GENERAL DEVELOPMENT PLAN

GEORGE WASHINGTON VILLAGE

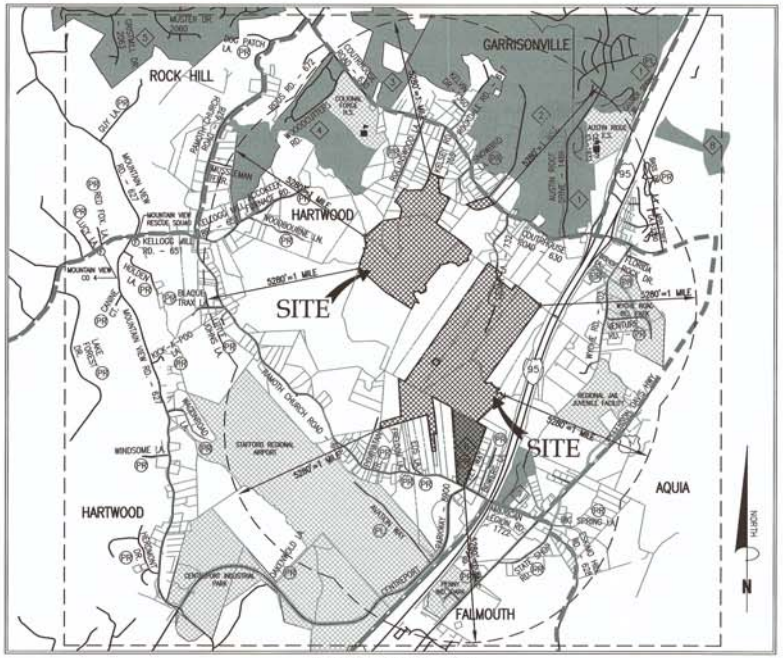
RC1400155

HARTWOOD MAGISTERIAL DISTRICT
STAFFORD COUNTY, VIRGINIA

PARCELS ADJACENT TO APPLICATION PROPERTY

Tax Map 29	Lot #	Owner	Zone	Inst #	Deed Book #	PG#	Use
29	51A	GEORGE WASHINGTONS FREDERICKSBURG F		060039178			VACANT
29	32	AUGUSTINE SOUTH ASSOCIATES LLC	R3	990008010			VACANT
29	32A	SIGMON JAMES L III & SUSAN C	A1	120026118			RESIDENTIAL
29	32B	FROMMRE JOSEPH	A1	120009156			RESIDENTIAL
29	33	BLACKBURN TURNER A & ESTHELEEN H TRU		020036896			VACANT
29	34	BLACKBURN TURNER A & ESTHELEEN H	A1	020036896			AGRICULTURAL
29	37A	WATERS JOHN A & DENISE COOPER-WATERS	A1		648	091	RESIDENTIAL
29	37B	WATTS ROBIN	A1	150019627			RESIDENTIAL
29	37D	HUNTER SANDRA A	A1		643	841	RESIDENTIAL
29	38	SIDDIQUI UZAIR & RUBINA	A2	50007852			RESIDENTIAL
29	38 1B	LUCIANI YOUNGSHIN	A2	140036010			RESIDENTIAL
29	38D	COURTNEY JAMES E & SONJA L	A2		573	762	RESIDENTIAL
29	39Q	CARPENTER LAWRENCE	A2	140006545			RESIDENTIAL
29	39K	WHEATON GARY K & BRENDA G	A2		335	101	RESIDENTIAL
29	39L	PICARELLO RALPH & JOAN C	A2	020039874			RESIDENTIAL
29	39-10	PIERSON INVESTMENTS LLC	A1	140001924			RESIDENTIAL
29	39-11	KROLIKIUS JOHN & RHONDA M	A1	070012569			RESIDENTIAL
29	39-12	EDINSTON DAVID L	A1	070004264			RESIDENTIAL
29	39-13	OZOLS RIQUIS & BEATRICE	A1		356	612	RESIDENTIAL
29	39-14	KAPPUS DARLA	A1		795	228	RESIDENTIAL
29	39-15	RITCHIE JASON M & KAREN E	A1	140012671			RESIDENTIAL
29	39-16	MASCHINO DANIEL G	A1	070011845			RESIDENTIAL
29	39-9	VIKLUND SHAWN MICHAEL & ERICA PALMER	A1	110020540			RESIDENTIAL
29	39A	JENKINS JACK LAWRENCE	A2		537	392	VACANT
29	39F	WATTS VERNON S & WILMA J			8464	P554	RESIDENTIAL
29	39Q	CARPENTER LAWRENCE	A1	140006621			VACANT
29	39K	MOORE DAVID E & LORRIE L	A1		814	712	RESIDENTIAL
29	39Z	RAIS DAVID W & SUSAN Y		040029501			RESIDENTIAL
29	72	NORTH STAFFORD ASSOCIATES LC	B2	040033774			VACANT
29	73A	DAMMRES MICHAEL PAUL & MARY VERONICA	A1	040029800			RESIDENTIAL
29	73D	KHAN ANOWAR H	A2	150009413			VACANT
29	73E	FAIRFAX JAY M	A1	030042630			RESIDENTIAL
29	73L	GARNER EMILY METTS & TODD LEE	A2	130014484			RESIDENTIAL
29	76	FRITTER IRENE VASQUEZ & MARY IRENE MCCONKICIE	A1	090000158W			RESIDENTIAL
29	76A	BEUCHERT LINDA D & PATRICK V JR	A1	030000457			RESIDENTIAL
29	79	YOGI HOSPITALITY LLC	B2 & A1	070019481			VACANT
29	80C	AUGUSTINE SOUTH ASSOCIATES LLC	B2	130016639			VACANT
29	80SB	COLONIAL FORGE COMMUNITY ASSOC INC		140014053X			

Tax Map 38	Lot #	Owner	Zone	Inst #	Deed Book #	PG#	Use
38	1A	AUGUSTINE SOUTH ASSOCIATES LLC	M1	990008010			VACANT
38	2A	BRUNO JOSEPH W & ANNA MARIE	A1		1157	286	VACANT
38	4	AUGUSTINE SOUTH ASSOCIATES LLC	M1	990008010			VACANT
38	5-8	REEDY DEBORAH A & R CATHERINE PIPPIN	A2		810	751	VACANT
38	11	MARQUIS PROPERTIES LLC	A2	70026758			VACANT
38	33	RAMOTH ROAD INVESTORS LLC	A1	100012310R			VACANT
38	34E	CHESAPEAKE HOLDINGS CSG LLC	M1	130016493X			VACANT
38	54A	CARLYLE JOHN W & DEBORAH	A2		1095	332	RESIDENTIAL
38	54B	CHURCHILL STEPHEN H & JILL KIRSTEN HODGES	A2	090005117			RESIDENTIAL
38	54C	HAMM LEONARD K & STEPHANIE N ALLEN	A2	970014774			RESIDENTIAL
38	54D	MOREAU DANIEL F & REGINA A	A2		1064	136	RESIDENTIAL
38	54E	MORTON LAMON & HALSTORK JAMES SPENCER JR	A2	140000662			RESIDENTIAL
38	54F	FINES OTIS & CYNTHIA	A2	060013396			RESIDENTIAL
38	54G	HAWKINS SYLVIA J	A2		478	595	RESIDENTIAL
38	54H	LAMONDE HAROLD L JR & SIDOKA MAHANI	A2	020022309			RESIDENTIAL
38	56	AMHC HOLDING LLC	A2	130023090			RESIDENTIAL
38	56A	VANSON JAMES ARCHIE & ADA F	A2		205	363	VACANT
38	57	LIPPOR ENTERPRISES INC	A2	980009120			VACANT
38	58A	BERRYMAN STACEY HOWARD & BETTY I	A2		598	144	
38	58B	THOMAS CONRAD M	A2	970004651			RESIDENTIAL
38	59	LIPPOR ENTERPRISES INC	A2	980009120			VACANT
38	60	MERCER PAULINE V	A2	960024554			RESIDENTIAL
38	61	JACKSON GLORIA	A2	40035969			RESIDENTIAL
38	62A	GUPTA GANESH	A2	40021299			VACANT
38	62C	WALKER RAYMOND K & JERMAINE J	A2	80017369			VACANT
38	63	TYLER BEATRICE	A1		80	399	RESIDENTIAL
38	64	LUCAS GERALD W & GARNETA V	A2		1129	680	RESIDENTIAL
38	65	TYLER FRANK A ESTATE	A1		25	667	VACANT
38	67	ACCOKEEK PROPERTY LLC	A1		455	466	VACANT
38	68	ACCAKEEK PARTNERSHIP	A1		660	747	VACANT
38	69A	COUNTY OF STAFFORD VIRGINIA	A1	090005077			PUMP STATION
38	72	SORNSBY DANIEL H TRUSTEE & JAMES P COVEY TRUSTEE	A1	120029911			VACANT
38	74	SORNSBY DANIEL H TRUSTEE & JAMES P COVEY TRUSTEE	A1	120029668			VACANT
38	75	ACCAKEEK PARTNERSHIP	A1		660	747	VACANT



VICINITY SKETCH MAP
1" = 2000'

PARCELS SUBJECT TO APPLICATION

Tax Map 29	Lot #	Owner	Mailing Address	Zone	Inst #	Plat Reference
29	32	AUGUSTINE SOUTH ASSOCIATES LLC	PO BOX 2648 STAFFORD VA 22555-2648		990008010	
ONLY A PORTION OF PARCEL 29-32 IS INCLUDED IN THE REZONING APPLICATION. SEE THE PLAT FOR ADDITIONAL INFORMATION						
29	36	AUGUSTINE SOUTH ASSOCIATES LLC	PO BOX 2648 STAFFORD VA 22555-2648	A2	110011657X	LR0000 38752
29	36A	AUGUSTINE SOUTH ASSOCIATES LLC	PO BOX 2648 STAFFORD VA 22555-2648	A2	110011657X	LR0000 38752
29	39C	AUGUSTINE SOUTH ASSOCIATES LLC	PO BOX 2648 STAFFORD VA 22555-2648	A2	110011657X	LR0000 38752
29	81	AUGUSTINE SOUTH ASSOCIATES LLC	PO BOX 2648 STAFFORD VA 22555-2648	A2	110011657X	LR0000 38752
29	82	AUGUSTINE SOUTH ASSOCIATES LLC	PO BOX 2648 STAFFORD VA 22555-2648	A2	110011657X	LR0000 38752
29	83	AUGUSTINE SOUTH ASSOCIATES LLC	PO BOX 2648 STAFFORD VA 22555-2648	A1	120016648	

Tax Map 38	Lot #	Owner	Mailing Address	Zone	Inst #	Plat Reference
38	1	AUGUSTINE SOUTH ASSOCIATES LLC	PO BOX 2648 STAFFORD VA 22555-2648	A1	110011657X	LR0000 38751
ONLY A PORTION OF PARCEL 38-1 IS INCLUDED IN THE REZONING APPLICATION. SEE THE PLAT FOR ADDITIONAL INFORMATION						
38	55	AUGUSTINE SOUTH ASSOCIATES LLC	PO BOX 2648 STAFFORD VA 22555-2648	A2	140010787	
38	58C	AUGUSTINE SOUTH ASSOCIATES LLC	PO BOX 2648 STAFFORD VA 22555-2648	A2	100015228X	PM0500 00018
38	58D	AUGUSTINE SOUTH ASSOCIATES LLC	PO BOX 2648 STAFFORD VA 22555-2648	A2	100015228X	PM0500 00018
38	66	AUGUSTINE SOUTH ASSOCIATES LLC	PO BOX 2648 STAFFORD VA 22555-2648	M1	990008010	B690 P765
38	69	AUGUSTINE SOUTH ASSOCIATES LLC	PO BOX 2648 STAFFORD VA 22555-2648	A1	150000838	
38	70	AUGUSTINE SOUTH ASSOCIATES LLC	PO BOX 2648 STAFFORD VA 22555-2648	A1	150000838	
38	70A	AUGUSTINE SOUTH ASSOCIATES LLC	PO BOX 2648 STAFFORD VA 22555-2648	A1	150000838	
38	71	AUGUSTINE SOUTH ASSOCIATES LLC	PO BOX 2648 STAFFORD VA 22555-2648	M1	140010785	

SHEET INDEX

NO.	TITLE
1	COVER SHEET
2	OVERALL LAYOUT
3	OVERALL LAYOUT WITH EXISTING CONDITIONS
4	SOILS MAP
5	ENVIRONMENTAL CONDITIONS
6	TRANSECT ZONE AND REGULATING PLAN
7	OPEN SPACE AND SIGNAGE PLAN
8	TRANSPORTATION PLAN
9	OVERALL SHEET LAYOUT
10–14	SITE LAYOUT
15	TYPICAL STREET SECTIONS
16	EXISTING SEWER SHED MAP AND ANALYSIS
17	PROPOSED SEWER SHED MAP AND ANALYSIS
18	WATER NETWORK SCHEMATIC
19–20	ZONING PLAT
20 SHEETS IN TOTAL	

VICINITY SKETCH MAP LEGEND

SUBDIVISION KEY

1. AUSTIN RIDGE
2. EMBREY MILL
3. LIBERTY KNOLLS
4. COLONIAL FORGE
5. AUGUSTINE NORTH
6. SENECA RIDGE ESTATES
7. ELLISON ESTATES
8. MONCURE ESTATES

SYMBOLS LEGEND

- (PR) PRIVATE STREET
- (PL) PLAT HAS BEEN RECORDED, THE ROADS ARE BEING BUILT TO STATE STANDARDS AND WILL BE TURNED OVER TO THE STATE AT A LATER DATE.
- SCHOOL LOCATED WITHIN ONE MILE OF THE SITE.
- MAGISTERIAL DISTRICT LINE

NOTES:

1. SUBDIVISIONS ARE IDENTIFIED BY SHADING ON THE VICINITY SKETCH MAP THIS SHEET.
2. SUBDIVISION LIST OBTAINED FROM STAFFORD COUNTY ROAD MAP WITH SUBDIVISIONS DATED JUNE 30, 2008. SUBDIVISIONS MAY OR MAY NOT BE RECORDED.

NOTES:

1. NO LIBRARIES ARE LOCATED WITHIN ONE MILE OF THE SITE.
2. NO PARKS ARE LOCATED WITHIN ONE MILE OF THE SITE.
3. AQUIA MAGISTERIAL DISTRICT IS LOCATED TO THE EAST OF ROUTE 1 AND ROCK HILL MAGISTERIAL DISTRICT IS LOCATED TO THE WEST OF ROUTE 1 WITH ROUTE 1 BEING THE DIVIDE BETWEEN THE TWO.

APPROVAL

AGENT, BOARD OF SUPERVISORS DATE

Bowman CONSULTING

Bowman Consulting Group, Ltd.
9813 Godwin Drive
Manassas, Virginia 20110

Phone (703) 330-8093
Fax (703) 930-8475

www.bowmanconsulting.com

COVER SHEET

GEORGE WASHINGTON VILLAGE

HARTWOOD MAGISTERIAL DISTRICT STAFFORD COUNTY, VIRGINIA

COUNTY PLAN NUMBER
RC1400155

COMMONWEALTH OF VIRGINIA
JUSTIN R. TROBEL
No. 040214
8/5/16
PROFESSIONAL ENGINEER

PLAN STATUS

DATE	DESCRIPTION
11/14/14	2ND SUBMISSION
02/01/15	3RD SUBMISSION
08/11/15	4TH SUBMISSION
08/12/16	SUPPLEMENTAL INFO

BCG DESIGN	BCG DRAWN	JRT CHKD

SCALE:

JOB No. 7489-01-001

DATE : APRIL 2014

FILE No. 7489-0-ZP-001

SHEET 1 OF 20

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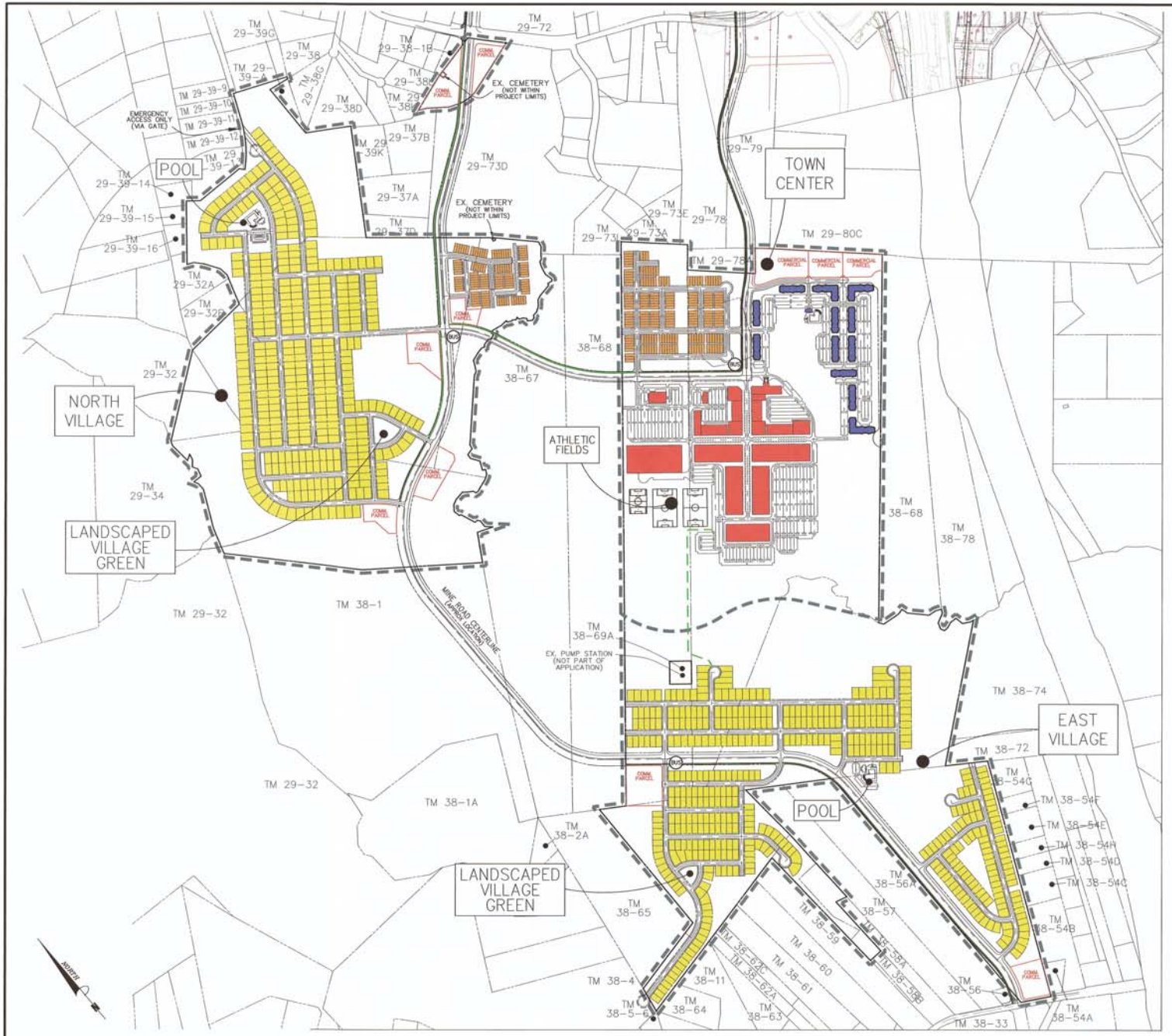

LEGEND

PROPOSED LAND USES

- SINGLE-FAMILY DETACHED UNIT
- FRONT LOAD TOWNHOUSE UNIT
- MULTI-FAMILY BUILDING
- COMMERCIAL BUILDING
- COMMERCIAL PARCEL

- INTERSECTION WITH POTENTIAL BUS STOP
- TM 38-65 — ADJACENT PARCEL (SEE COVER SHEET FOR ADDITIONAL INFORMATION)
- VILLAGE BOUNDARIES
- TRAIL (APPROXIMATE LOCATION)
- TRAIL (APPROXIMATE LOCATION – IF PERMITTED WITHIN ENVIRONMENTALLY SENSITIVE AREAS AND SUBJECT TO CONSTRUCTABILITY ANALYSIS)

VILLAGES MAP

N.T.S.

