APPLICATION ACCEPTED: March 16, 2015
PLANNING COMMISSION: September 24, 2015
BOARD OF SUPERVISORS: Not Yet Scheduled

County of Fairfax, Virginia

September 10, 2015

STAFF REPORT

APPLICATION RZ 2015-SP-003

SPRINGFIELD DISTRICT

APPLICANT:	Christopher Land, LLC
PRESENT ZONING:	R-1: Residential, One Dwelling Unit/Acre
REQUESTED ZONING:	R-8: Residential, Eight Dwelling Units/Acre
PARCEL:	78-3 ((1)) 2
LOCATION:	9537 Burke Lake Road
SITE AREA:	1.88 acres
PROPOSED DENSITY:	6.4 dwelling units per acre (du/ac)
PLAN MAP:	Residential; 5-8 du/ac
PROPOSAL:	To demolish the existing dwelling and rezone from R-1 to R-8 to permit the construction of 12 single family attached dwelling units

STAFF RECOMMENDATIONS:

Staff recommends approval of RZ 2015-SP-003, subject to the execution of proffers consistent with those contained in Appendix 1.

Staff recommends approval of the following waivers and modifications:

Department of Planning and Zoning
Zoning Evaluation Division
12055 Government Center Parkway, Suite 801
Fairfax, Virginia 22035-5509
Phone 703-324-1290 FAX 703-324-3924
www.fairfaxcounty.gov/dpz

- Modification of Par. 1 of Sect. 3-806 of the Zoning Ordinance requiring a minimum district size of five acres for the R-8 District to allow 1.88 acres;

- Modification of Sect. 13-303 of the Zoning Ordinance requiring transitional screening to permit the landscaping as shown on the Generalized Development Plan;

- Waiver of Sect. 13-304 of the Zoning Ordinance requiring barriers; and,

- Deviation from Sect. 12-0508 of the Public Facilities Manual to permit a reduced tree preservation target as shown on the Generalized Development Plan.

It should be noted that it is not the intent of staff to recommend that the Board, in adopting any conditions proffered by the owner, relieve the applicant/owner from compliance with the provisions of any applicable ordinances, regulations, or adopted standards.

It should be further noted that the content of this report reflects the analysis and recommendation of staff; it does not reflect the position of the Board of Supervisors.

The approval of this application does not interfere with, abrogate or annul any easements, covenants, or other agreements between parties, as they may apply to the property subject to this application

For information, contact the Zoning Evaluation Division, Department of Planning and Zoning, 12055 Government Center Parkway, Suite 801, Fairfax, Virginia 22035-5505, (703) 324-1290.

Americans with Disabilities Act (ADA): Reasonable accommodation is available upon 48 hours advance notice. For additional information on ADA call (703) 324-1334 or TTY 711 (Virginia Relay Center).

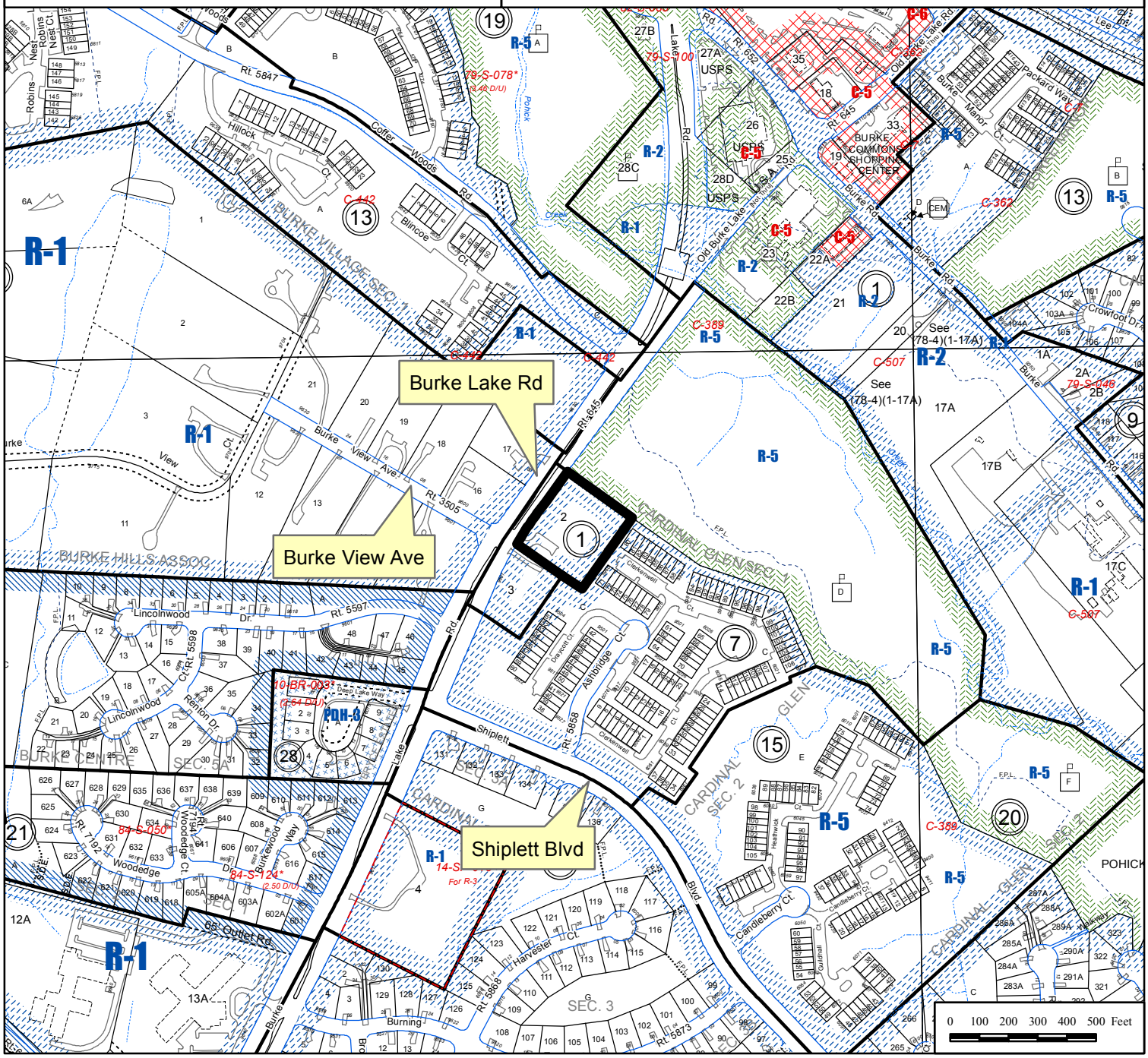
Rezoning Application

RZ 2015-SP-003

Applicant: CHRISTOPHER LAND, LLC
Accepted: 03/16/2015
Proposed: RESIDENTIAL
Area: 1.88 AC OF LAND; DISTRICT - SPRINGFIELD

Zoning Dist Sect:
Located: EAST SIDE OF BURKE LAKE ROAD, 600 FEET NORTH OF ITS INTERSECTION WITH SHIPLETT BOULEVARD

Zoning: FROM R- 1 TO R- 8
Overlay Dist:
Map Ref Num: 078-3- /01/ /0002

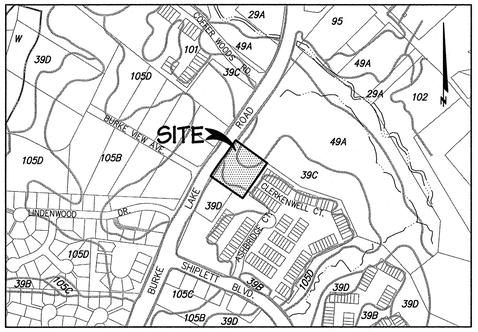


GENERALIZED DEVELOPMENT PLAN

THE TOWNES AT BURKE LAKE CROSSING

SPRINGFIELD DISTRICT
FAIRFAX COUNTY, VIRGINIA

RZ 2015-SP-003



SOIL I.D. #	SERIES NAME	FOUNDATION SUPPORT	SOIL DRAINAGE	EROSION POTENTIAL	PROBLEM CLASS	GEOTECH REPORT REQ'D
39C	GLENELG SILT LOAM	GOOD	GOOD	HIGH	I	NO
39D	GLENELG SILT LOAM	GOOD	GOOD	HIGH	I	NO
49A	HATBORO SILT LOAM	POOR	POOR	LOW	III	YES
95	URBAN LAND	N/A	N/A	N/A	N/A	N/A

SOILS MAP/DATA
SCALE : 1" = 500'

REVISIONS		
NO.	SHEET NUMBER AND REVISION DESCRIPTION	DATE
1.	(1) REV. SITE TABS & TYPICAL LOT LAYOUT. (4) REVISED LAYOUT. (5) REV. LANDSCAPING, TREE COVER CALCULATIONS & TREE PRESERVATION TARGET LETTER. (6&7) REVISED TREE INVENTORY. (12) NEW SHEET. (13) REVISED POTENTIAL INTERPARCEL CONNECTION.	5-29-15
2.	(1) ADDED WAIVER REQUESTS. (4) REVISED SITE ENTRANCE; ADDED NOISE BARRIER & OPTIONAL DESIGN. (6&7) REVISED TREE INVENTORY. (12&13) UPDATED PLAN WITH NEW ENTRANCE. (14) NEW SHEET.	7-24-15
3.	(1) REVISED PARKING TAB. (5) NEW SHEET.	8-4-15
4.	(5) REVISED LAYOUT.	8-19-15
5.	(4) REVISED SIDEWALK CONNECTION TO CARDINAL GLEN. (5) REVISED EMERGENCY ACCESS & SIDEWALK CONNECTION TO CARDINAL GLEN. (6) REVISED TREE TARGET LETTER. (5A,5B,6A,6B,6C) NEW SHEETS.	9-3-15
6.	(5) REVISED SITE EGRESS. (6A) REVISED LANDSCAPING IN BUFFER ALONG LOT 12. (5B&6C) REMOVED SHEETS.	9-8-15

NO CHANGES, OTHER THAN THOSE SPECIFIED ABOVE, HAVE BEEN MADE TO THIS PLAN FROM WHAT WAS PREVIOUSLY SUBMITTED OR APPROVED.

MINIMUM STORMWATER INFORMATION FOR REZONING, SPECIAL EXCEPTION, SPECIAL PERMIT AND DEVELOPMENT PLAN APPLICATIONS

☒ 1. Plat is at a minimum scale of 1"=50' (unless it is depicted on one sheet with a minimum scale of 1"=100').

☒ 2. A graphic depicting the stormwater management facility(ies) and limits of clearing and grading accommodate the stormwater management facility(ies), storm drainage pipe systems and outlet protection, pond spillways, access roads, site outfalls, energy dissipation devices, and stream stabilization measures as shown on Sheet 4.

☒ 3. Provide :

Facility Name/ Type & No.	On-site area served (acres)	Off-site area served (acres)	Drainage area (acres)	Footprint area (sf)	Storage Volume (cf)	If pond, dam height (ft)
Rain Garden	1.67	0	1.67	2,500	4,125	N/A
UG Stone Storage	1.67	2.84	4.51	3,500	6,650	N/A
Totals	1.67	2.84	4.51	3,500	10,775	

☒ 4. Onsite drainage channels, outfalls, and pipe systems are shown on Sheet 4. Pond inlet and outlet pipe systems are shown on Sheet 4.

☒ 5. Maintenance access (road) to stormwater management facility(ies) are shown on Sheet 4. Type of maintenance access road surface noted on the plat is grass pavers.

☒ 6. Landscaping and tree preservation shown in and near the stormwater management facility is shown on Sheet 6.

☒ 7. A 'stormwater management narrative' which contains a description of how detention and best management practices requirements will be met is provided on Sheet 10.

☒ 8. A description of the existing conditions of each numbered site outfall extended downstream from the site to a point which is at least 100 times the site area or which has a drainage area of at least one square mile (640 acres) is provided on Sheet 10.

☒ 9. A description of how the outfall requirements, including known changes to contributing drainage areas (i.e. drainage diversions), of the Public Facilities Manual will be satisfied is provided on Sheet 10.

☒ 10. Existing topography with maximum contour intervals of two (2) feet and a note as to whether it is an air survey or field run is provided on Sheets 1 & 2.

☐ 11. A submission waiver is requested for N/A

☐ 12. Stormwater management is not required because N/A

NOTES

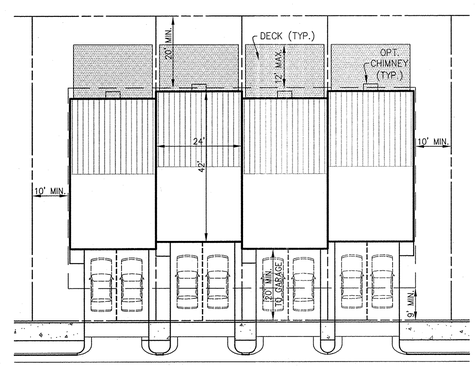
1. THE SUBJECT PROPERTY DELINEATED ON THIS PLAN IS LOCATED ON FAIRFAX COUNTY TAX ASSESSMENT MAP NUMBER 78-3((1))2. THE SITE IS CURRENTLY ZONED R-1. THE PROPOSED ZONING DISTRICT IS R-8.
2. THE PROPERTY HEREON IS CURRENTLY UNDER THE OWNERSHIP OF EVERTH QUEZADA AND ROSMERY VEGA IN DEED BOOK 20126 AT PAGE 1188 AMONG THE LAND RECORDS OF FAIRFAX COUNTY, VIRGINIA.
3. BOUNDARY AND TOPOGRAPHIC INFORMATION TAKEN FROM A FIELD RUN SURVEY PREPARED BY CHARLES P. JOHNSON & ASSOCIATES, DATED JANUARY 2015. CONTOUR INTERVAL EQUALS TWO FEET NGVD 1929.
4. THERE ARE NO 100-YEAR FLOODPLAINS ON-SITE. NO FLOODPLAIN OR DRAINAGE STUDIES ARE REQUIRED FOR THIS PROJECT.
5. THERE ARE NO RESOURCE PROTECTION AREAS (RPAs) OR ENVIRONMENTAL QUALITY CORRIDORS (EQCs) IMPACTING THIS SITE. A WATER QUALITY IMPACT ASSESSMENT WILL NOT BE REQUIRED.
6. TO THE BEST OF OUR KNOWLEDGE, THE SITE HAS NO SCENIC ASSETS OR NATURAL FEATURES DESERVING OF PROTECTION AND PRESERVATION.
7. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO KNOWN GRAVES, OBJECTS, OR STRUCTURES MARKING A PLACE OF BURIAL.
8. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITY EASEMENTS HAVING A WIDTH OF 25 FEET OR GREATER, NOR ANY MAJOR UNDERGROUND UTILITY EASEMENTS LOCATED WITHIN THE SITE.
9. ANY EXISTING WELLS ON-SITE ARE TO BE CAPPED AND ABANDONED IN ACCORDANCE WITH HEALTH DEPARTMENT REGULATIONS.
10. SEE SHEET 3 FOR A DESCRIPTION OF THE EXISTING VEGETATION.
11. EXISTING STRUCTURES ARE TO BE REMOVED. THE EXISTING DWELLING WAS CONSTRUCTED IN 1955.
12. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO HAZARDOUS OR TOXIC SUBSTANCES AS SET FORTH IN TITLE 40, CODE OF FEDERAL REGULATIONS PART 116.4, 302.4, AND 355; ALL HAZARDOUS WASTE AS SET FORTH IN COMMONWEALTH OF VIRGINIA/DEPARTMENT OF WASTE MANAGEMENT VR 672-10-1 – VIRGINIA HAZARDOUS WASTE MANAGEMENT REGULATIONS; AND/OR PETROLEUM PRODUCTS AS DEFINED IN TITLE 40, CODE OF FEDERAL REGULATIONS PART 280; TO BE GENERATED, UTILIZED, STORED, TREATED, AND/OR DISPOSED OF ON-SITE AND THE SIZE AND CONTENTS OF ANY EXISTING OR PROPOSED STORAGE TANKS OR CONTAINERS.
13. THERE ARE NO ZONING OVERLAY DISTRICTS IMPACTING THIS SITE.
14. THERE ARE NO AFFORDABLE DWELLING UNITS (ADUs) REQUIRED FOR THIS PROJECT.
15. NO DENSITY REDUCTIONS ARE REQUIRED BY ZONING ORDINANCE SECTION 2-308. DENSITY CREDIT FOR ANY DEDICATION OF LAND FOR PUBLIC USE SHALL BE RESERVED FOR THE SUBJECT PROPERTY IN ACCORDANCE WITH THE PROVISIONS SET FORTH IN PAR. 4 OF §2-308 OF THE ZONING ORDINANCE.
16. THE TRAFFIC AND PEDESTRIAN CIRCULATION SYSTEMS SHALL BE PROVIDED AS GENERALLY SHOWN ON THIS PLAN, SUBJECT TO FINAL ENGINEERING.
17. PRIVATE STREETS AND INTERIOR TRAVELWAYS SHALL CONFORM TO THE FAIRFAX COUNTY PFM, UNLESS OTHERWISE MODIFIED.
18. A TRAIL IS NOT REQUIRED FOR THIS PROJECT PER THE FAIRFAX COUNTY TRAILS PLAN.
19. PARKING SPACES WILL BE PROVIDED AS GENERALLY SHOWN ON THE PLAN. THE NUMBER OF PARKING SPACES MAY BE INCREASED OR DECREASED FROM THAT NUMBER REPRESENTED IN THAT TABULATION AS LONG AS THE MINIMUM NUMBER OF SPACES IS PROVIDED IN ACCORDANCE WITH THE PROVISIONS OF ARTICLE 11 OF THE ZONING ORDINANCE.
20. THE LANDSCAPE CONCEPTS, SCREENING MEASURES, AND PROPOSED TREE COVER PROVIDED SHALL COMPLY WITH THE PROVISIONS OF CHAPTER 12 OF THE FAIRFAX COUNTY PFM AND ARTICLE 13 OF THE ZONING ORDINANCE. LANDSCAPING SHOWN ON THIS PLAN IS FOR SCHEMATIC PURPOSES ONLY, AND IS SUBJECT TO CHANGE WITH FINAL ENGINEERING. THE LOCATION OF LANDSCAPING MAY BE ADJUSTED TO ACCOMMODATE UTILITY, SIGNAGE, SIGHT DISTANCE, AND OTHER REQUIREMENTS, FROM THOSE SHOWN ON THIS PLAN.
21. ALL LIGHTING ON SITE WILL BE SHIELDED AND LOCATED IN SUCH A MANNER AS TO REDUCE GLARE ON ADJACENT PROPERTIES IN ACCORDANCE WITH THE STANDARDS SET FORTH IN ARTICLE 14 OF THE ZONING ORDINANCE.
22. THE PROPOSED UTILITY ALIGNMENTS SHOWN ON THE PLAN ARE SCHEMATIC AND SUBJECT TO CHANGE WITH FINAL ENGINEERING DESIGN. UTILITY PLANS AND PROFILES, AS WELL AS ALL NECESSARY EASEMENTS WILL BE PROVIDED WITH THE SITE PLAN(S).
23. IN ACCORDANCE WITH THE ADOPTED COMPREHENSIVE PLAN, THE PROPOSED DEVELOPMENT WILL PROVIDE RESIDENTIAL DEVELOPMENT AT 6.4 DWELLING UNITS PER ACRE AND WILL CONFORM TO ALL APPLICABLE ORDINANCES, REGULATIONS, AND ADOPTED STANDARDS EXCEPT AS NOTED BELOW :
   - A WAIVER OF THE MINIMUM DISTRICT SIZE OF FIVE (5) ACRES IS HEREBY REQUESTED.
   - A MODIFICATION OF THE TRANSITIONAL SCREENING REQUIREMENT OF ZONING ORDINANCE ARTICLE 13-303 ALONG BURKE LAKE ROAD IS HEREBY REQUESTED.
   - A WAIVER OF THE BARRIER REQUIREMENT OF Z.O. ARTICLE 13-304 IS HEREBY REQUESTED.
   - A DEVIATION FROM THE TREE PRESERVATION TARGET REQUIREMENT OF PFM §12-508 IS HEREBY REQUESTED (SEE LETTER ON SHEET 6).
   - A WAIVER OF THE ON-ROAD BIKE LANE REQUIREMENT OF Z.O. ARTICLE 17-201 ALONG BURKE LAKE ROAD IS HEREBY REQUESTED.
   - A WAIVER OF THE STORMWATER ACCESS REQUIREMENT WILL BE REQUESTED WITH THE FINAL PLANS.
24. PROPOSED PUBLIC IMPROVEMENTS :
   - WATER SERVICE TO BE PROVIDED BY AN EXISTING 12" MAIN LOCATED IN BURKE LAKE ROAD
   - SANITARY SERVICE TO BE PROVIDED BY AN EXISTING 8" MAIN LOCATED IN CARDINAL GLEN SECTION ONE
25. THERE ARE NO RECREATIONAL FACILITIES PROPOSED WITH THIS DEVELOPMENT.
26. SPECIAL AMENITIES ARE NOT PROPOSED WITH THIS PLAN.
27. A DEVELOPMENT SCHEDULE HAS NOT BEEN DETERMINED AT THIS TIME.
28. SEE SHEET 15 FOR ARCHITECTURAL ELEVATIONS.
29. FIRE LANE LOCATION(S), AND THE STRIPING AND SIGNAGE THEREOF, WILL BE PROVIDED WITH THE SITE PLAN.
30. PARCEL "A" WILL BE CONVEYED TO A HOMEOWNERS ASSOCIATION FOR OWNERSHIP AND MAINTENANCE.
31. THE APPLICANT RESERVES THE RIGHT TO LOCATE ONE OR MORE TEMPORARY SALES OFFICES ON THE PROPERTY IN ACCORDANCE WITH ARTICLE 8-808 OF THE ZONING ORDINANCE.
32. MINOR MODIFICATIONS TO THE BUILDING FOOTPRINTS, LOT AREAS, DIMENSIONS, UTILITY LAYOUT, AND LIMITS OF CLEARING AND GRADING MAY OCCUR WITH THE FINAL ENGINEERING DESIGN, IN SUBSTANTIAL CONFORMANCE WITH THE GDP, PROVIDED SUCH ARE IN ACCORDANCE WITH THE MINOR MODIFICATIONS PROVISION IN SECTION 18-204 OF THE ZONING ORDINANCE.

SITE TABULATIONS

SITE AREA :		
LOT AREA	31,620∅	(0.726 Ac)
PARCEL "A"	45,951∅	(1.055 Ac)
RIGHT-OF-WAY DEDICATION	4,345∅	(0.010 Ac)
TOTAL	81,916∅	(1.881 Ac)

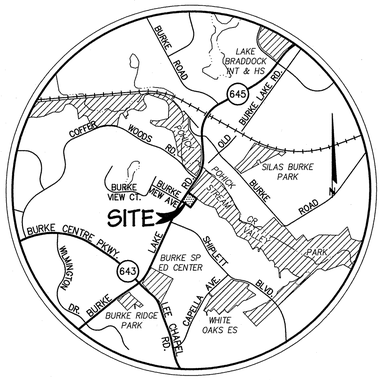
R-8 ZONE	REQUIRED	PROVIDED
MINIMUM DISTRICT SIZE	5 Ac	1.88 Ac*
NUMBER OF UNITS	---	12 Single-family Attached
MAXIMUM DENSITY	8 DU/Ac	6.4 DU/AC
MINIMUM LOT AREA	N/A	2,000∅ ±
AVERAGE LOT AREA	N/A	2,600∅ ±
MINIMUM LOT WIDTH	Interior Lot – 18' Corner Lot – N/A	Interior Lot – 24' Corner Lot – N/A
MAXIMUM BUILDING HEIGHT	35'	35'
MINIMUM YARDS : FRONT SIDE REAR	 15'/5' 15'/10' 30'/20'	See angle of bulk plane diagram this sheet
OPEN SPACE	20% (0.38 Ac)	30%± (0.56 Ac±)
PARKING	2.7 spaces/unit (36 total)	4.75 spaces/ unit (24 garage + 24 driveway + 9 surface = 57 total)

* SEE WAIVER REQUEST WITH NOTE #23



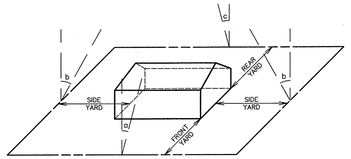
TYPICAL LOT LAYOUT
SCALE : 1" = 20'

NOTES :
- EXTENSIONS INTO REQUIRED YARDS ARE TO BE PERMITTED IN ACCORDANCE WITH ARTICLE 2-412.
- DECKS MAY BE PERMITTED IN ACCORDANCE WITH ARTICLE 2-412, WHICH ALLOWS A 12' EXTENSION INTO THE REQUIRED MINIMUM YARD, BUT SET BACK AT LEAST FIVE (5) FEET FROM PROPERTY LINE(S).
- EACH UNIT IS TO HAVE TWO(2) 8.5' x 18.0' PARKING SPACES IN THE DRIVEWAY



VICINITY MAP
SCALE : 1" = 2000'

MINIMUM REQUIRED YARD FOR BUILDING WITH 35' HEIGHT
RESIDENTIAL



FRONT YARD : 1a 15' WITH A BUILDING HEIGHT OF 35', THE FRONT YARD = 9' BUT NOT LESS THAN 5'

SIDE YARD : 1b 15' WITH A BUILDING HEIGHT OF 35', THE SIDE YARD = 9' BUT NOT LESS THAN 10'

REAR YARD : 1c 30' WITH A BUILDING HEIGHT OF 35', THE REAR YARD = 20' BUT NOT LESS THAN 20'

COMMONWEALTH OF VIRGINIA
ANTHONY T. OWENS
Lic. No. 034522
9-9-15
PROFESSIONAL ENGINEER

DEVELOPER
THE CHRISTOPHER COMPANIES
10461 WHITE GRANITE ROAD
SUITE 103
OAKTON, VIRGINIA 22124
(703) 352-5950

TABLE OF CONTENTS

1 COVER SHEET
2 EXISTING CONDITIONS PLAN
3 EXISTING VEGETATION MAP
4 GENERALIZED DEVELOPMENT PLAN
5 ALTERNATE ENTRANCE LOCATION 'A'
5A ALTERNATE ENTRANCE LOCATION 'B'
6 LANDSCAPE PLAN
6A LANDSCAPE PLAN FOR ALTERNATE LAYOUT 'A'
6B LANDSCAPE PLAN FOR ALTERNATE LAYOUT 'B'
7 TREE PRESERVATION PLAN
8 TREE PRESERVATION INVENTORY
9 OUTFALL MAP
10 OUTFALL NARRATIVE & COMPUTATIONS
11 DRAINAGE MAPS
12 BMP CALCULATIONS
13 SIGHT DISTANCE PLAN & PROFILE
14 POTENTIAL FUTURE LAYOUT FOR 78-3((1))3
15 ARCHITECTURAL ELEVATIONS

CPJ Associates
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3959 Pender Dr., Ste. 210 Fairfax, VA 22030 703-385-7555 Fax: 703-273-8595
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DATE : MARCH 13, 2015
REVISED : MAY 29, 2015
JULY 24, 2015
AUGUST 4, 2015
AUGUST 19, 2015
SEPTEMBER 3, 2015
SEPTEMBER 8, 2015

THE TOWNES AT BURKE LAKE CROSSING

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BURKE VIEW AVENUE
ROUTE #3505
(50' WIDTH)

BURKE LAKE ROAD – ROUTE #645
(VARIABLE WIDTH)

EX. ASPHALT TRAIL
EX. MEDIAN
EX. 12" D.I.P. W/M
EX. 15" R.C.P.
INV. OUT =261.49
RIM= 254.47
EX. C&G
EX. 5' CONC. WALK
A=30.65' R=1519.00'
S N35°05'01"E 269.08'
17' C&P EASEMENT (D.B. 7532, PG. 1647)
15' V.E.P.CO. ESM'T. (D.B. 7548, PG. 1656)
EX. RIGHT-OF-WAY
S. V.E.P.CO. ESM'T. (D.B. 1433, PG. 351)
EX. DRIVEWAY
EX. FLAGPOLE TBR
EX. DRIVEWAY TBR
VIRGINIA STATE GRID NORTH (VCS83)

PARCEL 3
N/F
ANN L. HARPER
(D.B. 9541, PG. 448)
(W.B. 624, PG. 531)
ZONE : R-1 USE : RESIDENTIAL

EX. ONE-STORY DWELLING TO BE REMOVED
#9537
EX. GARAGE TO BE REMOVED
EX. DECK
N55°29'06"W 273.33'
S55°29'55"E 273.05'
159.2'
129.1'
107.7'
36.0'
10' SAN. SEWER ESM'T. (D.B. 3583, PG. 1118)
EX. SAN. CLEANOUTS
S34°59'28"W 299.79'

PARCEL "G"
N/F
FAIRFAX COUNTY PARK AUTHORITY
(D.B. 417, PG. 146)
ZONE : R-3C USE : PARK

POHICK STREAM VALLEY PARK

LOT 51

CARDINAL GLEN
SECTION ONE

PARCEL "C"
N/F
CARDINAL GLEN
HOMES ASSOCIATION
(D.B. 3837, PG. 318)
ZONE : R-5C USE : OPEN SPACE

DRAYCOTT COURT
(PRIVATE STREET)

CLERKENWELL COURT
(PRIVATE STREET)

LOT 71
LOT 72
LOT 80
LOT 81

INV. OUT =252.80
EX. 8" SAN. SEWER
10' SAN. SEWER ESM'T. (D.B. 3837, PG. 271)
EX. 3' C.I.P. W/M
15' V.E.P. ESM'T. (D.B. 3837, PG. 271)
10' STM. DRN. ESM'T. (D.B. 3837, PG. 271)
EX. 15" R.C.P.

