the guaranty.

3. Virginia Capital Access Program (VCAP):

The Virginia Small Business Financing Authority's (VSBFA) Virginia Capital Access Program (VCAP) provides access to capital for Virginia businesses by encouraging banks in Virginia to make loans that they would otherwise not make due to a borrower's riskier profile. Unlike government guaranty programs which provide a guaranty of a specific loan, VCAP utilizes an insurance concept on a portfolio of loans. The Program establishes a loan loss reserve at each participating bank which is funded by enrollment premiums paid by the Borrower/Bank and VSBFA. Because the participating bank determines what loans to enroll without VSBFA's involvement, the Program is a flexible, non-bureaucratic tool to assist banks in meeting the financing needs of Virginia businesses. If the participating bank determines that the proposed financing request does not meet the bank's normal underwriting guidelines, the bank will then determine whether the proposed loan transaction would be acceptable if the loan were enrolled in VCAP.

4. Industrial Development Bond Program: Companies seeking to finance new manufacturing plants or improvements to existing manufacturing plants can obtain long-term financing at favorable interest rates through the use of industrial development bonds (IDBs). An IDB is a form of tax-exempt municipal bond issued by a state or local government entity to finance the acquisition, construction or equipping of a facility. IDB tax-exempt financing for manufacturing projects has been restored under the federal Revenue Reconciliation Act of 1993 on a permanent basis. Today IDBs continue to provide companies with an important alternative to conventional financing of manufacturing projects. Some of the benefits of IDBs are:

- a. Sub-prime pricing. Since interest earned on IDBs is exempt from federal income taxes, IDBs provide lower interest rates than conventional financing.
- b. 100% project financing. IDBs enable companies to finance virtually all the costs of a project, including site preparation, capitalized interest during construction and most issuance costs, up to \$20 million.
- c. Long-term financing. IDBs can have an average maturity of up to 120% of the economic life of the assets financed.

5. Virginia Department of Housing and Community Development - The Community Economic Development (CED) fund:

The CED fund is designed to support economic development activities, particularly those creating employment opportunities for low- and moderate- income persons in Virginia Community Development Block Grant Eligible Localities. Assistance is limited to projects involving employment creation by private, for-profit basic industries. Projects involving commercial development or other types of job creation may be eligible for competitive grant funding. Activities eligible for CED funding include:

- a. Off-site improvements related to industrial location or expansion, including water and sewer system improvements, streets, and drainage.
- b. On-site improvements are also eligible, pending underwriting, but the funding required for these improvements will be provided to localities in loan form.
- c. This is a relatively broad strategy; therefore certain communities with higher median income are not always eligible, and funds are implemented in a case-by-case basis.

6. Governor's Opportunity Fund (GOF):

The GOF supports economic development projects that create new jobs and capital investment according to state guidelines:

- a. Project investment & job creation are achieved
- b. Locality participates with matching financial commitment
- c. Project is not an intrastate relocation
- d. Performance agreement is effected between the locality and the business to ensure fulfillment of promised job creation and investment GOF is coordinated by the Virginia Economic Development Partnership (VEDP)

7. Virginia Department of Taxation Major Business Facility Tax Credit:

Qualified businesses locating or expanding in Virginia receive a \$1,000 corporate income tax credit for each new full time job created over 100 jobs. (not available to businesses utilizing Enterprise Zone job grants.)

8. Community Development Authority (CDA):

A Community Development Authority is an entity authorized by the Board of County Supervisors (upon petition by a majority of property owners, or those owning a majority of the assessed value, within the proposed CDA boundaries) for the purpose of providing public infrastructure. The CDA is empowered to issue tax-exempt bonds for thirty different kinds of infrastructure improvements including, in part, roads, parks, recreation facilities, educational facilities, water and sewer, and fire prevention and control systems.

Any bonds issued by the CDA are repaid through assessments (other than county tax assessments) levied upon the property owners within the boundaries of the CDA district. Assessments can be levied in two ways.

1. Ad Valorem Assessments limited to 25 cents per \$100 unless all property owners agree to a higher rate;
2. Special Assessment based on use and benefit from the improvements. Assessments cannot exceed the cost of the improvements.