PROPOSED DWELLING UNITS

UNIT TYPE	VILLAGE			TOTALS
	NORTH	EAST	TOWN CENTER	
SINGLE-FAMILY DETACHED	378	440	0	818
TOWNHOME	113	0	187	300
MULTI-FAMILY	0	0	750	750
TOTALS	**491**	**440**	**937**	**1,868**

NOTE: THE PROPOSED SCHEMATIC LAYOUT SHOWN ON THE GENERAL DEVELOPMENT PLAN AND REGULATING PLAN ARE APPROXIMATE IN NATURE AND SUBJECT TO ADJUSTMENT DURING FINAL ENGINEERING AS REFERENCED IN THE ASSOCIATED PROFFER STATEMENT WITH THIS APPLICATION. IN ACCORDANCE WITH SECTION 28-56 OF THE COUNTY ORDINANCE, THE LOCATION OF RESIDENTIAL LOTS, COMMERCIAL BUILDINGS, CIVIC USES, AND/OR ASSOCIATED INFRASTRUCTURE MAY BE RELOCATED WITHIN THE RESPECTIVE TRANSECT ZONES. A MINIMUM OF 20% OF THE PROPOSED SINGLE-FAMILY DETACHED UNITS IN THE T-4 TRANSECT ZONE MUST BE VILLAGE HOME UNITS.

GRAPHIC SCALE

400 0 200 400 800 1,200

(IN FEET)
1 inch = 400 ft.

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OVERALL LAYOUT

GEORGE WASHINGTON VILLAGE

HARTWOOD MAGISTERIAL DISTRICT STAFFORD COUNTY, VIRGINIA

COUNTY PLAN NUMBER
RC1400155

COMMONWEALTH OF VIRGINIA
JUSTIN R. TROIDL
No. 040214
8/5/16
PROFESSIONAL ENGINEER

PLAN STATUS

11/14/14	2ND SUBMISSION
02/01/15	3RD SUBMISSION
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08/12/16	SUPPLEMENTAL INFO

DATE	DESCRIPTION	
BCG DESIGN	BCG DRAWN	JRT CHKD
SCALE	1"=400'	
JOB No.	7489-01-001	
DATE :	APRIL 2014	
FILE No.	7489-D-ZP-001	

SHEET 2 OF 20

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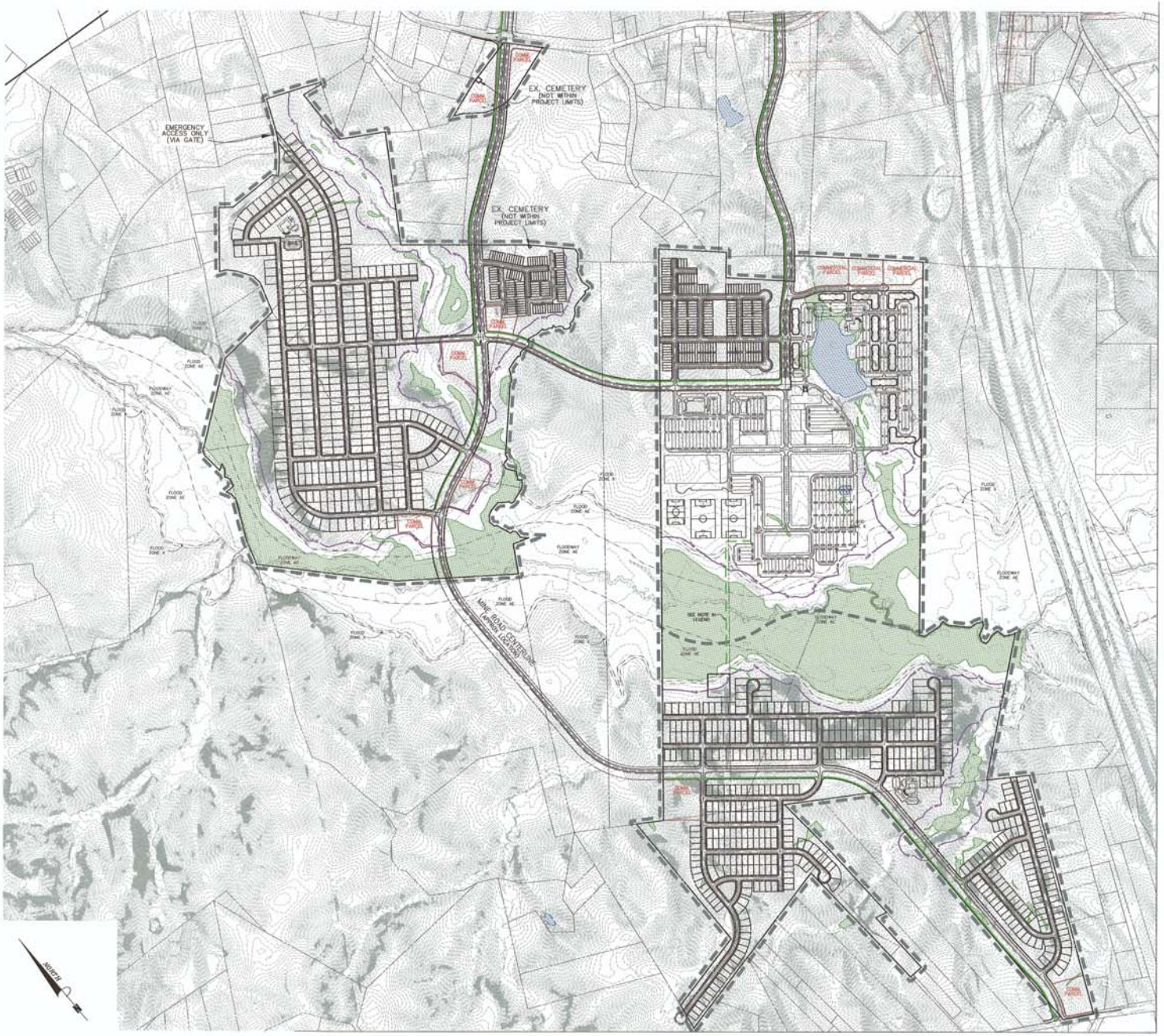

LEGEND

ENVIRONMENTAL FEATURES

- STEEP SLOPES GREATER THAN 25%
- PRELIMINARY PALUSTRINE WETLANDS (PEM, PSS, PFO)
- PRELIMINARY PONDS (POW)
- PRELIMINARY STREAM CHANNELS
- PRELIMINARY CRPA
- 100 YEAR FLOODPLAIN PER FEMA

NOTE: A FEMA LETTER OF MAP CHANGE SHALL BE REQUIRED FOR ANY CHANGE TO THE FLOOD INSURANCE RATE MAP (FIRM) AND/OR FLOOD INSURANCE STUDY (FIS).

OTHER PLAN FEATURES

- VILLAGE BOUNDARIES
- TRAIL (APPROXIMATE LOCATION)
- TRAIL (APPROXIMATE LOCATION) – IF PERMITTED WITHIN ENVIRONMENTALLY SENSITIVE AREAS AND SUBJECT TO CONSTRUCTABILITY ANALYSIS

PROPOSED DWELLING UNITS

UNIT TYPE	VILLAGE			TOTALS
	NORTH	EAST	TOWN CENTER	
SINGLE-FAMILY DETACHED	378	440	0	818
TOWNHOME	113	0	187	300
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TOTALS	491	440	937	1,868

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GRAPHIC SCALE

400 0 200 400 800 1,200

(IN FEET)
1 inch = 400 ft.

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OVERALL LAYOUT & EXISTING CONDITIONS

GEORGE WASHINGTON VILLAGE

HARTWOOD MAGISTERIAL DISTRICT STAFFORD COUNTY, VIRGINIA

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SHEET	3 OF 20

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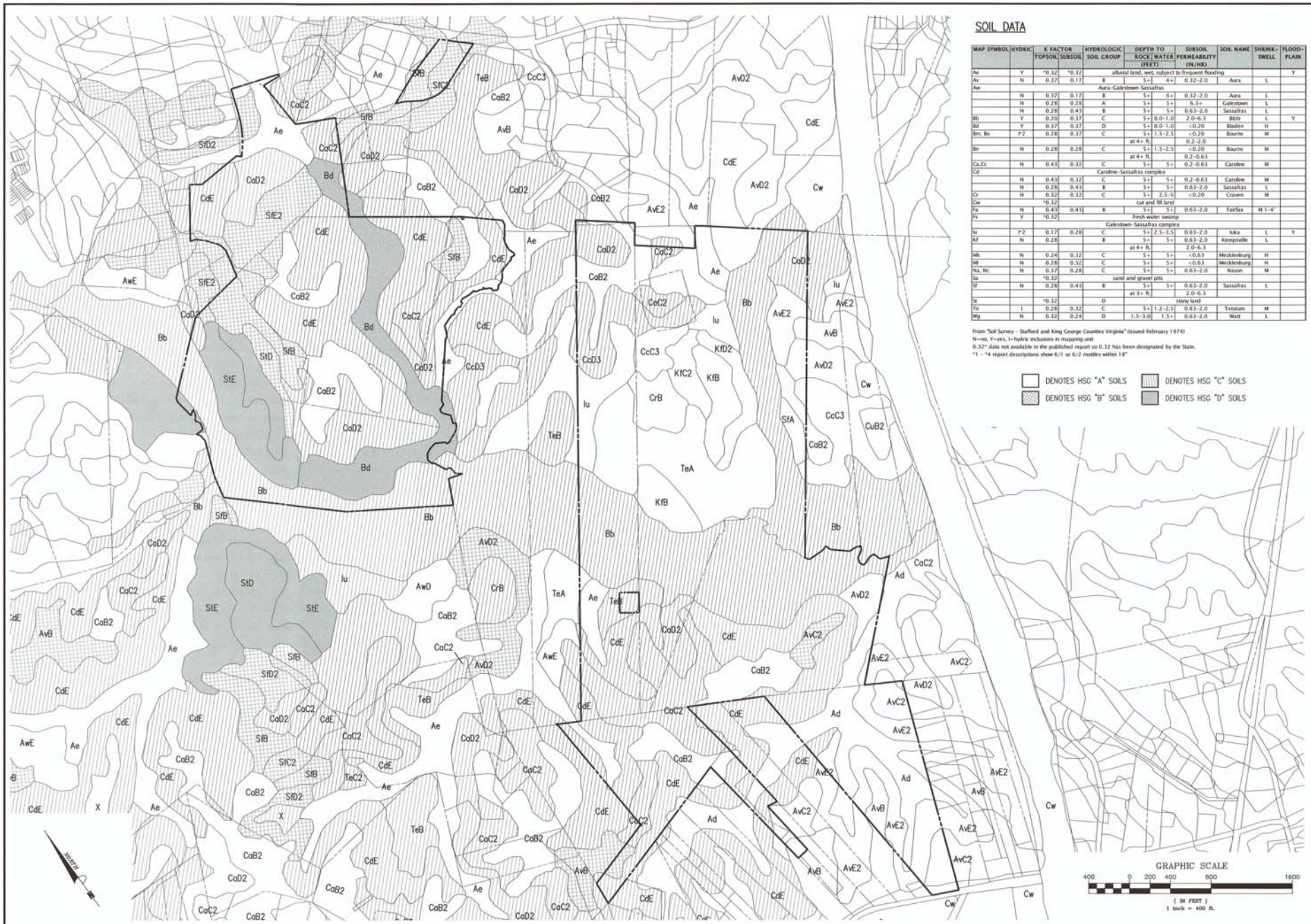

SOIL DATA

MAP SYMBOL	HYDRIC	K FACTOR TOPSOIL	K FACTOR SUBSOIL	HYDROLOGIC SOIL GROUP	DEPTH TO ROCK (FEET)	DEPTH TO WATER (FEET)	SUBSOIL PERMEABILITY (IN/HR)	SOIL NAME	SHRINK-SWELL	FLOOD-PLAIN
Ae	Y	*0.32	*0.32	alluvial land, wet, subject to frequent flooding						Y
Av	N	0.37	0.17	B	5+	6+	0.32-2.0	Aura	L	
Aw				Aura-Galestown-Sassafras						
	N	0.37	0.17	B	5+	6+	0.32-2.0	Aura	L	
	N	0.28	0.28	A	5+	5+	6.3+	Galestown	L	
	N	0.28	0.43	B	5+	5+	0.63-2.0	Sassafras	L	
Bb	Y	0.20	0.37	C	5+	0.0-1.0	2.0-6.3	Bibb	L	Y
Bd	Y	0.37	0.37	D	5+	0.0-1.0	<0.20	Bladen	H	
Bm, Bo	P2	0.28	0.37	C	5+	1.5-2.5	<0.20	Bourne	M	
					at 4+ ft.		0.2-2.0			
Bn	N	0.28	0.28	C	5+	1.5-2.5	<0.20	Bourne	M	
					at 4+ ft.		0.2-0.63			
Ca,Cc	N	0.43	0.32	C	5+	5+	0.2-0.63	Caroline	M	
Cd				Caroline-Sassafras complex						
	N	0.43	0.32	C	5+	5+	0.2-0.63	Caroline	M	
	N	0.28	0.43	B	5+	5+	0.63-2.0	Sassafras	L	
Cr	N	0.32	0.32	C	5+	2.5-5	<0.20	Craven	M	
Cw		*0.32		cut and fill land						
Fa	N	0.43	0.43	B	5+	5+	0.63-2.0	Fairfax	M 1-4'	
Fs	Y	*0.32		fresh water swamp						
				Galestown-Sassafras complex						
Iu	P2	0.17	0.28	C	5+	2.5-3.5	0.63-2.0	Iuka	L	Y
Kf	N	0.28		B	5+	5+	0.63-2.0	Kempsville	L	
					at 4+ ft.		2.0-6.3			
Mk	N	0.24	0.32	C	5+	5+	<0.63	Mecklenburg	H	
Mt	N	0.28	0.32	C	5+	5+	<0.63	Mecklenburg	H	
Na, Nc	N	0.37	0.28	C	5+	5+	0.63-2.0	Nason	M	
Sa		*0.32		sand and gravel pits						
Sf	N	0.28	0.43	B	5+	5+	0.63-2.0	Sassafras	L	
					at 3+ ft.		2.0-6.3			
St		*0.32		D			stony land			
Tn	I	0.28	0.32	C	5+	1.2-2.5	0.63-2.0	Tetotum	M	
Wg	N	0.32	0.24	D	1.5-3.0	1.5+	0.63-2.0	Watt	L	

From "Soil Survey - Stafford and King George Counties Virginia" (issued February 1974)
N=no, Y=yes, I=hydric inclusions in mapping unit
0.32* data not available in the published report so 0.32 has been designated by the State.
*1 - *4 report descriptions show 6/1 or 6/2 mottles within 18"