GRAPHIC SCALE
20 0 10 20 40
SCALE: 1" = 20'

LEGEND

- 402 — EXISTING CONTOUR
- 400 — EXISTING INDEX CONTOUR
- EXISTING TREELINE
- EX. STORM DRAIN & EASEMENT
- EX. SAN. SEWER & EASEMENT
- W — W — EX. WATERMAIN & EASEMENT
- OHW — OHW — EXISTING UTILITY LINE & POLE
- EXISTING STREET LIGHT

NO.	DATE	REVISION PRIOR TO APPROVAL

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EXISTING CONDITIONS PLAN

THE TOWNES AT BURKE LAKE CROSSING

SPRINGFIELD DISTRICT
FAIRFAX COUNTY, VIRGINIA

RZ 2015-SP-003

COMMONWEALTH OF VIRGINIA
ANTHONY T. OWENS
Lic. No. 034522
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	REVIEW/APPROV. BY	DATE
	REVISIONS		

DESIGN KJV	DRAFT KJV
APPROVED HWT	DATE FEB. 2015
SCALE HORIZ.: 1" = 20' VERT: ---	

SHEET 2 OF 15

PRJ NO: 13-531

TYPE: GDP

Attached Xrefs: 00-G0500/00-R0401/00-R0301

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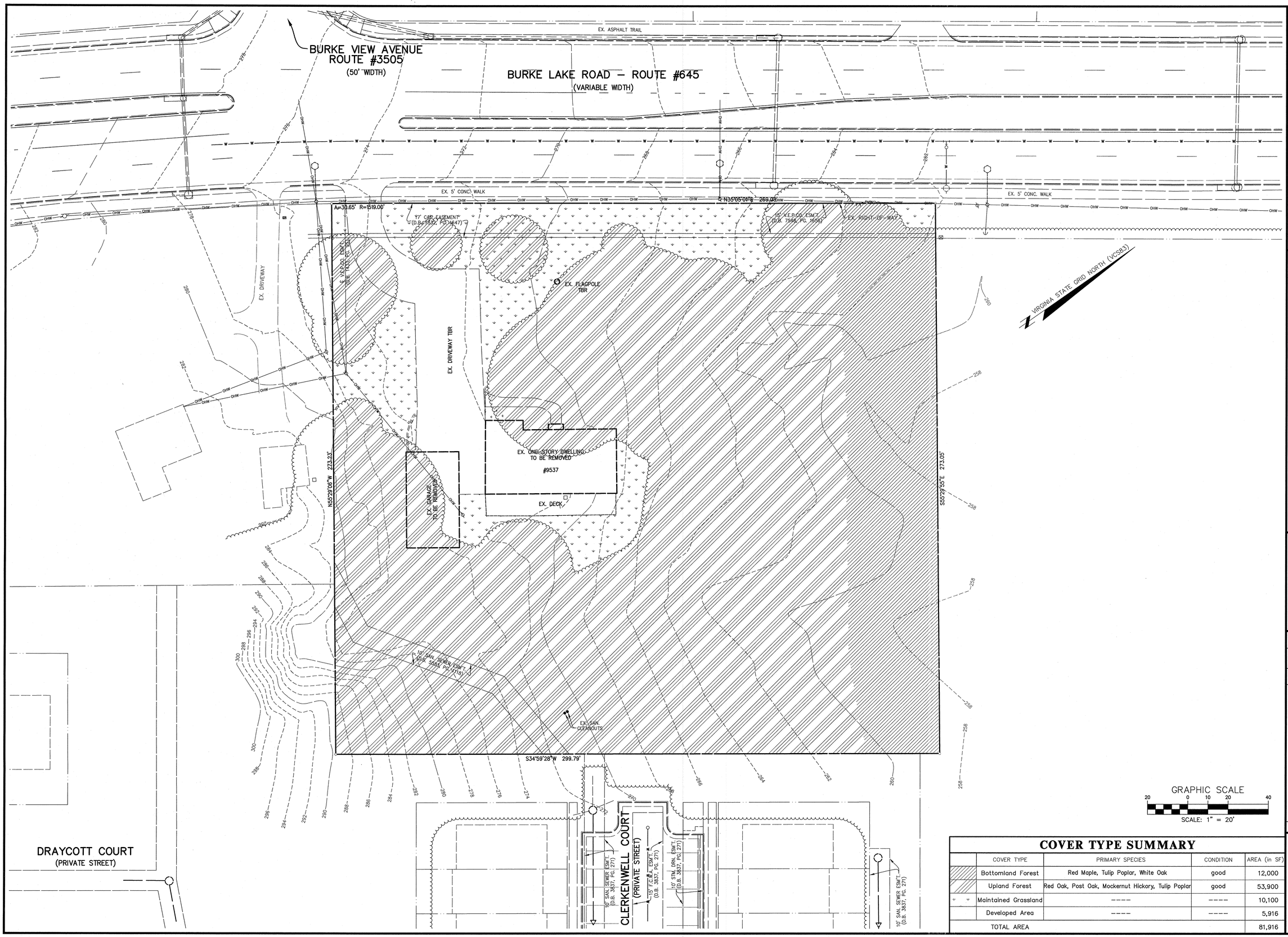
kvestal



GRAPHIC SCALE

20 0 10 20 40

SCALE: 1" = 20'

COVER TYPE SUMMARY

	COVER TYPE	PRIMARY SPECIES	CONDITION	AREA (in SF)
	Bottomland Forest	Red Maple, Tulip Poplar, White Oak	good	12,000
	Upland Forest	Red Oak, Post Oak, Mockernut Hickory, Tulip Poplar	good	53,900
	Maintained Grassland	----	----	10,100
	Developed Area	----	----	5,916
	TOTAL AREA			81,916

NO.	DATE	REVISION PRIOR TO APPROVAL

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EXISTING VEGETATION MAP

THE TOWNES AT BURKE LAKE CROSSING

SPRINGFIELD DISTRICT
FAIRFAX COUNTY, VIRGINIA

RZ 2015-SP-003

COMMONWEALTH OF VIRGINIA
ANTHONY T. OWENS
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PROFESSIONAL ENGINEER

NO.	DESCRIPTION	REVIEW BY	APPROV.	DATE
	REVISIONS			

DESIGN LBD	DRAFT LBD
APPROVED HMF	
DATE FEB. 2015	SCALE HORIZ.: 1" = 20' VERT:
SHEET 3	OF 15
PRJ NO: 13-531	
TYPE: GDP	

Attached Xrefs: 00-R0401/00-G0500/00-R0301

kvestal

BURKE VIEW AVENUE
ROUTE #3505
(50' WIDTH)

BURKE LAKE ROAD – ROUTE #645
(VARIABLE WIDTH)

THE NEED FOR ANY MODIFICATIONS OF THE LEFT-TURN LANE SHALL BE DETERMINED BY A CAPACITY ANALYSIS TO BE SUBMITTED WITH THE FINAL PLANS. THE CLEARING LIMITS MAY BE MODIFIED TO ACCOMMODATE ANY LEFT-TURN LANE EXTENSION.

A WAIVER OF THE STORMWATER FACILITY ACCESS REQUIREMENT WILL BE REQUESTED WITH THE FINAL PLANS. IF NO WAIVER IS GRANTED, THE ACCESS SHALL BE ROUTED FROM THE SITE EGRESS THROUGH THE RIGHT-OF-WAY DEDICATION AREA.

PARCEL 3
N/F
ANN L HARPER
(D.B. 9541, PG. 448)
(W.B. 624, PG. 531)
ZONE : R-1 USE : RESIDENTIAL

SEE SHEET 14 FOR POTENTIAL INTERPARCEL CONNECTION (FUNDS FOR FUTURE CONSTRUCTION TO BE ESCROWED)

PARCEL "A"
45,951¢

PARCEL "C"
N/F
CARDINAL GLEN HOMES ASSOCIATION
(D.B. 3837, PG. 318)
ZONE : R-5C USE : OPEN SPACE

PARCEL "D"
N/F
FAIRFAX COUNTY PARK AUTHORITY
(D.B. 4176, PG. 146)
ZONE : R-5C USE : PARK

FOHICK STREAM VALLEY PARK

CARDINAL GLEN
SECTION ONE

CLERKENWELL COURT
(PRIVATE STREET)

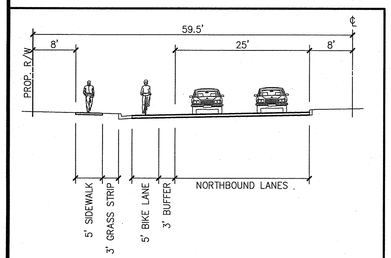
PRIVATE STREET

POSSIBLE SIDEWALK CONNECTION (SUBJECT TO APPROVAL BY THE CARDINAL GLEN HOA)

THE APPLICANT SHALL HAVE THE RIGHT TO CHANGE ITS STORMWATER MANAGEMENT DESIGNS OR TYPES OF FACILITIES WITHOUT THE REQUIREMENT TO AMEND THE GDP OR THE PROFFERS, OR TO GAIN APPROVAL OF A PROFFER OR GDP AMENDMENT, PROVIDED THE STORMWATER MANAGEMENT DESIGN SHALL NOT MATERIALLY IMPACT THE LIMITS OF CLEARING & GRADING, BUILDING LOCATIONS, OR THE ROAD LAYOUTS, AND SHALL BE IN MATERIAL CONFORMANCE WITH THE GDP.

GRAPHIC SCALE
SCALE: 1" = 20'

VIRGINIA STATE GRID NORTH (VCS83)



FUTURE BURKE LAKE ROAD
WITH ON-ROAD BIKE LANE
SCALE : 1" = 15'

LEGEND

- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- LIMITS OF CLEARING & GRADING
- EXISTING TREELINE
- PROPOSED TREELINE
- EX. STORM DRAIN & EASEMENT
- PROPOSED STORM DRAIN
- EX. SAN. SEWER & EASEMENT
- PROPOSED SANITARY SEWER
- EX. WATERMAIN & EASEMENT
- PROPOSED WATERMAIN
- EXISTING UTILITY LINE & POLE
- POSSIBLE NOISE BARRIER

OPTIONAL DESIGN
WITH ALTERNATE SANITARY SEWER CONNECTION

NO.	DATE	REVISION PRIOR TO APPROVAL
5.	9-3-15	REVISED SIDEWALK CONNECTION TO CARDINAL GLEN (KJV)
2.	7-24-15	REVISED SITE ENTRANCE LOCATION; ADDED NOISE BARRIER & OPT. DESIGN
1.	5-29-15	REVISED LAYOUT (KJV)

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GENERALIZED DEVELOPMENT PLAN

THE TOWNES AT BURKE LAKE CROSSING

SPRINGFIELD DISTRICT
FAIRFAX COUNTY, VIRGINIA

RZ 2015-SP-003

COMMONWEALTH OF VIRGINIA
KIMBERLY ANTHONY OWENS
No. 034522
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	REVIEW BY	APPROVD.	DATE
	REVISIONS			

DESIGN	DRAFT	APPROVED	DATE	SCALE
KJV	KJV	HMF	MAR 2015	HORIZ.: 1" = 20' VERT.: 1" = --

SHEET 4 OF 15

PRJ NO: 13-531

TYPE: GDP

Attached Xrefs: 00-G0500/00-R0401/00-R0301/00-G0700

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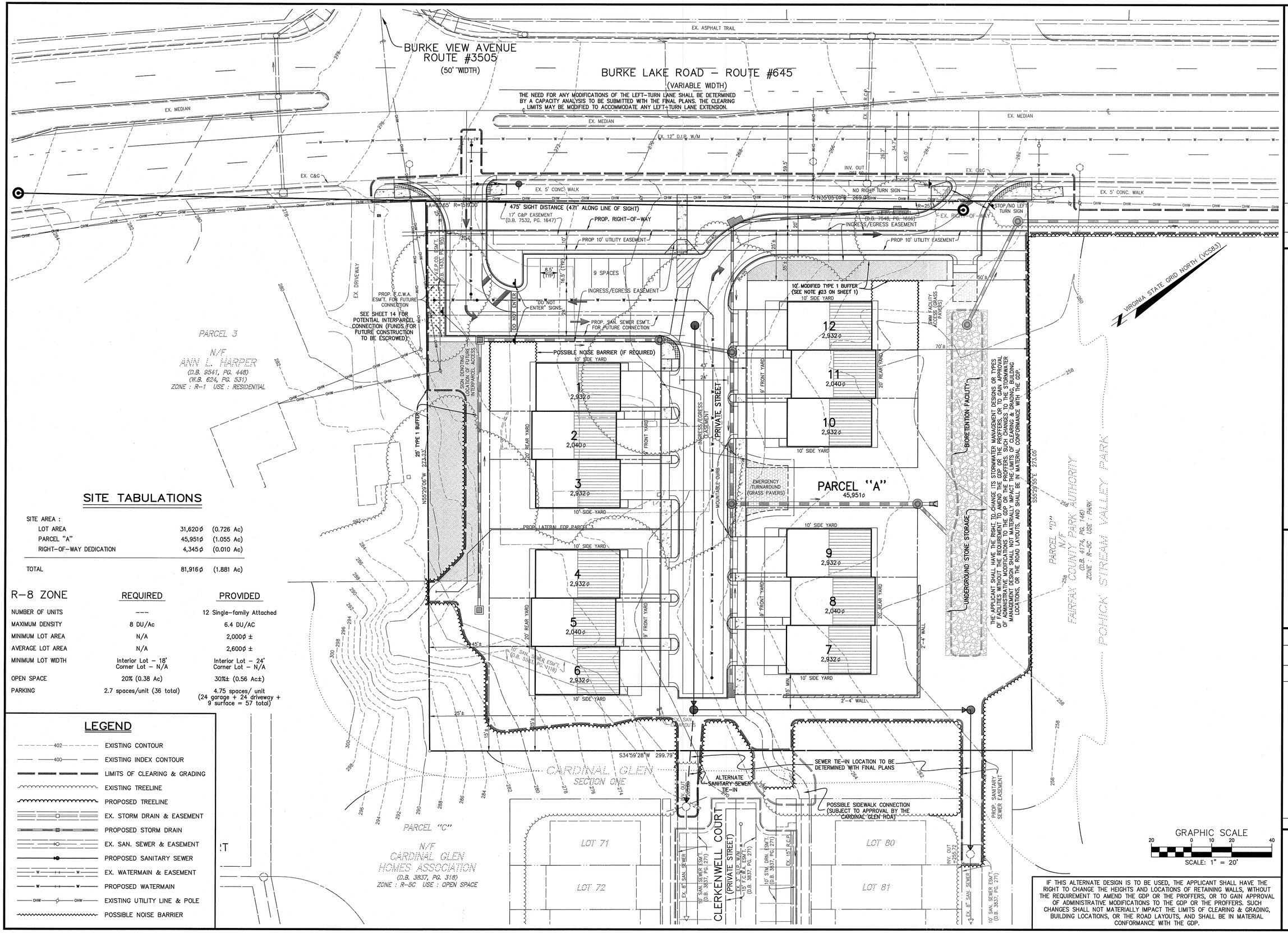

SITE TABULATIONS

SITE AREA :		
LOT AREA	31,620¢	(0.726 Ac)
PARCEL "A"	45,951¢	(1.055 Ac)
RIGHT-OF-WAY DEDICATION	4,345¢	(0.010 Ac)
TOTAL	81,916¢	(1.881 Ac)

R-8 ZONE	REQUIRED	PROVIDED
NUMBER OF UNITS	---	12 Single-family Attached
MAXIMUM DENSITY	8 DU/Ac	6.4 DU/AC
MINIMUM LOT AREA	N/A	2,000¢ ±
AVERAGE LOT AREA	N/A	2,600¢ ±
MINIMUM LOT WIDTH	Interior Lot – 18' Corner Lot – N/A	Interior Lot – 24' Corner Lot – N/A
OPEN SPACE	20% (0.38 Ac)	30%± (0.56 Ac±)
PARKING	2.7 spaces/unit (36 total)	4.75 spaces/ unit (24 garage + 24 driveway + 9 surface = 57 total)

LEGEND

- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- LIMITS OF CLEARING & GRADING
- EXISTING TREELINE
- PROPOSED TREELINE
- EX. STORM DRAIN & EASEMENT
- PROPOSED STORM DRAIN
- EX. SAN. SEWER & EASEMENT
- PROPOSED SANITARY SEWER
- EX. WATERMAIN & EASEMENT
- PROPOSED WATERMAIN
- EXISTING UTILITY LINE & POLE
- POSSIBLE NOISE BARRIER

IF THIS ALTERNATE DESIGN IS TO BE USED, THE APPLICANT SHALL HAVE THE RIGHT TO CHANGE THE HEIGHTS AND LOCATIONS OF RETAINING WALLS, WITHOUT THE REQUIREMENT TO AMEND THE GDP OR THE PROFFERS, OR TO GAIN APPROVAL OF ADMINISTRATIVE MODIFICATIONS TO THE GDP OR THE PROFFERS. SUCH CHANGES SHALL NOT MATERIALLY IMPACT THE LIMITS OF CLEARING & GRADING, BUILDING LOCATIONS, OR THE ROAD LAYOUTS, AND SHALL BE IN MATERIAL CONFORMANCE WITH THE GDP.

NO.	DATE	REVISION PRIOR TO APPROVAL
6.	9-8-15	MODIFIED SITE EGRESS (KJV)
5.	9-3-15	REV. EMERGENCY ACCESS & SIDEWALK CONNECTION TO CARDINAL GLEN (KJV)
4.	8-19-15	REVISED LAYOUT (KJV)
3.	8-4-15	NEW SHEET (KJV)

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ALTERNATE ENTRANCE LOCATION 'A'

THE TOWNES AT BURKE LAKE CROSSING

SPRINGFIELD DISTRICT
FAIRFAX COUNTY, VIRGINIA

RZ 2015-SP-003

COMMONWEALTH OF VIRGINIA
KEVIN JAMES OWENS
Lic. No. 034522
PROFESSIONAL ENGINEER

NO.	DESCRIPTION REVISIONS	RENEW APPROV.	DATE

DESIGN	DRAFT	APPROVED	DATE	SCALE
KJV	KJV	HWE	MAR. 2015	HORIZ: 1" = 20' VERT: ---

SHEET 5 OF 15

PRJ NO: 13-531

TYPE: GDP

Attached Xrefs: 00-G0500/00-R0401/00-R0301/00-G0700A

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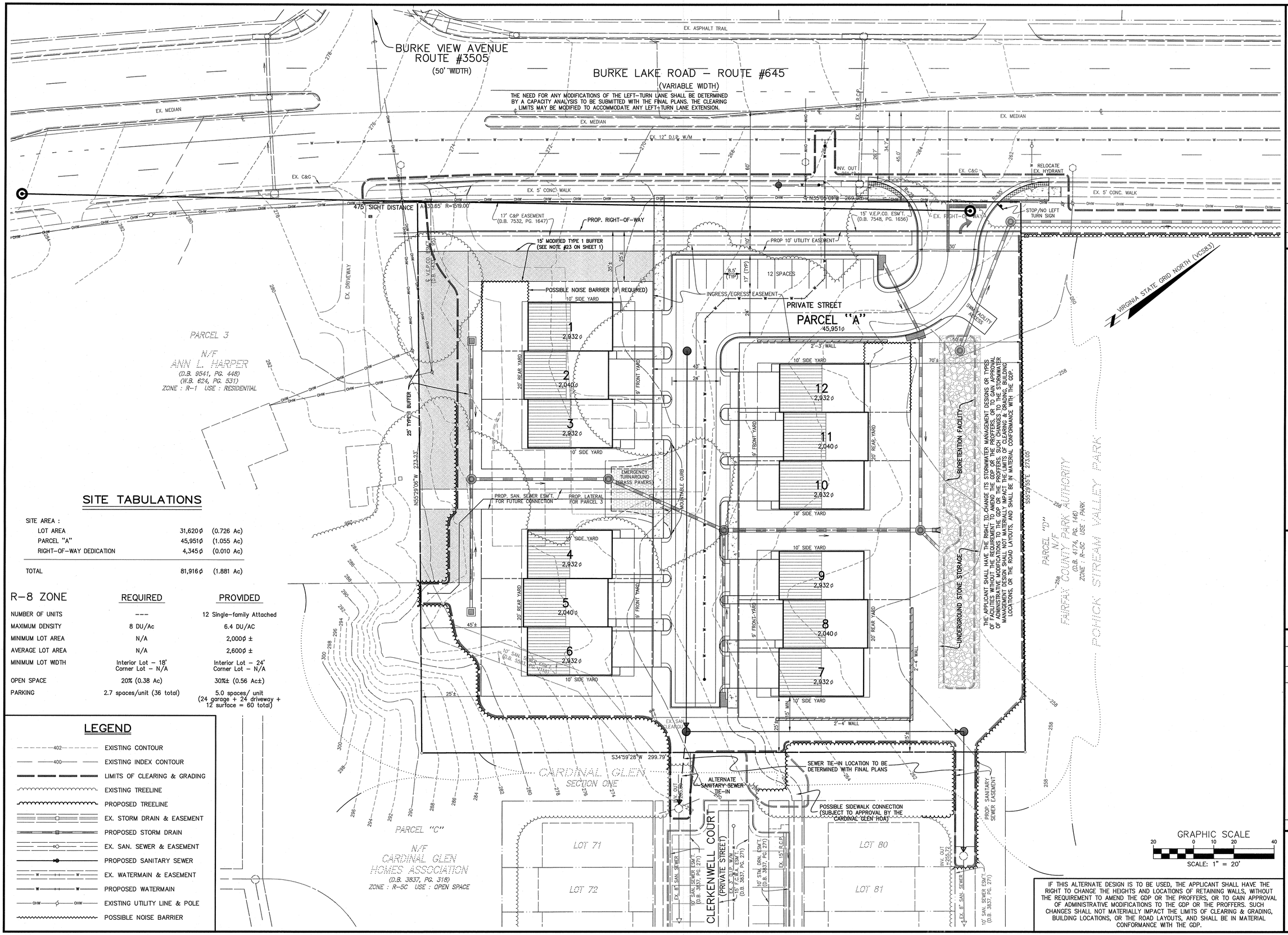

SITE TABULATIONS

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TOTAL	81,916¢	(1.881 Ac)

R-8 ZONE	REQUIRED	PROVIDED
NUMBER OF UNITS	---	12 Single-family Attached
MAXIMUM DENSITY	8 DU/Ac	6.4 DU/AC
MINIMUM LOT AREA	N/A	2,000¢ ±
AVERAGE LOT AREA	N/A	2,600¢ ±
MINIMUM LOT WIDTH	Interior Lot – 18' Corner Lot – N/A	Interior Lot – 24' Corner Lot – N/A
OPEN SPACE	20% (0.38 Ac)	30%± (0.56 Ac±)
PARKING	2.7 spaces/unit (36 total)	5.0 spaces/ unit (24 garage + 24 driveway + 12 surface = 60 total)

LEGEND

- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- LIMITS OF CLEARING & GRADING
- EXISTING TREELINE
- PROPOSED TREELINE
- EX. STORM DRAIN & EASEMENT
- PROPOSED STORM DRAIN
- EX. SAN. SEWER & EASEMENT
- PROPOSED SANITARY SEWER
- EX. WATERMAIN & EASEMENT
- PROPOSED WATERMAIN
- EXISTING UTILITY LINE & POLE
- POSSIBLE NOISE BARRIER

IF THIS ALTERNATE DESIGN IS TO BE USED, THE APPLICANT SHALL HAVE THE RIGHT TO CHANGE THE HEIGHTS AND LOCATIONS OF RETAINING WALLS, WITHOUT THE REQUIREMENT TO AMEND THE GDP OR THE PROFFERS, OR TO GAIN APPROVAL OF ADMINISTRATIVE MODIFICATIONS TO THE GDP OR THE PROFFERS. SUCH CHANGES SHALL NOT MATERIALLY IMPACT THE LIMITS OF CLEARING & GRADING, BUILDING LOCATIONS, OR THE ROAD LAYOUTS, AND SHALL BE IN MATERIAL CONFORMANCE WITH THE GDP.