Potential Benefits of a CDA:

There are several reasons to consider using a CDA as a funding mechanism for infrastructure improvements. Some reasons would include:

- a. Providing a development incentive for potential developers and property owners by reducing the costs of development of infrastructure;
- b. As a means of accelerating the project timing by financing all of the improvements over the 30-year bond period but implementing the infrastructure improvements in the initial phases of the redevelopment;
- c. Owners/developers might be able to increase development value of their investments by having such infrastructure and funding available;
- d. The CDA can require levels of development quality, thus improving the overall redevelopment area;
- e. It is a lawful and ready redevelopment tool that is already being used in other areas of the Commonwealth;
- f. The CDA could assume expenses that otherwise could be County expenses.

Caveats Using CDA Bonds:

Using CDA bonds is not without risk. As with any issuance of debt, the primary concern is default on bonds as a result of insufficient ad valorem tax revenues (if that is the method chosen) or the inability

of property owners to pay special assessments due to slow absorption or poor financial performance of developments within the CDA district. Other concerns might include:

- a. Property value decline could reduce the bond repayment revenue stream. Recent economic experience nationwide with property value declines raises the question of whether values can be kept constant or increasing over the life of the bonds;
- b. There is default potential in the development start-up phase when most land in the CDA owned by developers or property owners and is not yet improved. This time gap can be problematic if extended as bond repayments may have to begin before sufficient revenues are available for repayment;
- c. Insufficient sales/rents to feed bond repayment revenue stream could be a problem if the land uses within the CDA do not perform well;
- d. Cyclical economic downturn could hurt property values, sales prices and/or sales of goods and services that ultimately support the values and/or assessments;
- e. Cost overruns on infrastructure improvements could lead to a liquidity problem
- f. If the CDA fails to perform financially, the County could be at risk to cover the repayments;
- g. The higher tax burden on property located within a CDA might make owners within the boundaries less likely to support the creation of the CDA and risk of higher burden should the CDA fail could reduce citizen support for general County bond referenda;
- h. A potential policy issue exists with the permissibility of using CDA bond proceeds to satisfy proffer obligations. As most CDA-type improvements would likely be eligible for funding under the use of proffers, using CDA funding in this manner results in a depletion of total available County CDA debt capacity. There is also the policy issue of shifting responsibility for paying for proffered improvements directly to the property owner as opposed to specific developers.

ERA was not tasked to complete a CDA sensitivity analysis or to conduct an analysis that reliance upon which debt or securities should be issued. To understand the full implication of the risks and potential of the establishment of a CDA, a full detailed analysis would be needed.

Note: Master plan implementation may require that there will have to be some public funds invested for infrastructure improvements if the CDA vehicle isn't used. These could be paid through:

- a. General obligation bonds as they might any infrastructure or
- b. As a pay-as-you-go using the general fund, the utility fund or a combination of the two.
- c. For any large single developer within the redevelopment areas, a proffer structure may also be used to pay for needed improvements to support the development (however, but, unless such developers are "ready to develop right away, some incentive such as a CDA to reduce the cost of development may be needed).

FEDERAL ECONOMIC DEVELOPMENT TOOLS

Economic Development Administration (EDA)

1. **Public Works and Economic Development Program:** Public Works and Economic Development investments help support the construction or rehabilitation of essential public infrastructure and facilities necessary to generate or retain private sector jobs and investments, attract private sector capital, and promote regional competitiveness, including investments that expand and upgrade infrastructure to attract new industry, support technology-led development, redevelop brownfield sites and provide eco-industrial development. Eligibility is based on economic distress levels, which is determined at the time of application. The EDA

defines economic distress as having one or more of the following criteria: an unemployment rate 1% above the national average for 24 months; per capita income that is 80% or less of the national average per capita income; or a "Special Need," as determined by EDA. The EDA may approve projects that are in sub-areas of regions that do not meet this criteria if the project has "substantial direct benefit" to a geographic area that meets the criteria by providing significant employment to unemployed or low-income residents.

Department of Housing and Urban Development

1. **Community Development Block Grants (CDBG):** CDBG funds are available to eligible localities for off-site activities such as water and sewer extensions or treatment facilities and road & rail access. Funds may be available for on-site assistance that supports economic development, subject to underwriting.