DENOTES HSG "A" SOILS
DENOTES HSG "B" SOILS
DENOTES HSG "C" SOILS
DENOTES HSG "D" SOILS

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SOILS MAP

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08/12/16	SUPPLEMENTAL INFO

DATE	DESCRIPTION

BCG DESIGN	BCG DRAWN	JRT CHKD

SCALE 1"=400'
JOB No. 7489-01-001
DATE : APRIL 2014
FILE No. 7489-D-ZP-001

SHEET 4 OF 20

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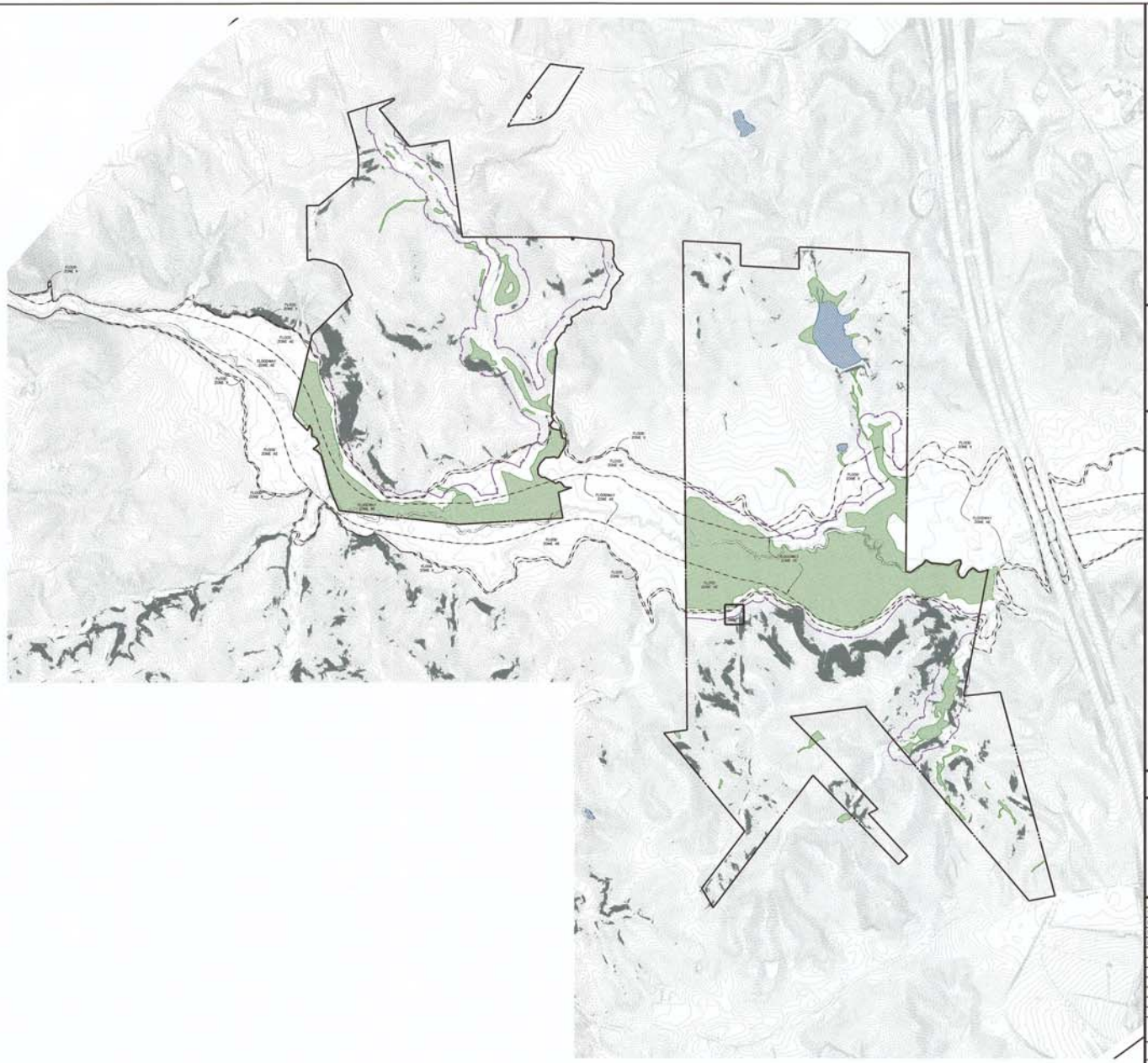
LEGEND

- STEEP SLOPES GREATER THAN 25%
- PRELIMINARY PALUSTRINE WETLANDS (PEM, PSS, PFO)
- PRELIMINARY EX. PONDS (POW)
- APPROXIMATE TREELINE
- PRELIMINARY STREAM CHANNELS
- PRELIMINARY CRPA
- 100 YEAR FLOODPLAIN PER FEMA

NOTES:

1. The George Washington Village Project is located between Courthouse Road and Ramoth Church Road, and west of Interstate 95 in Stafford County, Virginia. The Project is generally located at 38°24'51"N Latitude and -77°26'37"W Longitude on the Stafford, Virginia USGS Quadrangle Map.
2. Property boundary information provided by Bowman Consulting Group, Ltd. (BCG). Topographic and existing conditions mapping obtained from the Stafford County GIS.
3. The majority of the Project area is currently undeveloped and wooded, and is generally comprised of medium-aged mixed deciduous forest dominated by oaks (*Quercus sp.*), red maple (*Acer rubrum*), tulip poplar (*Liriodendron tulipifera*), black gum (*Nyssa sylvatica*), and American beech (*Fagus grandifolia*). Most of the larger trees of these species have been cut during past logging operations. Young re-growth saplings of these species are very common, particularly in those areas which have had several years to re-vegetate. Mountain laurel (*Kalmia latifolia*) and American holly (*Ilex opaca*) are typical evergreen understory species. Accokeek Creek and its associated floodplain transects the central portion of the Project area. Beaver activities have altered the Accokeek Creek floodplain and contributing stream valleys, and there are areas of wetlands throughout the site. These areas are dominated by black gum, sweet gum (*Liquidambar styraciflua*), spice bush (*Lindera benzoin*), cardinal flower (*Lobelia cardinalis*), and cinnamon fern (*Osmunda cinnamomea*).
4. Soils GIS information was obtained from the USDA Stafford and King George Counties Soils Survey (USDA Natural Resources Conservation Service, Web Soil Survey 2.1, *http://websoilsurvey.nrcs.usda.gov*, Survey Area Data: Version 11, January 11, 2010), and is summarized on the Soil Map included as a separate sheet.
5. An analysis of 2-foot contour topographic mapping obtained from the Stafford County GIS indicates that there are slopes greater than 25 percent located within the Project, as shaded on this Plan.
6. According to FEMA Flood Insurance Rate Maps No. 5101540137E, 5101540141E, 5101540139E, and 5101540143E (Effective Date February 4, 2005), Zone AE and Zone A floodplains are mapped along Accokeek Creek, which transects the central portion of the Project area; the remainder of the Project area is mapped as Zone X. The FEMA Floodplain along Accokeek Creek has been digitized from available mapping information.
7. The preliminary wetland and stream boundaries depicted on this Plan and within the Project area are based on a preliminary wetland and stream evaluation conducted by BCG in November 2010, November 2011, and December 2013 using the *Corps of Engineers Wetlands Delineation Manual* (1987) and the *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Eastern Mountains and Piedmont* (Version 2.0, 2012) as guides, and represent those approximate areas that are most likely within the regulatory purview of the U.S. Army Corps of Engineers (USACE).
8. Preliminary stream classifications (perennial vs. non-perennial, or intermittent) indicated on this Plan are based on preliminary field observation by BCG conducted in November 2010, November 2011, and December 2013 using visual observations and the *North Carolina Division of Water Quality Identification Methods for the Origins of Intermittent and Perennial Streams* (Version 4.11, September 2010) as guides.
9. The Preliminary Critical Resource Protection Area (CRPA) boundaries depicted on this Plan are based on the results of the preliminary wetland and stream evaluation and using Section 28-62(b)(1) of the County's Chesapeake Bay Preservation Area (CBPA) Policy and the Virginia Department of Conservation and Recreation's Resource Protection Areas: Nontidal Wetlands, Guidance on the Chesapeake Bay Preservation Area Designation and Management Regulations.
10. The approximate location and extent of the preliminary wetland, stream, and CRPA boundaries within the Project area have been drafted based on County GIS mapping information and aerial photography, and should be used for preliminary site planning purposes only. A formal wetland delineation and survey, USACE Jurisdictional Determination, and perennial flow evaluation and CRPA determination study should be conducted to determine the final approved limits of jurisdictional areas on the Project as guides.
11. An evaluation of the likelihood of Federal and State-listed threatened and endangered species occurring on, or in the vicinity of, the Project area was conducted by BCG based on information obtained from the U.S. Fish and Wildlife Service (F&WS), the Virginia Department of Conservation and Recreation (DCR), and the Virginia Department of Game and Inland Fishers (DGIF) (Report dated December 16, 2013). Additionally, Mr. Phillip Abell of BCG, who is on F&WS Virginia Field Office's list of qualified surveyors for the State-listed endangered and Federal-listed threatened small whorled pogonia (*Isotria medeoloides*), conducted preliminary habitat assessments for this species for the Project area in July 2011 and December 2013; based on existing habitat conditions and the preliminary assessments, there is little potential suitable habitat for small whorled pogonia on the Project. Mr. Abell also conducted detailed habitat assessments and field surveys on Parcels 38-55, 29-36, 29-36C, 29-81, 29-82, and 29-83; no individuals or colonies of the small whorled pogonia were observed. Based on existing habitat conditions, and the evaluations for those identified Federal and State-listed species and the results of the small whorled pogonia habitat assessments and field surveys, the potential for occurrences of or potential impacts to listed species is considered low, and no Federal or State-listed threatened or endangered species are anticipated to be adversely affected by this Project.
12. Based on a review of the Virginia Department of Historic Resources (DHR) Virginia Cultural Resource Information System (V-CRIS) (*https://vcris.dhr.virginia.gov/vcris/*), no known archaeological sites, architectural resources, or cemeteries are documented within the Project area, and only one abandoned structure over 50 years of age is located on the Project.
13. Impacts to environmentally sensitive features (wetlands, streams, and CRPA) are proposed with the George Washington Village Project. Appropriate Federal and State Permits will be obtained from the USACE and DEQ prior to the commencement of construction activities in jurisdictional areas. Appropriate compensatory mitigation will be provided through the purchase of wetland and/or stream credits from USACE and DEQ-approved mitigation bank(s), or as otherwise required by the USACE and DEQ permits. Water Quality Impact Assessments will be conducted as required under the CBPA Policy for proposed encroachments to the CRPA associated with road crossings and other allowed uses, and appropriate mitigation measures will be provided as warranted.



NORTH

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ENVIRONMENTAL CONDITIONS MAP

GEORGE WASHINGTON VILLAGE

HARTWOOD MAGISTERIAL DISTRICT STAFFORD COUNTY, VIRGINIA

COUNTY PLAN NUMBER
RC1400155

COMMONWEALTH OF VIRGINIA
JUSTIN R. TROIDL
No. 040214
PROFESSIONAL ENGINEER
10/5/16

PLAN STATUS	
11/14/14	2ND SUBMISSION
02/01/15	3RD SUBMISSION
08/11/15	4TH SUBMISSION
08/12/16	SUPPLEMENTAL INFO

DATE	DESCRIPTION

BCG DESIGN	BCG DRAWN	JRT CHKD

SCALE 1"=500'

JOB No. 7489-01-001

DATE : APRIL 2014

FILE No. 7489-0-ZP-001

SHEET 5 OF 20

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TRANSECT ANALYSIS

TRANSECT ZONE	OVERALL AREA: MINIMUM % OF SITE	MINIMUM ACREAGE	MAXIMUM % OF SITE	MAXIMUM ACREAGE	PROPOSED AREA (ACRES)	PROPOSED PERCENTAGE	NON-RESIDENTIAL AREA: MINIMUM % OF TRANSECT ZONE	MAXIMUM % OF TRANSECT ZONE	MINIMUM ACREAGE OF TRANSECT ZONE	MAXIMUM ACREAGE OF TRANSECT ZONE	PROPOSED ACREAGE (APPROXIMATE)	% OF TRANSECT ZONE (APPROXIMATE)	RESIDENTIAL AREA: PROPOSED RESIDENTIAL GROSS ACREAGE	PERMITTED TND BASE DENSITY (DU/GROSS ACRE)	PERMITTED TND BASE TRANSECT UNITS	PROPOSED RESIDENTIAL UNITS	PROPOSED DENSITY (DU/GROSS ACRE)
T1	0%	0.00	50%	267.26	**151.11**	**28.3%**	0%	0%	0.00	0.00	**151.11**	**100.00%**	0.00	0.01	1	0	0.00
T4	30%	160.36	60%	320.71	**262.28**	**49.1%**	20%	30%	52.46	78.68	**65.19**	**24.86%**	197.09	12	3,147	1,118	4.26
T6	0%	0.00	40%	213.81	**112.01**	**21.0%**	50%	100%	56.01	112.01	**92.61**	**82.68%**	19.40	48	5,376	750	6.70
SD-C	0%	0.00	30%	160.36	**9.12**	**1.7%**	60%	100%	5.47	9.12	**9.12**	**100.00%**	0.00	48	437	0	0.00
				TOTAL =	**534.52**	**100.0%**			113.93	199.81	**318.03**	**59.50%**	216.49		**6,961**	**1,868**	3.49

PROPOSED RESIDENTIAL ANALYSIS

TRANSECT ZONE	SINGLE-FAMILY DETACHED: PROPOSED FRONT LOADED SINGLE FAMILY DETACHED UNIT		PROPOSED FRONT LOADED SINGLE FAMILY DETACHED VILLAGE UNIT		ATTACHED: PROPOSED TOWNHOME FRONT LOADED		MULTI-FAMILY: PROPOSED APARTMENT OR CONDO		TOTAL RESIDENTIAL UNITS PER TRANSECT
T1	0	0%	0	0%	0	0%	0	0%	**0**
T4	594	53%	224	20%	300	27%	0	0%	**1,118**
T6	0	0%	0	0%	0	0%	750	100%	**750**
SD-C	0	0%	0	0%	0	0%	0	0%	**0**
	594		**224**		**300**		**750**		**1,868**

NOTES:
1. THE PROPOSED SCHEMATIC LAYOUT SHOWN ON THE GENERAL DEVELOPMENT PLAN AND REGULATING PLAN ARE APPROXIMATE IN NATURE AND SUBJECT TO ADJUSTMENT DURING FINAL ENGINEERING AS REFERENCED IN THE ASSOCIATED PROFFER STATEMENT WITH THIS APPLICATION. IN ACCORDANCE WITH SECTION 28-56 OF THE COUNTY ORDINANCE, THE LOCATION OF RESIDENTIAL LOTS, COMMERCIAL BUILDINGS, CIVIC USES, AND/OR ASSOCIATED INFRASTRUCTURE MAY BE RELOCATED WITHIN THE RESPECTIVE TRANSECT ZONES.
2. NON-RESIDENTIAL AREAS INCLUDES ALL OPEN SPACE AND RIGHT-OF-WAY (NOT DIRECTLY IN FRONT OF A RESIDENTIAL UNIT) WITHIN THE TRANSECT ZONE.
3. NON-RESIDENTIAL AREA IS APPROXIMATE AND SUBJECT TO CHANGE WITH FINAL ENGINEERING. THE FINAL AREA WILL BE CONSISTENT WITH THE MINIMUM AND MAXIMUM REQUIREMENTS
4. SINGLE-FAMILY DETACHED VILLAGE LOTS SHALL HAVE A FRONT PORCH. THERE ARE NO RESTRICTIONS ON THE MINIMUM SIZE OR DIMENSIONS OF THE PORCH.

LEGEND

PROPOSED TRANSECT ZONES

- T1 – NATURAL PRESERVE
- T4 – URBAN GENERAL
- T6 – URBAN CORE
- SD-C – SPECIAL DISTRICTS–COMMERCIAL

TRANSECT ZONE	NAME	DESCRIPTION
T-1	NATURAL ZONE	Consists of lands approximating or reverting to a wilderness condition, including lands unsuitable for settlement due to topography, hydrology or vegetation. This shall include all lands designated as critical resource protection area (CRPA), unless approved by the appropriate county, state, or federal offices to permit certain activities within the CRPA.
T-4	GENERAL URBAN ZONE	Consists of a mixed-use but primarily residential urban fabric. It has a wide range of building types: single, patio and townhouses. Setbacks and landscaping are variable. Streets typically define medium-sized blocks.
T-6	URBAN CORE ZONE	Consists of the highest density, with the greatest variety of uses, and civic buildings of regional importance. It may have larger blocks; streets have steady street tree planting and buildings set close to the frontage.
SD-C	SPECIAL DISTRICTS-COMMERCIAL	Consists of larger structures for commercial uses. The use may serve more than the development. The use may be appropriate when the development is in close proximity to a major transportation network. Proportion to scale between the height of the building and the street should be taken into consideration. Such uses may require a larger scale of parking.