NO.	DATE	REVISION PRIOR TO APPROVAL	NEW SHEET (KJV)
5.	9-3-15		

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ALTERNATE ENTRANCE LOCATION 'B'

THE TOWNES AT BURKE LAKE CROSSING

SPRINGFIELD DISTRICT
FAIRFAX COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
KEVIN JOHNSON
ANTHONY T. OWENS
Lic. No. 034522
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	REVISIONS	REVIEW BY	APPROVD.	DATE

DESIGN	DRAFT	APPROVED	DATE
KJV	KJV	HMF	MAR. 2015

SCALE HORZ.: 1" = 20' VERT: ---

SHEET 5A OF 15

PRJ NO: 13-531

TYPE: GDP

RZ 2015-SP-003

Attached Xrefs: 00-G0500/00-R0401/00-R0301/00-G0700B

kvestal

Last Saved 9/3/2015 Last Plotted 9/8/2015 4:50 PM Sheet N:\13531\DWG\00-G0601B

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September 3, 2015

Fairfax County
Urban Forest Management Division
12055 Government Center Parkway
Fairfax, Virginia 22035

Attention: Mr. Keith Cline

Re: The Townes at Burke Lake Crossing

Dear Mr. Cline:

The purpose of this letter is to request a deviation from the Tree Preservation Target Area requirement of PFM § 12-0508.

The applicant is proposing to meet the 10-year tree canopy requirement through proposed landscaping as shown on Sheet 6 of the CDP/FDP, as well as preserving existing trees. As calculated from the Existing Vegetation Map on Sheet 3, 80.4% of the 10-year tree canopy requirement should include tree preservation. However, the applicant is providing 45% of the requirement through preservation, and requests a modification of this tree preservation target, indicating that conformance would preclude development of the use and intensity permitted by the Zoning Ordinance.

In order to meet the full target requirement (an additional 5,780 square feet of tree preservation), at least two (2) lots would have to be removed, which would result in a 17% reduction in the total number of units, leaving the development five (5) units short of the maximum density of eight (8) per acre. Any additional tree preservation would be difficult to achieve, due to the allowance for interparcel access to the adjacent property to the south, and meeting stormwater and BMP requirements through a rain garden along the northern site boundary.

If you have any questions or concerns, please do not hesitate to contact me at 703-385-7555 or kvestal@cpja.com.

Sincerely,

Kenneth J. Vestal, LA

N:\13531\wp\Planning\13531 Tree Preservation Target Area.doc

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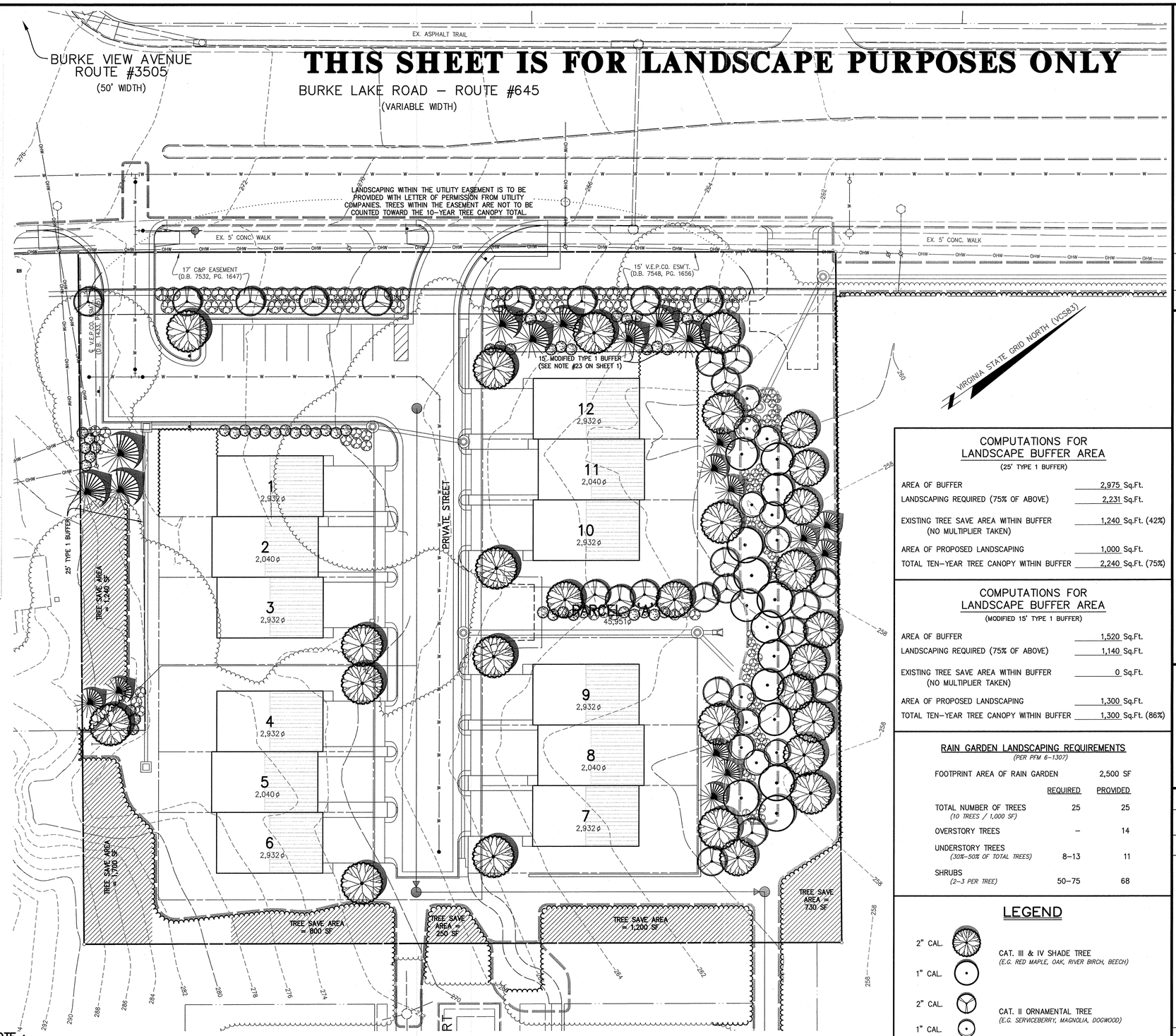
Table 12.10 10-YEAR TREE CANOPY CALCULATION WORKSHEET

A. Tree Preservation Target Calculations and Statement (Table 12.3)			
A	Pre-development area of existing tree canopy	65,900	SF
B	Percentage of gross site area covered by existing tree canopy	80.4	%
C	Percentage of 10-year canopy required for site	20	%
D	***Percentage of 10-year canopy requirement that should be met through tree preservation***	***80.4***	***%***
E	***Proposed percentage of canopy requirement that will be met through tree preservation***	***45.2***	***%***
F	Has the Tree Preservation Target minimum been met?	NO	
G	If no, provide sheet number where deviation approval is located	SHEET 5	
B. Tree Canopy Requirement			
1	Identify gross site area	81,916	SF
2	Subtract area dedicated to road frontage and parks	0	SF
3	Subtract area of exemptions	0	SF
4	***Adjusted gross site area (B1 - B2 - B3)***	***81,916***	***SF***
5	Identify site's zoning and/or use	R-8	
6	***Percentage of 10-year canopy required***	***20***	***%***
7	***Area of 10-year canopy required (B4 x B6)***	***16,383***	***SF***
8	Is a modification of canopy requirements being requested?	NO	
9	If B8 is yes, provide sheet number where modification request is located	N/A	
C. Tree Preservation			
1	***Tree Preservation Target Area***	***13,180***	***SF***
2	Total canopy area meeting standards of §12-0200	5,920	SF
3	x 1.25	7,400	SF
4	Total canopy area of unique or valuable forest or woodland communities	0	SF
5	x 1.50	0	SF
6	Total canopy area of Heritage, Memorial, Specimen or Street Trees	0	SF
7	x 1.5 to 3.0	0	SF
8	Canopy area of trees within Resource Protection Areas and 100-year floodplains	0	SF
9	x 1.0	0	SF
10	Canopy area of Virginia Pines	0	SF
11	x 1.0	0	SF
12	***Total of C3, C5, C7, C9, and C11***	***7,400***	***SF***
D. Tree Planting			
1	***Area of canopy to be met through tree planting (B7 - C12)***	***8,983***	SF
2	Area of canopy to be planted	12,075	SF
3	x 1.0	12,075	SF
4	Area of canopy provided through tree seedlings	0	SF
5	x 1.0	0	SF
6	Area of canopy provided through native shrubs or woody seed mix	0	SF
7	x 1.0	0	SF
8	Percentage of line D4 represented by line D6 (must not exceed 33% of D4)	0	%
9	***Total of canopy area to be provided through tree planting***	***12,075***	***SF***
10	Is offsite planting relief requested?	NO	
11	Tree Bank or Tree Fund?	N/A	
12	Canopy area requested to be provided through offsite banking or tree fund	0	SF
13	Amount to be deposited into the Tree Preservation and Planting Fund	0	
E. Total of 10-year Tree Canopy Provided			
1	Total canopy area provided through tree preservation (C12)	7,400	SF
2	Total canopy area provided through tree planting (D9)	12,075	SF
3	Total canopy area provided through offsite mechanism (D12)	N/A	SF
4	***Total 10-year tree canopy provided***	***19,475***	***SF***
	Total 10-year tree canopy provided (% of net site area)	***23.8***	***%***

**** Plant species and additional credit types (if applicable) are to be specified with the final site/landscape plan. Total 10-year tree canopy provided with the site plan shall be equivalent to that shown on the CDP/FDP.***

THIS SHEET IS FOR LANDSCAPE PURPOSES ONLY



NOTE :

TREE PRESERVATION CANOPY AREAS MEETING STANDARDS OF §12–0200 WERE CALCULATED USING THE FOLLOWING THREE GUIDELINES :

- CANOPY CREDIT IS TAKEN ONLY FOR TREES WITH MAIN TRUNKS LOCATED ON THE SITE BEING DEVELOPED WITHIN THE TREE PRESERVATION AREAS.
- TREES THAT WERE BISECTED BY THE DEVELOPMENT SITE'S OUTER PROPERTY LINE THAT ARE ASSUMED TO SURVIVE FOR THE MINIMUM 10 YEARS AFTER PLAN APPROVAL. CREDIT WAS TAKEN ONLY FOR THE PART OF THE TREE'S CANOPY THAT DIRECTLY OVERHANGS THE DEVELOPMENT SITE.
- WHERE SHARED PROPERTY LINES BISECT DENSE FOREST STANDS AND IT IS NOT PRACTICAL OR FEASIBLE TO DETERMINE WHICH PROPERTY A CANOPY ORIGINATES FROM, THE EXTENT OF ON–SITE CANOPY AREAS MAY BE DEFINED BY THE SHARED PROPERTY LINE.

PLEASE REFER TO THE TREE PRESERVATION PLAN ON SHEET 7 TO SEE INDIVIDUAL TREES 12" AND GREATER IN DIAMETER THAT CONTRIBUTE TO THE TREE PRESERVATION CANOPY AREA PER THE ABOVE GUIDELINES.

GRAPHIC SCALE
20 0 10 20 40
SCALE: 1" = 20'

COMPUTATIONS FOR LANDSCAPE BUFFER AREA
(25' TYPE 1 BUFFER)

AREA OF BUFFER	2,975 Sq.Ft.
LANDSCAPING REQUIRED (75% OF ABOVE)	2,231 Sq.Ft.
EXISTING TREE SAVE AREA WITHIN BUFFER (NO MULTIPLIER TAKEN)	1,240 Sq.Ft. (42%)
AREA OF PROPOSED LANDSCAPING	1,000 Sq.Ft.
TOTAL TEN–YEAR TREE CANOPY WITHIN BUFFER	2,240 Sq.Ft. (75%)

COMPUTATIONS FOR LANDSCAPE BUFFER AREA
(MODIFIED 15' TYPE 1 BUFFER)

AREA OF BUFFER	1,520 Sq.Ft.
LANDSCAPING REQUIRED (75% OF ABOVE)	1,140 Sq.Ft.
EXISTING TREE SAVE AREA WITHIN BUFFER (NO MULTIPLIER TAKEN)	0 Sq.Ft.
AREA OF PROPOSED LANDSCAPING	1,300 Sq.Ft.
TOTAL TEN–YEAR TREE CANOPY WITHIN BUFFER	1,300 Sq.Ft. (86%)

RAIN GARDEN LANDSCAPING REQUIREMENTS
(PER PFM 6–1307)

FOOTPRINT AREA OF RAIN GARDEN 2,500 SF

	REQUIRED	PROVIDED
TOTAL NUMBER OF TREES *(10 TREES / 1,000 SF)*	25	25
OVERSTORY TREES	–	14
UNDERSTORY TREES *(30%–50% OF TOTAL TREES)*	8–13	11
SHRUBS *(2–3 PER TREE)*	50–75	68

LEGEND

- 2" CAL. / 1" CAL. — CAT. III & IV SHADE TREE *(E.G. RED MAPLE, OAK, RIVER BIRCH, BEECH)*
- 2" CAL. / 1" CAL. — CAT. II ORNAMENTAL TREE *(E.G. SERVICEBERRY, MAGNOLIA, DOGWOOD)*
- CAT. I–IV EVERGREEN TREE (8' HGT.) *(E.G. HOLLY, EASTERN REDCEDAR, SPRUCE)*
- MEDIUM DECIDUOUS SHRUB *(E.G. VIBURNUM, HYDRANGEA, DOGWOOD)*
- MEDIUM EVERGREEN SHRUB *(E.G. HOLLY, JUNIPER)*

** LANDSCAPING IS CONCEPTUAL IN NATURE. FINAL LOCATIONS AND SPECIES ARE TO BE DETERMINED WITH FINAL SITE PLAN. NATIVE AND/OR DESIRABLE SPECIES WILL BE USED WHERE POSSIBLE. TREE LOCATIONS AND SIZES MAY VARY WITH FINAL OVERHEAD & UNDERGROUND UTILITY LOCATIONS.*

NO.	DATE	REVISION PRIOR TO APPROVAL
5.	9–3–15	REVISED TREE TARGET LETTER (KJV)
1.	5–29–15	REV. LANDSCAPING, TREE COVER CALCS & TREE TARGET LETTER (KJV)

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kvestal

LANDSCAPE PLAN

THE TOWNES AT BURKE LAKE CROSSING

SPRINGFIELD DISTRICT
FAIRFAX COUNTY, VIRGINIA

RZ 2015–SP–003

COMMONWEALTH OF VIRGINIA
ANTHONY T. OWENS
Lic. No. 034522
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	REVIEW BY	APPROVD.	DATE
	REVISIONS			

DESIGN KJV	DRAFT KJV	APPROVED HMF	DATE JAN. 2015
SCALE HORIZ.: 1" = 20' VERT.: — — —			

SHEET 6 OF 15

PRJ NO: 13–531

TYPE: GDP

Attached Xrefs: 00–G0700/00–R0301/00–G0500/00–R0401

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Silver Spring, MD • Gaithersburg, MD • Frederick, MD • Fairfax, VA

September 3, 2015

Fairfax County
Urban Forest Management Division
12055 Government Center Parkway
Fairfax, Virginia 22035

Attention: Mr. Keith Cline

Re: The Townes at Burke Lake Crossing

Dear Mr. Cline:

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In order to meet the full target requirement (an additional 5,780 square feet of tree preservation), at least two (2) lots would have to be removed, which would result in a 17% reduction in the total number of units, leaving the development five (5) units short of the maximum density of eight (8) per acre. Any additional tree preservation would be difficult to achieve, due to the allowance for interparcel access to the adjacent property to the south, and meeting stormwater and BMP requirements through a rain garden along the northern site boundary.

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Kenneth J. Vestal, LA

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E	***Proposed percentage of canopy requirement that will be met through tree preservation***	***45.2***	***%***
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G	If no, provide sheet number where deviation approval is located	SHEET 5	
B. Tree Canopy Requirement			
1	Identify gross site area	81,916	SF
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5	Identify site's zoning and/or use	R-8	
6	***Percentage of 10-year canopy required***	***20***	***%***
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8	Is a modification of canopy requirements being requested?	NO	
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1	***Tree Preservation Target Area***	***13,180***	***SF***
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4	Total canopy area of unique or valuable forest or woodland communities	0	SF
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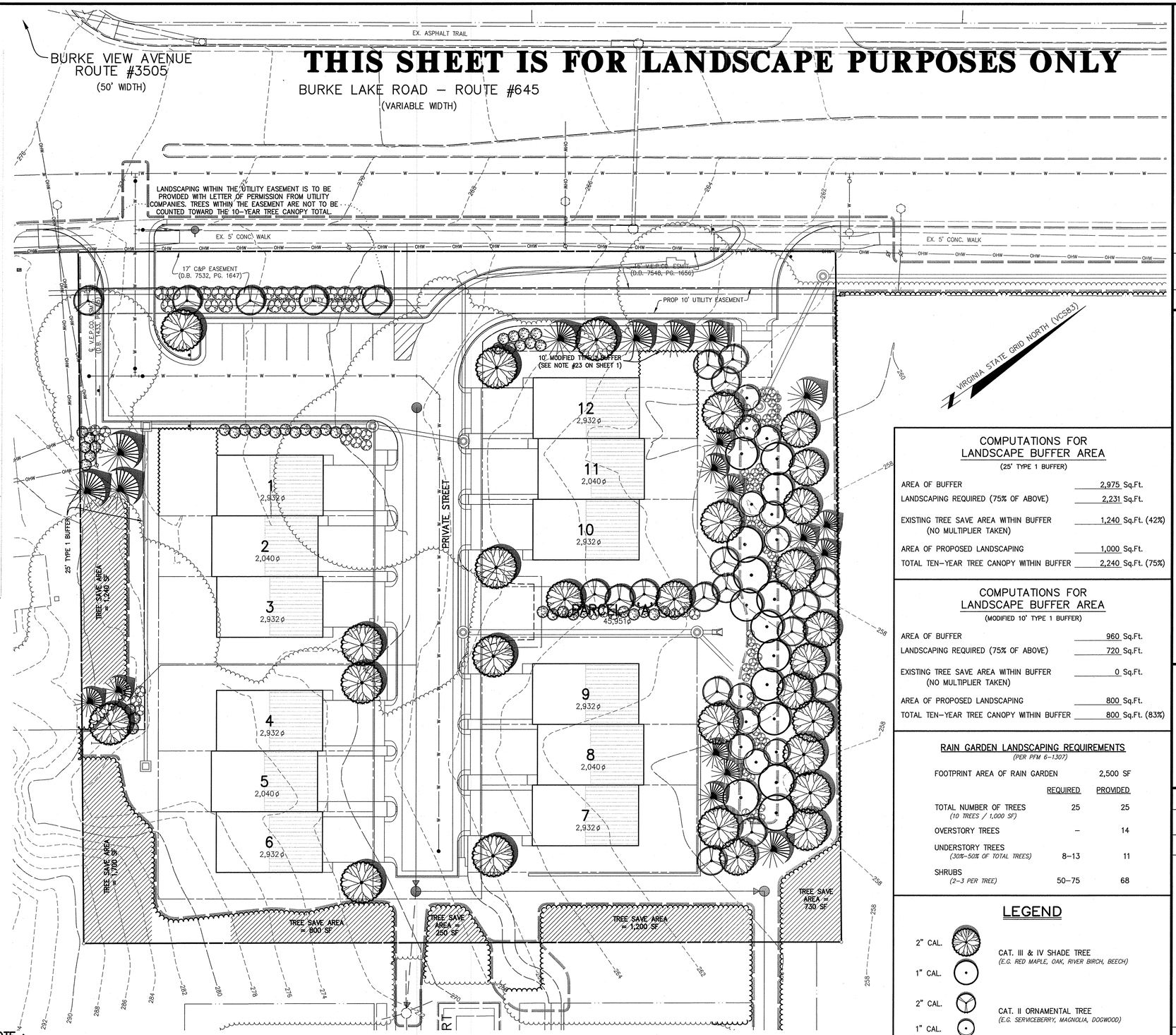
10	Is offsite planting relief requested?	NO	
11	Tree Bank or Tree Fund?	N/A	
12	Canopy area requested to be provided through offsite banking or tree fund	0	SF
13	Amount to be deposited into the Tree Preservation and Planting Fund	0	
E. Total of 10-year Tree Canopy Provided			
1	Total canopy area provided through tree presevation (C12)	7,400	SF
2	Total canopy area provided through tree planting (D9)	12,075	SF
3	Total canopy area provided through offsite mechanism (D12)	N/A	SF
4	***Total 10-year tree canopy provided***	***19,475***	***SF***
	Total 10-year tree canopy provided (% of net site area)	***23.8***	***%***

**** Plant species and additional credit types (if applicable) are to be specified with the final site/landscape plan. Total 10-year tree canopy provided with the site plan shall be equivalent to that shown on the CDP/FDP.***



NOTE :

TREE PRESERVATION CANOPY AREAS MEETING STANDARDS OF §12-0200 WERE CALCULATED USING THE FOLLOWING THREE GUIDELINES :

- CANOPY CREDIT IS TAKEN ONLY FOR TREES WITH MAIN TRUNKS LOCATED ON THE SITE BEING DEVELOPED WITHIN THE TREE PRESERVATION AREAS.
- TREES THAT WERE BISECTED BY THE DEVELOPMENT SITE'S OUTER PROPERTY LINE THAT ARE ASSUMED TO SURVIVE FOR THE MINIMUM 10 YEARS AFTER PLAN APPROVAL. CREDIT WAS TAKEN ONLY FOR THE PART OF THE TREE'S CANOPY THAT DIRECTLY OVERHANGS THE DEVELOPMENT SITE.
- WHERE SHARED PROPERTY LINES BISECT DENSE FOREST STANDS AND IT IS NOT PRACTICAL OR FEASIBLE TO DETERMINE WHICH PROPERTY A CANOPY ORIGINATES FROM, THE EXTENT OF ON-SITE CANOPY AREAS MAY BE DEFINED BY THE SHARED PROPERTY LINE.

PLEASE REFER TO THE TREE PRESERVATION PLAN ON SHEET 7 TO SEE INDIVIDUAL TREES 12" AND GREATER IN DIAMETER THAT CONTRIBUTE TO THE TREE PRESERVATION CANOPY AREA PER THE ABOVE GUIDELINES.

GRAPHIC SCALE
20 0 10 20 40
SCALE: 1" = 20'

COMPUTATIONS FOR LANDSCAPE BUFFER AREA
(25' TYPE 1 BUFFER)

AREA OF BUFFER	2,975 Sq.Ft.
LANDSCAPING REQUIRED (75% OF ABOVE)	2,231 Sq.Ft.
EXISTING TREE SAVE AREA WITHIN BUFFER (NO MULTIPLIER TAKEN)	1,240 Sq.Ft. (42%)
AREA OF PROPOSED LANDSCAPING	1,000 Sq.Ft.
TOTAL TEN-YEAR TREE CANOPY WITHIN BUFFER	2,240 Sq.Ft. (75%)

COMPUTATIONS FOR LANDSCAPE BUFFER AREA
(MODIFIED 10' TYPE 1 BUFFER)

AREA OF BUFFER	960 Sq.Ft.
LANDSCAPING REQUIRED (75% OF ABOVE)	720 Sq.Ft.
EXISTING TREE SAVE AREA WITHIN BUFFER (NO MULTIPLIER TAKEN)	0 Sq.Ft.
AREA OF PROPOSED LANDSCAPING	800 Sq.Ft.
TOTAL TEN-YEAR TREE CANOPY WITHIN BUFFER	800 Sq.Ft. (83%)

RAIN GARDEN LANDSCAPING REQUIREMENTS
(PER PFM 6-1307)

FOOTPRINT AREA OF RAIN GARDEN 2,500 SF

	REQUIRED	PROVIDED
TOTAL NUMBER OF TREES (10 TREES / 1,000 SF)	25	25
OVERSTORY TREES	–	14
UNDERSTORY TREES (30%-50% OF TOTAL TREES)	8-13	11
SHRUBS (2-3 PER TREE)	50-75	68

LEGEND

2" CAL.	CAT. III & IV SHADE TREE (E.G. RED MAPLE, OAK, RIVER BIRCH, BEECH)
1" CAL.	
2" CAL.	CAT. II ORNAMENTAL TREE (E.G. SERVICEBERRY, MAGNOLIA, DOGWOOD)
1" CAL.	
	CAT. I-IV EVERGREEN TREE (8' HGT.) (E.G. HOLLY, EASTERN REDCEDAR, SPRUCE)
	MEDIUM DECIDUOUS SHRUB (E.G. VIBURNUM, HYDRANGEA, DOGWOOD)
	MEDIUM EVERGREEN SHRUB (E.G. HOLLY, JUNIPER)

** LANDSCAPING IS CONCEPTUAL IN NATURE. FINAL LOCATIONS AND SPECIES ARE TO BE DETERMINED WITH FINAL SITE PLAN. NATIVE AND/OR DESIRABLE SPECIES WILL BE USED WHERE POSSIBLE. TREE LOCATIONS AND SIZES MAY VARY WITH FINAL OVERHEAD & UNDERGROUND UTILITY LOCATIONS.*

NO.	DATE	REVISION PRIOR TO APPROVAL
6.	9-8-15	REVISED LANDSCAPING IN BUFFER ALONG LOT 12 (KJV)
5.	9-3-15	NEW SHEET (KJV)

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kvestal

LANDSCAPE PLAN FOR ALTERNATE LAYOUT 'A'

THE TOWNES AT BURKE LAKE CROSSING

SPRINGFIELD DISTRICT
FAIRFAX COUNTY, VIRGINIA

RZ 2015-SP-003

COMMONWEALTH OF VIRGINIA
ANTHONY T. OWENS
Lic. No. 034522
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	REVIEW BY	APPROVD.	DATE
	REVISIONS			

DESIGN KJV	DRAFT KJV	APPROVED HMF	DATE JAN. 2015
SCALE HORIZ.: 1" = 20' VERT.: ---			

SHEET 6A OF 15

PRJ NO: 13-531

TYPE: GDP

Attached Xrefs: 00-G0700A/00-R0301/00-G0500/00-R0401

Last Saved 9/8/2015 Last Plotted 9/8/2015 4:56 PM Sheet N:\13531\DWG\00-G6601A

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Silver Spring, MD • Gaithersburg, MD • Frederick, MD • Fairfax, VA

September 3, 2015

Fairfax County
Urban Forest Management Division
12055 Government Center Parkway
Fairfax, Virginia 22035

Attention: Mr. Keith Cline

Re: The Townes at Burke Lake Crossing

Dear Mr. Cline:

The purpose of this letter is to request a deviation from the Tree Preservation Target Area requirement of PFM § 12-0508.