Community Development Finance Institutions Fund (CDFI)

1. **The Community Development Financial Institutions (CDFI) Program** uses federal resources to invest in and build the capacity of CDFIs to serve low-income people and communities lacking adequate access to affordable financial products and services. The Fund provides monetary awards for Financial Assistance (FA) through the CDFI Program. CDFIs use FA awards to further goals such as economic development (job creation, business development, and commercial real estate development) and affordable housing (housing development and home ownership).
2. **Financial Assistance (FA) Awards:** Through FA awards, the Fund invests in certified CDFIs that demonstrate they have the financial and managerial capacity to:
 1. Provide affordable and appropriate financial products and services that positively impact their communities;
 2. Be viable financial institutions;
 3. Use and leverage CDFI Fund dollars effectively.
3. **New Market Tax Credits:** The New Markets Tax Credit (NMTC) Program permits taxpayers to receive a credit against Federal income taxes for making qualified equity investments in designated Community Development Entities (CDEs). Substantially all of the qualified equity investment must in turn be used by the CDE to provide investments in low-income communities. An organization wishing to receive awards under the NMTC Program must be certified as a CDE by the CDFI Fund. To qualify as a CDE, an organization must:
 - i. Be a domestic corporation or partnership at the time of the certification application;
 - ii. Demonstrate a primary a mission of serving, or providing investment capital for, low-income communities or low-income persons;
 - iii. Maintain accountability to residents of low-income communities through representation on a governing board of or advisory board to the entity.
4. **Office of Economic Adjustment:** Stafford already receives BRAC-related funds to establish a baseline for further planning in the Boswell's Corner area, and to establish Jefferson Davis Highway (US-1) in Boswell's Corner as a regional improvement priority.

Within the planned redevelopment areas, all of the census tracts are reported by the CDFI Fund as eligible to receive NMTC funds. NMTC may also be used in conjunction with federal and state historic rehabilitation tax credits (HTC) in eligible areas for historic properties. There may be opportunities for such reinvestment activity in the Falmouth Village redevelopment area.

APPENDIX VII

CONCEPT MASTER REDEVELOPMENT PLAN ACKNOWLEDGMENTS

STAFFORD COUNTY TEAM

Stafford County Board of Supervisors

George H. Schwartz	Chairman
Harry E. Crisp II	Vice-Chairman
M.S. "Joe" Brito	
Cord A. Sterling	
Paul V. Milde III	
L. Mark Dudenhefer	
Robert "Bob" Woodson	

Planning Commission

Pete Fields	Chairman
Archer Di Peppe	Vice Chairman
Ken Mitchell	Secretary
Ruth Carlone	
Gordon Howard	
Cecelia Kirkman	
Michael Rhodes	

Redevelopment Advisory Committee

George H. Schwartz	Chairman of the Board
Paul V. Milde III	Supervisor
Archer Di Peppe	Stafford Planning Commission
Jo Knight	Economic Development Authority
Wendy Surman	Economic Development Authority
Tim Baroody	Deputy County Administrator & Economic Development Director
Brad Johnson	Redevelopment Administrator
Jeff Harvey	Director of Planning & Zoning
Mike Neuhard	Deputy County Administrator

County Staff Team

Sara Woolfenden	Senior Transportation Planner
Janet Spencer	Utilities Department
Kathy Baker	Assistant Director of Planning and Zoning
Dale Allen	County Engineer
Dave Capaz	GIS Manager
Anita L. Dodd	Stafford County Historical Commission Chair
Tom Rumora	BRAC Coordinator, Quantico Growth Management Committee

County Staff Helping During Workshops

Sara Woolfenden	Senior Transportation Planner
Tom Rumora	BRAC Coordinator
Catherine Baker (nee Spoehr)	BRAC Assistant
Jonathon Schultis	Planner
Rishi Baral	Senior Engineer
Thomas O'Connor	Engineering Specialist
Mike Zuraf	Principal Planner
Michael Lott	Environmental Planner
Jamie Stepowany	Planner
Lee Ann Ennis	Planner
Anthony Romanello	County Administrator
Mike Neuhard	Deputy County Administrator

CONSULTANT TEAM

Design & Planning:

CMSS Architects, PC

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Stephanie McMorris, Assoc. AIA	Landscape Architect
Nishith Trivedi	Planner / GIS
Dave Warwick, Assoc. AIA	Architectural Illustrator
Scott Wertz	Architectural Illustrator
Jorge delCid	Architectural Illustrator
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Dane Magoon	Vice President, Senior Principal Investigator
Sandra DeChard	Senior Architectural Historian

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Infrastructure & Storm Water Analysis:

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