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TRANSECT PLAN

GEORGE WASHINGTON VILLAGE

HARTWOOD MAGISTERIAL DISTRICT STAFFORD COUNTY, VIRGINIA

COUNTY PLAN NUMBER
RC1400155

COMMONWEALTH OF VIRGINIA
JUSTIN R. TROIDL
No.040214
8/5/16
PROFESSIONAL ENGINEER

PLAN STATUS

DATE	DESCRIPTION
11/14/14	2ND SUBMISSION
02/01/15	3RD SUBMISSION
08/11/15	4TH SUBMISSION
08/12/16	SUPPLEMENTAL INFO

BCG DESIGN	BCG DRAWN	JRT CHKD

SCALE 1"=400'

JOB No. 7489-01-001

DATE : APRIL 2014

FILE No. 7489-D-ZP-001

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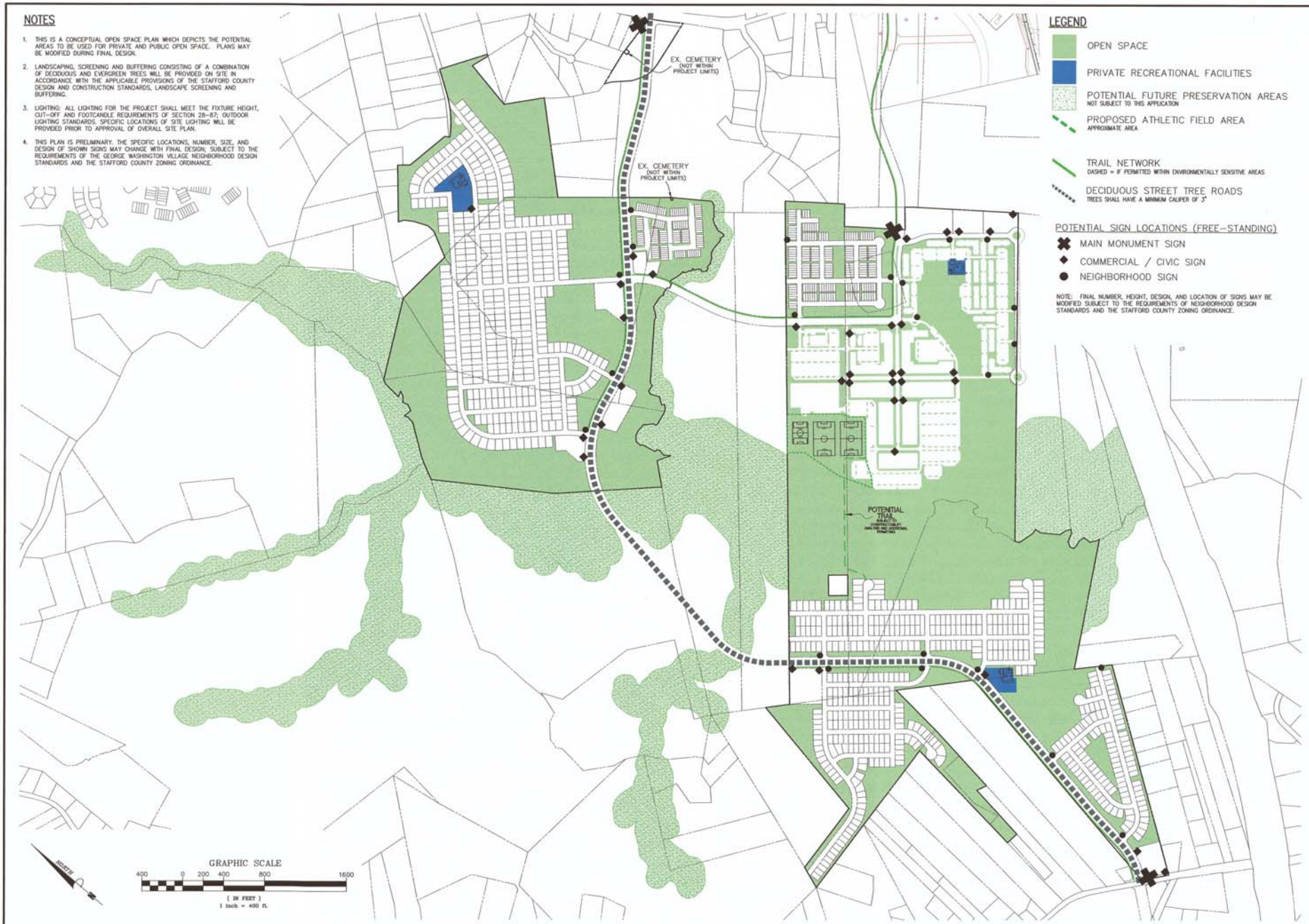
NOTES

1. THIS IS A CONCEPTUAL OPEN SPACE PLAN WHICH DEPICTS THE POTENTIAL AREAS TO BE USED FOR PRIVATE AND PUBLIC OPEN SPACE. PLANS MAY BE MODIFIED DURING FINAL DESIGN.
2. LANDSCAPING, SCREENING AND BUFFERING CONSISTING OF A COMBINATION OF DECIDUOUS AND EVERGREEN TREES WILL BE PROVIDED ON SITE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE STAFFORD COUNTY DESIGN AND CONSTRUCTION STANDARDS, LANDSCAPE SCREENING AND BUFFERING.
3. LIGHTING: ALL LIGHTING FOR THE PROJECT SHALL MEET THE FIXTURE HEIGHT, CUT-OFF AND FOOTCANDLE REQUIREMENTS OF SECTION 28-87; OUTDOOR LIGHTING STANDARDS. SPECIFIC LOCATIONS OF SITE LIGHTING WILL BE PROVIDED PRIOR TO APPROVAL OF OVERALL SITE PLAN.
4. THIS PLAN IS PRELIMINARY. THE SPECIFIC LOCATIONS, NUMBER, SIZE, AND DESIGN OF SHOWN SIGNS MAY CHANGE WITH FINAL DESIGN; SUBJECT TO THE REQUIREMENTS OF THE GEORGE WASHINGTON VILLAGE NEIGHBORHOOD DESIGN STANDARDS AND THE STAFFORD COUNTY ZONING ORDINANCE.



LEGEND

- OPEN SPACE
- PRIVATE RECREATIONAL FACILITIES
- POTENTIAL FUTURE PRESERVATION AREAS
  NOT SUBJECT TO THIS APPLICATION
- PROPOSED ATHLETIC FIELD AREA
  APPROXIMATE AREA
- TRAIL NETWORK
  DASHED = IF PERMITTED WITHIN ENVIRONMENTALLY SENSITIVE AREAS
- DECIDUOUS STREET TREE ROADS
  TREES SHALL HAVE A MINIMUM CALIPER OF 3"

POTENTIAL SIGN LOCATIONS (FREE-STANDING)

- MAIN MONUMENT SIGN
- COMMERCIAL / CIVIC SIGN
- NEIGHBORHOOD SIGN

NOTE: FINAL NUMBER, HEIGHT, DESIGN, AND LOCATION OF SIGNS MAY BE MODIFIED SUBJECT TO THE REQUIREMENTS OF NEIGHBORHOOD DESIGN STANDARDS AND THE STAFFORD COUNTY ZONING ORDINANCE.

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OPEN SPACE & SIGNAGE PLAN

GEORGE WASHINGTON VILLAGE

HARTWOOD MAGISTERIAL DISTRICT STAFFORD COUNTY, VIRGINIA

COUNTY PLAN NUMBER
RC1400155

JUSTIN R. TROIDL, No. 040214, PROFESSIONAL ENGINEER

PLAN STATUS	
11/14/14	2ND SUBMISSION
02/01/15	3RD SUBMISSION
08/11/15	4TH SUBMISSION
08/12/16	SUPPLEMENTAL INFO

DATE	DESCRIPTION	
BCG DESIGN	BCG DRAWN	JRT CHKD

SCALE: 1"=400'
JOB No. 7489-01-001
DATE : APRIL 2014
FILE No. 7489-D-ZP-001

SHEET 7 OF 20

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LEGEND

ROAD CLASSIFICATIONS

- PARKWAY – DEDICATION & CONSTRUCTION BY APPLICANT
- PARKWAY (HALF–SECTION) – DEDICATION & CONSTRUCTION BY APPLICANT
- NEIGHBORHOOD STREET
- PEDESTRIAN TRAIL (APPROXIMATE LOCATION)
- PEDESTRIAN TRAIL (APPROXIMATE LOCATION) – IF PERMITTED WITHIN ENVIRONMENTALLY SENSITIVE AREAS AND SUBJECT TO CONSTRUCTABILITY ANALYSIS
- (BUS) PROPOSED BUS STOP (APPROXIMATE LOCATION)

NOTE: FOR PARKWAY DEDICATION & CONSTRUCTION SEE PROFFERS FOR DEDICATION & CONSTRUCTION LIMITS

PROPOSED LAND USES
(PRELIMINARY & SUBJECT TO CHANGE)

- RESIDENTIAL AREA (SINGLE–FAMILY DETACHED HOMES)
- RESIDENTIAL AREA (TOWNHOMES & MULTI–FAMILY)
- TOWN CENTER – COMMERCIAL AREA
- COMMERCIAL AREAS
- PARKS – ACTIVE RECREATION AREAS

NOTE: THIS PLAN IS CONCEPTUAL AND DEPICTED LOCATION OF TRANSPORTATION ELEMENTS ARE APPROXIMATE AND SUBJECT TO CHANGE.

GRAPHIC SCALE
500 0 250 500 1000 2000
(IN FEET)
1 inch = 600 ft.

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TRANSPORTATION PLAN
GEORGE WASHINGTON VILLAGE
HARTWOOD MAGISTERIAL DISTRICT STAFFORD COUNTY, VIRGINIA

COUNTY PLAN NUMBER
RC1400155

COMMONWEALTH OF VIRGINIA
JUSTIN R. TROIDL
No. 040314
PROFESSIONAL ENGINEER

PLAN STATUS	
11/14/14	2ND SUBMISSION
02/01/15	3RD SUBMISSION
08/11/15	4TH SUBMISSION
08/12/16	SUPPLEMENTAL INFO

DATE	DESCRIPTION

BCG DESIGN	BCG DRAWN	JRT CHKD

SCALE 1"=600'
JOB No. 7489-01-001
DATE : APRIL 2014
FILE No. 7489-D-ZP-001
SHEET 8 OF 20

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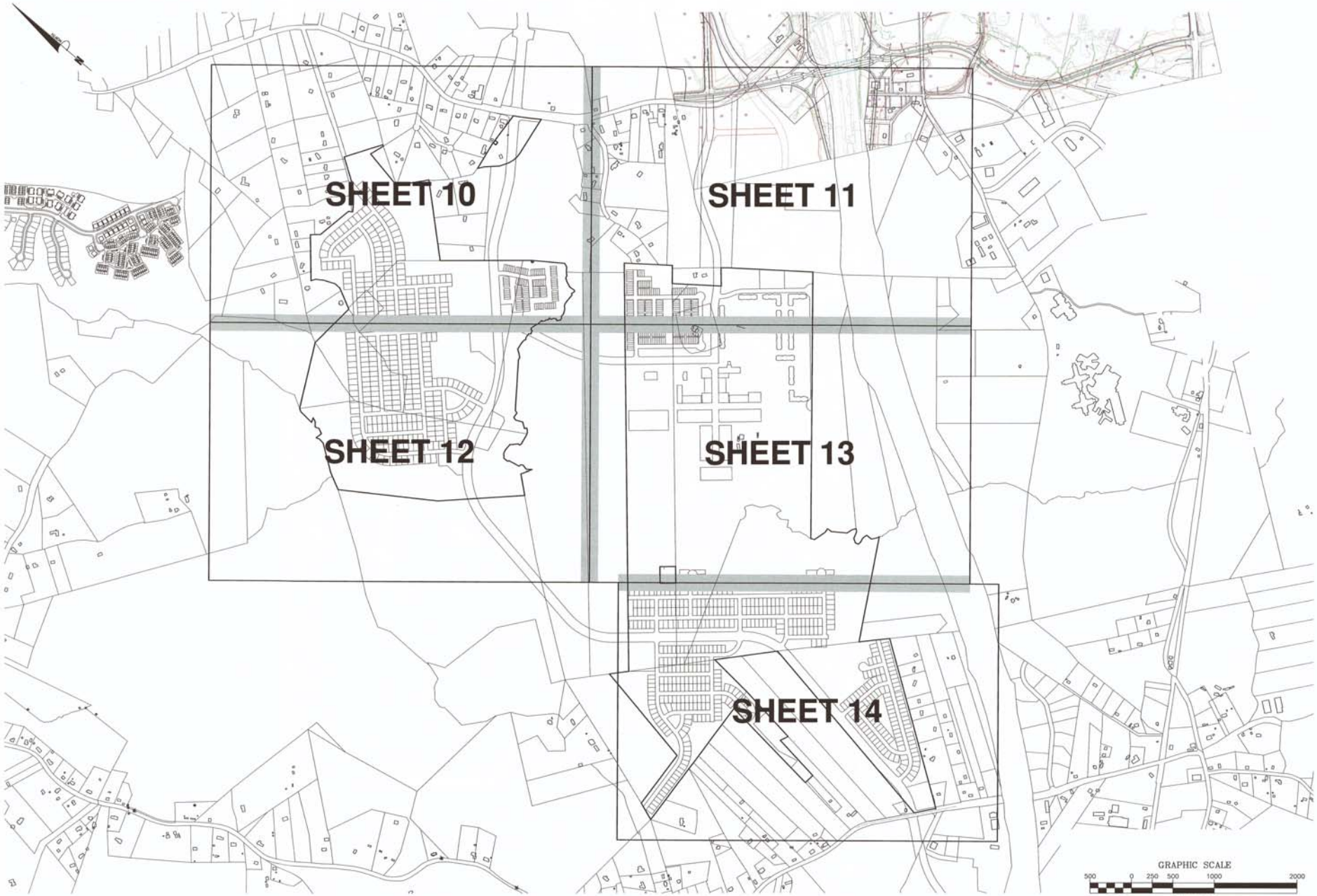

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OVERALL SHEET LAYOUT

GEORGE WASHINGTON VILLAGE

HARTWOOD MAGISTERIAL DISTRICT STAFFORD COUNTY, VIRGINIA

COUNTY PLAN NUMBER
RC1400155

COMMONWEALTH OF VIRGINIA
JUSTIN R. TROIDL
No. 040214
PROFESSIONAL ENGINEER

PLAN STATUS	
11/14/14	2ND SUBMISSION
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08/11/15	4TH SUBMISSION
06/12/16	SUPPLEMENTAL INFO.

DATE	DESCRIPTION

BCG DESIGN	BCG DRAWN	JRT CHKD

SCALE 1"=500'

JOB No. 7489-01-001

DATE : APRIL 2014

FILE No. 7489-0-ZP-001

SHEET 9 OF 20

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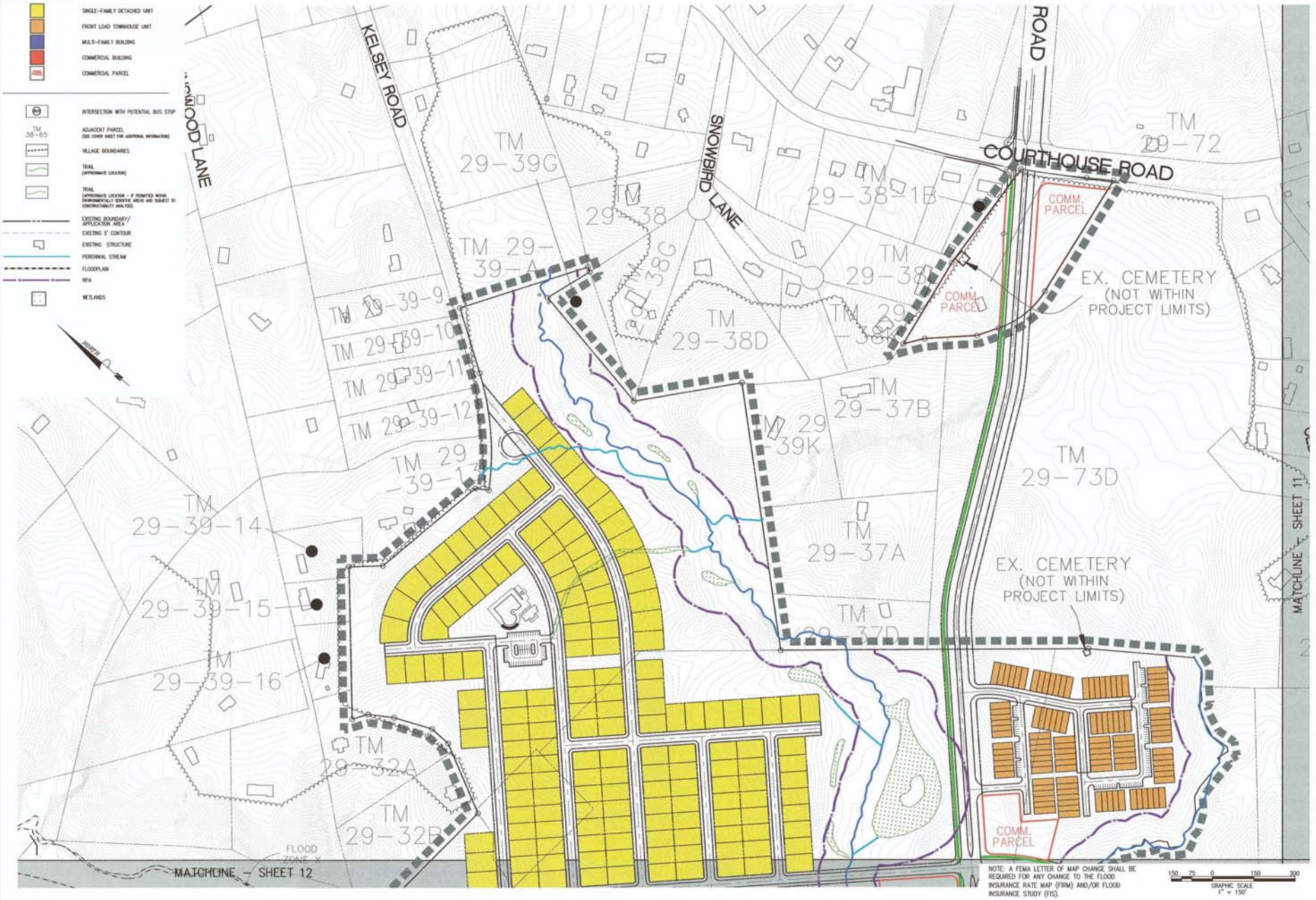

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GEORGE WASHINGTON VILLAGE

HARTWOOD MAGISTERIAL DISTRICT STAFFORD COUNTY, VIRGINIA

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08/12/16	SUPPLEMENTAL INFO.