The applicant is proposing to meet the 10-year tree canopy requirement through proposed landscaping as shown on Sheet 6B of the CDP/FDP, as well as preserving existing trees. As calculated from the Existing Vegetation Map on Sheet 3, 80.4% of the 10-year tree canopy requirement should include tree preservation. However, the applicant is providing 43% of the requirement through preservation, and requests a modification of this tree preservation target, indicating that conformance would preclude development of the use and intensity permitted by the Zoning Ordinance.

In order to meet the full target requirement (an additional 6,180 square feet of tree preservation), at least two (2) lots would have to be removed, which would result in a 17% reduction in the total number of units, leaving the development five (5) units short of the maximum density of eight (8) per acre. Any additional tree preservation would be difficult to achieve, due to the allowance for interparcel access to the adjacent property to the south, and meeting stormwater and BMP requirements through a rain garden along the northern site boundary.

If you have any questions or concerns, please do not hesitate to contact me at 703-385-7555 or kvestal@cpja.com.

Sincerely,

Kenneth J. Vestal, LA

N:\13531\wp\Planning\13531 Tree Preservation Target Area.doc

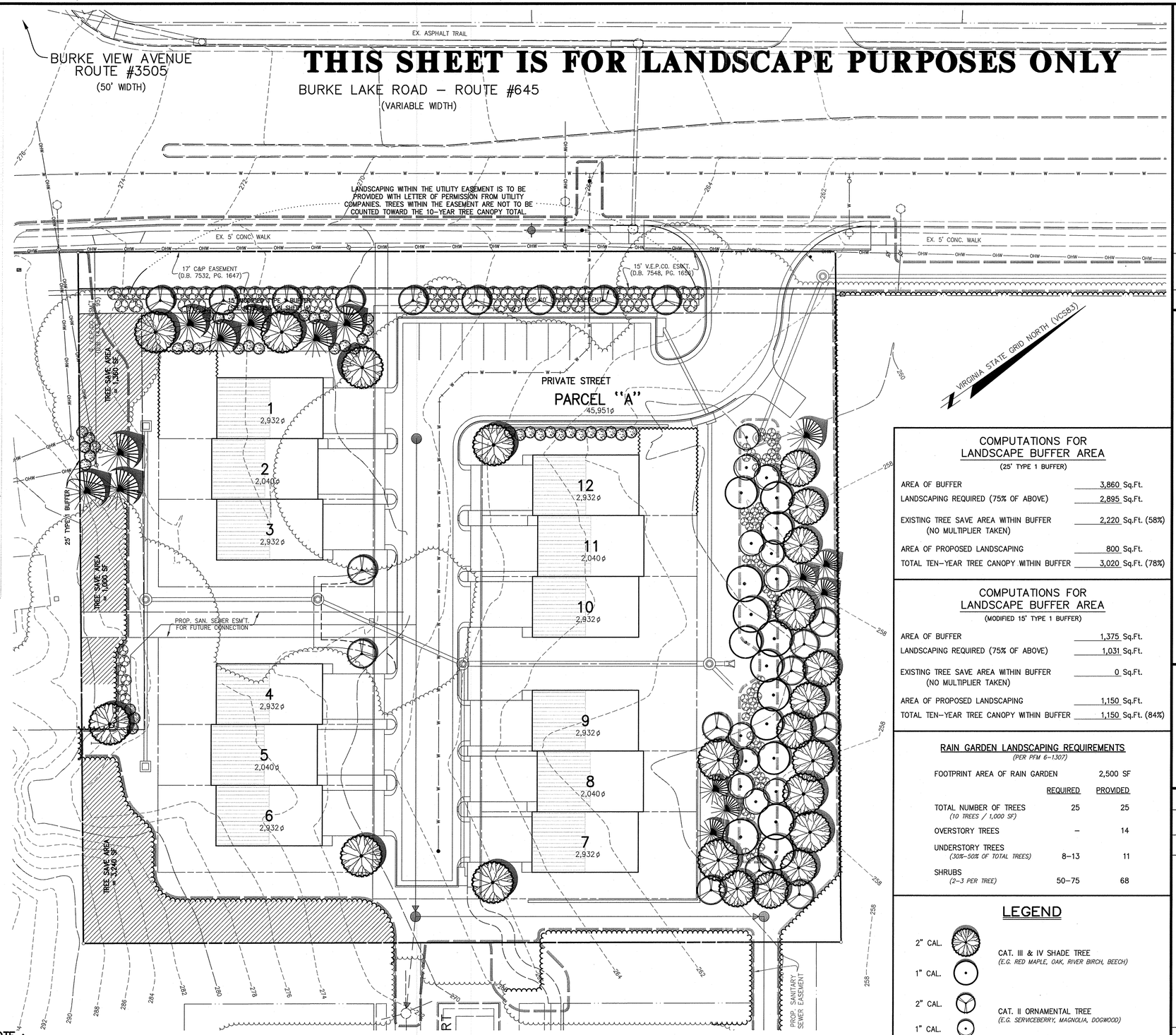
3959 Pender Drive, Suite 210 • Fairfax, VA 22030 • 703-385-7555 • Fax: 703-273-8595 • www.cpja.com

Table 12.10 10-YEAR TREE CANOPY CALCULATION WORKSHEET

A. Tree Preservation Target Calculations and Statement (Table 12.3)			
A	Pre-development area of existing tree canopy	65,900	SF
B	Percentage of gross site area covered by existing tree canopy	80.4	%
C	Percentage of 10-year canopy required for site	20	%
D	***Percentage of 10-year canopy requirement that should be met through tree preservation***	***80.4***	***%***
E	***Proposed percentage of canopy requirement that will be met through tree preservation***	***42.7***	***%***
F	Has the Tree Preservation Target minimum been met?	NO	
G	If no, provide sheet number where deviation approval is located	SHEET 5	
B. Tree Canopy Requirement			
1	Identify gross site area	81,916	SF
2	Subtract area dedicated to road frontage and parks	0	SF
3	Subtract area of exemptions	0	SF
4	***Adjusted gross site area (B1 - B2 - B3)***	***81,916***	***SF***
5	Identify site's zoning and/or use	R-8	
6	***Percentage of 10-year canopy required***	***20***	***%***
7	***Area of 10-year canopy required (B4 x B6)***	***16,383***	***SF***
8	Is a modification of canopy requirements being requested?	NO	
9	If B8 is yes, provide sheet number where modification request is located	N/A	
C. Tree Preservation			
1	***Tree Preservation Target Area***	***13,180***	***SF***
2	Total canopy area meeting standards of §12-0200	5,600	SF
3	x 1.25	7,000	SF
4	Total canopy area of unique or valuable forest or woodland communities	0	SF
5	x 1.50	0	SF
6	Total canopy area of Heritage, Memorial, Specimen or Street Trees	0	SF
7	x 1.5 to 3.0	0	SF
8	Canopy area of trees within Resource Protection Areas and 100-year floodplains	0	SF
9	x 1.0	0	SF
10	Canopy area of Virginia Pines	0	SF
11	x 1.0	0	SF
12	***Total of C3, C5, C7, C9, and C11***	***7,000***	***SF***
D. Tree Planting			
1	***Area of canopy to be met through tree planting (B7 - C12)***	***9,383***	***SF***
2	Area of canopy to be planted	9,775	SF
3	x 1.0	9,775	SF
4	Area of canopy provided through tree seedlings	0	SF
5	x 1.0	0	SF
6	Area of canopy provided through native shrubs or woody seed mix	0	SF
7	x 1.0	0	SF
8	Percentage of line D4 represented by line D6 (must not exceed 33% of D4)	0	%
9	***Total of canopy area to be provided through tree planting***	***9,775***	***SF***
10	Is offsite planting relief requested?	NO	
11	Tree Bank or Tree Fund?	N/A	
12	Canopy area requested to be provided through offsite banking or tree fund	0	SF
13	Amount to be deposited into the Tree Preservation and Planting Fund	0	
E. Total of 10-year Tree Canopy Provided			
1	Total canopy area provided through tree preservation (C12)	7,000	SF
2	Total canopy area provided through tree planting (D9)	9,775	SF
3	Total canopy area provided through offsite mechanism (D12)	N/A	SF
4	***Total 10-year tree canopy provided***	***16,775***	***SF***
	Total 10-year tree canopy provided (% of net site area)	***20.5***	***%***

**** Plant species and additional credit types (if applicable) are to be specified with the final site/landscape plan. Total 10-year tree canopy provided with the site plan shall be equivalent to that shown on the CDP/FDP.***

THIS SHEET IS FOR LANDSCAPE PURPOSES ONLY



NOTE :

TREE PRESERVATION CANOPY AREAS MEETING STANDARDS OF §12–0200 WERE CALCULATED USING THE FOLLOWING THREE GUIDELINES :

- CANOPY CREDIT IS TAKEN ONLY FOR TREES WITH MAIN TRUNKS LOCATED ON THE SITE BEING DEVELOPED WITHIN THE TREE PRESERVATION AREAS.
- TREES THAT WERE BISECTED BY THE DEVELOPMENT SITE'S OUTER PROPERTY LINE THAT ARE ASSUMED TO SURVIVE FOR THE MINIMUM 10 YEARS AFTER PLAN APPROVAL. CREDIT WAS TAKEN ONLY FOR THE PART OF THE TREE'S CANOPY THAT DIRECTLY OVERHANGS THE DEVELOPMENT SITE.
- WHERE SHARED PROPERTY LINES BISECT DENSE FOREST STANDS AND IT IS NOT PRACTICAL OR FEASIBLE TO DETERMINE WHICH PROPERTY A CANOPY ORIGINATES FROM, THE EXTENT OF ON–SITE CANOPY AREAS MAY BE DEFINED BY THE SHARED PROPERTY LINE.

PLEASE REFER TO THE TREE PRESERVATION PLAN ON SHEET 7 TO SEE INDIVIDUAL TREES 12" AND GREATER IN DIAMETER THAT CONTRIBUTE TO THE TREE PRESERVATION CANOPY AREA PER THE ABOVE GUIDELINES.

IF THIS ALTERNATE DESIGN IS TO BE USED, THE APPLICANT SHALL HAVE THE RIGHT TO CHANGE WHICH TREES ARE TO BE SAVED/REMOVED AS SHOWN ON SHEETS 7 AND 8, WITHOUT THE REQUIREMENT TO AMEND THE GDP OR THE PROFFERS, OR TO GAIN APPROVAL OF ADMINISTRATIVE MODIFICATIONS TO THE GDP OR THE PROFFERS.

GRAPHIC SCALE
20 0 10 20 40
SCALE: 1" = 20'

COMPUTATIONS FOR LANDSCAPE BUFFER AREA
(25' TYPE 1 BUFFER)

AREA OF BUFFER	3,860 Sq.Ft.
LANDSCAPING REQUIRED (75% OF ABOVE)	2,895 Sq.Ft.
EXISTING TREE SAVE AREA WITHIN BUFFER (NO MULTIPLIER TAKEN)	2,220 Sq.Ft. (58%)
AREA OF PROPOSED LANDSCAPING	800 Sq.Ft.
TOTAL TEN–YEAR TREE CANOPY WITHIN BUFFER	3,020 Sq.Ft. (78%)

COMPUTATIONS FOR LANDSCAPE BUFFER AREA
(MODIFIED 15' TYPE 1 BUFFER)

AREA OF BUFFER	1,375 Sq.Ft.
LANDSCAPING REQUIRED (75% OF ABOVE)	1,031 Sq.Ft.
EXISTING TREE SAVE AREA WITHIN BUFFER (NO MULTIPLIER TAKEN)	0 Sq.Ft.
AREA OF PROPOSED LANDSCAPING	1,150 Sq.Ft.
TOTAL TEN–YEAR TREE CANOPY WITHIN BUFFER	1,150 Sq.Ft. (84%)

RAIN GARDEN LANDSCAPING REQUIREMENTS
(PER PFM 6–1307)

FOOTPRINT AREA OF RAIN GARDEN 2,500 SF

	REQUIRED	PROVIDED
TOTAL NUMBER OF TREES *(10 TREES / 1,000 SF)*	25	25
OVERSTORY TREES	–	14
UNDERSTORY TREES *(30%–50% OF TOTAL TREES)*	8–13	11
SHRUBS *(2–3 PER TREE)*	50–75	68

LEGEND

2" CAL. / 1" CAL. — CAT. III & IV SHADE TREE *(E.G. RED MAPLE, OAK, RIVER BIRCH, BEECH)*

2" CAL. / 1" CAL. — CAT. II ORNAMENTAL TREE *(E.G. SERVICEBERRY, MAGNOLIA, DOGWOOD)*

CAT. I–IV EVERGREEN TREE (8' HGT.) *(E.G. HOLLY, EASTERN REDCEDAR, SPRUCE)*

MEDIUM DECIDUOUS SHRUB *(E.G. VIBURNUM, HYDRANGEA, DOGWOOD)*

MEDIUM EVERGREEN SHRUB *(E.G. HOLLY, JUNIPER)*

** LANDSCAPING IS CONCEPTUAL IN NATURE. FINAL LOCATIONS AND SPECIES ARE TO BE DETERMINED WITH FINAL SITE PLAN. NATIVE AND/OR DESIRABLE SPECIES WILL BE USED WHERE POSSIBLE. TREE LOCATIONS AND SIZES MAY VARY WITH FINAL OVERHEAD & UNDERGROUND UTILITY LOCATIONS.*

NO.	DATE	NEW SHEET (KJV) REVISION PRIOR TO APPROVAL
5.	9–3–15	

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kvestal

LANDSCAPE PLAN FOR ALTERNATE LAYOUT 'B'

THE TOWNES AT BURKE LAKE CROSSING

SPRINGFIELD DISTRICT
FAIRFAX COUNTY, VIRGINIA

RZ 2015–SP–003

COMMONWEALTH OF VIRGINIA
ANTHONY T. OWENS
Lic. No. 034522
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	REVIEW	APPROV.	DATE
	REVISIONS	BY		

DESIGN	DRAFT	SCALE
KJV	KJV	HORIZ: 1" = 20'
APPROVED	DATE	VERT: — —
HMF	JAN. 2015	

SHEET 6B OF 15

PRJ NO: 13–531

TYPE: GDP

Attached Xrefs: 00–G07008/00–R0301/00–G0500/00–R0401

Last Saved 9/3/2015 Last Plotted 9/8/2015 4:58 PM Sheet N:\13531\DWG\00–G6601B

THIS SHEET IS FOR TREE PRESERVATION PURPOSES ONLY

BURKE VIEW AVENUE
ROUTE #3505
(50' WIDTH)

BURKE LAKE ROAD – ROUTE #645
(VARIABLE WIDTH)

EX. ASPHALT TRAIL

EX. 5' CONC. WALK

EX. RIGHT-OF-WAY

PROP 10' UTILITY EASEMENT

15' MODIFIED TYPE 1 BUFFER
(SEE NOTE #23 ON SHEET 1)

EX. DRIVEWAY

PRIVATE STREET

PARCEL "A"
45,951ø

UNDERGROUND STORM STORAGE

BORE EATON FACILITY

CLERKENWELL COURT
(PRIVATE STREET)

15' F.C.W.A. ESM'T.
(D.B. 3837, PG. 271)

10' STM. DRN. ESM'T.
(D.B. 3837, PG. 271)

VIRGINIA STATE GRID NORTH (VCS83)

GRAPHIC SCALE
20 0 10 20 40
SCALE: 1" = 20'

LEGEND

- ON-SITE TREE TO BE SAVED
- CRITICAL ROOT ZONE (1' RAD./1" DBH)
- OFF-SITE TREE TO BE SAVED
- TREE TO BE REMOVED
- DEAD TREE
- LIMITS OF CLEARING & GRADING
- RP — RP ROOT PRUNING
- TP — TP / SSF — SSF TREE PROTECTION OR SUPER SILT FENCE

THIS PLAN IS *NOT* INTENDED TO BE USED FOR CALCULATING 10-YEAR TREE CANOPY. PLEASE SEE THE LANDSCAPE PLAN ON SHEET 6.

NO.	DATE	REVISION
2.	7-24-15	CHANGED TREE 162 TO BE REMOVED
1.	5-29-15	REVISED TREE INVENTORY (LBD)

PRIOR TO APPROVAL

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TREE PRESERVATION PLAN

THE TOWNES AT BURKE LAKE CROSSING

SPRINGFIELD DISTRICT
FAIRFAX COUNTY, VIRGINIA

RZ 2015-SP-003

COMMONWEALTH OF VIRGINIA
ANTHONY T. OWENS
Lic. No. 034522
9-3-15
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	REVIEW BY	APPROVD	DATE
	REVISIONS			

DESIGN LBD	DRAFT LBD
APPROVED HMF	DATE FEB. 2015
HORIZ. 1" = 20'	VERT. ---

SHEET 7 OF 15

PRJ NO: 13-531

TYPE: GDP

Attached Xrefs: 00-G0700/00-G0500/00-R0301/00-R0401

Last Saved 9/3/2015 Last Plotted 9/8/2015 5:01 PM Sheet N:\13531\DWG\00-G6801

TREE PRESERVATION NARRATIVE:

Trees as referred to in this document are considered those trees that are protected by limits of clearing and grading and shown for preservation on approved plans.

1. **Flagging/ Site Layout:** Prior to requesting a pre-construction meeting, the contractor is responsible for flagging the limits of clearing and grading. These limits shall not exceed that shown on the approved plans

2. **Pre-Construction Meeting:** After clearing limits have been staked a meeting shall be requested by the contractor to walk with owner or owner's designated representative, arborist/forester hired by owner, site superintendant, clearing contractor and UFMD, DPWES representative to make minor adjustments as necessary to observe trees listed in tree preservation activity schedule. Additional preservation activities will be coordinated with the Urban Forestry Division at this time.

3. **Tree Protection Approval:** Selective tree removals, root pruning, and tree protection fence installation should be completed prior to any demolition or land clearing operations. An UFMD, DPWES, representative shall be contacted a minimum of three (3) days prior to any site clearing, grading or demolition activities are to begin, to inspect the site to insure that the tree protection has been installed.

4. **Protection of Existing Understory Vegetation and Soil Conditions in Tree Preservation Areas:** All tree preservation-related work occurring in or adjacent to tree preservation areas shall be accomplished in a manner that minimizes damage to vegetation to be preserved in the lower canopy environment, and to the existing top soil and leaf litter layers that provide nourishment and protection to that vegetation. Any removal of any vegetation or soil disturbance in tree preservation areas including the removal of plant species that may be perceived as noxious or invasive, such as poison ivy, greenbrier, multi-floral rose, etc. shall be subject to the review and approval of UFMD, DPWES

5. **Use of Equipment:** Except as qualified herein, the use of motorized equipment in tree preservation areas will be limited to hand-operated equipment such as chainsaws, wheel barrows, rake and shovels. Any work that requires the use of motorized equipment, such as tree transplanting spades, skid loaders, tractors, trucks, stump-grinders, etc., or any accessory or attachment connected to this type of equipment shall not occur unless pre-approved by UFMD.

6. **Root Pruning:** Tree preservation Areas shall be root pruned along the limits of clearing adjacent to significant trees 20" dbh and greater or as noted by the project arborist in the Tree Inventory and Activity Schedule. Root pruning shall be a minimum of 18" deep and shall be accomplished using a small walk behind trencher or air spade. The root pruning trench shall be backfilled immediately. Silt fence/super silt fence installation utilizing walk behind trencher can be substituted for root pruning as long as a minimum depth of 18" is achieved.

7. **Mulching:** Mulch shall be placed in areas as indicated on approved plans and/or extending in a swath fifteen feet wide along the Limit of Disturbance adjacent to indicated trees at minimum. Trees/Areas indicated will be mulched with wood chips generated from on site clearing or tree removal and pruning operations when possible. Shredded hardwood mulch from offsite maybe utilized if approved by project arborist. Mulch shall be spread in a uniform depth of three (3") inches by hand.

8. **Tree Protection Fencing:** Tree Preservation Areas shall be protected by per the attached Tree Protection Detail. Super-Silt fencing may be used for tree protection fencing as approved by UFMD. Fencing shall be erected at the limits of clearing and grading as shown on the demolition, and erosion and sediment control sheets. The installation of all tree protection fence types should be performed under the supervision of a certified arborist, and accomplished in a manner that does not harm existing vegetation that is to be preserved. Tree protection fencing shall be made clearly visible to all construction personnel. Bilingual signs stating "TREE PRESERVATION AREA – KEEP OUT" shall be affixed to the tree preservation fence at least every 30 feet, and three (3) working days prior to the commencement of any clearing, grading, or demolition activities, but subsequent to the installation of the tree protection devices including fencing. UFMD and the district supervisor staff shall be notified and given the opportunity to inspect the site to assure that all tree protection devices have been correctly installed. If it is determined that the fencing has not been installed correctly, no grading or construction activities shall occur until the fencing is installed correctly, as determined by UFMD.

9. **Tree Protection Maintenance**: Fencing shall be maintained in an upright position for the duration of the project. Tree protection fencing that is damaged as a result of land clearing operations shall be repaired prior to the end of the workday that the damage occurred.

10. **Pruning:** All pruning shall conform to current ANSI A300-2001 pruning standards. Trees designated for pruning shall be crown cleaned of deadwood 2" and greater unless otherwise specified by the project arborist. The interior of trees shall not be stripped of live tissue, suckers, or epicormic branches. Damaged, crossing, and rubbing branches may be removed at the arborist's discretion. Debris from pruning operations may be chipped and deposited into the Tree Preservation Areas and spread by hand to a uniform depth or be removed from the site.

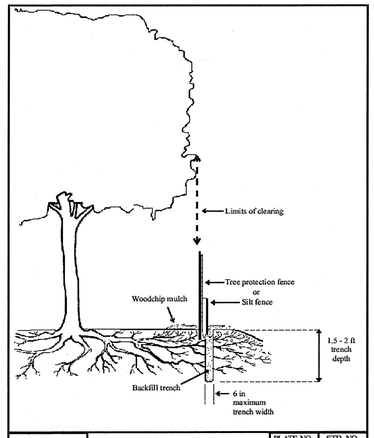
11. **Site Monitoring**: During any clearing or tree/vegetation structure removal or transplantation of vegetation on the subject site, a representative of the applicant shall be present to monitor the process and ensure that the activities are conducted as approved by UFMD. The applicant should retain the services of a certified arborist to monitor all construction work and tree preservation efforts in order to ensure conformance with all tree preservation conditions, and UFMD approvals. Monitoring inspections to ensure compliance with tree preservation plans and other jurisdictional requirements shall be conducted daily during initial site clearing operations, weekly through the erosion and sediment control phase, weekly for four weeks there after and monthly for 12 months. The district supervisor shall be notified of the name and contact information of the Applicant's representative responsible for site monitoring at the tree preservation walk-through meeting.

NOTE: AS STATED BY SECTION 12–0507.1B IN THE PUBLIC FACILITIES MANUAL, DEAD TREES AND TREES THAT REPRESENT A POTENTIAL HAZARD TO HUMAN HEALTH AND PROPERTY WHICH ARE 12 INCHES IN DIAMETER OR GREATER THAT RESIDE IN ONE OF THE TWO FOLLOWING AREAS WILL BE IDENTIFIED IN THE TREE INVENTORY.

AREA 1. 100 FEET FROM THE PROPOSED LIMITS OF CLEARING AND GRADING WITHIN THE UNDISTURBED AREA.

AREA 2. 10 FEET FROM THE PROPOSED LIMITS OF CLEARING AND GRADING WITHIN THE DISTURBED AREA.

FAIRFAX COUNTY PUBLIC FACILITIES MANUAL



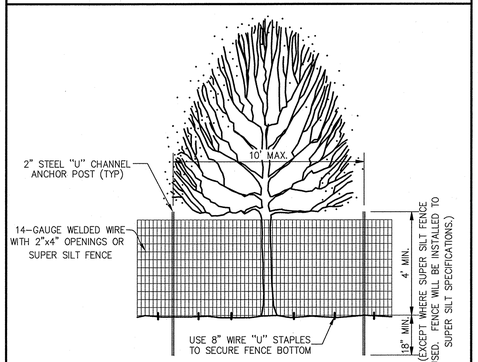
Ref. Sec. 12-0702.1 Rev. 10-08	ROOT PRUNING	PLATE NO. 7-12	STD. NO.

TREE PROTECTION AREA
DO NOT ENTER

ZONA DE PROTECCIÓN DE ÁRBOLES
NO ENTRE

NOTES: 1. TREE PROTECTION SIGNS SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.
2. BILINGUAL SIGNS WILL BE POSTED ON THE TREE PROTECTION FENCE AT LEAST EVERY 30 FEET.
3. SIGN SHOWN IS FOR INFORMATIONAL PURPOSES ONLY AND ACTUAL SIGNS MAY DIFFER IN APPEARANCE AND WORDING. CONTENT SHALL BE EQUAL.