DATE	DESCRIPTION
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JRT CHKD	
SCALE	1"=150'
JOB No.	7489-01-001
DATE :	APRIL 2014
FILE No.	7489-0-ZP-001
SHEET	10 OF 20

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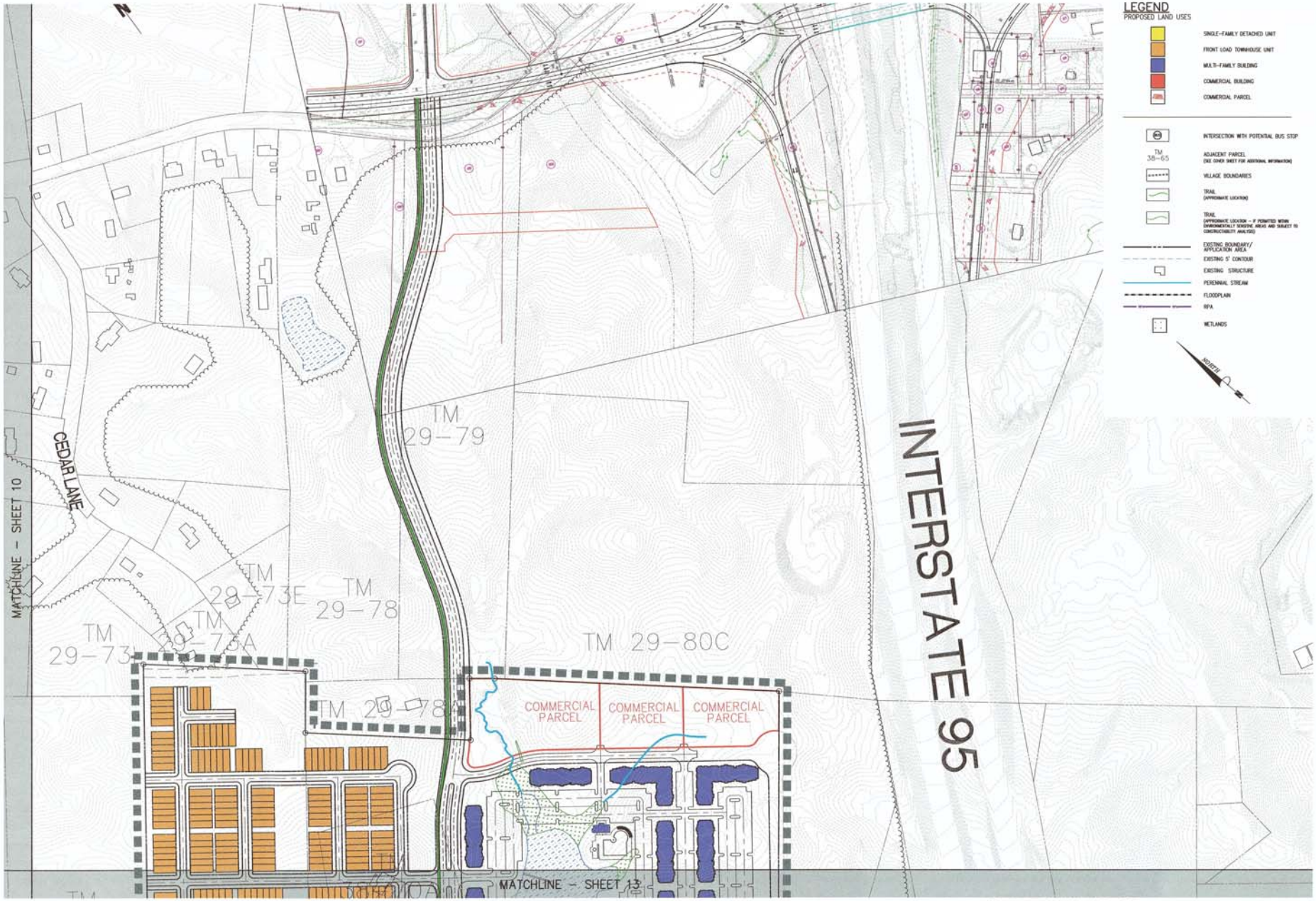

NOTE: A FEMA LETTER OF MAP CHANGE SHALL BE REQUIRED FOR ANY CHANGE TO THE FLOOD INSURANCE RATE MAP (FIRM) AND/OR FLOOD INSURANCE STUDY (FIS).

150 75 0 150 300
GRAPHIC SCALE
1" = 150'

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GEORGE WASHINGTON VILLAGE

HARTWOOD MAGISTERIAL DISTRICT STAFFORD COUNTY, VIRGINIA

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FILE No. 7489-D-ZP-001
SHEET 11 OF 20

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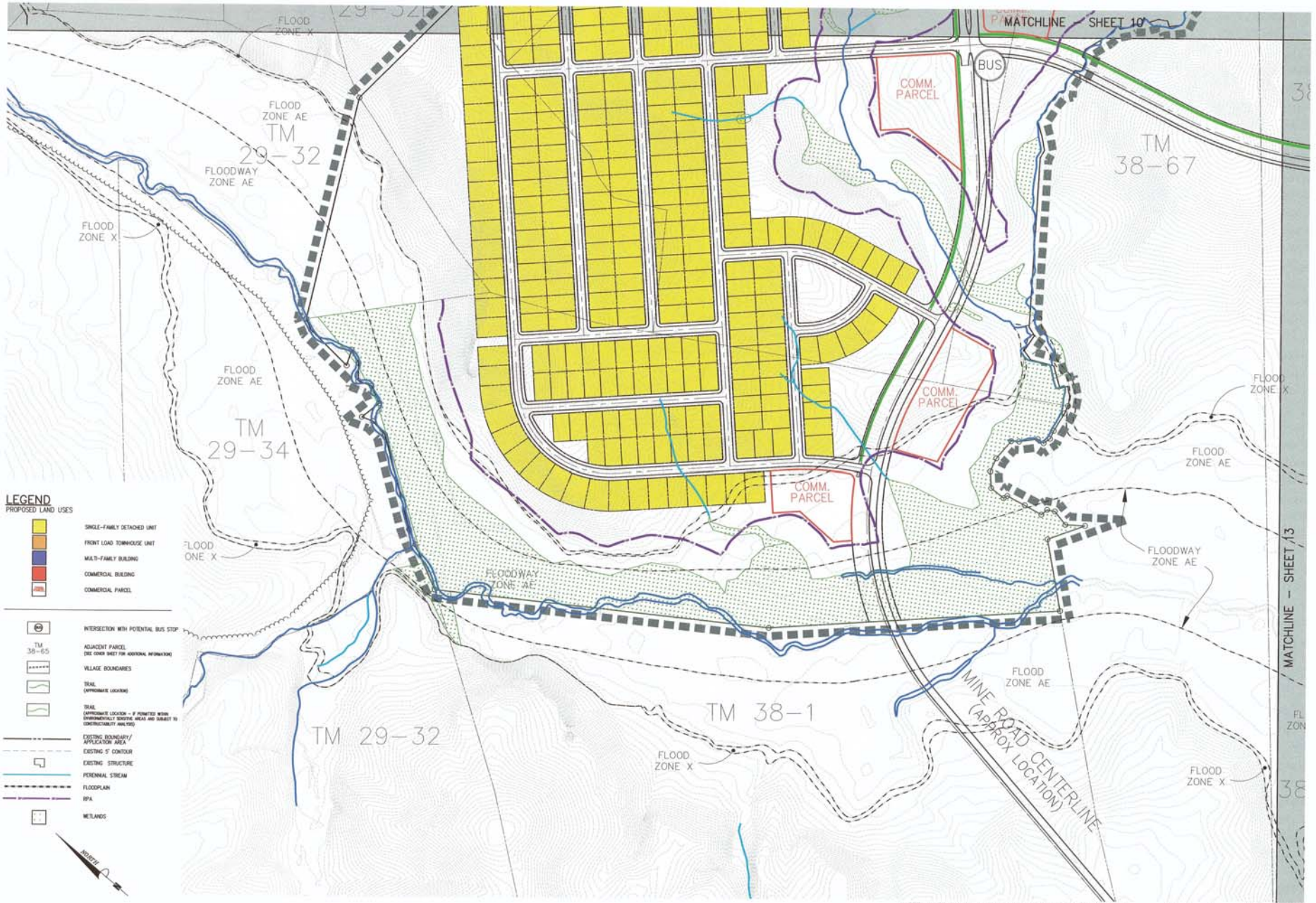

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GEORGE WASHINGTON VILLAGE

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SCALE	1"=150'	
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FILE No.	7489-D-ZP-001	

SHEET 12 OF 20

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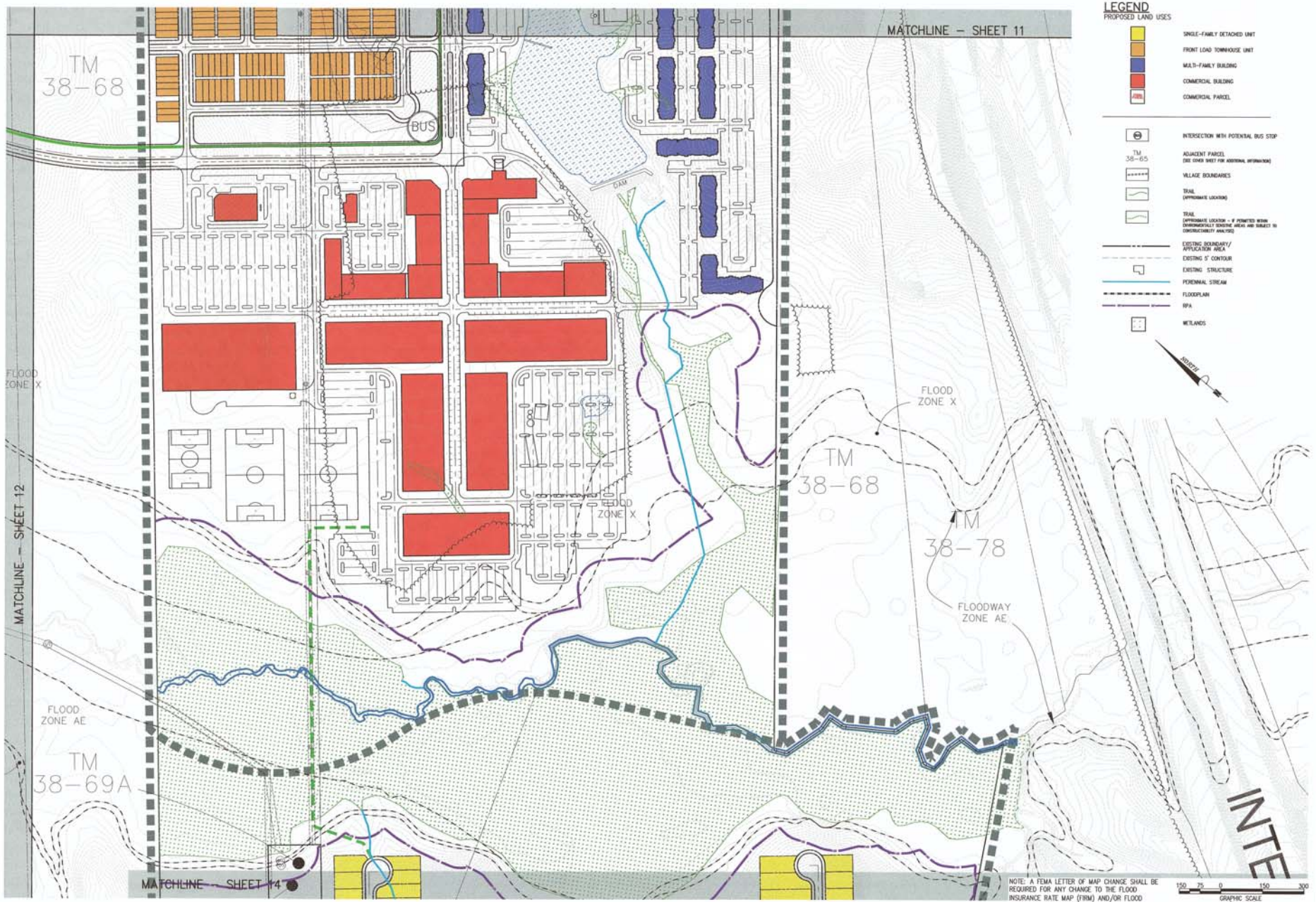

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GEORGE WASHINGTON VILLAGE

HARTWOOD MAGISTERIAL DISTRICT STAFFORD COUNTY, VIRGINIA

COUNTY PLAN NUMBER
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COMMONWEALTH OF VIRGINIA
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No.040214
8/5/16
PROFESSIONAL ENGINEER

PLAN STATUS	
11/14/14	2ND SUBMISSION
02/01/15	3RD SUBMISSION
08/11/15	4TH SUBMISSION
08/12/16	SUPPLEMENTAL INFO

DATE	DESCRIPTION	
BCG DESIGN	BCG DRAWN	JRT CHKD

SCALE 1"=150'

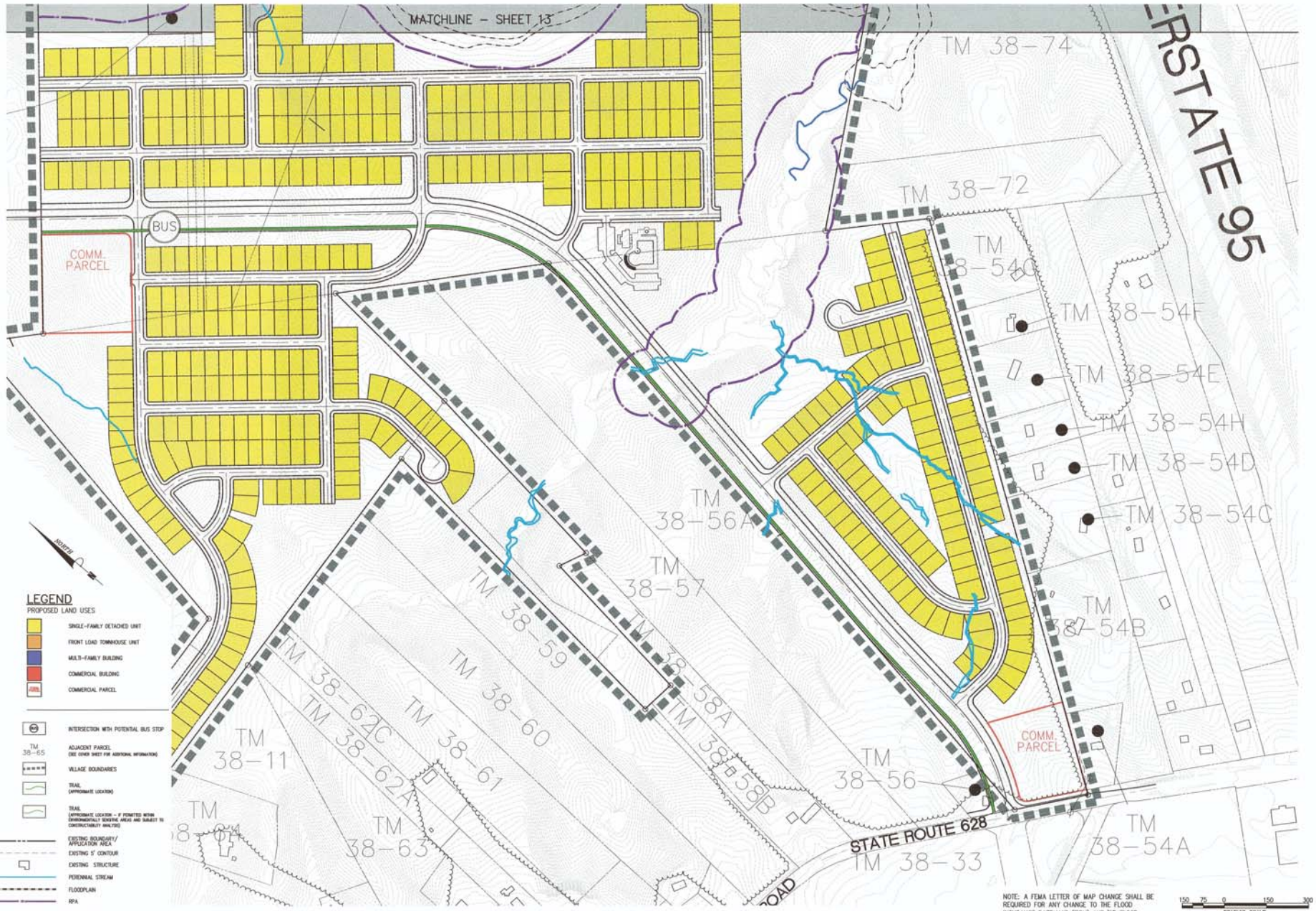
JOB No. 7489-01-001

DATE : APRIL 2014

FILE No. 7489-D-ZP-001

SHEET 13 OF 20

P:\7489 - George Washington Village\7489-02-001 (ENG)\Engineering\Engineering Plans\GDP\7489-01-001 (010-014) - Site Layout.dwg, 8/5/2016 10:49:18 AM, \\battlefield\HP Designjet 1050C by HP



NOTE: A FEMA LETTER OF MAP CHANGE SHALL BE REQUIRED FOR ANY CHANGE TO THE FLOOD INSURANCE RATE MAP (FIRM) AND/OR FLOOD INSURANCE STUDY (FIS).

GRAPHIC SCALE 1" = 150'

Bowman CONSULTING

Bowman Consulting Group, Ltd.
9813 Godwin Drive
Manassas, Virginia 20110
Phone: (703) 830-8083
Fax: (703) 530-8475
www.bowmanconsulting.com

GEORGE WASHINGTON VILLAGE

HARTWOOD MAGISTERIAL DISTRICT STAFFORD COUNTY, VIRGINIA

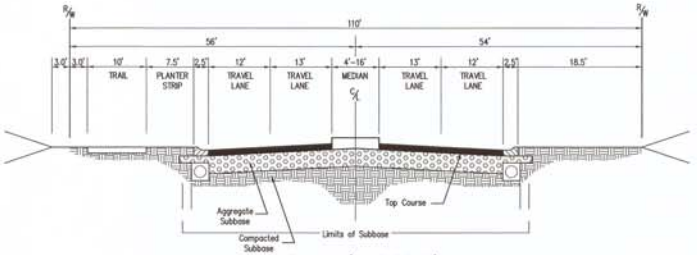
COUNTY PLAN NUMBER RC140055

COMMONWEALTH OF VIRGINIA JUSTIN R. TROIDL No. 040214 PROFESSIONAL ENGINEER

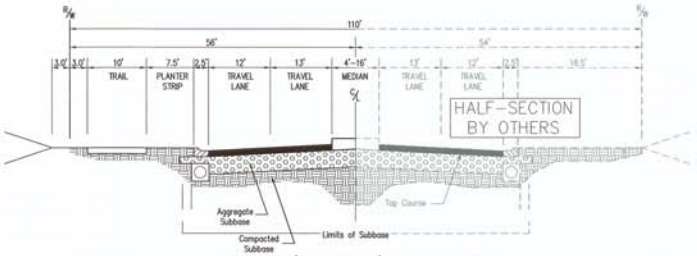
PLAN STATUS	
11/14/14	2ND SUBMISSION
02/01/15	3RD SUBMISSION
06/11/15	4TH SUBMISSION
08/12/16	SUPPLEMENTAL INFO

DATE	DESCRIPTION
BCG DESIGN	BCG DRAWN / JRT CHKD
SCALE	1"=150'
JOB No.	7489-01-001
DATE :	APRIL 2014
FILE No.	7489-D-ZP-001
SHEET	14 OF 20

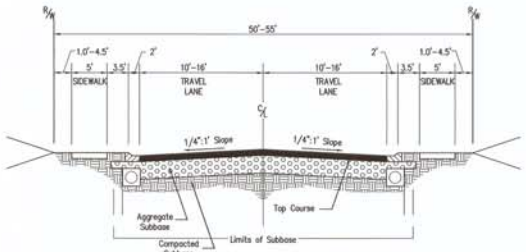
P:\7489 - George Washington Village\7489-02-001 (ENG)\Engineering\Engineering Plans\GDP\7489-01-001 (010-014) - Site Layout.dwg, 8/5/2016 10:49:36 AM, \\battlefield-vhf Designjet 1050C by HP



PARKWAY (MINE ROAD)
(NOT TO SCALE)



PARKWAY (MINE ROAD) HALF SECTION
(NOT TO SCALE)
NOTE: SIDE TO BE CONSTRUCTED BY OTHERS MAY VARY AND SHALL BE DETERMINED AT FINAL ENGINEERING.