TREE PROTECTION SIGN DETAIL
NOT TO SCALE



NOTE : TREE PROTECTION FENCING SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION

TREE PROTECTION FENCE DETAIL
NOT TO SCALE

NOTE: TREES TO BE PRESERVED WITH IVY OR VINES GROWING ON THEM SHALL HAVE ALL VINES CUT AT THE BASE OF THE VINE. VINES SHALL BE LEFT TO DIE ON THE TREE. NO VINES OR IVY SHALL BE PULLED FROM THE TRUNK OR LIMBS OF THE TREE AS THIS CAN CAUSE INJURY TO THE TRUNK OR LIMBS.

THIS PLAN IS *NOT* INTENDED TO BE USED FOR CALCULATING 10-YEAR TREE CANOPY. PLEASE SEE THE LANDSCAPE PLAN ON SHEET 6.

TREE INVENTORY AND ACTIVITIES SPREADSHEET

Tree #	COMMON NAME	SCIENTIFIC BINOMIAL	DBH(in)	CONDITION	COMMENTS	STATUS	ACTIVITIES: ROOT PRUNE	MULCH	TREE FENCE	PRUNE	FERTILIZE	CABLE	CAMBISTAT	TREAT PESTS
100	White oak	Quercus alba	12	66	Buttressing roots, broken leader, crowding, uneven canopy, dying, epicormic sprouting	Remove								
101	Red maple	Acer rubrum	12	75	Offsite: Buttressing roots, multiple curves in trunk, crowding, leaning canopy, uneven canopy	Preserve	X	X	X					
102	Tulip poplar	Liriodendron tulipifera	20	69	Offsite: Buttressing roots, crowding, limb dieback, sparse canopy, uneven canopy, forest grown form	Preserve			X	X				
103	White oak	Quercus alba	12	69	Buttressing roots, canopy dieback, canopies interwined, crowding, dual leader, limb dieback, forest grown form	Preserve			X	X				
104	Tulip poplar	Liriodendron tulipifera	18	72	Offsite: Buttressing roots, multiple curves in trunk, crowding, dual leader, limb dieback, uneven canopy	Preserve	X	X	X	X				
105	Scarlet oak	Quercus coccinea	15	69	Offsite: Adjacent tree, buttressing roots, canopy dieback, canopies interwined, crowding, dual leader, severely leaning canopy, limb dieback, spase canopy, uneven canopy	Preserve			X	X				
106	Tulip poplar	Liriodendron tulipifera	24	75	Offsite: Buttressing roots, girdling roots, crack in trunk, crowding, multileader, forest grown form	Preserve			X	X				
107	Red maple	Acer rubrum	12	66	Buttressing roots, tree at root collar, leaning trunk, multiple curves in trunk, poor trunk form, crowding, multileader, leaning canopy, limb dieback	Remove								
108	Tulip poplar	Liriodendron tulipifera	22	75	Buttressing roots, multiple curves in trunk, crowding, multileader, uneven canopy, forest grown form	Remove								
109	Tulip poplar	Liriodendron tulipifera	19	66	Offsite: Buttressing roots, girdling roots, multiple curves in trunk, canopy dieback, multileader, forest grown form, leader not strong	Preserve	X	X	X					
111	Unidentified	dead tree	18	0	Offsite: Dead	Remove								
112	Red maple	Acer rubrum	23	69	Offsite: Buttressing roots, dual trunk, leaning trunk, multiple curves in trunk, poor trunk form, multileader, poor canopy form, epicormic sprouting	Preserve	X	X	X					
115	Red maple	Acer rubrum	12	50	Buttressing roots, jog in trunk, multiple curves in trunk, dual leader, limb dieback, bark damage, dying, remove due to dangerous amount of decay, epicormic sprouting, center rotted out at base	Remove								
116	White oak	Quercus alba	16	75	Offsite: Buttressing roots, multileader, leaning canopy, limb dieback, uneven canopy, epicormic sprouting, forest grown form	Preserve	X	X	X	X				
118	White oak	Quercus alba	18	72	Buttressing roots, dual leader, limb dieback, epicormic sprouting, forest grown form	Remove								
119	Mockernut	Carya tomentosa	14	72	Buttressing roots, girdling roots, multileader, leaning canopy, uneven canopy, forest grown form	Preserve	X	X	X					
122	White oak	Quercus alba	18	82	Offsite: Buttressing roots, dual leader, piece of wood nailed to trunk	Preserve	X	X	X					
123	White oak	Quercus alba	16	72	Offsite: Buttressing roots, debris at base, crowding, dual leader, limb dieback, uneven canopy, forest grown form	Preserve	X	X	X	X				
124	White oak	Quercus alba	14	69	Offsite: Buried root collar, severely leaning canopy, poor canopy form, uneven canopy, epicormic sprouting	Remove								
125	White oak	Quercus alba	12	72	Offsite: Canopy dieback, crowding, multileader, limb dieback, epicormic sprouting	Remove								
126	White oak	Quercus alba	12	69	Buttressing roots, multiple curves in trunk, canopy dieback, limb dieback, poor canopy form, sparse canopy, uneven canopy	Remove								
127	White oak	Quercus alba	12	67	Buttressing roots, canopy dieback, crowding, dual leader, limb dieback, sparse canopy, epicormic sprouting, vine coverage	Remove								
128	White oak	Quercus alba	17	72	Buttressing roots, multileader, limb dieback	Remove								
129	White oak	Quercus alba	16	72	Offsite: Buttressing roots, severely leaning trunk, multileader, leaning canopy, limb dieback, uneven canopy	Preserve	X	X	X					
131	Northern red oak	Quercus rubra	16	69	Canopy dieback, dual leader, leaning canopy, poor canopy form, sparse canopy, uneven canopy, epicormic sprouting	Preserve	X	X	X					
132	Red maple	Acer rubrum	12	69	Offsite: Leaning trunk, multiple curves in trunk, poor trunk form, canopies interwined, crowding, dual leader, leaning canopy, poor canopy form, uneven canopy	Preserve			X	X				
133	White oak	Quercus alba	28	72	Buttressing roots, crowding, multileader, leaning canopy, uneven canopy, rock at base	Preserve	X	X	X					
134	White oak	Quercus alba	18	72	Buttressing roots, canopy dieback, crowding, multileader	Remove								
135	White oak	Quercus alba	15	70	Crowding, multileader, extensive epicormic sprouting	Remove								
136	White oak	Quercus alba	18	69	Buried root collar, crowding, multileader, leaning canopy, uneven canopy, epicormic sprouting	Preserve	X	X	X					
137	Unidentified	dead tree	12	0	Offsite: Dead	Remove								
138	Unidentified	dead tree	12	0	Offsite: Dead	Remove								
139	Southern red oak	Quercus falcata	18	65	Buttressing roots, debris at base, extensive canopy dieback, canopies intertwined, crowding, multileader, hanging branches, severely leaning canopy, extensive limb dieback, poor canopy form	Remove								
140	White oak	Quercus alba	14	69	Buttressing roots, multiple curves in trunk, canopy dieback, canopies interwined, crowding, multileader, leaning canopy, limb dieback, sparse canopy, uneven canopy	Preserve	X	X	X					
141	White oak	Quercus alba	14	69	Buried root collar, canopy dieback, crowding, leaning canopy, limb dieback, sparse canopy, epicormic sprouting, rock at base	Preserve	X	X	X					
142	Mockernut	Carya tomentosa	16	72	Offsite: Buttressing roots, girdling roots, crowding, limb dieback, uneven canopy	Preserve	X	X	X					
143	White oak	Quercus alba	14	72	Buried root collar, debris at base, canopy dieback, limb dieback, uneven canopy, epicormic sprouting	Preserve	X	X	X					
144	White oak	Quercus alba	12	75	Buried root collar, debris at base, multileader, leaning canopy, limb dieback, uneven canopy	Preserve	X	X	X					
145	Scarlet oak	Quercus coccinea	16	75	Buried root collar, debris at base, crowding, leaning canopy, limb dieback, uneven canopy, forest grown form	Preserve	X	X	X					
146	White oak	Quercus alba	12	69	Offsite: Buttressing roots, debris at base, canopies interwined, crowding, limb dieback, vine coverage	Preserve			X	X				
147	Tulip poplar	Liriodendron tulipifera	12	69	Offsite: Buttressing roots, debris at base, jog in trunk, multiple curves in trunk, poor trunk form, crowding, poor canopy form, epicormic sprouting	Preserve			X	X				
148	Scarlet oak	Quercus coccinea	22	66	Buttressing roots, debris at base, hole in trunk, canopy dieback, crowding, dual leader, limb dieback, poor canopy form, uneven canopy, bark damage, signs of decay, epicormic sprouting, hole at base	Remove								
154	Post oak	Quercus stellata	12	69	Buried root collar, buttressing roots, debris at base, canopy dieback, canopies interwined, crowding, multileader, limb dieback, poor canopy form, rubbing branches, epicormic sprouting	Preserve			X					
155	Post oak	Quercus stellata	12	69	Buried root collar, multiple curves in trunk, canopy dieback, crowding, multileader, leaning canopy, limb dieback, poor canopy, uneven canopy, extensive epicormic sprouting, extensive vine coverage	Preserve			X					
156	White oak	Quercus alba	12	72	Buttressing roots, canopy dieback, crowding, multileader, limb dieback, poor canopy form, uneven canopy, epicormic sprouting, bulge at base	Preserve	X	X	X					
157	American sycamore	Platanus occidentalis	20	63	Offsite: Buried root collar, debris at base, on steep slope, multiple curves in trunk, canopy dieback, crowding, dual leader, sparse canopy, uneven canopy, epicormic sprouting	Preserve			X					
158	American beech	Fagus grandifolia	12	69	Buttressing roots, debris at base, on steep slope, multileader, poor canopy form, uneven canopy, epicormic sprouting, rock at base	Remove								
159	Mockernut	Carya tomentosa	12	69	Offsite: Buttressing roots, debris at base, girdling roots, hole in trunk, canopies interwined, crowding, multileader, poor canopy form, uneven canopy, epicormic sprouting, rocks at base	Preserve	X	X	X					
160	Tulip poplar	Liriodendron tulipifera	24	69	Offsite: On steep slope, jog in trunk, canopy dieback, dual leader, limb dieback, poor canopy form	Preserve	X	X	X					
161	Southern red oak	Quercus falcata	18	72	Debris at base, multiple curves in trunk, multileader, uneven canopy	Preserve			X	X				
162	Green ash	Fraxinus pennsylvanica	12	72	Buttressing roots, j-root, canopy dieback, multileader, under powerlines	Remove								
163	Green ash	Fraxinus pennsylvanica	16	72	Buttressing roots, hole in trunk, multileader, limb dieback, uneven canopy, poor pruning scars	Remove								
164	Black gum	Nyssa sylvatica	14	69	Buried root collar, dual leader, poor canopy form, extensive epicormic sprouting	Preserve			X					
165	Tulip poplar	Liriodendron tulipifera	14	67	Buried root collar, dual leader, poor canopy form, extensive epicormic sprouting, j-root damaged	Preserve			X					
200	Virginia pine	Pinus virginiana	12	74	Buttressing roots, crowding, dual leader	Preserve	X	X	X	X				
201	Red maple	Acer rubrum	21	70	Buttressing roots, j-root, dual trunk, jog in trunk, severely leaning trunk, crowding, multileader, limb dieback, uneven canopy	Preserve	X	X	X	X				
202	Scarlet oak	Quercus coccinea	24	74	Debris at base, leaning trunk, multileader, limb dieback, uneven canopy, forest grown form	Preserve	X	X	X	X				
203	Northern red oak	Quercus rubra	36	74	Buttressing roots, debris at base, crowding, multileader, limb dieback, uneven canopy, forest grown form	Remove								
204	White oak	Quercus alba	30	74	Leaning trunk, crowding, multileader, limb dieback	Remove								
8474	Green ash	Fraxinus pennsylvanica	12	50	Offsite: Jog in trunk, multileader, uneven canopy, dying, epicormic sprouting, extensive vine coverage	Preserve	X	X	X					
8475	Tulip poplar	Liriodendron tulipifera	33	67	Offsite: Tree at root collar, canopy dieback, multileader, limb dieback, poor canopy form, extensive epicormic sprouting, forest grown form	Preserve	X	X	X					
8476	Scarlet oak	Quercus coccinea	24	67	Offsite: Buttressing roots, canopy dieback, multileader, leaning canopy, sparse canopy, uneven canopy, epicormic sprouting, forest grown form	Preserve	X	X	X					
8477	Scarlet oak	Quercus coccinea	14	67	Offsite: Buttressing roots, canopies interwined, crowding, multileader, leaning canopy, uneven canopy, extensive epicormic sprouting	Preserve			X					
8478	White oak	Quercus alba	16	69	Offsite: Canopy dieback, multileader, uneven canopy, epicormic sprouting	Preserve			X					
8479	Red maple	Acer rubrum	30	63	Offsite: Buttressing roots, multitrunk, large hole in trunk, poor trunk form, multileader, poor canopy form, signs of decay, extensive epicormic sprouting, included bark, poor pruning scars	Preserve	X	X	X					

THIS SHEET IS FOR TREE PRESERVATION PURPOSES ONLY

NO.	DATE	REVISION
2.	7–24–15	CHANGED TREE 162 TO BE REMOVED
1.	5–29–15	REVISED TREE INVENTORY (LBD)

PRIOR TO APPROVAL

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TREE PRESERVATION INVENTORY

THE TOWNES AT BURKE LAKE CROSSING

SPRINGFIELD DISTRICT
FAIRFAX COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
ANTHONY K. OWENS
Lic. No. 034522
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	REVIEW BY	APPROVD.	DATE
	REVISIONS			

DESIGN: LBD | DRAFT: LBD
APPROVED: HMF
DATE: FEB 2015
SCALE: HORIZ: — VERT: —

SHEET 8 OF 15

PRJ NO: 13–531
TYPE: GDP

RZ 2015–SP–003

Attached Xrefs: 00–G0700/00–G0500/00–R0301/00–R0401

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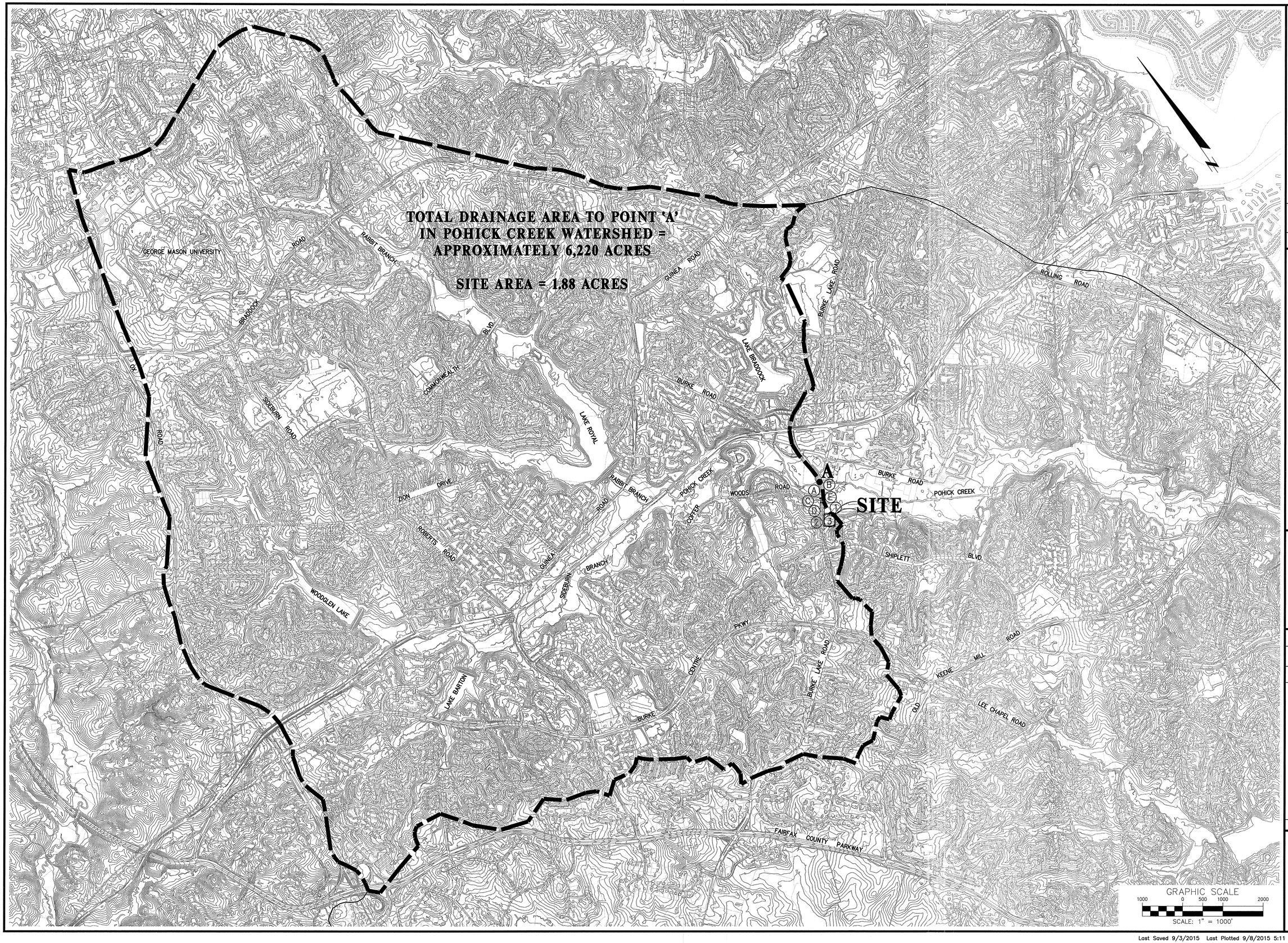

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OUTFALL MAP

THE TOWNES AT BURKE LAKE CROSSING

SPRINGFIELD DISTRICT
FAIRFAX COUNTY, VIRGINIA

RZ 2015-SP-003

COMMONWEALTH OF VIRGINIA
CONSULTING ENGINEER
CHRISTOPHER ANTHONY T. OWENS
Lic. No. 034522
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	REVIEW BY	APPROVD	DATE
	REVISIONS			

DESIGN ADC	DRAFT ADC
APPROVED ATO	DATE FEB 2015
SCALE HORIZ: 1"=1000' VERT: ---	

SHEET 9 OF 15

PRJ NO: 13-531

TYPE: GDP

Attached Xrefs:

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Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sq.ft)	Incr. Storage (cu.ft)	Total storage (cu.ft)
0.00	253.25	3,500	0	0
4.75	258.00	3,500	8,549	8,549

Culvert / Orifice Structures

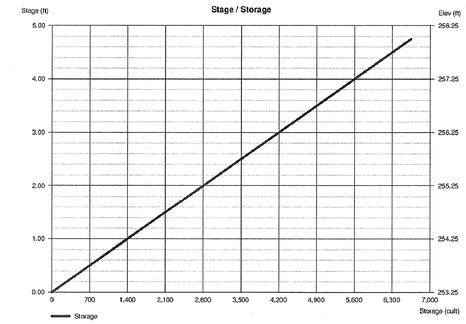
	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 18.00	12.00	0.00	0.00
Span (in)	= 18.00	12.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 253.25	253.25	0.00	0.00
Length (ft)	= 18.50	1.00	0.00	0.00
Slope (%)	= 0.29	0.01	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest EL (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No

Exfil(in/hr) = 0.000 (by Contour)
TW Elev. (ft) = 0.00

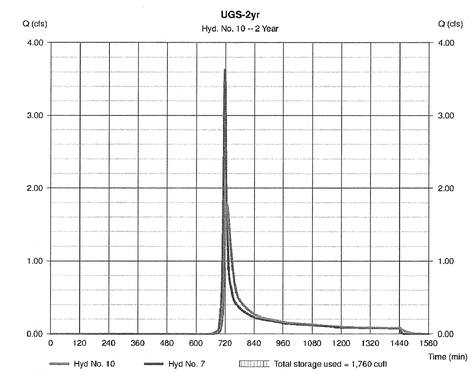
Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked to orifice conditions (ic) and submergence (s).



UGS-2yr

Hydrograph type	= Reservoir	Peak discharge	= 1.790 cfs
Storm frequency	= 2 yrs	Time to peak	= 726 min
Time interval	= 2 min	Hyd. volume	= 10,304 cuft
Inflow hyd. No.	= 7 - 2yr combined	Max. Elevation	= 254.51 ft
Reservoir name	= UGS	Max. Storage	= 1,760 cuft

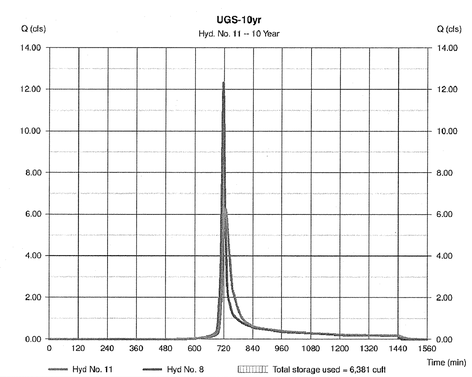
Storage Indication method used.



UGS-10yr

Hydrograph type	= Reservoir	Peak discharge	= 6.269 cfs
Storm frequency	= 10 yrs	Time to peak	= 726 min
Time interval	= 2 min	Hyd. volume	= 30,694 cuft
Inflow hyd. No.	= 8 - 10yr combined	Max. Elevation	= 257.82 ft
Reservoir name	= UGS	Max. Storage	= 6,381 cuft

Storage Indication method used.



OUTFALL, SWM, AND BMP NARRATIVE

THE SITE CONSISTS OF 1.88 ACRES, ON WHICH 12 SINGLE-FAMILY ATTACHED UNITS ARE PROPOSED TO BE CONSTRUCTED. THE SITE IS PARTIALLY WOODED, WITH SLOPES AVERAGING ABOUT 6%. THE EXISTING HOUSE AND DRIVEWAY ARE TO BE REMOVED.

THE EXISTING SITE DRAINS TOWARD FAIRFAX COUNTY PARK AUTHORITY PROPERTY TO THE NORTH AND EAST, THEN INTO A FLOODPLAIN WHICH FLOWS IN A SOUTHEASTERLY DIRECTION. THIS FLOODPLAIN IS WITHIN THE POHICK STREAM VALLEY PARK.

POST-DEVELOPMENT CONDITIONS

A RAIN GARDEN WITH UNDERGROUND STORAGE WILL BE PROVIDED WITH THIS DEVELOPMENT. A CLOSED STORM SEWER SYSTEM WILL BE INSTALLED TO COLLECT MOST OF THE SITE'S RUNOFF INTO THE PROPOSED RAIN GARDEN. THIS RAIN GARDEN WILL PROVIDE STORMWATER MANAGEMENT & STORMWATER QUALITY CONTROL FOR THIS SITE. THE POST DEVELOPMENT PEAK FLOW WILL BE BELOW THE PRE-DEVELOPMENT PEAK FLOWS.

THE OVERALL DRAINAGE AREA MAP SHOWN ON SHEET 9 DEPICTS THE DRAINAGE AREA WHERE THE SITE OUTFALLS INTO THE EXISTING FLOODPLAIN VIA A CLOSED CONDUT SYSTEM THAT RUNS ALONG BURKE LAKE ROAD. THE TOTAL SITE AREA (1.88 ACRES) DRAINING INTO THE EXISTING FLOODPLAIN AT POINT "A" IS LESS THAN 1% OF THE OVERALL DRAINAGE AREA (6,220 ACRES) OF THE POHICK CREEK WATERSHED. THE EXISTING STREAM CHANNEL IS WELL-DEFINED WITH BED AND BANK. THEREFORE, PER PFM 6-0203.2A, THE EXTENT OF THE DOWNSTREAM DRAINAGE IS COMPLETED AT POINT "A".

SINCE THE FLOWS FROM THE SITE WILL BE REDUCED BELOW PRE-DEVELOPMENT LEVELS, IT IS THE ENGINEER'S OPINION THAT AN ADEQUATE OUTFALL FOR THIS PROJECT HAS BEEN MET.

STORMWATER QUALITY (BMPs) WILL BE PROVIDED VIA A RAIN GARDEN. PRELIMINARY CALCULATIONS SHOW THAT THE TOTAL PHOSPHORUS REMOVAL IS IN COMPLIANCE WITH THE VIRGINIA RUNOFF REDUCTION METHOD. THEREFORE, WATER QUALITY REQUIREMENTS HAVE BEEN MET FOR THIS DEVELOPMENT.

10-YR STORM DRAIN DESIGN COMPUTATIONS

FROM	TO	DRAIN. AREA (ACRES)	RUNOFF COEF. C	C x A INCR.	C x A ACCUM	TIME OF CONCENTRATION tc TO PIPE (min.)	TIME IN PIPE (sec.)	TIME	I	Q (cfs) INCR (c.f.s.)	Q (cfs) ACCUM (c.f.s.)	DESIGN PIPE DIA. In	SLOPE Ft/Ft	"n"	MAX Q (c.f.s.)	VEL Ft/Sec	LENGTH Ft	FALL Ft	UPPER INV	LOWER INV
3	2	Pond Release									6.34	18	0.0029	0.013	5.71	3.7	29.38	0.09	253.00	252.91
2	1										6.34	15	0.0100	0.013	6.47	6.1	178.59	1.79	252.66	250.88
1	EX E										6.34	15	0.0100	0.013	6.47	6.1	17.76	0.18	250.63	250.45
EX E	EX D	0.23	0.70	0.16		5.00		10	4.68	0.75	7.09	15	0.0136	0.013	7.56	7.1	73.34	1.00	250.20	249.20
EX D	EX C	14.51	0.40	5.80		10.00		10	5.10	29.60	36.69	30	0.0198	0.013	57.81	12.5	131.93	2.61	248.95	246.34
EX C	EX B	1.86	0.40	0.74		5.00		10	4.68	3.48	40.18	30	0.0097	0.013	40.48	9.5	109.30	1.06	246.04	244.98
EX B	EX A	0.74	0.40	0.30		5.00		10	4.68	1.39	41.56	30	0.0570	0.013	106.41	20.1	18.50	1.24	244.88	243.64

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OUTFALL NARRATIVE & COMPUTATIONS

THE TOWNES AT BURKE LAKE CROSSING

SPRINGFIELD DISTRICT
FAIRFAX COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
ANTHONY T. OWENS
Lic. No. 034522
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	REVIEW BY	APPROVD.	DATE
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DESIGN ADC	DRAFT ADC	APPROVED ATO	DATE FEB. 2015
SCALE HORIZ: N/A VERT: ---			

SHEET 10 OF 15

PRJ NO: 13-531

TYPE: GDP

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Attached Xrefs:

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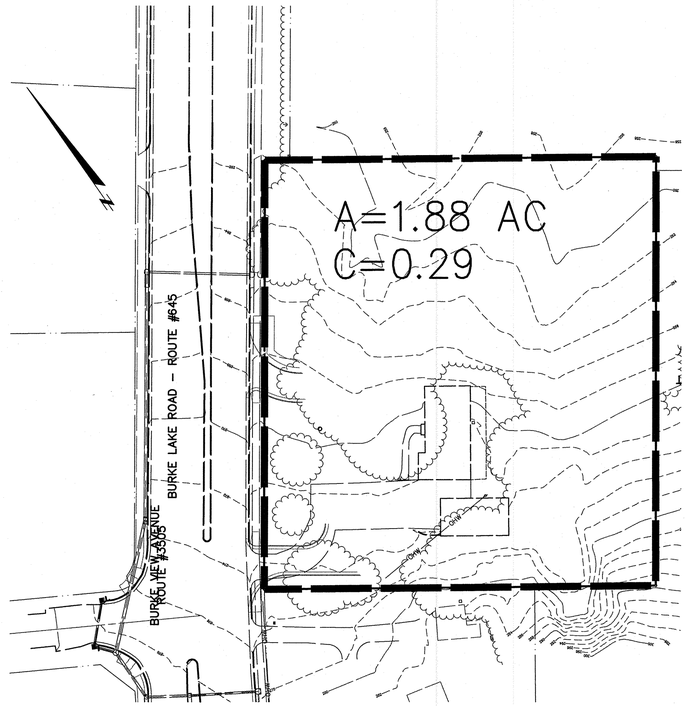
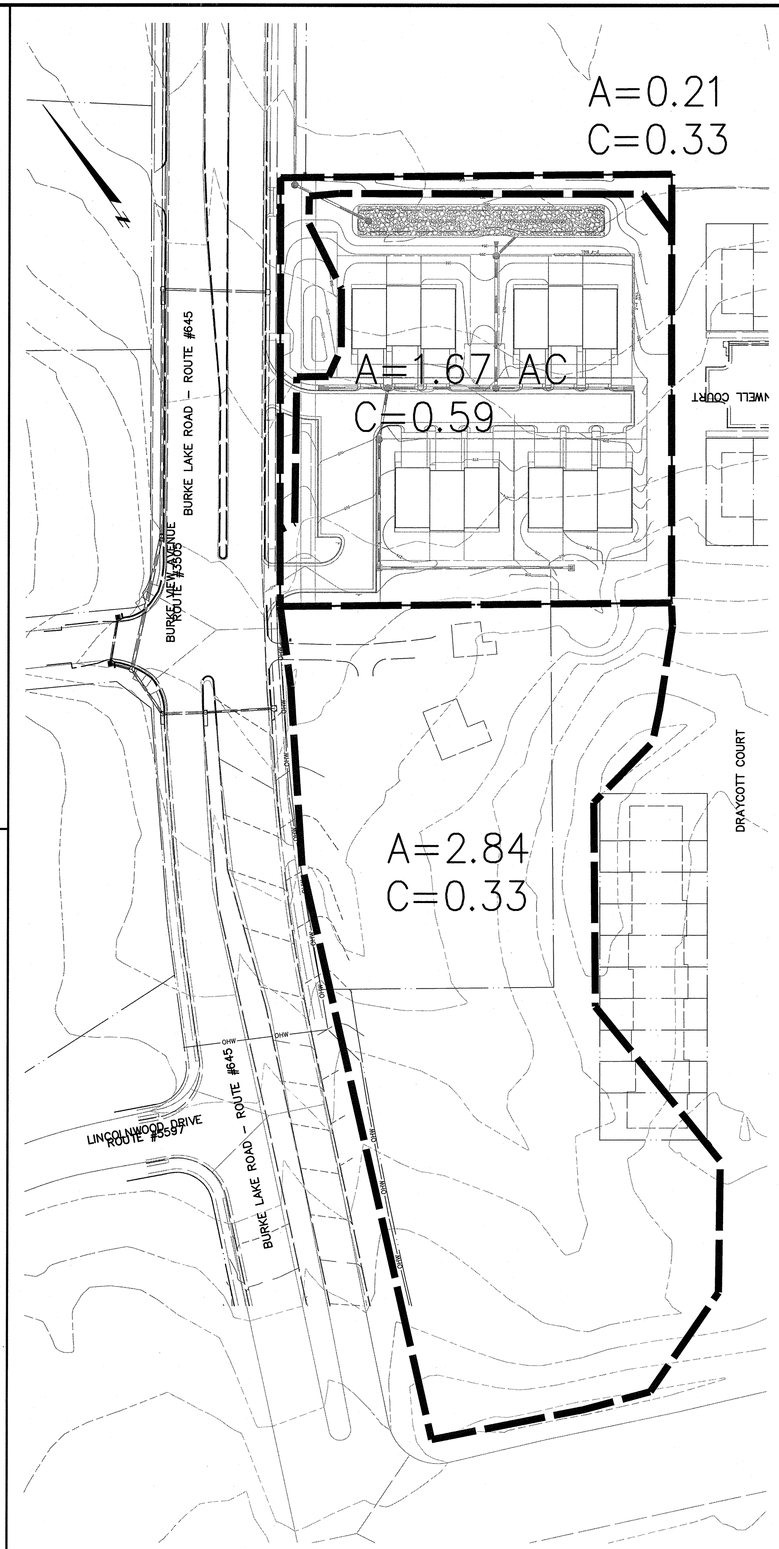
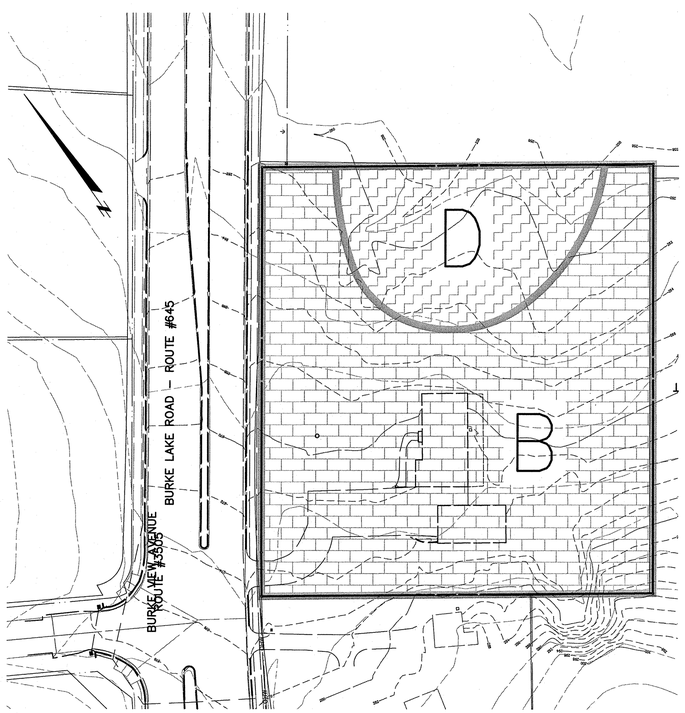


EXISTING DRAINAGE MAP

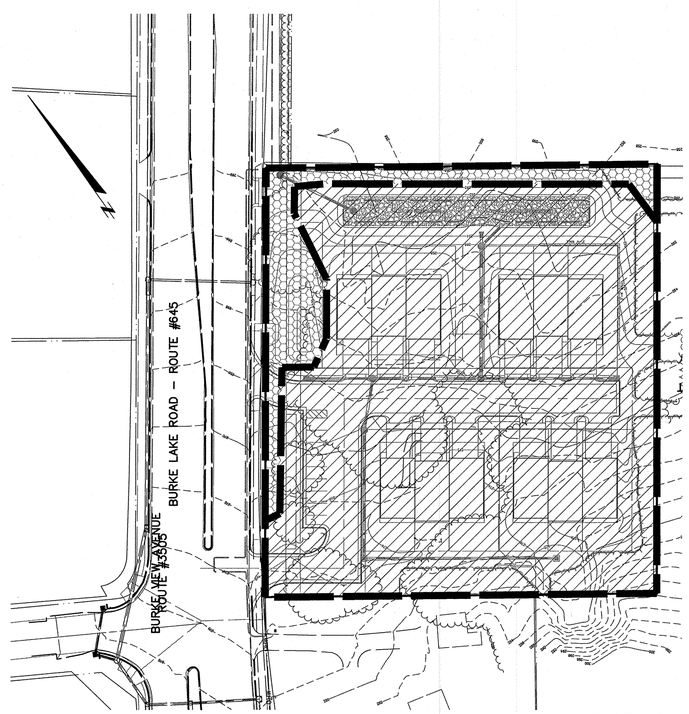


PROPOSED DRAINAGE MAP

GRAPHIC SCALE
50 0 25 50 100
SCALE: 1" = 50'



HYDROLOGICAL SOILS MAP



BMP MAP

LEGEND

DRAINAGE AREA TO RAIN GARDEN/STONE STORAGE

DRAINAGE AREA UNCONTROLLED

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DRAINAGE MAPS

THE TOWNES AT BURKE LAKE CROSSING

SPRINGFIELD DISTRICT
FAIRFAX COUNTY, VIRGINIA

RZ 2015-SP-003

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ANTHONY T. OWENS
Lic. No. 034522
9/9/15
PROFESSIONAL ENGINEER

NO.	DESCRIPTION REVISIONS	REVIEW BY	APPRVD.	DATE

DESIGN ADC	DRAFT ADC	APPROVED ATO	DATE FEB. 2015
SCALE HORIZ.:1" = 50' VERT: ___			

SHEET 11 OF 15

PRJ NO: 13-531

TYPE: GDP

Attached Xrefs: 00-G0500/00-R0401/00-R0301/00-G0700/00-G2401

Last Saved 9/3/2015 Last Plotted 9/8/2015 5:05 PM Sheet N:\13531\DWG\00-G2301

Virginia Runoff Reduction Method New Development Worksheet - v2.8 - June 2014

Update Summary Sheet

Print

Site Data Summary

Total Rainfall = 43 inches

Site Land Cover Summary

	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest (acres)	0.00	0.00	0.00	0.00	0.00	*0.00*
Turf (acres)	0.00	0.74	0.00	0.32	1.06	*56.38*
Impervious (acres)	0.00	0.75	0.00	0.07	0.82	*43.62*
					1.88	*100.00*

Site Rv	0.54
Post Development Treatment Volume (ft3)	3655
Post Development TP Load (lb/yr)	2.30
Post Development TN Load (lb/yr)	16.43
Total TP Load Reduction Required (lb/yr)	1.53

Total Runoff Volume Reduction (ft^3)	2750
Total TP Load Reduction Achieved (lb/yr)	2
Total TN Load Reduction Achieved (lb/yr)	15.44
Adjusted Post Development TP Load (lb/yr)	0.35
Remaining Phosphorous Load Reduction (Lb/yr) Required	0.00

Drainage Area Summary

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
Forest (acres)	0.00	0.00	0.00	0.00	0.00	*0.00*
Turf (acres)	1.06	0.00	0.00	0.00	0.00	*1.06*
Impervious (acres)	0.82	0.00	0.00	0.00	0.00	*0.82*
						1.88

Drainage Area Compliance Summary

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
TP Load Red. (lb/yr)	1.94	0.00	0.00	0.00	0.00	*1.94*
TN Load Red. (lb/yr)	15.44	0.00	0.00	0.00	0.00	*15.44*

Drainage Area A Summary

Land Cover Summary

	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest (acres)	0.00	0.00	0.00	0.00	0.00	*0.00*
Turf (acres)	0.00	0.74	0.00	0.32	1.06	*56.38*
Impervious (acres)	0.00	0.75	0.00	0.07	0.82	*43.62*
					1.88	

BMP Selections

Practice	Credit Area (acres)		Downstream Practice
6.b. Bioretention #2 (Spec #9)	Impervious:	0.8	
	Turf (Pervious):	0.87	

Total Impervious Cover Treated (acres)	0.80
Total Turf Area Treated (acres)	0.87
Total TP Load Reduction Achieved in D.A. A (lb/yr)	1.94
Total TN Load Reduction Achieved in D.A. A (lb/yr)	15.44

Virginia Runoff Reduction Method New Development Worksheet - v2.8 - June 2014
To be used w/ 2011 BMP Standards and Specifications
Site Data

Project Name: The Townes at Burke Lake Crossing
Date: 1/27/2015

data input cells
calculation cells
constant values

1. Post-Development Project & Land Cover Information

Constants

Annual Rainfall (inches)	43		
Target Rainfall Event (inches)	1.00		
Phosphorus EMC (mg/L)	0.26	Nitrogen EMC (mg/L)	1.86
Target Phosphorus Target Load (lb/acre/yr)	0.41		
Pj	0.90		

Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested land	0.00	0.00	0.00	0.00	0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be mowed/managed	0.00	0.74	0.00	0.32	1.06
Impervious Cover (acres)	0.00	0.75	0.00	0.07	0.82
				Total	1.88

Rv Coefficients

	A soils	B Soils	C Soils	D Soils
Forest/Open Space	0.02	0.03	0.04	0.05
Managed Turf	0.15	0.20	0.22	0.25
Impervious Cover	0.95	0.95	0.95	0.95

Land Cover Summary

Forest/Open Space Cover (acres)	0.00		
Weighted Rv(forest)	0.00		
% Forest	0%		
Managed Turf Cover (acres)	1.06		
Weighted Rv(turf)	0.22		
% Managed Turf	56%		
Impervious Cover (acres)	0.82		
Rv(impervious)	0.95		
% Impervious	44%		
Total Site Area (acres)	1.88		
Site Rv	0.54		
Post-Development Treatment Volume (acre-ft)	0.08		
Post-Development Treatment Volume (cubic feet)	3,655		
Post_Development Load (TP) (lb/yr)	2.30	Post_Development Load (TN) (lb/yr)	16.43
Total Load (TP) Reduction Required (lb/yr)	1.53		

RAIN GARDEN #1

Total Site Area	A =	1.88 ac		
Drainage Area to Rain Garden #1 from Surface	A_{rg} =	1.67 ac		
Total Impervious Area to Rain Garden from Surface	A_i =	0.80 ac	C = 0.59	
	Q_{10} =	7.11 cfs	(for rain garden)	
Treatment Volume (From Runoff Reduction Spreadsheet)	T_v =	3,655 cf		
Bioretion Soil Media Depth	d =	3 ft		
Gravel Depth	d =	1 ft		
Surface Storage Depth	d =	0.5 ft		
Filter Bed Design				
Equivalent Storage Depth	h_f =	1.65 ft		
Required Surface Area of Filter	A_{req} =	WQ_v / h_f		
	=	2215 sf		
Provided Surface Area of Filter	A_f =	**2,500** sf	at elevation	**261.00**
Provided surface area is larger then the required area.				
Depth of Filter	d_f =	3 ft	at elevation	**258.00**
Coefficient of Permeability of Filter Bed	k_f =	1.5 in/hr		
Drain time through the filter	t_f =	$(WQ_v) *(d_f) / [(k_f / 12) * (0.5h_f + d_f) * A_f]$		
	=	9.17 hrs	< 24 hrs OK	

Channel and Flood Protection

	Weighted CN	1-year storm Adjusted CN	2-year storm Adjusted CN	10-year storm Adjusted CN
Target Rainfall Event (in)		2.70	3.20	5.20
D.A. A CN	80	72	73	75

Site Results

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	AREA CHECK
IMPERVIOUS COVER	0.82	0.00	0.00	0.00	0.00	OK.
IMPERVIOUS COVER TREATED	0.80	0.00	0.00	0.00	0.00	OK.
TURF AREA	1.06	0.00	0.00	0.00	0.00	OK.
TURF AREA TREATED	0.87	0.00	0.00	0.00	0.00	OK.
AREA CHECK	OK.	OK.	OK.	OK.	OK.	

Phosphorus

TOTAL TREATMENT VOLUME (cf)	3,655
TOTAL PHOSPHORUS LOAD REDUCTION REQUIRED (LB/YEAR)	1.53
RUNOFF REDUCTION (cf)	2750
PHOSPHORUS LOAD REDUCTION ACHIEVED (LB/YR)	1.94
ADJUSTED POST-DEVELOPMENT PHOSPHORUS LOAD (TP) (lb/yr)	0.35
REMAINING PHOSPHORUS LOAD REDUCTION (LB/YR) NEEDED	CONGRATULATIONS!! YOU EXCEEDED THE TARGET REDUCTION BY 0.4 LB/YEAR!!

Practice	Unit	Description of Credit	Credit	Credit Area (acres)	Volume from Upstream RR Practice (cf)	Runoff Reduction (cf)	Remaining Runoff Volume (cf)	Phosphorus Efficiency (%)	Phosphorus Load from Upstream RR Practices (lbs)	Untreated Phosphorus Load to Practice (lbs.)	Phosphorus Removed By Practice (lbs.)	Remaining Phosphorus Load (lbs.)	Downstream Treatment to be Employed
6. Bioretention													
6.a. Bioretention #1 or Urban Bioretention (Spec #9)	impervious acres draining to bioretention	40% runoff volume reduction	0.40	0.00	0	0	0	25	0.00	0.00	0.00	0.00	
	turf acres draining to bioretention	40% runoff volume reduction	0.40	0.00	0	0	0	25	0.00	0.00	0.00	0.00	
6.b. Bioretention #2 (Spec #9)	impervious acres draining to bioretention	80% runoff volume reduction	0.80	0.80	0	2207	552	50	0.00	1.73	1.56	0.17	
	turf acres draining to bioretention	80% runoff volume reduction	0.80	0.87	0	543	136	50	0.00	0.43	0.38	0.04	

	Nitrogen Efficiency (%)	Nitrogen Load from Upstream RR Practices (lbs)	Untreated Nitrogen Load to Practice (lbs.)	Nitrogen Removed By Practice (lbs.)	Remaining Nitrogen Load (lbs.)
6. Bioretention					
6.a. Bioretention #1 or Urban Bioretention (Spec #9) — impervious acres draining to bioretention	40	0.00	0.00	0.00	0.00
turf acres draining to bioretention	40	0.00	0.00	0.00	0.00
6.b. Bioretention #2 (Spec #9) — impervious acres draining to bioretention	60	0.00	12.39	11.40	0.99
turf acres draining to bioretention	60	0.00	3.05	2.81	0.24

NO.	DATE	REVISION PRIOR TO APPROVAL

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BMP CALCULATIONS

THE TOWNES AT BURKE LAKE CROSSING

SPRINGFIELD DISTRICT
FAIRFAX COUNTY, VIRGINIA

RZ 2015-SP-003

COMMONWEALTH OF VIRGINIA
ANTHONY C. OWENS
Lic. No. 034522
9/8/15
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	REVISIONS	REVIEW BY	APPRVD	DATE

DESIGN ADC	DRAFT ADC	APPROVED ATO	DATE FEB 2015
SCALE HORIZ: 1" = 50' VERT: ---			
SHEET 12	OF 15		
PRJ NO: 13-531			
TYPE: GDP			

Attached Xrefs: 00-G0500/00-RG401/00-RG301/00-G0700/00-G2401

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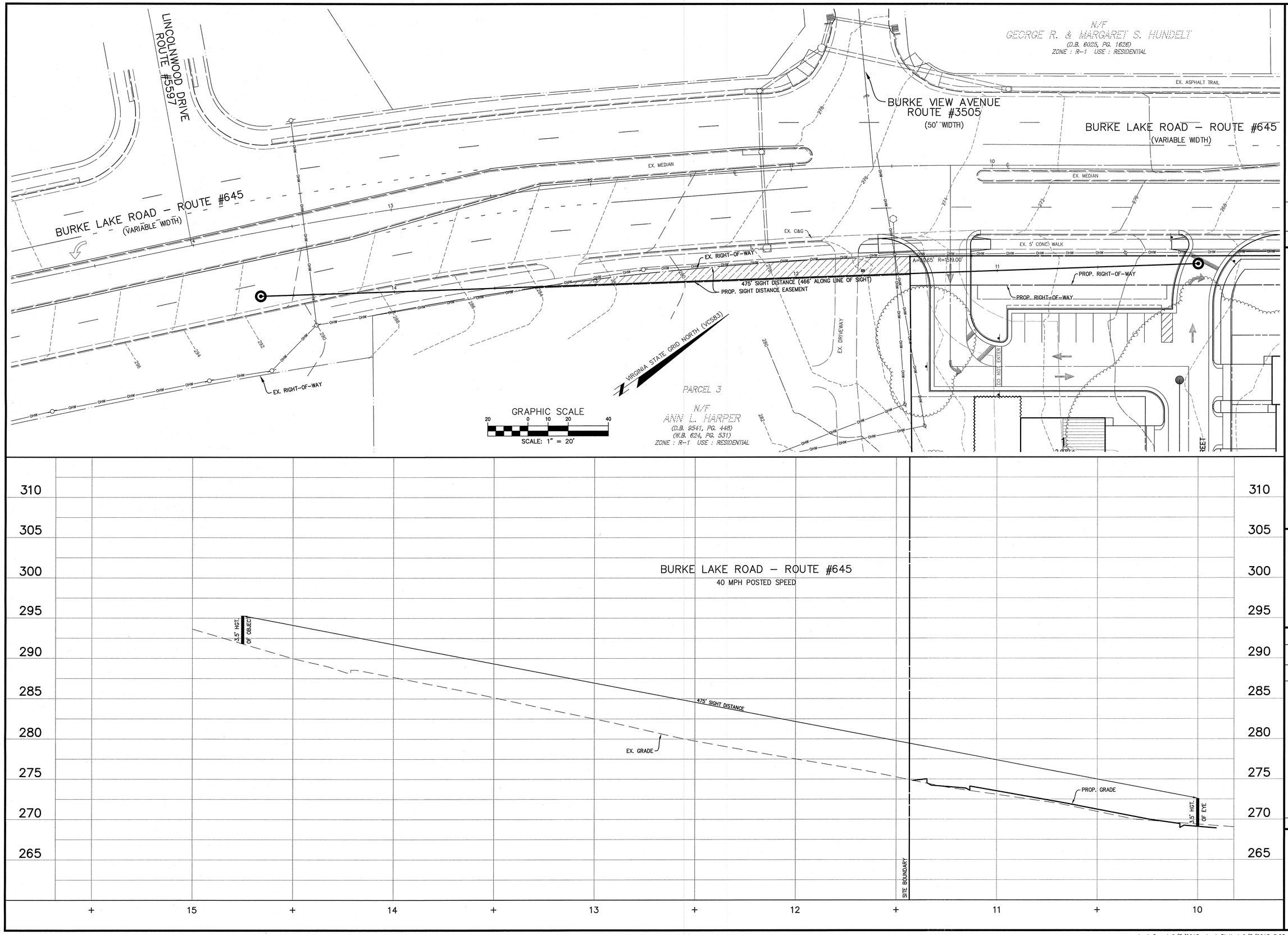

NO.	DATE	REVISION PRIOR TO APPROVAL
2.	7-24-15	UPDATED PLAN WITH NEW ENTRANCE (KJV)
1.	5-29-15	NEW SHEET (KJV)

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SIGHT DISTANCE PLAN & PROFILE

THE TOWNES AT BURKE LAKE CROSSING

SPRINGFIELD DISTRICT
FAIRFAX COUNTY, VIRGINIA

RZ 2015-SP-003

COMMONWEALTH OF VIRGINIA
HUGH ANTHONY T. OWENS
Lic. No. 034522
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	REVIEW BY	APPROV.	DATE
	REVISIONS			

DESIGN	DRAFT	APPROVED	DATE	SCALE
KJV	KJV	HWF	MAR. 2015	HORIZ: 1" = 20' VERT: 1" = 5'

SHEET 13 OF 15

PRJ NO: 13-531

TYPE: GDP

Attached Xrefs: 00-G0500/00-R0401/00-R0301/00-G0700

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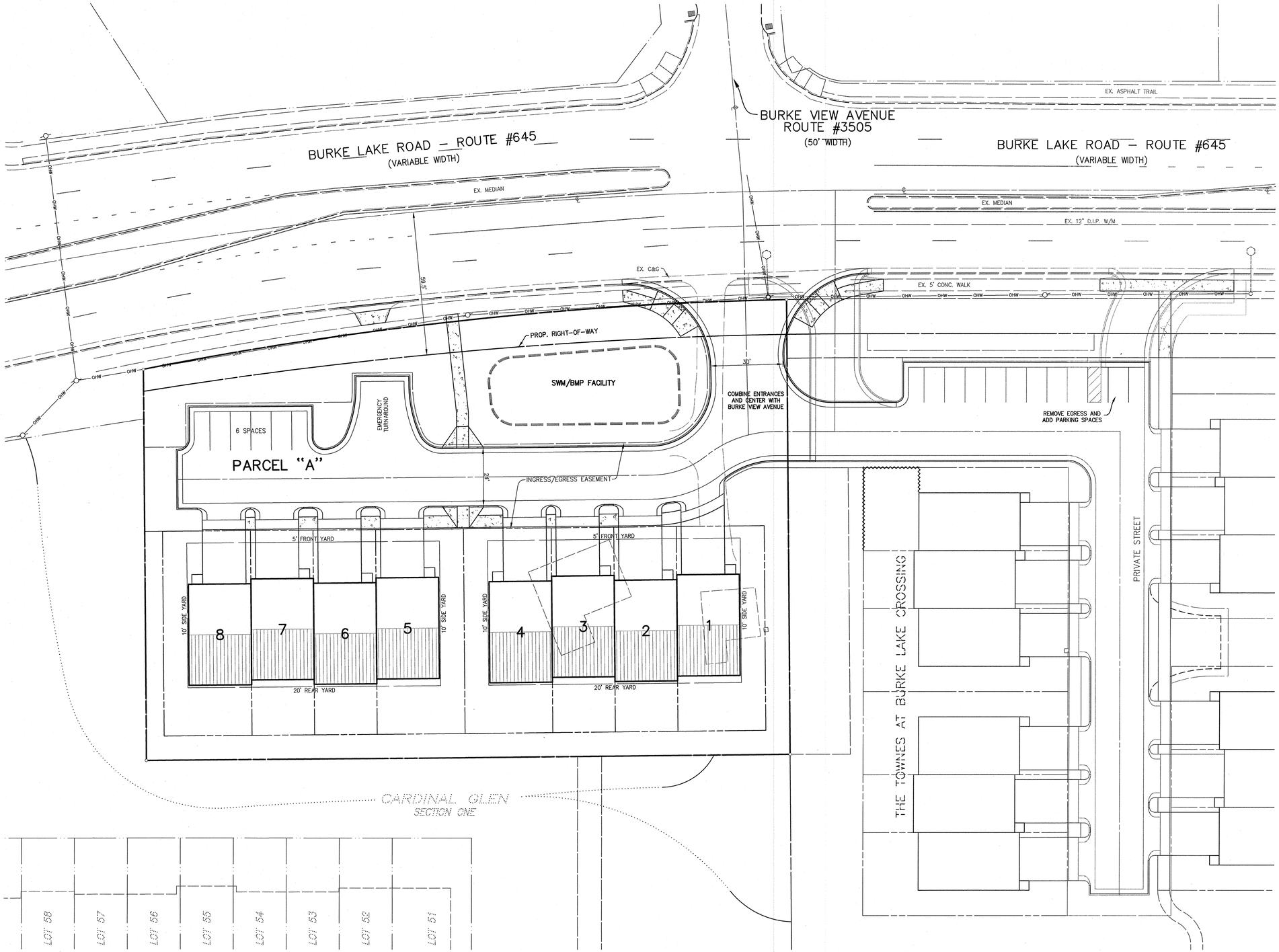