NEIGHBORHOOD STREET
(NOT TO SCALE)

Bowman CONSULTING

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9813 Godwin Drive
Manassas, Virginia 20110
Phone: (703) 530-8083
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STREET SECTION DETAILS

GEORGE WASHINGTON VILLAGE

HARTWOOD MAGISTERIAL DISTRICT STAFFORD COUNTY, VIRGINIA

COUNTY PLAN NUMBER
RC1400155

COMMONWEALTH OF VIRGINIA
JUSTINE TROIDL
No. 040214
PROFESSIONAL ENGINEER

PLAN STATUS	
11/14/14	2ND SUBMISSION
02/01/15	3RD SUBMISSION
08/11/15	4TH SUBMISSION
08/12/16	SUPPLEMENTAL INFO

DATE	DESCRIPTION

BCG DESIGN	BCG DRAWN	JRT CHKD

SCALE

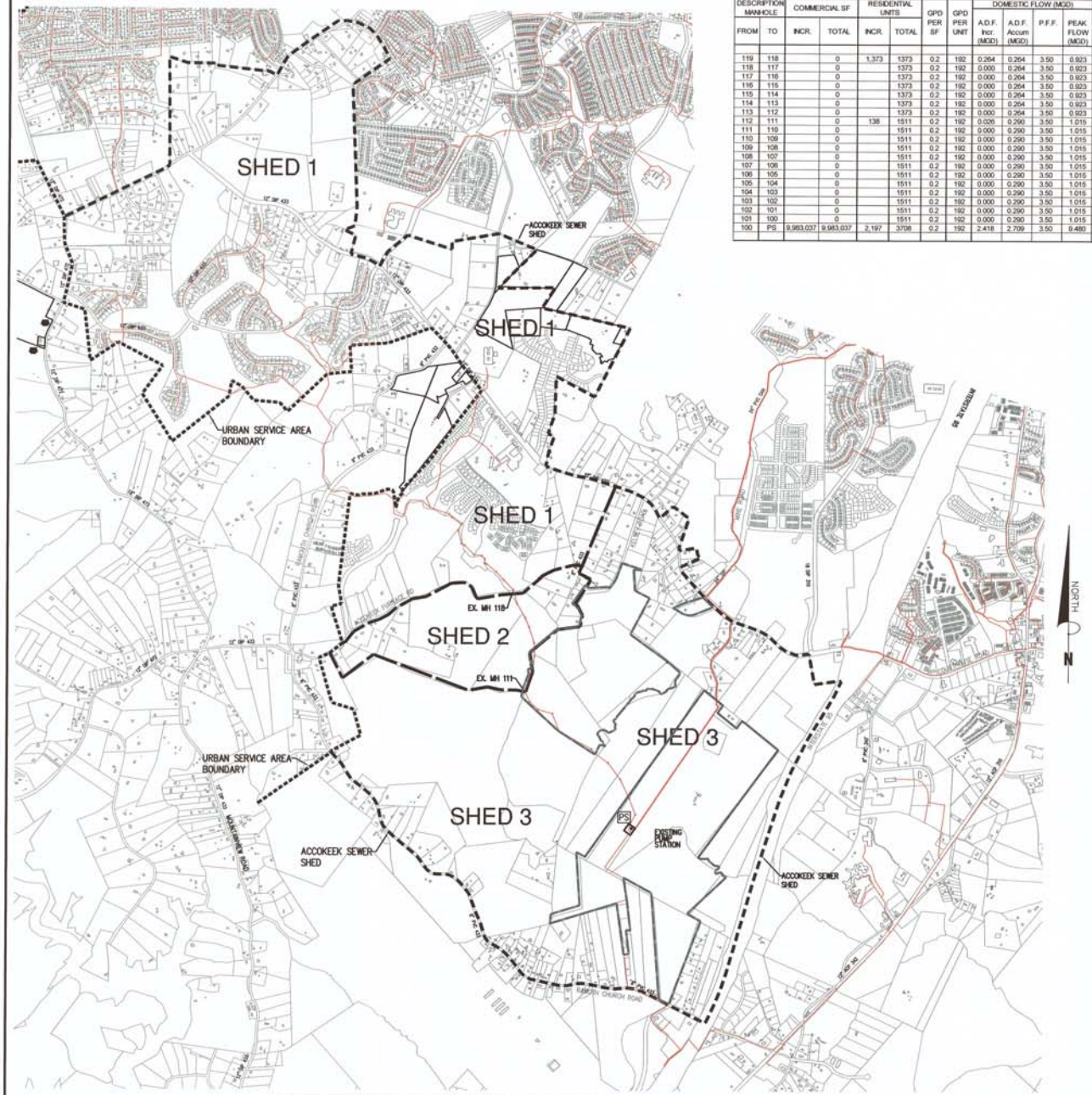
JOB No. 7489-01-001

DATE : APRIL 2014

FILE No. 7489-0-ZP-001

SHEET 15 OF 20

P:\7489 - George Washington Village\7489-02-001 (SWG)\Engineering\Engineering Plans\GDP\7489-01-001 (015) - Street Sections.dwg 8/3/2016 6:10:48 PM \\battlefield\HP Designjet 1050C by HP



EXISTING SEWER SHED TO ACCOKEEK PUMP STATION

NOT TO SCALE

SANITARY SEWER DESIGN TABLE - EXISTING ZONING

DESCRIPTION MANHOLE FROM	TO	COMMERCIAL SF INCR.	TOTAL	RESIDENTIAL UNITS INCR.	TOTAL	GPD PER SF	GPD PER UNIT	DOMESTIC FLOW (MGD) A.D.F. Incr. (MGD)	A.D.F. Accum (MGD)	P.F.F.	PEAK FLOW (MGD)	INFILTRATION (500 GPD/IN MILE) (GPD)	TOTAL PEAK FLOW (CFS)	PIPE MATERIAL	LENGTH (FEET)	PIPE DIA (IN)	SLOPE (%)	n	FLOWING FULL CAPACITY OF PIPE (MGD)	(CFS)	VEL (FPS)	PEAK FLOW DEPTH RATIO (d/D)	VEL. (FPS)	ELEVATION OF INVERTS UPPER END	LOWER END	q/Q	COMMENTS
119	118		0	1,373	1373	0.2	192	0.264	0.264	3.50	0.923	544.91	1.428	PVC	319.66	18	0.24	0.013	3.319	5.14	2.9	0.36	2.53	135.95	135.19	0.28	SEWER SHED 1
118	117		0		1373	0.2	192	0.000	0.264	3.50	0.923	599.56	1.428	PVC	351.74	18	0.19	0.013	2.949	4.56	2.6	0.38	2.33	134.94	134.28	0.31	
117	116		0		1373	0.2	192	0.000	0.264	3.50	0.923	656.08	1.429	PVC	384.90	18	0.27	0.013	3.539	5.47	3.1	0.34	2.60	133.98	132.94	0.26	
116	115		0		1373	0.2	192	0.000	0.264	3.50	0.923	402.99	1.428	PVC	236.42	18	0.36	0.013	4.106	6.35	3.6	0.32	2.92	132.69	131.83	0.22	
115	114		0		1373	0.2	192	0.000	0.264	3.50	0.923	701.08	1.429	PVC	411.30	18	0.31	0.013	3.798	5.88	3.3	0.33	2.75	131.80	130.32	0.24	
114	113		0		1373	0.2	192	0.000	0.264	3.50	0.923	569.84	1.428	PVC	333.60	18	0.35	0.013	4.014	6.21	3.5	0.32	2.85	130.06	128.90	0.23	
113	112		0		1373	0.2	192	0.000	0.264	3.50	0.923	637.84	1.429	PVC	374.20	18	0.67	0.013	5.575	8.63	4.9	0.27	3.62	128.69	126.18	0.17	
112	111		0	138	1511	0.2	192	0.026	0.290	3.50	1.015	846.51	1.572	PVC	498.62	18	0.32	0.013	3.828	5.92	3.4	0.35	2.87	125.94	124.37	0.27	SEWER SHED 2
111	110		0		1511	0.2	192	0.000	0.290	3.50	1.015	472.50	1.572	PVC	277.20	18	0.61	0.013	5.331	8.25	4.7	0.29	3.59	124.09	122.39	0.19	
110	109		0		1511	0.2	192	0.000	0.290	3.50	1.015	468.65	1.572	PVC	274.94	18	0.40	0.013	4.325	6.69	3.8	0.32	3.08	122.19	121.08	0.23	
109	108		0		1511	0.2	192	0.000	0.290	3.50	1.015	609.22	1.572	PVC	357.41	18	0.37	0.013	4.121	6.38	3.6	0.33	2.96	120.98	119.67	0.25	
108	107		0		1511	0.2	192	0.000	0.290	3.50	1.015	724.26	1.572	PVC	424.90	18	0.35	0.013	4.031	6.24	3.5	0.34	2.96	119.51	118.02	0.25	
107	106		0		1511	0.2	192	0.000	0.290	3.50	1.015	726.99	1.572	PVC	426.50	18	0.48	0.013	4.696	7.27	4.1	0.31	3.28	118.42	116.39	0.22	
106	105		0		1511	0.2	192	0.000	0.290	3.50	1.015	814.53	1.572	PVC	477.86	18	0.37	0.013	4.166	6.45	3.6	0.33	3.01	116.14	114.35	0.24	
105	104		0		1511	0.2	192	0.000	0.290	3.50	1.015	270.06	1.571	PVC	135.60	21	0.24	0.013	4.985	7.71	3.2	0.30	2.51	114.23	113.91	0.20	
104	103		0		1511	0.2	192	0.000	0.290	3.50	1.015	764.43	1.572	PVC	384.40	21	0.21	0.013	4.684	7.25	3.0	0.31	2.40	113.72	112.92	0.22	
103	102		0		1511	0.2	192	0.000	0.290	3.50	1.015	992.13	1.573	PVC	498.90	21	0.25	0.013	5.160	7.98	3.3	0.30	2.60	112.82	111.56	0.20	
102	101		0		1511	0.2	192	0.000	0.290	3.50	1.015	970.26	1.573	PVC	487.90	21	0.38	0.013	6.306	9.76	4.1	0.27	3.01	111.39	109.55	0.18	
101	100		0		1511	0.2	192	0.000	0.290	3.50	1.015	965.45	1.573	PVC	424.80	24	0.40	0.013	9.247	14.31	4.6	0.22	3.04	109.35	107.66	0.11	
100	PS	9,983,037	9,983,037	2,197	3708	0.2	192	2.418	2.709	3.50	9.480	732.73	14.669	PVC	322.40	24	0.28	0.013	7.789	12.05	3.8	1.00	3.84	107.56	106.65	1.22	SEWER SHED 3

OVERALL SEWER SHED - EXISTING ZONING

ZONE	AREA	AC	DENSITY	FPLAN/RPA	BUILD AREA	UNITS	MFA RATIO	MFA IN AC	MFA IN SF
A-1	96,444,729	2,259.98	3 AC LOTS	370.98	1,860.02	630	-	-	-
A-2	23,044,547	529.03	1 AC LOTS	19.45	509.58	509	-	-	-
R-1	12,912,055	296.42	1.5 DU/AC	18.40	278.02	417	-	-	-
R-3	13,734,904	315.31	7.0 DU/AC	66.17	258.14	641	-	-	-
B-2	11,342,153	260.38	-	20.46	-	-	0.40	104.15	4,536,861
M-1	15,560,503	357.22	-	38.67	-	-	0.35	125.03	5,446,176
					TOTAL UNITS	2,197			
					TOTAL SF COMMERCIAL				9,983,037

SEWER SHED 1 (PROPERTIES TO EX. MH 118)

ZONE	AREA	AC	DENSITY	FPLAN/RPA	BUILD AREA	UNITS	MFA RATIO	MFA IN AC	MFA IN SF
A-1	55,325,120	1,270.09	3 AC LOTS	220.11	1,049.98	350	-	-	-
A-2	2,997,799	68.82	1 AC LOTS	2.47	66.35	66	-	-	-
R-1	12,912,055	296.42	1.5 DU/AC	18.40	278.02	417	-	-	-
R-3	12,941,240	297.09	7.0 DU/AC	52.41	244.68	540	-	-	-
					TOTAL UNITS	1,373			
					TOTAL SF COMMERCIAL				0

SEWER SHED 2 (PROPERTIES TO EX. MH 111)

ZONE	AREA	AC	DENSITY	FPLAN/RPA	BUILD AREA	UNITS	MFA RATIO	MFA IN AC	MFA IN SF
A-1	9,391,536	215.60	3 AC LOTS	36.84	178.76	60	-	-	-
R-3	625,967	14.37	7.0 DU/AC	3.38	11.19	78	-	-	-
					TOTAL UNITS	138			
					TOTAL SF COMMERCIAL				0

SEWER SHED 3 (PROPERTIES TO PUMP STATION)

ZONE	AREA	AC	DENSITY	FPLAN/RPA	BUILD AREA	UNITS	MFA RATIO	MFA IN AC	MFA IN SF
A-1	33,728,072	774.29	3 AC LOTS	114.01	660.28	220	-	-	-
A-2	20,046,749	460.21	1 AC LOTS	16.98	443.23	443	-	-	-
R-3	167,706	3.85	7.0 DU/AC	0.58	3.27	23	-	-	-
B-2	11,342,153	260.38	-	-	-	-	0.40	104.15	4,536,861
M-1	15,560,503	357.22	-	-	-	-	0.35	125.03	5,446,176
					TOTAL UNITS	686			
					TOTAL SF COMMERCIAL				9,983,037

EXISTING SEWER SHED

THE PROJECT SITE IS LOCATED WITHIN THE BOUNDARIES OF THE URBAN SERVICE AREA IN THE ACCOKEEK SEWER SHED. A GRAVITY SEWER, THE UPPER ACCOKEEK SANITARY SEWER INTERCEPTOR RUNS ALONG ACCOKEEK CREEK, FROM NORTH TO SOUTH WITHIN THE BOUNDARY OF THIS SITE. THE PROPOSED DEVELOPMENT OUTFALLS TO THIS SEWER INTERCEPTOR., WHICH VARIES IN SIZE FROM 18" TO 24". THE INTERCEPTOR THEN OUTFALLS TO THE UPPER ACCOKEEK PUMPING STATION AND FORCE MAIN WHERE IT IS PUMPED NORTH TO A 24" GRAVITY SEWER LINE THAT FLOWS TO THE AQUIA SEWAGE TREATMENT PLANT.

THIS DRAWING PROVIDES THE ENTIRE EXISTING SEWER SHED OF THE INTERCEPTOR WITH THE CURRENT ZONING OF THE PROPERTIES PER THE STAFFORD COUNTY ZONING MAP. IN ORDER TO APPROXIMATE THE ULTIMATE SEWER CONDITIONS PER EXISTING ZONING, EACH PROPERTY IN THE SEWER SHED WAS ANALYZED USING THE LAND AREA AND ZONING CLASSIFICATION. THE TABLE ON THIS SHEET IS PROVIDED TO SHOW THE PROPERTIES ORGANIZED BY ZONE AND APPROXIMATES THE MAXIMUM AMOUNT OF RESIDENTIAL AND COMMERCIAL AREA POSSIBLE FOR THE SEWER SHED. IT HAS BEEN DETERMINED THAT SEWER SHED 3 WOULD ULTIMATELY CONTAIN 686 RESIDENTIAL UNITS AND 9,983,037 SQUARE FEET OF COMMERCIAL SPACE.

LEGEND

EXISTING SEWER PER STAFFORD COUNTY GIS

GRAPHIC SCALE

(IN FEET)
1 inch = 1200 ft.