GRAPHIC SCALE

20 0 10 20 40

SCALE: 1" = 20'

SITE TABULATIONS

NO. OF UNITS : 8 SINGLE-FAMILY ATTACHED
DENSITY : 7.3 UNITS/ACRE
SITE AREA : 48,007 SF
(1.102 Ac)
ZONE : R-8
SETBACKS :
FRONT – 15'/5'
SIDE – 15'/10'
REAR – 30'/20'
OPEN SPACE :
REQUIRED – 20%
PROVIDED – 25%±

NO.	DATE	REVISION PRIOR TO APPROVAL
2.	7-24-15	UPDATED PLAN WITH NEW ENTRANCE (KJV)
1.	5-29-15	REVISED POSSIBLE INTERPARCEL CONNECTION (KJV)

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POTENTIAL FUTURE LAYOUT FOR 78-3((1))3

THE TOWNES AT BURKE LAKE CROSSING

SPRINGFIELD DISTRICT
FAIRFAX COUNTY, VIRGINIA

RZ 2015-SP-003

COMMONWEALTH OF VIRGINIA
ANTHONY L. OWENS
Lic. No. 034522
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	REVIEW BY	APPRVD	DATE
	REVISIONS			

DESIGN	DRAFT	APPROVED	DATE	SCALE
KJV	KJV	HMF	FEB. 2015	HORIZ: 1" = 20' VERT: –

SHEET 14 OF 15

PRJ NO: 13-531

TYPE: GDP

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kvestal

ARCHITECTURAL ELEVATIONS

THE TOWNES AT BURKE LAKE CROSSING

SPRINGFIELD DISTRICT
FAIRFAX COUNTY, VIRGINIA

RZ 2015-SP-003

NO.	DATE	REVISION PRIOR TO APPROVAL
	7-24-15	NEW SHEET (KJV)

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CONSTANTINE ANTHONY T. OWENS
Lic. No. 034522
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	REVIEW BY	APPRVD	DATE
	REVISIONS			

DESIGN KJV	DRAFT KJV
APPROVED HMF	
DATE FEB. 2015	SCALE HORIZ. 1" = 5' VERT. ---

SHEET 15 OF 15

PRJ NO: 13-531

TYPE: GDP

Attached Xrefs:

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DESCRIPTION OF THE APPLICATION

The applicant, Christopher Land, LLC, has requested the approval of a rezoning of 1.88 acres from the R-1: Residential District (One Dwelling Unit/Acre) to the R-8: Residential District (Eight Dwelling Units/Acre). The applicant proposes to redevelop the property with 12 single family attached dwellings, resulting in 6.4 dwelling units per acre (du/ac). The subject property's public street road frontage is along Burke Lake Road. The Generalized Development Plan (GDP) contains three options for vehicular access to Burke Lake Road, based upon the applicant's ability to either obtain a sight distance easement from the adjacent property owner, or a sight distance waiver from the Virginia Department of Transportation (VDOT).

The applicant has submitted four requests for waivers and modifications:

- Modification of the minimum district size;
- Modification of the transitional screening;
- Waiver of the barrier requirement; and,
- Deviation from the minimum tree preservation target.

Copies of the draft proffers, affidavit, and applicant's statement of justification are included in Appendices 1, 2, and 3, respectively. A reduced copy of the applicant's GDP is included at the beginning of this staff report.

LOCATION AND CHARACTER

The subject property is located at 9537 Burke Lake Road, approximately 600 feet northeast of Burke Lake Road's intersection with Shiplett Boulevard. The existing site contains a 2,152 square foot single family detached house built in 1955 and a driveway with one access point on Burke Lake Road. Approximately 65,900 square feet of the site's 81,916 square feet are forested.

The Pohick Stream Valley Park is located to the immediate northeast. To the southeast, the property is bordered by Cardinal Glen, Section 1, zoned R-5. This is a community of 114 townhouses served by private streets that access the surrounding road network via Shiplett Boulevard. The property is bordered immediately on its southwestern boundary by 9601 Burke Lake Road, which is Tax Map 78-3 ((1)) 3 and developed with one single family detached dwelling. This adjacent property is zoned R-1, and is 43,813 square feet in size. The subject property is across the street from the Burke Hills community, which is a neighborhood of 21 single family detached dwellings zoned R-1 with access to Burke Lake Road via a single access point at Burke View Avenue. Figure 1 shows the subject property and adjacent development.

Figure 1: The subject property with neighboring streets and parcel boundaries (*Source: Fairfax County GIS and Pictometry*)

BACKGROUND

The Board of Supervisors has not previously approved rezoning or special exception applications for the subject property. The Board of Zoning Appeals has not previously approved special permit applications for the property.

COMPREHENSIVE PLAN PROVISIONS

Plan Area: Area III, Pohick Planning District
P2 – Main Branch Community Planning Sector

Plan Map: Residential; 5-8 du/ac

DESCRIPTION OF THE GENERALIZED DEVELOPMENT PLAN

Proposed Dwelling Units

All three options propose a site layout with four groups of three single family attached dwellings each, for a total of 12 dwellings. Each dwelling would be 3-stories and no taller than 35 feet. Interior dwellings would be on 2,040 square foot parcels, while end units would be on 2,932 square feet. The applicant has included architectural elevations of the proposed dwellings on Sheet 15, which are depicted below in Figure 2.

Figure 2

Roadways

The applicant would dedicate an approximately 14-foot wide section of right-of-way along the Burke Lake Road frontage. This dedication would allow for a 59.5 foot wide half-section of right-of-way from the Burke Lake Road centerline.

The townhouses would be served by a private street network to be maintained by a future homeowners association.

Access and Parking

The applicant would arrange the proposed dwellings perpendicular to Burke Lake Road. The property's sole public street frontage is Burke Lake Road. The applicant has

included three options for vehicular access to Burke Lake Road in the GDP:

The proposed access on Sheet 4 would allow motorists to enter the site from either northbound or southbound Burke Lake Road with right or left turns into the site, respectively. Vehicles exiting the site would use a separate exit for right turns only onto northbound Burke Lake Road. Sheet 4 shows nine common area parking spaces, with three additional spaces to be provided upon redevelopment of 9601 Burke Lake Road, which is the adjacent property to the southwest (Tax Map 78-3 ((1)) 3). The applicant has identified where an interparcel access road to link the two properties could be located. The site's stormwater maintenance driveway would come off of Burke Lake Road to serve the site's bioretention facility. The site's interface with Burke Lake Road is shown in greater detail below in Figure 3. In order to implement this site design, the applicant would need a site distance easement from the adjacent property owner to the southwest to ensure that a clear line of sight could be achieved for motorists to safely exit the site. As an alternative, the applicant could request a sight distance waiver from VDOT. The applicant would also need to obtain an access management waiver from VDOT due to the close proximity of the ingress and egress.

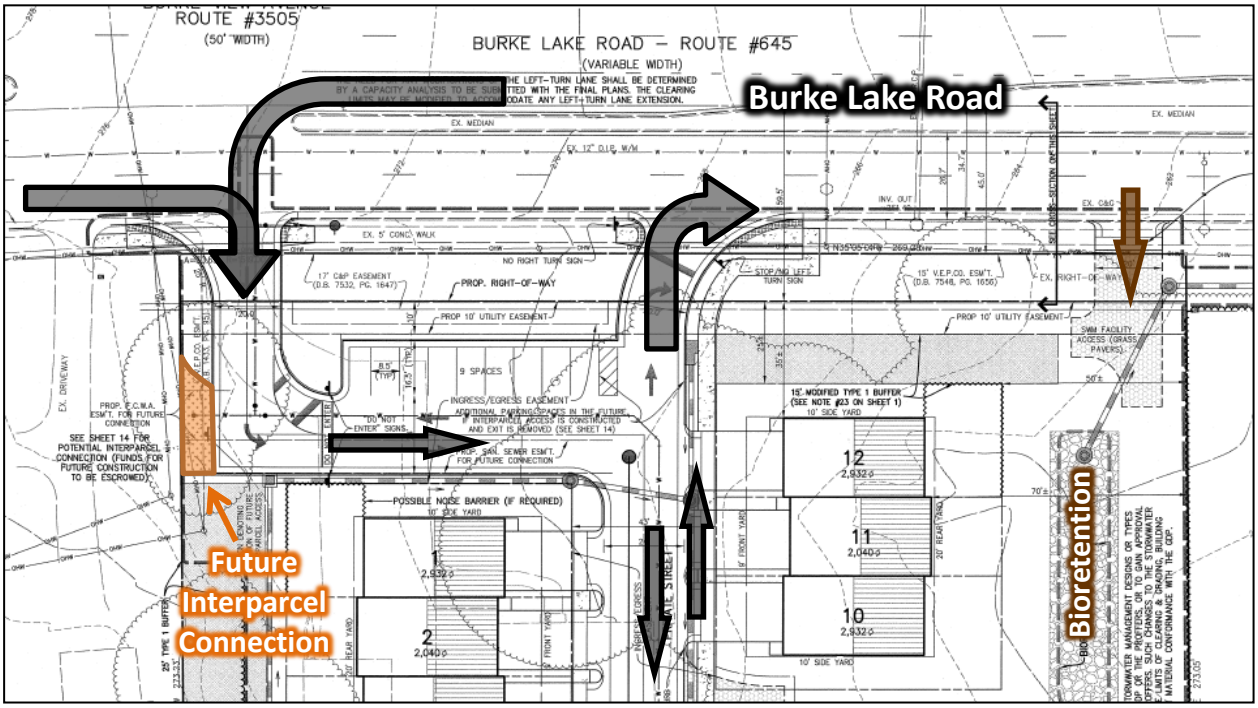

Figure 3: Sheet 4 shows separate ingress and egress points for the vehicular access to and from Burke Lake Road, as well as the location of a future interparcel connection upon the adjacent site's redevelopment ***(Source: Charles P. Johnson & Associates, Inc., 9/8/2015)***

The proposed access on Sheet 5 would allow motorists to enter the site from the same location as Sheet 4, but vehicles exiting the site would use an egress point near the property's shared boundary with Pohick Stream Valley Park. The site's stormwater maintenance access driveway would be located just off of this egress driveway. The applicant would still accommodate interparcel access to the southwest with this layout.

With the egress point located at the far northern corner of the property, the applicant could achieve VDOT's sight distance requirements without the need of an easement from the adjacent property owner or a waiver. The applicant would still be required to obtain an access management waiver from VDOT during site plan review in order to implement Sheet 5 (Figure 4).

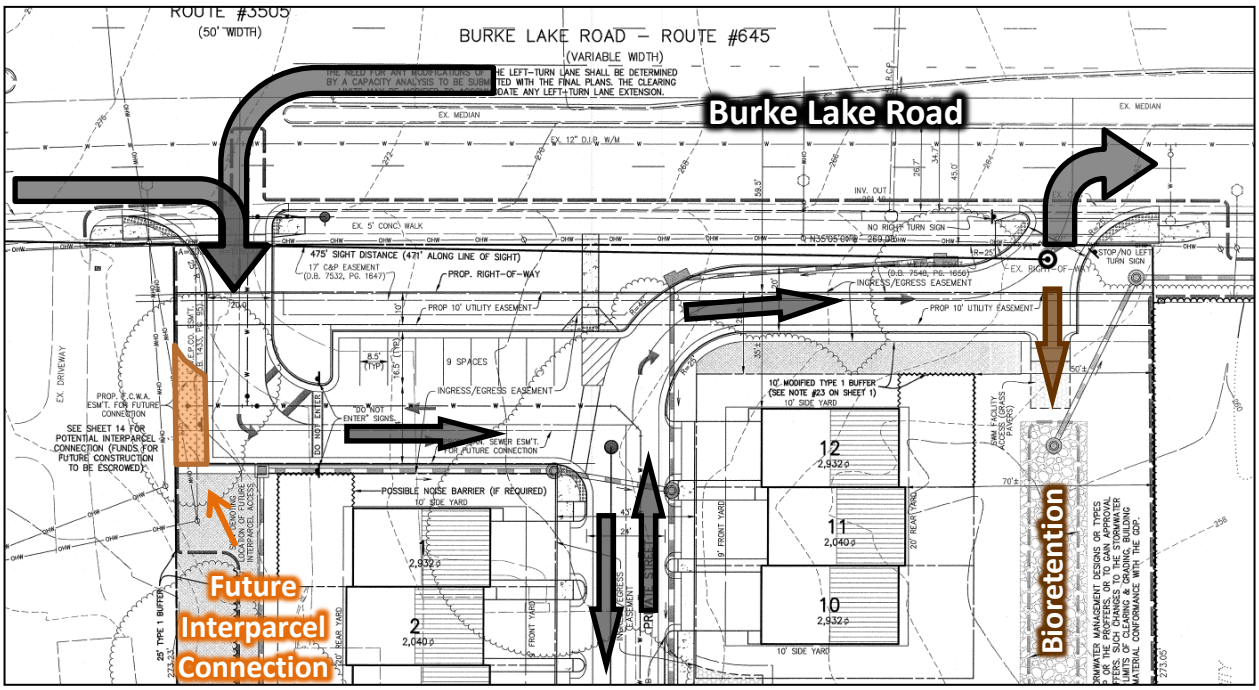

Figure 4: The modified layout on Sheet 5 would preserve interparcel access ***(Source: Charles P. Johnson & Associates, Inc., 9/8/2015)***

The proposed access on Sheet 5A of the GDP would provide a combined ingress/egress near the site's boundary with Pohick Stream Valley Park (Figure 5). Due to the median along the center of Burke Lake Road at this location, southbound motorists would need to make a U-turn to access the site. While the applicant would meet the VDOT sight distance and access management requirements without the need for off-site easements or waivers, the site design on Sheet 5A would eliminate the prospect of interparcel connection with future development of the adjacent property to the southwest. Sheet 5A shows 12 parking spaces instead of the nine spaces in the previous two layouts. The bioretention facility's access driveway would be off of the internal driveway.

All three options provide a pedestrian path linking the subject property to a sidewalk in Cardinal Glen, Section 1. The pedestrian path would be established subject to the approval of the Cardinal Glen Homeowners Association.

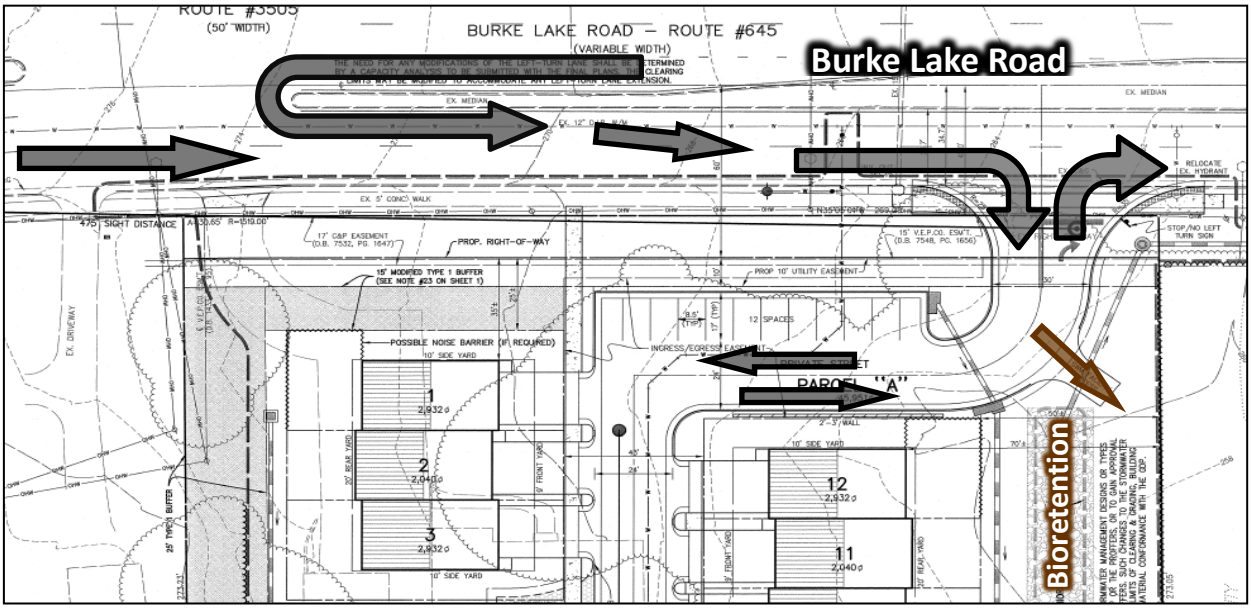

Figure 5: Sheet 5A would eliminate the need for waivers related to sight distance or access management, but would prevent future interparcel access to the southwest upon redevelopment of 9601 Burke Lake Road *(Source: Charles P. Johnson & Associates, Inc., 9/8/2015)*

Each dwelling would have a two-car garage and driveways to accommodate two cars parked side by side, with sufficient length to avoid conflicts with pedestrians. The applicant would provide 57 parking spaces, which would include 24 garage spaces for each of the townhouse's 2-car garages, 24 driveway spaces, and nine common spaces. Sheet 5A would add three common spaces for a total of 60 parking spaces on site.

Stormwater Management

The applicant would install a rain garden with underground storage along the property's northeastern boundary with Pohick Stream Valley Park. The applicant intends to use a closed storm sewer system with gravel-filled chambers, and plant landscaping above the storage system.

Landscaping

The Fairfax County Public Facilities Manual (PFM) requires a minimum of 20 percent tree canopy coverage after 10 years of mature tree growth post-development. Furthermore, the PFM requires tree preservation as part of the 20 percent post-development canopy equivalent to the percentage of the pre-development tree canopy coverage. The subject property has an existing tree canopy covering 65,900 square feet of the site (80.4 percent). The PFM requires the applicant to provide a total of 16,383 square feet of tree canopy coverage (20 percent of the entire site), of which 13,180 must be through preserved trees (80.4 percent of the required canopy).

For each of the applicant's site designs that would provide interparcel access, 5,920 square feet of existing tree canopy coverage (7,400 square feet of canopy credit per PFM 12-0510 3B) would be retained. This preservation would equate to 42.7 percent of the total canopy coverage coming from existing trees, instead of the 80.4 percent required by the PFM. The preserved tree cover would be generally located along the property's boundaries with Cardinal Glen, Section 1 and the property to the southwest. The applicant would provide 12,075 square feet of new tree canopy coverage to the site. Sheets 6 and 6A of the GDP show the applicant's landscaping for the site layouts previously discussed on Sheets 4 and 5, respectively. With the weighted credit given to the preserved trees, the applicant's total tree canopy coverage would be 23.8 percent of the subject property. Figure 6 shows the landscape plan corresponding with the Sheet 4 layout.

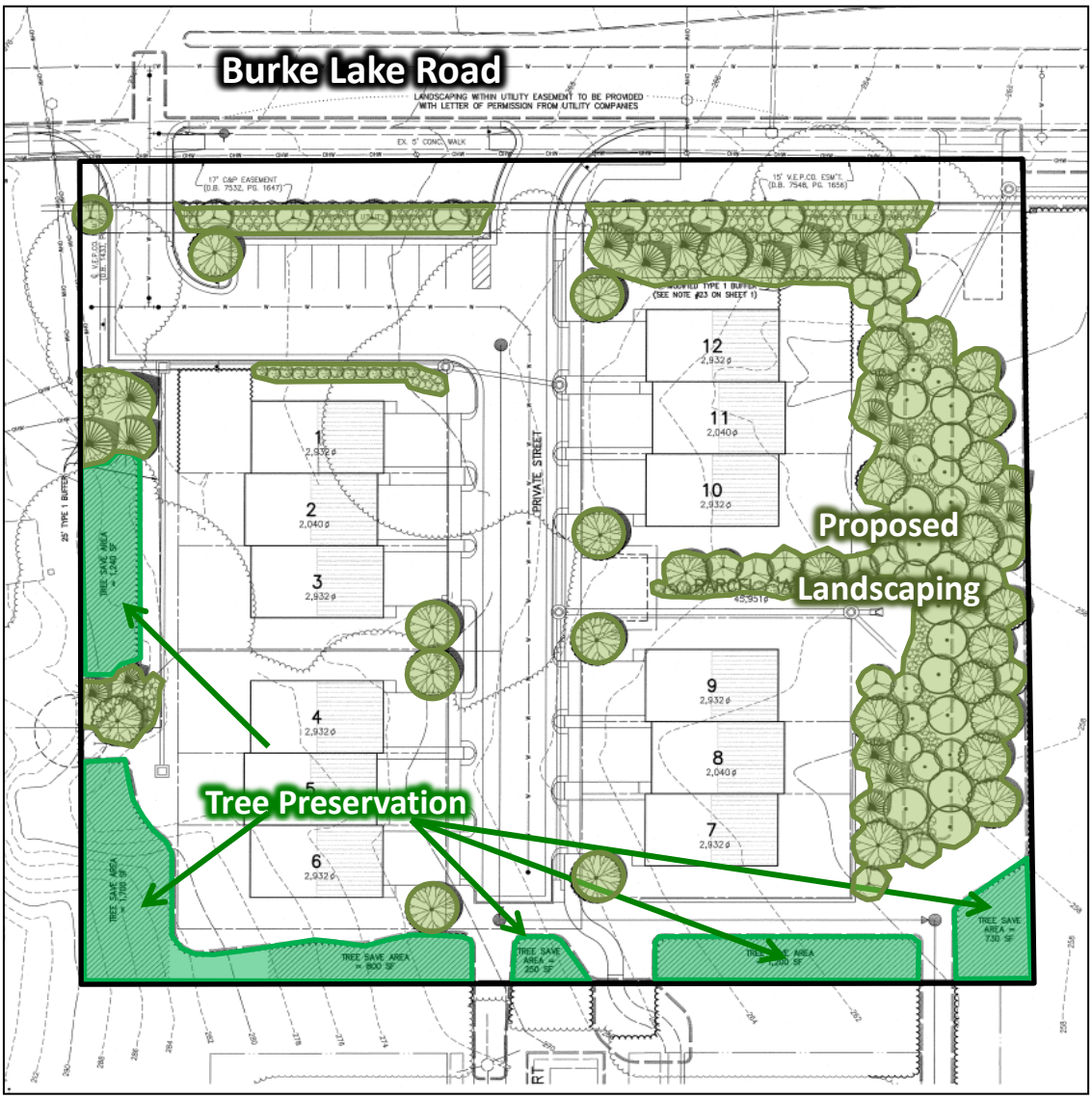

Figure 6: The proposed landscape plan with tree preservation areas. The landscape plan is for Sheet 4's site layout *(Source: Charles P. Johnson & Associates, Inc., 9/8/2015)*

The applicant's landscape plan shown on Sheet 6B is associated with the site layout shown on Sheet 5A with the combined ingress/egress to Burke Lake Road. The applicant would preserve 5,600 square feet of existing tree canopy coverage (7,000 square feet of canopy credit per PFM 12-0510 3B), or 42.7 percent of the required 80.4 percent. In total, the applicant's total tree canopy coverage would be 20.5 percent of the subject property.

For each of the site layout options, the majority of the site's plantings would be for the proposed rain garden and along Burke Lake Road. Additional trees would be placed near the tree save areas to supplement the existing canopy coverage. While the applicant has not specified individual tree species, the rain garden would be planted predominantly with deciduous shade trees classified as Category III and Category IV by the PFM. The tree species themselves would be reviewed and approved the Department of Public Works and Environmental Service's (DPWES) Urban Forest Management Division (UFMD).

The applicant has included several medium deciduous shrubs and nine Category II ornamental trees within a proposed 10-foot wide utility easement along Burke Lake Road. The applicant's note on the GDP specifies that the landscaping would be provided subject to the permission of the easement holder.

Potential Interparcel Access

Sheet 14 of the GDP shows a conceptual layout for the neighboring 9601 Burke Lake Road (Tax Map 78-3 ((1)) 3), demonstrating a potential concept for how the site could be developed in accordance with the Comprehensive Plan with eight townhouses and a vehicular access point across from Burke View Avenue (Figure 7, next page). The conceptual layout shows how the subject property's layout could integrate with the neighboring townhouses, with a combined entrance and exit for both developments on Burke Lake Road. The conceptual layout could allow the subject property's ingress and egress points to be removed and replanted.