Bowman CONSULTING

Bowman Consulting Group, Ltd.
9813 Godwin Drive
Manassas, Virginia 20110

Phone: (703) 830-8083
Fax: (703) 830-8475

www.bowmanconsulting.com

EX. SEWER SHED MAP AND ANALYSIS

GEORGE WASHINGTON VILLAGE

HARTWOOD MAGISTERIAL DISTRICT STAFFORD COUNTY, VIRGINIA

COUNTY PLAN NUMBER
RC1400155

COMMONWEALTH OF VIRGINIA
JUSTIN R. TRODDL
No. 040214
PROFESSIONAL ENGINEER

PLAN STATUS	
11/14/14	2ND SUBMISSION
02/01/15	3RD SUBMISSION
08/11/15	4TH SUBMISSION
06/12/16	SUPPLEMENTAL INFO

DATE	DESCRIPTION

BCG DESIGN	BCG DRAWN	JRT CHKD

SCALE 1"=1,200'

JOB No. 7489-01-001

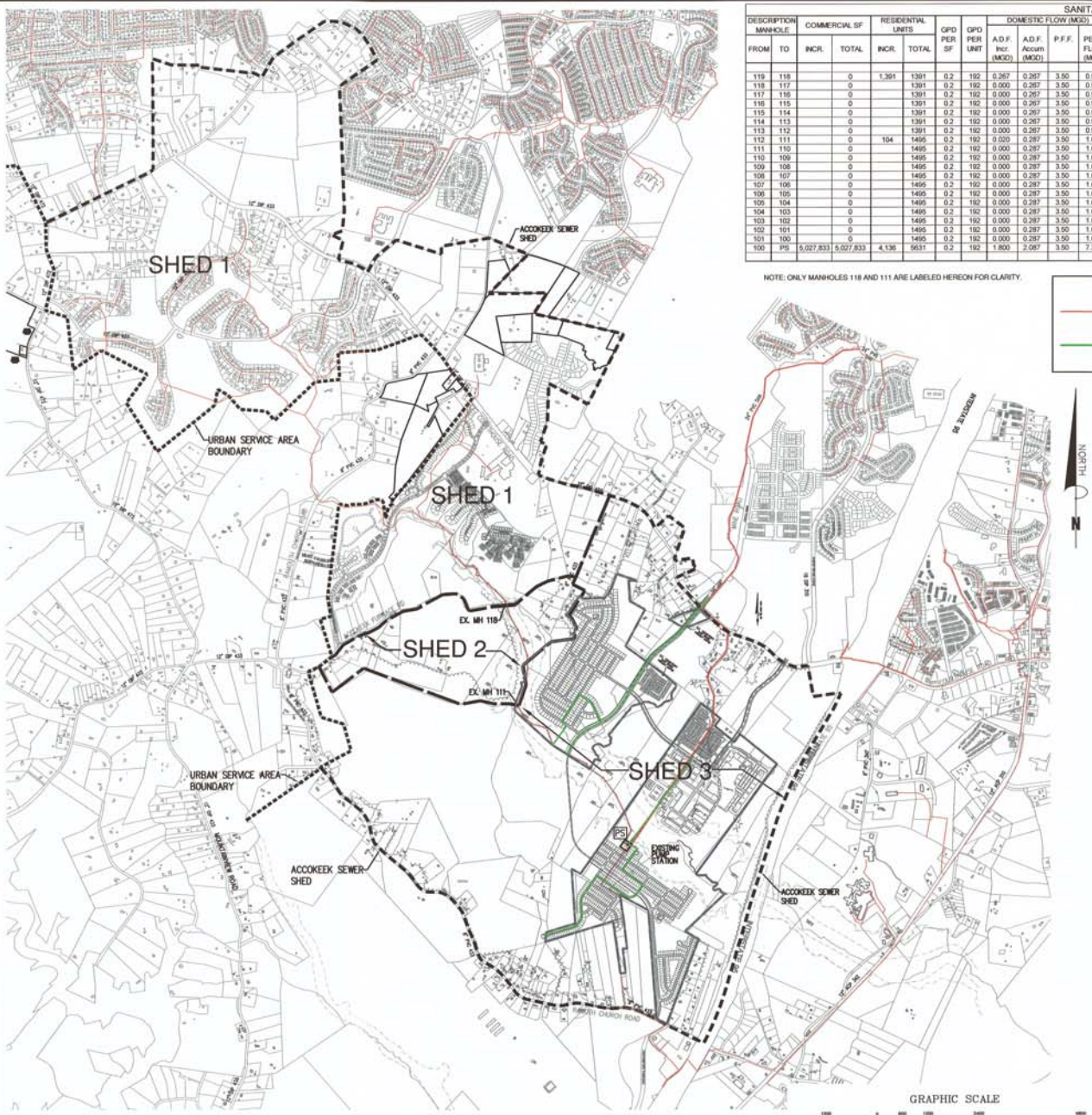
DATE : APRIL 2014

FILE No. 7489-D-ZP-001

SHEET 16 OF 20

P:\7489 - George Washington Village\7489-03-001 (ENG)\Engineering\Engineering Plans\GDP\7489-01-001 (016-017) - Sewer.dwg, 8/3/2016 6:13:01 PM, \\battlefield\HP DesignJet 1050C by HP

Cad file name : P:\7489 - George Washington Village\7489-02-001 (ENG)\Engineering\Engineering Plans\GDP\7489-01-001 (016-017) - Sewer.dwg



SANITARY SEWER DESIGN TABLE - PROPOSED ZONING

DESCRIPTION MANHOLE FROM	TO	COMMERCIAL SF INCR.	TOTAL	RESIDENTIAL UNITS INCR.	TOTAL	GPD PER SF	GPD PER UNIT	DOMESTIC FLOW (MGD) A.D.F. Incr. (MGD)	A.D.F. Accum (MGD)	P.F.F.	PEAK FLOW (MGD)	INFILTRATION (500 GPD/ IN. MILE) (GPD)	TOTAL PEAK FLOW (CFS)	PIPE MATERIAL	LENGTH (FEET)	PIPE DIA. (IN)	SLOPE (%)	n	FLOWING FULL CAPACITY OF PIPE (MGD)	(CFS)	VEL. (FPS)	PEAK FLOW DEPTH RATIO (d/D)	VEL. (FPS)	ELEVATION OF INVERTS UPPER END	LOWER END	q/Q	COMMENTS
119	118		0	1,391	1391	0.2	192	0.267	0.267	3.50	0.935	544.91	1.447	PVC	319.68	18	0.24	0.013	3.319	5.14	2.9	0.36	2.53	135.95	135.19	0.28	PROP. SEWER SHED 1
118	117		0		1391	0.2	192	0.000	0.267	3.50	0.935	599.56	1.447	PVC	351.74	18	0.19	0.013	2.949	4.56	2.6	0.38	2.33	134.94	134.28	0.32	
117	116		0		1391	0.2	192	0.000	0.267	3.50	0.935	656.08	1.447	PVC	384.90	18	0.27	0.013	3.539	5.47	3.1	0.35	2.65	133.98	132.94	0.26	
116	115		0		1391	0.2	192	0.000	0.267	3.50	0.935	402.99	1.447	PVC	236.42	18	0.36	0.013	4.106	6.35	3.6	0.32	2.92	132.69	131.83	0.23	
115	114		0		1391	0.2	192	0.000	0.267	3.50	0.935	701.08	1.447	PVC	411.30	18	0.31	0.013	3.798	5.88	3.3	0.33	2.75	131.60	130.32	0.25	
114	113		0		1391	0.2	192	0.000	0.267	3.50	0.935	568.64	1.447	PVC	333.60	18	0.35	0.013	4.014	6.21	3.5	0.32	2.85	130.06	128.90	0.23	
113	112		0		1391	0.2	192	0.000	0.267	3.50	0.935	637.84	1.447	PVC	374.20	18	0.67	0.013	5.575	8.63	4.9	0.27	3.62	128.69	126.18	0.17	
112	111		0	104	1495	0.2	192	0.020	0.287	3.50	1.005	846.51	1.556	PVC	496.62	18	0.32	0.013	3.828	5.92	3.4	0.35	2.87	125.94	124.37	0.26	PROP. SEWER SHED 2
111	110		0		1495	0.2	192	0.000	0.287	3.50	1.005	472.50	1.555	PVC	277.20	18	0.61	0.013	5.331	8.25	4.7	0.29	3.59	124.09	122.39	0.19	
110	109		0		1495	0.2	192	0.000	0.287	3.50	1.005	468.65	1.555	PVC	274.94	18	0.40	0.013	4.325	6.69	3.8	0.32	3.08	122.19	121.08	0.23	
109	108		0		1495	0.2	192	0.000	0.287	3.50	1.005	609.22	1.555	PVC	357.41	18	0.37	0.013	4.121	6.38	3.6	0.33	2.98	120.98	119.67	0.24	
108	107		0		1495	0.2	192	0.000	0.287	3.50	1.005	724.26	1.556	PVC	424.90	18	0.35	0.013	4.031	6.24	3.5	0.34	2.96	119.51	118.02	0.25	
107	106		0		1495	0.2	192	0.000	0.287	3.50	1.005	726.99	1.556	PVC	426.50	18	0.48	0.013	4.696	7.27	4.1	0.31	3.28	118.42	116.39	0.21	
106	105		0		1495	0.2	192	0.000	0.287	3.50	1.005	814.53	1.556	PVC	477.86	18	0.37	0.013	4.199	6.45	3.6	0.33	3.01	116.14	114.36	0.24	
105	104		0		1495	0.2	192	0.000	0.287	3.50	1.005	270.06	1.555	DIP	135.80	21	0.24	0.013	4.985	7.71	3.2	0.30	2.51	114.23	113.91	0.20	
104	103		0		1495	0.2	192	0.000	0.287	3.50	1.005	764.43	1.556	PVC	384.40	21	0.21	0.013	4.684	7.25	3.0	0.31	2.40	113.72	112.92	0.21	
103	102		0		1495	0.2	192	0.000	0.287	3.50	1.005	992.13	1.556	PVC	498.90	21	0.25	0.013	5.160	7.98	3.3	0.29	2.56	112.82	111.56	0.19	
102	101		0		1495	0.2	192	0.000	0.287	3.50	1.005	970.26	1.556	PVC	487.90	21	0.38	0.013	6.306	9.76	4.1	0.26	2.95	111.39	109.55	0.16	
101	100		0		1495	0.2	192	0.000	0.287	3.50	1.005	965.45	1.556	PVC	424.80	24	0.40	0.013	9.247	14.31	4.6	0.22	3.04	109.35	107.66	0.11	
100	PS	5,027,833	5,027,833	4,136	5631	0.2	192	1.800	2.087	3.50	7.304	732.73	11.301	PVC	322.40	24	0.28	0.013	7.789	12.05	3.8	0.77	4.36	107.56	106.65	0.94	PROP. SEWER SHED 3

NOTE: ONLY MANHOLES 118 AND 111 ARE LABELED HEREON FOR CLARITY.

LEGEND

- EXISTING SEWER PER STAFFORD COUNTY GIS
- APPROXIMATE PROPOSED SEWER FOR TND DEVELOPMENT (MAJOR COLLECTOR SHOWN ONLY)

OVERALL SEWER SHED - PROPOSED ZONING

ZONE	AREA	AC	DENSITY	FPLAIN/RPA	BUILD AREA	UNITS	MFA RATIO	MFA IN AC.	MFA IN SF
A-1	89,704,896	2,059.34	3 AC LOTS	310.45	1,748.89	857	-	-	-
A-2	15,341,312	352.19	1 AC LOTS	2.79	349.40	349	-	-	-
R-1	12,961,488	297.33	1.5 DU/AC	18.40	278.93	418	-	-	-
R-3	13,715,170	314.86	7.0 DU/AC	33.23	281.63	844	-	-	-
B-2	5,671,076	130.19	-	-	-	-	0.40	52.08	2,268,431
M-1	5,718,262	131.27	-	-	-	-	0.35	46.95	2,001,402
P-TND	23,284,998			133.00		1,868			768,000
					TOTAL UNITS	4,136			
					TOTAL SF COMMERCIAL				5,027,833

SEWER SHED 1 (PROPERTIES TO EX. MH 118)

ZONE	AREA	AC	DENSITY	FPLAIN/RPA	BUILD AREA	UNITS	MFA RATIO	MFA IN AC.	MFA IN SF
A-1	57,741,587	1,325.56	3 AC LOTS	220.11	1,105.45	368	-	-	-
A-2	2,957,475	67.89	1 AC LOTS	2.47	65.42	65	-	-	-
R-1	12,961,488	297.33	1.5 DU/AC	18.40	278.93	418	-	-	-
R-3	12,930,860	296.85	7.0 DU/AC	52.41	244.44	540	-	-	-
					TOTAL UNITS	1,391			
					TOTAL SF COMMERCIAL				0

SEWER SHED 2 (PROPERTIES TO EX. MH 111)

ZONE	AREA	AC	DENSITY	FPLAIN/RPA	BUILD AREA	UNITS	MFA RATIO	MFA IN AC.	MFA IN SF
A-1	9,662,985	221.83	3 AC LOTS	36.84	184.99	62	-	-	-
R-3	784,310	18.01	7.0 DU/AC	3.18	14.83	104	-	-	-
					TOTAL UNITS	166			
					TOTAL SF COMMERCIAL				0

PROPOSED SEWER SHED 3 (PROPERTIES TO PUMP STATION)

ZONE	AREA	AC	DENSITY	FPLAIN/RPA	BUILD AREA	UNITS	MFA RATIO	MFA IN AC.	MFA IN SF
A-1	22,300,284	511.94	3 AC LOTS	84.83	427.11	427	-	-	-
A-2	12,383,837	284.29	1 AC LOTS	0.32	283.97	284	-	-	-
R-3	0	0.00	7.0 DU/AC	0.00	0.00	0	-	-	-
B-2	5,671,076	130.19	-	-	-	-	0.40	52.08	2,268,431
M-1	5,718,262	131.27	-	-	-	-	0.35	46.95	2,001,402
P-TND	23,284,998	534.55	-	-	-	1,868	-	-	768,000
					TOTAL UNITS	2,579			
					TOTAL SF COMMERCIAL				5,027,833

SANITARY SEWER NARRATIVE

THE PROPOSED TND DEVELOPMENT CONTAINS 1,868 RESIDENTIAL UNITS AND 723,000 SF OF COMMERCIAL SPACE. IN ORDER TO APPROXIMATE THE ULTIMATE DEVELOPMENT OF THE PROPERTIES IN THE PROPOSED SEWER SHED, EACH PARCEL WAS ANALYSED IN A POST-DEVELOPED SCENARIO BASED ON THE CURRENT AND/OR PROPOSED ZONING FOR EACH INDIVIDUAL PROPERTY PER THE REQUIREMENTS IN SECTION 28-35 OF THE STAFFORD COUNTY ZONING ORDINANCE. TABLES ARE PROVIDED TO SHOW THE PROPERTIES ORGANIZED BY ZONING DISTRICTS. THESE TABLES SUMMARIZE THE APPROXIMATE MAXIMUM AMOUNT OF RESIDENTIAL UNITS AND COMMERCIAL AREA POSSIBLE FOR THE SEWER SHED. THE DIFFERENCE BETWEEN THE GROWTH OF THE EXISTING ZONING AND PROPOSED ZONING CAN BE BROKEN DOWN AS FOLLOWS:

	SEWER SHED EXISTING ZONING	SEWER SHED PROPOSED ZONING
RESIDENTIAL UNITS	2,197	4,136
COMMERCIAL AREA (SF)	9,983,037	5,027,833
TOTAL PEAK FLOW (CFS)	14.67	11.26

AS-BUILT DRAWINGS FOR THE SEWER INTERCEPTOR WERE FURNISHED BY THE STAFFORD COUNTY UTILITIES DEPARTMENT IN ORDER TO CREATE A SEWER DESIGN MODEL FOR BOTH THE EXISTING AND PROPOSED SCENARIOS. IN ORDER TO DETERMINE ADEQUATE CAPACITY OF THE EXISTING SEWER OUTFALL, THE OVERALL SEWER SHED WAS BROKEN INTO THREE SUB-SHEDS FOR EVALUATION IN THE DESIGN CALCULATIONS. SEWER SHED 1 INCLUDES THE OUTFALL OF ALL PROPERTIES NORTH OF THE SITE THAT EVENTUALLY FLOW TO EXISTING MANHOLE 118 OF THE INTERCEPTOR, WHICH IS LOCATED ON THE NORTHERN-MOST POINT OF THE SITE. SEWER SHED 2 INCLUDES THE OUTFALL OF ALL PROPERTIES FROM MANHOLE 118 TO EXISTING MANHOLE 111 LOCATED INSIDE THE SITE APPROXIMATELY 2,700 LF SOUTH OF MANHOLE 118. SEWER SHED 3 INCLUDES THE REMAINING PROPERTIES IN THE SEWER SHED. A CALCULATION IS SHOWN FOR EACH SUB-SHED AND PROVIDES THE ULTIMATE EXISTING AND THE ULTIMATE PROPOSED RESIDENTIAL/ COMMERCIAL QUANTITES FOR EACH SUB-SHED.

BASED ON SECTION 3.1.2 OF THE STAFFORD COUNTY WATER AND SEWER DESIGN STANDARDS, RESIDENTIAL UNITS SHALL HAVE AN AVERAGE DAILY FLOW OF 192 GALLONS PER DAY PER EQUIVALENT DWELLING UNIT. COMMERCIAL PROPERTIES HAVE BEEN GIVEN A VALUE OF 0.2 GALLONS PER DAY PER SQUARE FOOT OF COMMERCIAL AREA. THE DATA FOR SEWER SHEDS 1 THROUGH 3 ARE SHOWN IN THE SEWER DESIGN CALCULATIONS IN COMBINATION WITH THE PROVIDED AS-BUILT INFORMATION. IT HAS BEEN CONCLUDED THAT THE PROPOSED ZONING OF THE PROJECT REDUCES THE TOTAL PEAK FLOW IN THE ULTIMATE DEVELOPMENT CONDITION FROM 13.45 CUBIC FEET PER SECOND (CFS) TO 10.34 CFS, WHICH IS A 23 PERCENT DECREASE IN ULTIMATE FLOW THROUGH THE INTERCEPTOR. THIS STUDY SHOWS THAT THE EXISTING UPPER ACCOKEEK SANITARY SEWER INTERCEPTOR CAN ADEQUATELY OUTFALL THE WASTEWATER FOR THE PROPOSED GEORGE WASHINGTON VILLAGE DEVELOPMENT WITHOUT ANY IMPROVEMENTS TO THE CURRENT INTERCEPTOR SYSTEM.

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PROP. SEWER SHED MAP AND ANALYSIS
GEORGE WASHINGTON VILLAGE
HARTWOOD MAGISTERIAL DISTRICT STAFFORD COUNTY, VIRGINIA

COUNTY PLAN NUMBER
RC1400155

COMMONWEALTH OF VIRGINIA
JUSTIN C. RODIL
No. 040214
PROFESSIONAL ENGINEER
9/5/16

PLAN STATUS	
11/14/14	2ND SUBMISSION
02/19/15	3RD SUBMISSION
08/11/15	4TH SUBMISSION
08/12/16	SUPPLEMENTAL INFO

DATE	DESCRIPTION	
BCG DESIGN	BCG DRAWN	JRT CHKD

SCALE 1"=1,200'
JOB No. 7489-01-001
DATE : APRIL 2014
FILE No. 7489-0-ZP-001
SHEET 17 OF 20

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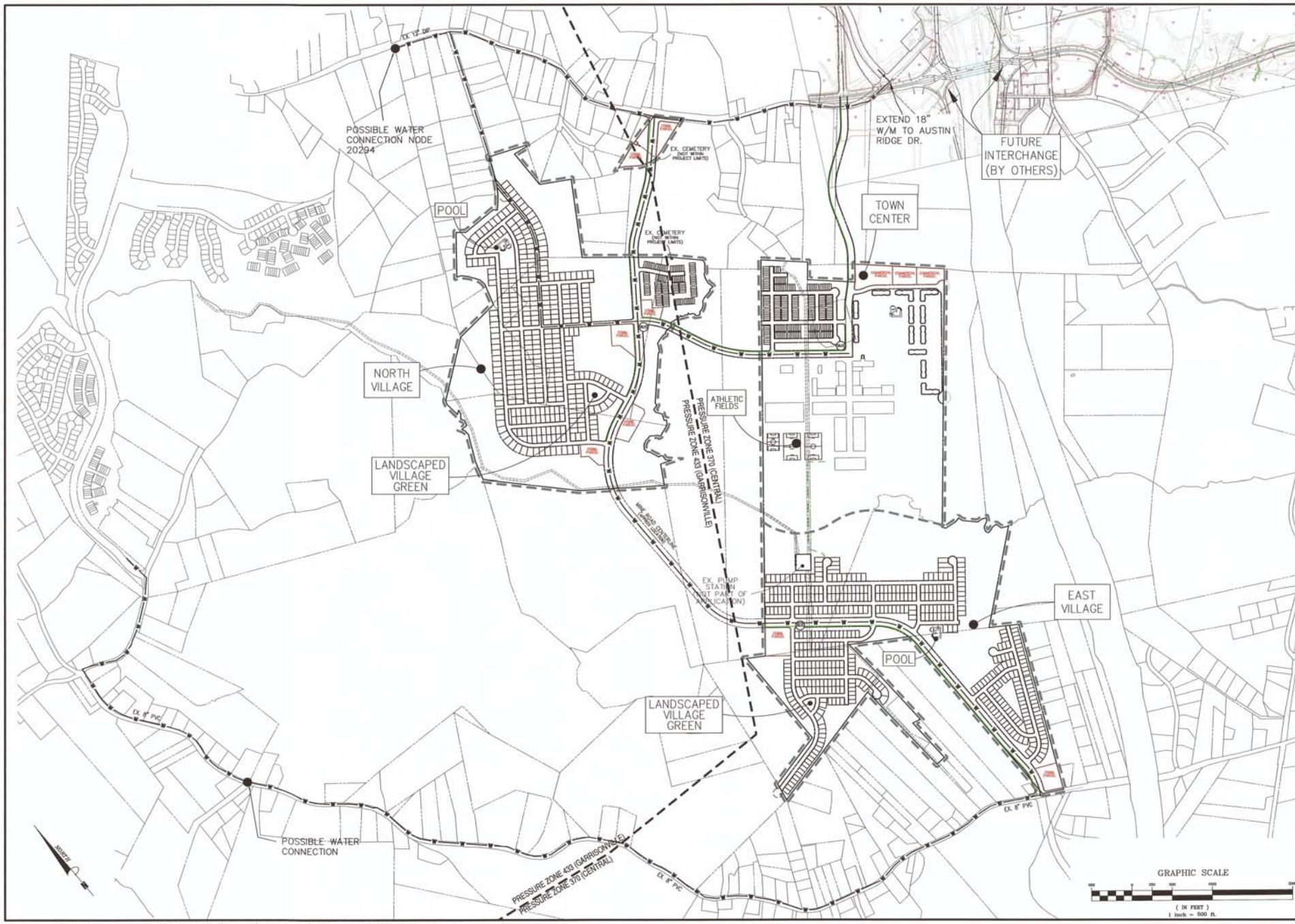

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WATER NETWORK SCHEMATIC

GEORGE WASHINGTON VILLAGE

HARTWOOD MAGISTERIAL DISTRICT STAFFORD COUNTY, VIRGINIA

COUNTY PLAN NUMBER
RC1400155

COMMONWEALTH OF VIRGINIA
JUSTIN R. TROIDL
No.040214
PROFESSIONAL ENGINEER
8/5/16

PLAN STATUS	
11/14/14	2ND SUBMISSION
02/01/15	3RD SUBMISSION
08/11/15	4TH SUBMISSION
08/12/16	SUPPLEMENTAL INFO

DATE	DESCRIPTION	
BCG DESIGN	BCG DRAWN	JRT CHKD

SCALE 1" = 500'

JOB No. 7489-01-001

DATE : APRIL 2014

FILE No. 7489-D-ZP-001

SHEET 18 OF 20

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DETAIL 1
NOT TO SCALE

DETAIL 2
NOT TO SCALE

DETAIL 3
SCALE: 1" = 100'

VICINITY MAP
SCALE: 1"=3000'

CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C1	992.46'	429.09'	N 31°48'13" E	425.76'	24°46'18"	217.95'
C2	3625.00'	240.94'	S 46°07'16" E	240.90'	3°48'30"	120.52'
C3	320.43'	220.07'	S 87°51'44" W	215.77'	39°21'03"	114.57'

LINE TABLE

LINE	BEARING	DISTANCE
L1	N 65°07'34" W	266.96'
L2	N 79°20'41" W	104.79'
L3	S 83°13'27" W	123.79'
L4	S 61°36'36" E	236.00'
L5	S 36°28'15" W	220.07'
L6	N 35°13'30" E	220.40'
L7	S 53°31'00" E	95.49'
L8	S 39°59'03" E	47.02'
L9	S 88°17'23" E	152.92'
L10	N 72°09'24" E	51.89'
L11	S 19°51'10" E	58.05'
L12	S 48°36'04" E	190.03'
L13	S 88°13'45" E	66.51'
L14	S 69°55'37" E	54.45'
L15	S 23°42'58" W	37.95'
L16	S 59°08'22" W	88.56'
L17	S 16°02'59" W	55.67'
L18	S 30°24'38" E	39.52'
L19	N 82°02'44" E	36.83'
L20	N 65°59'16" E	55.85'
L21	S 89°55'16" E	55.82'
L22	S 16°06'14" E	73.81'
L23	S 68°14'55" E	71.47'
L24	S 84°09'50" E	28.35'
L25	N 22°08'24" E	60.42'
L26	N 07°08'03" E	118.25'
L27	N 13°39'27" E	58.67'
L28	N 21°28'00" E	349.67'
L29	N 08°20'00" W	65.80'
L30	N 33°23'41" W	41.94'
L31	N 87°47'58" E	80.12'
L32	N 11°42'47" E	68.19'
L33	N 33°37'43" W	31.24'
L34	N 36°54'37" E	64.95'
L35	N 08°00'01" E	52.68'
L36	S 54°06'51" W	59.18'
L37	N 09°10'03" W	181.80'
L38	N 13°36'08" E	42.97'
L39	N 11°30'00" W	79.00'
L40	N 37°12'24" W	144.55'
L41	N 46°19'50" W	94.98'
L42	N 70°00'38" W	60.61'
L43	S 55°15'35" E	122.61'
L44	S 45°46'38" E	50.00'
L45	S 15°47'46" W	18.75'
L46	N 84°59'09" W	179.32'
L47	S 06°41'36" W	47.59'
L48	S 38°04'09" W	62.44'
L49	S 30°30'32" W	50.84'
L50	S 73°15'08" W	21.50'
L51	S 19°28'29" W	49.33'
L52	S 07°44'16" W	74.58'
L53	S 18°45'25" E	66.09'
L54	S 25°42'19" W	17.72'
L55	N 85°40'06" W	43.91'
L56	S 08°49'12" W	17.95'
L57	S 75°44'28" W	114.70'
L58	S 64°20'48" W	41.63'
L59	S 32°30'24" W	53.16'
L60	S 51°39'49" W	54.77'

LINE TABLE

LINE	BEARING	DISTANCE
L61	S 78°34'23" W	40.64'
L62	S 21°55'28" W	19.07'
L63	S 63°33'31" W	27.37'
L64	N 60°53'20" W	45.89'
L65	N 18°07'47" E	22.01'
L66	N 46°00'28" W	32.76'
L67	N 70°57'35" W	35.40'
L68	N 09°25'44" W	24.00'
L69	S 59°02'39" W	25.36'
L70	N 53°09'51" W	28.35'
L71	S 84°52'15" W	18.19'
L72	N 65°55'15" W	34.54'
L73	N 04°10'57" E	13.67'
L74	S 83°04'46" W	59.13'
L75	N 83°58'43" W	88.86'
L76	S 57°34'37" W	28.66'
L77	S 21°10'59" E	18.68'
L78	S 59°33'17" W	44.61'
L79	N 50°44'43" W	24.77'
L80	S 72°32'37" W	58.10'
L81	S 39°24'41" W	25.39'
L82	N 65°57'32" W	20.94'
L83	S 76°03'38" W	42.89'
L84	S 69°04'04" W	89.67'
L85	S 20°15'48" W	56.10'
L86	S 25°47'42" W	50.00'
L87	S 65°38'58" W	30.62'
L88	S 03°38'13" W	35.79'
L89	S 70°32'35" W	65.23'
L90	S 00°11'53" W	39.84'
L91	S 39°17'50" E	86.28'
L92	S 20°39'33" W	83.50'
L93	S 66°50'06" E	28.78'
L94	S 23°53'56" W	39.75'
L95	S 47°14'04" W	32.80'
L96	S 60°57'40" W	28.91'
L97	S 67°54'13" W	74.46'
L98	S 60°44'52" W	31.17'
L99	N 88°25'15" W	28.19'
L100	N 19°17'35" W	25.53'
L101	N 61°32'09" W	68.46'
L102	N 51°36'18" W	28.21'
L103	S 77°19'49" W	81.97'
L104	S 60°42'48" W	50.88'
L105	S 32°55'41" W	59.87'
L106	S 15°22'06" E	57.31'
L107	S 84°41'14" E	16.02'
L108	S 26°18'19" E	71.71'
L109	S 24°58'29" E	68.82'
L110	N 86°22'11" E	27.25'
L111	S 42°12'01" E	28.26'
L112	S 02°30'07" E	61.29'
L113	S 50°55'08" E	71.04'
L114	N 73°34'32" W	143.60'
L115	S 48°01'31" E	97.84'
L116	N 72°26'32" W	83.62'
L117	N 57°07'51" W	190.40'
L118	N 67°31'27" W	79.67'

AREA TABULATION

TM 29-32 (PART)	5.70368 AC.
TM 29-36	66.04022 AC.
TM 29-38A	5.10173 AC.
TM 29-39C	37.04277 AC.
TM 29-81	18.26889 AC.
TM 29-82	15.20354 AC.
TM 29-83	2.46820 AC.
TM 38-1 (PART)	50.46392 AC.
TM 38-55	39.65627 AC.
TM 38-58C	2.98961 AC.
TM 38-58D	2.62015 AC.
TM 38-66	29.50261 AC.
TM 38-69	63.77626 AC.
TM 38-70 (PART)	60.63600 AC.
TM 38-70 (PART)	83.95694 AC.
TM 38-70A	5.39268 AC.
TM 38-71	85.67065 AC.
TOTAL	534.52312 AC.

KEY MAP SCALE 1"=1000'

NOTES

1. THE PROPERTIES DELINEATED HEREON ARE LOCATED ON STAFFORD COUNTY TAX ASSESSMENT MAP AS LISTED BELOW:

TAX MAP 29-32 (PART)	ZONED: R-3
TAX MAP 29-36	ZONED: A-2
TAX MAP 29-38A	ZONED: A-2
TAX MAP 29-39C	ZONED: A-2
TAX MAP 29-81	ZONED: A-2
TAX MAP 29-82	ZONED: A-2
TAX MAP 29-83	ZONED: A-1
TAX MAP 38-1 (PART)	ZONED: A-1
TAX MAP 38-55	ZONED: A-2
TAX MAP 38-58C	ZONED: A-2
TAX MAP 38-58D	ZONED: A-2
TAX MAP 38-66	ZONED: M-1
TAX MAP 38-69	ZONED: A-1
TAX MAP 38-70 (PART)	ZONED: A-1
TAX MAP 38-70A	ZONED: A-1
TAX MAP 38-71	ZONED: M-1

2. THE PROPERTIES CURRENTLY STAND IN THE NAME OF THE FOLLOWING AS RECORDED AMONG THE LAND RECORDS OF STAFFORD COUNTY, VIRGINIA:

AS TO TM 29-32 – AUGUSTINE SOUTH ASSOCIATES LLC AS RECORDED IN LR 990008010.

AS TO TM 29-36 – AUGUSTINE SOUTH ASSOCIATES LLC AS RECORDED IN LR 110011657.

AS TO TM 29-38A – AUGUSTINE SOUTH ASSOCIATES LLC AS RECORDED IN LR 110011657.

AS TO TM 29-39C – AUGUSTINE SOUTH ASSOCIATES LLC AS RECORDED IN LR 110011657.

AS TO TM 29-81 – AUGUSTINE SOUTH ASSOCIATES LLC AS RECORDED IN LR 110011657.

AS TO TM 29-82 – AUGUSTINE SOUTH ASSOCIATES LLC AS RECORDED IN LR 110011657.

AS TO TM 29-83 – AUGUSTINE SOUTH ASSOCIATES LLC AS RECORDED IN LR 120016648.

AS TO TM 38-1 – AUGUSTINE SOUTH ASSOCIATES LLC AS RECORDED IN LR 110011657.

AS TO TM 38-55 – AUGUSTINE SOUTH ASSOCIATES LLC AS RECORDED IN LR 140010787.

AS TO TM 38-58C – AUGUSTINE SOUTH ASSOCIATES LLC AS RECORDED IN LR 100015228.

AS TO TM 38-58D – AUGUSTINE SOUTH ASSOCIATES LLC AS RECORDED IN LR 100015228.

AS TO TM 38-66 – AUGUSTINE SOUTH ASSOCIATES LLC AS RECORDED IN LR 990008010.

AS TO TM 38-69 – AUGUSTINE SOUTH ASSOCIATES LLC AS RECORDED IN LR 150000838.

AS TO TM 38-70 – AUGUSTINE SOUTH ASSOCIATES LLC AS RECORDED IN LR 150000838.

AS TO TM 38-70A – AUGUSTINE SOUTH ASSOCIATES LLC AS RECORDED IN LR 150000838.

AS TO TM 38-71 – AUGUSTINE SOUTH ASSOCIATES LLC AS RECORDED IN LR 140010785.

3. BOUNDARY INFORMATION AS SHOWN HEREON IS COMPILED FROM EXISTING LAND RECORDS OF STAFFORD COUNTY, FIELD SURVEYS PERFORMED BY BOWMAN CONSULTING GROUP, LTD. ON JUNE 27, 2013 AND NOVEMBER 21, 2013 AND SURVEY PERFORMED BY THE KNISELEY GROUP, INC., DATED MAY 31, 2013.

4. NO TITLE REPORT FURNISHED. THE PROPERTIES AS SHOWN HEREON ARE SUBJECT TO ALL COVENANTS AND RESTRICTIONS OF RECORD.

5. A PORTION OF THE PROPERTIES SHOWN HEREON LIE IN ZONE "X"(UNSHADED), AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, ZONE "AE", SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD, BASE FLOOD ELEVATIONS DETERMINED AND ZONE "X"(SHADED), AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD, AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP FOR STAFFORD COUNTY, VIRGINIA, COMMUNITY-PANEL NUMBER 5101540137 E, REVISED DATE FEBRUARY 4, 2005.

6. COURSES ALONG ACCOKEEK CREEK, ICE POND BRANCH AND BALLS BRANCH ARE FOR THE PURPOSES OF CALCULATING AREA. THE ACTUAL PROPERTY LINES RUN WITH THE MEANDERS OF THE STREAM(S).

7. SOURCE OF MERIDIAN: NAD 83-VIRGINIA NORTH ZONE.

ZONING PLAT
ON
GEORGE WASHINGTON VILLAGE
ROCK HILL MAGISTERIAL DISTRICT
STAFFORD COUNTY, VIRGINIA

SCALE: AS NOTED
DATE: JUNE 14, 2016

COMMONWEALTH OF VIRGINIA
KEVIN D. EARLY
Lic. No. 003132
6/14/16
LAND SURVEYOR

REVISION

Bowman
CONSULTING

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DWG: P:\7489 – George Washington Village\7489-03-003 (SUR)\Survey\Plats\7489-D-ZP-001.dwg | BY: JA | CHK: KDE | QC:

BCG PROJECT NO: 7489-03-003 | TASK: 0003 | COUNTY REF NO: | SHEET 1 OF 2

7489-D-ZP-001

ZONING PLAT
ON
GEORGE WASHINGTON VILLAGE
ROCK HILL MAGISTERIAL DISTRICT
STAFFORD COUNTY, VIRGINIA

SCALE: 1" = 300'

DATE: JUNE 14, 2016

REVISION

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DWG: P:\7489 – George Washington Village\7489-03-003 (SUR)\Survey\Plats\7489-D-ZP-001.dwg	BY: JA	CHK: KDE	QC:
BCG PROJECT NO: 7489-03-003	TASK: 0003	COUNTY REF NO:	SHEET 2 OF 2

7489-D-ZP-001