RESIDENTIAL DEVELOPMENT CRITERIA

Fairfax County expects new residential development to enhance the community by fitting into the fabric of the neighborhood, respecting the environment, addressing transportation impacts, addressing impacts on public facilities, respecting the County's historic heritage, contributing to the provision of affordable housing, and being responsive to the unique site specific considerations of the property. To that end, the Comprehensive Plan requires the following criteria (Appendix 4) to be used in evaluating zoning requests for new residential development:

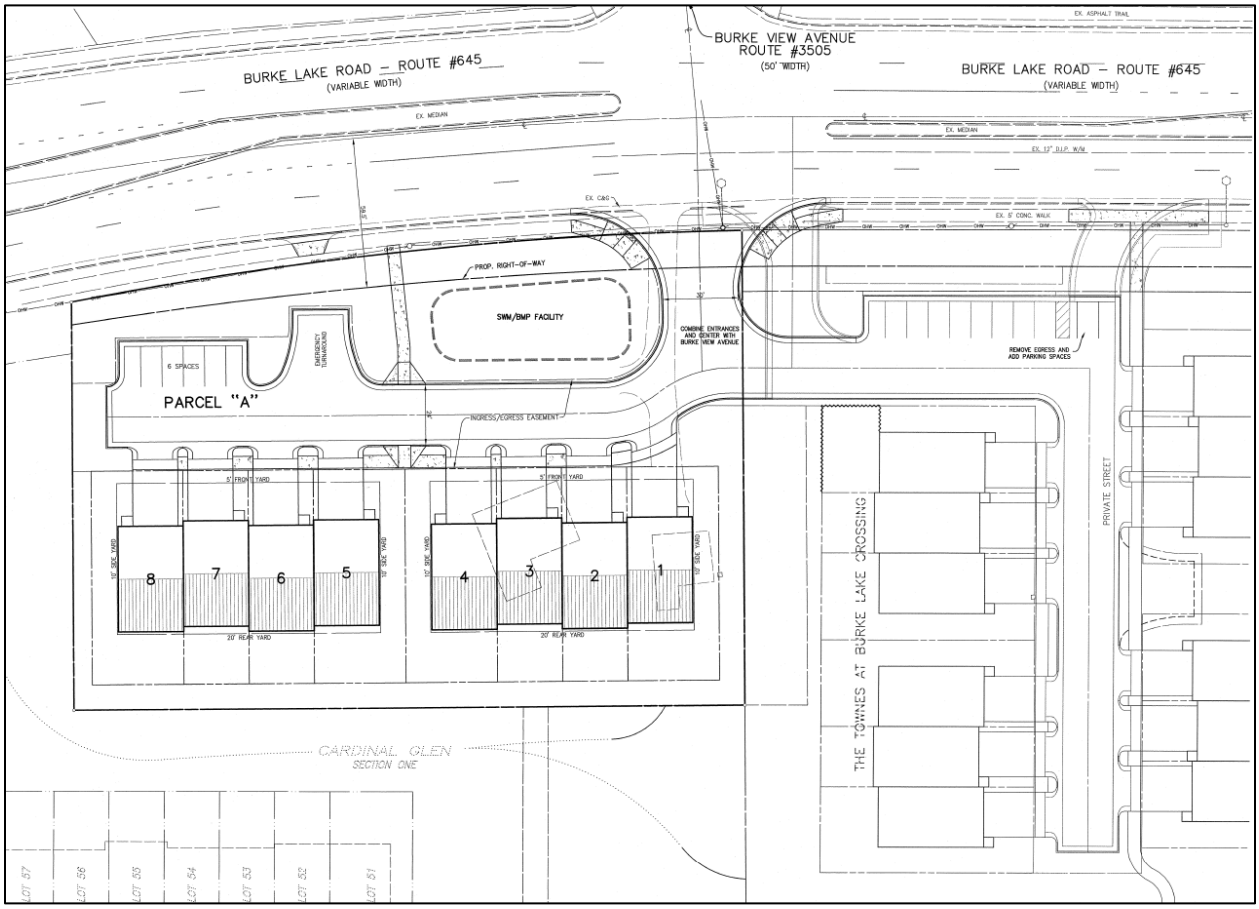

Figure 7: The applicant's conceptual layout of 9601 Burke Lake road with 8 townhouses, and how the subject property would integrate into the site design with a combined access point *(Source: Charles P. Johnson & Associates, Inc., 9/8/2015)*

Site Design (Development Criterion #1)

All rezoning applications for residential development should be characterized by high quality site design. Rezoning proposals for residential development, regardless of the proposed density, will be evaluated based upon the following principles, although not all of the principles may be applicable for all developments.

<u>Consolidation:</u> There is no site specific consolidation requirement in the Comprehensive Plan. Consolidation with the existing townhouse development of Cardinal Glen to the southeast would permit access from Clerkenwell Court instead of Burke Lake Road. The streets in Cardinal Glen, Section 1 are private streets controlled by the neighboring homeowners association. Connecting the streets of the subject property to that of the adjacent Cardinal Glen, Section 1 would require a consensus vote of the adjacent residents and the applicant indicated that the community does not support such a connection. Consolidation with 9601 Burke Lake Road to the southwest would permit a consolidated access point at the median break of Burke Lake Road. The

applicant has reached out to the property owner, who has elected to not participate in a consolidated development with the applicant.

The applicant's conceptual layout on Sheet 14 of the GDP demonstrates a consolidated site design can be made with the adjacent parcel to the southwest at a future time. The applicant's proffer statement includes commitments to interparcel access and removal of the access points on the subject property when interparcel access is achieved.

If developed as shown on Sheet 5A (Figure 5) the site would not achieve interparcel access in the future with 9601 Burke Lake Road should it redevelop. The applicant's site design shows a 15-foot wide landscaped buffer between the side yard lot line of Unit 1. This buffer is intended to meet the purpose and intent of the transitional screening and buffering requirements of Article 13 in the Zoning Ordinance. Both the landscaped buffer and the 10-foot wide utility easement shown on the GDP for the future relocation of electrical transmission lines should protected bike lanes be installed on Burke Lake Road would preclude interparcel access.

Layout: The proposed layout should provide appropriate relationships between the proposed dwellings and their respective front and rear yards.

- The proposed layouts of the three options are generally the same in terms of house location and relationship to the adjacent properties. The proposed layouts provide logical, functional, and appropriate relationships among dwelling units, landscaping, and the street network.
- The proposed dwelling units would be oriented appropriately to the adjacent streets and homes. The orientation is similar to that along Clerkenwell Court, and the dwellings would be set back from Burke Lake Road, which is a higher functional class than that of the local streets to serve the proposed development.
- The site layouts provides ample space for the future construction of decks or other accessory structures.

Open Space: The proposed layout would provide approximately 30 percent open space, or 24,394 square feet and exceed the Zoning Ordinance's minimum open space requirement of 20 percent for R-8 Districts.

Landscaping: Sheets 6-6B of the GDP shows the applicant's landscape plan for the three proposed options, which would add new vegetation to the, and at other scattered locations on site. This even distribution of landscaping throughout the site is appropriate.

Amenities: Given the number of dwellings proposed and the increase open space, staff did not identify a substantial need for additional amenities in the open space areas.

Based on the features discussed above, Criterion #1 has been met.

Neighborhood Context (Development Criterion #2)

All rezoning applications for residential development, regardless of the proposed density, should be designed to fit into the community within which the development is to be located. Developments should fit into the fabric of their adjacent neighborhoods, as evidenced by an evaluation of:

Transitions to abutting and adjacent uses: The proposed townhouses are a compatible use when compared to the townhouse development to the southeast and planned density to the southwest.

Lot sizes, particularly along the periphery: The proposed lot sizes are of a similar size and shape as those of the townhouses to the southeast.

Bulk/mass of the proposed dwelling units: The applicant proposes to construct 3-story, 35-foot tall townhouses which would exceed the bulk and mass of the Cardinal Glen, Section 1 townhouses. However, direct comparisons with the bulk and mass are not practical given that each community was developed 35 years apart and architectural styles, as well as purchasers' expectations, have changed.

Setbacks (front, side and rear): The proposed front, side and rear setbacks are similarly sized to the Cardinal Glen townhouses.

Orientation of the proposed dwelling units to adjacent streets and homes: As previously discussed, the proposed orientation is similar to elements seen in Cardinal Glen, Section 1.

Architectural elevations and materials: The architectural elevations on Sheet 15 of the GDP show that the design and style of the proposed units would differ from the surrounding neighborhoods. The Cardinal Glen, Section 1 townhouses are two stories tall with no garages and a mixed palate of façade materials. As previously discussed, direct comparisons are difficult given the different building typologies and development eras for each community.

Pedestrian, bicycle and vehicular connections to off-site trails, roadways, transit facilities and land uses: To accommodate future improvements recommended by the Countywide Bicycle Master Plan, the applicant has dedicated an additional 14-foot wide section of right-of-way that would provide space for protected bicycle lanes along northbound Burke Lake Road. The applicant has also shown a pedestrian link to Cardinal Glen, Section 1.

Existing topography and vegetative cover and proposed changes to them as a result of clearing and grading: The applicant proposes to clear the majority of the site's trees and preserve either 5,600 or 5,920 of the existing 65,900 square feet of canopy coverage, which is necessary to achieve the Comprehensive Plan's guidance for density in this area. The applicant has requested a deviation from the minimum tree

preservation target, which is discussed at greater length in the Modifications and Waivers section of this report.

Based on the features discussed above, Criterion #2 has been met.

Environment (Development Criterion #3)

All rezoning applications for residential development should respect the environment. Rezoning proposals for residential development, regardless of the proposed density, should be consistent with the policies and objectives of the environmental element of the Policy Plan, and will also be evaluated on the following principles, where applicable.

Preservation: There are no natural environmental resources located on the subject property that warrant preservation other than existing trees. As previously discussed, the applicant has requested a deviation from the tree preservation target.

Slopes and Soils: The subject property lacks steep slopes, and is characterized by soils with high erosion potential, but good foundational support and good subsurface drainage.

Water Quality: The applicant's GDP proposes a stormwater management system that uses a rain garden low impact development (LID) technique that is anticipated to meet the PFM standards for water quality improvement. In addition, Proffer 11 provides a $4,500 reserve fund for future residents to use for maintenance of the stormwater management system.

Drainage: The applicant's underground gravel storage facility is an acceptable approach to meeting the PFM's stormwater volume control requirements.

Noise: The Policy Plan recommends transportation noise impacts be mitigated so that internal noise levels inside homes do not exceed 45 dBA and 65 dBA for outdoor recreation areas for homes.

The applicant's proffer statement includes a commitment to submit a noise study prior to the issuance of building permit approval to the Environment and Development Review Branch for evaluation. The proffer further commits the applicant to incorporating noise attenuation features in the proposed dwellings that would meet the Comprehensive Plan's recommended standards listed above (Appendix 5).

Lighting: Any lighting proposed by the applicant will need to meet the performance standards specified in Article 14 of the Zoning Ordinance.

Energy: The applicant has proffered to qualifying the proposed townhouses either under the 2012 National Green Building Standard or the Earth Craft House programs through a home energy rater certified to demonstrate that the homes have met the

proper qualifications. This certification process meets the green building recommendations in the Comprehensive Plan.

Based on the features discussed above, Criterion #3 has been met.

Tree Preservation and Tree Cover Requirements (Development Criterion #4)

All rezoning applications for residential development, regardless of the proposed density, should be designed to take advantage of the existing quality tree cover. If quality tree cover exists on site as determined by the County, it is highly desirable that developments meet most or all of their tree cover requirement by preserving and, where feasible and appropriate, transplanting existing trees. Tree cover in excess of ordinance requirements is highly desirable. Proposed utilities, including stormwater management and outfall facilities and sanitary lines, should be located to avoid conflicts with tree preservation and planting areas. Air quality-sensitive tree preservation and planting efforts are also encouraged.

The applicant has included several proffers related to tree preservation, construction monitoring, root pruning, and tree protection that are typically recommended by the Department of Public Works and Environmental Service's (DPWES) Urban Forest Management Division (UFMD) and Criterion #4 has been met.

Transportation (Development Criterion #5)

All rezoning applications for residential development should implement measures to address planned transportation improvements. Applicants should offset their impacts to the transportation network. Accepted techniques should be utilized for analysis of the development's impact on the network. Residential development considered under these criteria will range widely in density and, therefore, will result in differing impacts to the transportation network. Some criteria will have universal applicability while others will apply only under specific circumstances. Regardless of the proposed density, applications will be evaluated based upon the following principles, although not all of the principles may be applicable

<u>Transportation Improvements:</u> The applicant's dedication of right-of-way along Burke Lake Road would allow for the future construction of protected bicycle lanes in accordance with the Countywide Bicycle Master Plan (Appendix 6).

The Fairfax County Department of Transportation (FCDOT) expressed concerns with a previous iteration of the GDP that included four site layout options instead of the three shown on the September 8th submission. The applicant's submission removed one option that was objectionable to both FCDOT and the Virginia Department of Transportation (VDOT), and modified Sheet 5 with a redesigned egress that allows use by both conventionally sized and emergency vehicles. FCDOT, VDOT and the Fire Marshal have not had the opportunity to formally review this option at the time of publication. .

The proposed access options on either Sheets 4 or 5 (Figures 3 and 4, respectively) are preferred by staff since it preserves interparcel access and provides for safe access to the site. Staff acknowledges that this design requires the applicant to obtain a sight distance waiver from VDOT or a sight distance easement from the 9601 Burke Lake Road property owner to implement Sheet 4. In the event the applicant is not successful in obtaining the site distance easement or waiver, staff supports Sheet 5A due to the less complicated design that would move ingress and egress away from Burke Lake Road's intersection with Burke View Avenue. staff expresses support knowing that the interparcel access could not be achieved in this scenario.

Transit/Transportation Management: Staff did not identify a need for transportation management measures given the minimal impacts the proposed dwelling units would have on the nearby transportation network.

Interconnection of Street Network: As previously discussed, the applicant's site design would accommodate an interparcel connection to the southwest should redevelopment occur on the adjacent property except for the design scenario shown on Sheet 5A. Through commitments outlined in the proffer statement, the applicant would contribute $12,000 toward the construction of an access point for the consolidated properties aligned with Burke View Avenue, which would eliminate superfluous access points along Burke Lake Road. However, should the site layout shown on Sheet 5A (Figure 5), which precludes interparcel access, be implemented, the $12,000 would not be repurposed for other transportation improvements to serve the subject property.

Staff has received community feedback from Cardinal Glen, Section 1 residents who are opposed to vehicular and pedestrian connections to Clerkenwell Court.

Streets: The applicants have proposed to use private streets. The applicant has committed, through proffers, to providing a $5,500 reserve fund for the maintenance of the private streets to serve the proposed townhouses.

Non-motorized Facilities: As previously discussed, the applicant's right-of-way dedication would conform to the Countywide Bicycle Master Plan.

Alternative Street Designs: No alternative street designs were proposed.

Based on the features discussed above, Criterion #5 has been met.

Public Facilities (Development Criterion #6)

All rezoning applications for residential development are expected to offset their public facility impact and to address public facility needs in the vicinity of the proposed development. Impact offset may be accomplished through the dedication of land suitable for the construction of an identified public facility need, the construction of public facilities, the contribution of specified in-kind goods, services or cash earmarked for those uses, and/or monetary contributions to be used toward funding capital

improvements projects. Selection of the appropriate offset mechanism should maximize the public benefit of the contribution.

Fairfax County Park Authority (FCPA): To mitigate the adverse impacts on off-site recreational facilities, FCPA has calculated a recommended contribution of $32,148 for development of park facilities in the area (Appendix 7). FCPA also requested that the applicant conduct a Phase 1 archaeological analysis of the site to identify any historical artifacts of significance.

While the applicant has committed to conducting the Phase 1 study, the applicant's contribution to off-site recreation facilities is only $26,348. The applicant's rationale for the reduced contribution is to deduct the cost of the Phase 1 study from the recommended contribution amount. The applicant has targeted these funds for the cross county trail proposed in Pohick Stream Valley Park or for other park improvements in the vicinity of the site. FCPA's continued recommendation is for fully funding both the adverse impacts to off-site facilities and the Phase 1 study.

Fairfax County Public Schools (FCPS): The Fairfax County Public Schools' (FCPS) Office of Facilities Planning Services anticipates that the 12 dwelling units proposed by the applicants would generate six new students attending County schools (Appendix 8). In order to address the need for capital improvements associated with the new students, a proffer contribution of $70,494 has been calculated to offset this impact.

The applicant's proffer statement includes a $58,745 contribution for FCPS to account for the future student population growth to be generated by the proposed townhouses. The applicant contends that FCPS has not adequately factored into their calculations the existing dwelling on site, while rounding the projected student numbers to generate an increased contribution amount. Staff recommends that the applicant commit to funding the full $70,494 request from FCPS.

Fairfax County Water Authority (FCWA): FCWA notes that the closest water main is a 12-inch main in Burke Lake Road. This water line is adequate to provide water service (Appendix 9).

Sanitary Sewer Analysis: DPWES has indicated in Appendix 10 that ample sanitary sewer capacity is available in the immediate sewer network. The proposed rezoning would not adversely impact nearby sanitary sewer capacity.

Based on the issues discussed above, Criterion #6 has not been met in full.

Affordable Housing (Development Criterion #7)

Ensuring an adequate supply of housing for low and moderate income families, those with special accessibility requirements, and those with other special needs is a goal of the County. Part 8 of Article 2 of the Zoning Ordinance requires the provision of Affordable Dwelling Units (ADUs) in certain circumstances. Criterion #7 is applicable to

all rezoning applications and/or portions thereof that are not required to provide any Affordable Dwelling Units, regardless of the planned density range for the site.

The Zoning Ordinance specifies that rezoning applicants should provide ADUs for single family attached development plans proposing 50 or more dwelling units. While the Zoning Ordinance would not require ADUs in this instance, the Comprehensive Plan recommends a contribution to the County's Housing Trust Fund in rezoning applications where the Zoning Ordinance's ADU provisions are not applicable.

The Residential Development Criteria specifies that this criterion can be satisfied with a contribution of 0.5 percent of the anticipated sales price of each new dwelling unit to the Housing Trust Fund. Prior to an applicant making the aforementioned contribution, the Residential Development Criteria specify that the Fairfax County Department of Housing and Community Development (HCD) review the comparable sales for the surrounding neighborhoods to ensure that the applicant is making a contribution reflecting accurate and current sales data.

The applicant has proffered to contribute a lump sum of $36,000 to Habitat for Humanity of Northern Virginia or the Fairfax County Housing Trust Fund at the direction of the Springfield District Supervisor. The flexibility to contribute the money to an entity whose mission is to provide affordable housing in Fairfax County is supported by the Residential Development Criteria. The applicant's contribution is based on a $600,000 sales price per dwelling unit, and would escalate should the sales price be higher than that anticipated by the applicant

Staff's preference is for the applicant to contribute 0.5 percent of the anticipated sales price as a lump sum to the Housing Trust Fund or Habitat for Humanity upon verification from HCD of the anticipated sales price for all of the proposed dwellings. This verification process is consistent with the Residential Development Criteria.

Based on the features discussed above, Criterion #7 has been met.

Heritage Resources (Development Criterion #8)

Heritage resources are those sites or structures, including their landscape settings that exemplify the cultural, architectural, economic, social, political, or historic heritage of the County or its communities.

The applicant has proffered to provide a Phase 1 archaeological analysis of the site to identify any historical artifacts of significance. Criterion #8 has been met.

MODIFICATIONS AND WAIVERS

Minimum district size

The land area of the subject properties is 1.88 acres, which is below the minimum district size of 5 acres required for an R-8 district. Section 9-610 of the Zoning Ordinance grants the Board of Supervisors the ability to approve a waiver of the minimum district size in accordance with the following:

1. *Such lot has not been reduced in width or area since the effective date of this Ordinance to a width or area less than required by this Ordinance.*

   The subject property has been reduced due to a previous widening project along Burke Lake Road; however, such reductions are exempt by the Zoning Ordinance from preventing properties from conforming to the lot size requirements of this provision. No other reductions of the property width or size has occurred.

2. *The applicant shall demonstrate that the waiver results in a development that preserves existing vegetation, topography, historic resources and/or other environmental features; provides for reduced impervious surface; maintains or improves stormwater management systems; and/or similar demonstrable impact.*

   The Urban Forest Management Division does not oppose the applicant's request for a deviation from the tree preservation target. The preserved trees would buffer the subject property from the adjacent residential developments.

3. *It shall be demonstrated that development of the subject lot will not have any deleterious effect on the existing or planned development of adjacent properties or on area roadways.*

   The applicant proposes to develop the site in a similar fashion as the adjacent residential communities.

4. *Such waiver shall be approved only if the remaining provisions of this Ordinance can be satisfied.*

   With the modifications and waivers outlined below, the applicant's site design would meet the applicable provisions of the Zoning Ordinance.

Staff has no objection to the modification of the minimum district size.

Transitional screening and barrier requirements

Section 13-302 of the Zoning Ordinance requires an applicant to provide transitional screening and barriers between dissimilar land uses as indicated in the Transitional Screening and Barrier Matrix at the end of Article 13. For single family attached

dwellings, Article 13 requires screening and barriers as indicated in Table 1.

Table 1 - Transitional Screening and Barrier Requirement			
Location	**Adj. Land Use**	**Required**	**Proposed**
Northeast	Vacant – Pohick Stream Valley Park	None	Proposed rain garden with 1- and 2-inch caliper trees
Southeast	Single family attached Cardinal Glen, Sect. 1	None	Tree save area along the property boundary
Southwest	Single family detached 9601 Burke Lake Rd.	Transitional Screening 1[1] Barrier A or B[2]	25 foot wide tree save area and plantings
Northwest	Single family detached dwellings – Burke Hills	Transitional Screening 1 Barrier A or B	15-foot wide landscaped buffer

Deviation from minimum tree preservation target

To comply with the Fairfax County Code's tree canopy requirements, the applicant must provide tree canopy coverage equivalent to 20 percent of the site. The 20 percent coverage is based on the canopy assumed after 10 years of tree growth. The applicant is required to provide 16,383 square feet of tree canopy coverage. This includes a required minimum of 13,180 square feet of preserved tree save area, or 80.4 percent of the 16,383 square foot minimum.

The applicant's request is to modify this preservation target from 80.4 percent to either 42.7 or 45.2 percent as shown on the GDP. This would be achieved with the preservation of several trees along the property boundaries shared with 9601 Burke Lake Road and Cardinal Glen, Section 1. In total, the applicant would retain 5,600 square feet of tree canopy. The applicant's deviation request on the landscape plan states that the tree preservation target could only be met through deleting two of the proposed home sites and not developing the site at its full potential as specified on the Comprehensive Plan's Land Use Map. The applicant cites the need to provide interparcel access and the stormwater management requirements as other limiting factors in meeting the preservation target. Urban Forest Management Division staff does not oppose the applicant's request for a deviation from the tree preservation target.

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1 Transitional Screening 1 shall consist of an unbroken strip of open space a minimum of twenty-five (25) feet wide planted with all of the following: (1) A mixture of large and medium evergreen trees and large deciduous trees that achieves a minimum ten (10) year tree canopy of seventy-five (75) percent or greater; (2) A mixture of trees consisting of at least seventy (70) percent evergreen trees, and consisting of no more than thirty-five (35) percent of any single species of evergreen or deciduous tree; and, (3) A mixture of predominately medium evergreen shrubs at a rate of three (3) shrubs for every ten (10) linear feet for the length of the transition yard area. The shrubs shall generally be located away from the barrier and staggered along the outer boundary of the transition yard.

2 Barrier A shall consist of a 42-48 inch wall, brick or architectural block faced on the side facing the existing use and may be required to be so faced on both sides as determined by the Director of DPWES. Barrier B shall consist of a 42-48 inch solid wood or otherwise architecturally solid fence.

CONCLUSIONS AND RECOMMENDATIONS

Staff Conclusions

The proposed rezoning would provide a compatible site design to the residential development within close proximity. The proposed density is within the limits specified on the Comprehensive Plan's Land Use Map. Staff supports the applicant's attempts at meeting VDOT's sight distance requirements, as a future, consolidated development with the parcel to the southwest provides the safest and most flexible option for motorists to access the sites. Staff will coordinate the review of the revised option shown on Sheet 5 to verify that the outstanding issues raised by FCDOT and VDOT have been resolved.

Recommendations

Staff recommends approval of RZ 2015-SP-003, subject to the execution of proffers consistent with those contained in Appendix 1.

Staff recommends approval of the following waivers and modifications:

- Modification of Par. 1 of Sect. 3-806 of the Zoning Ordinance requiring a minimum district size of five acres for the R-8 District to allow 1.88 acres;

- Modification of Sect. 13-303 of the Zoning Ordinance requiring transitional screening to permit the landscaping as shown on the Generalized Development Plan;

- Waiver of Sect. 13-304 of the Zoning Ordinance requiring barriers; and,

- Deviation from Sect. 12-0508 of the Public Facilities Manual to permit a reduced tree preservation target as shown on the Generalized Development Plan.

It should be noted that it is not the intent of staff to recommend that the Board, in adopting any conditions proffered by the owner, relieve the applicant/owner from compliance with the provisions of any applicable ordinances, regulations, or adopted standards.

It should be further noted that the content of this report reflects the analysis and recommendation of staff; it does not reflect the position of the Board of Supervisors.

The approval of this application does not interfere with, abrogate or annul any easements, covenants, or other agreements between parties, as they may apply to the property subject to this application

APPENDICES

1. Draft Proffers
2. Affidavit
3. Applicant's Statement of Justification
4. Residential Development Criteria
5. Environment and Development Review Branch
6. Fairfax County Department of Transportation
7. Fairfax County Park Authority
8. Fairfax County Public Schools
9. Fairfax County Water Authority
10. Sanitary Sewer
11. Urban Forest Management Division
12. Glossary of Terms

PROFFER STATEMENT

September 8, 2015
The Townes at Burke Lake Crossing
RZ 2015 – SP-003
Christopher Land, L.L.C.

Pursuant to Section 15.2-2303(A), Code of Virginia, 1950 as amended, the undersigned Owner/Applicant, in this rezoning proffers that the development of the parcel under consideration and shown on the Fairfax County Tax Map as Tax Map Reference 78-3 ((1)) 2 (hereinafter referred to as the "Property") will be in accordance with the following conditions (the "Proffered Conditions"), if and only if, said rezoning request for the R-8 Zoning District is granted. In the event said rezoning request is denied, these Proffered Conditions shall be null and void. The Owner/Applicant, for themselves, their successors and assigns hereby agree that these Proffered Conditions shall be binding on the future development of the Property unless modified, waived or rescinded in the future by the Board of Supervisors of Fairfax County, Virginia, in accordance with applicable County and State statutory procedures. The Proffered Conditions are:

I. GENERAL

1. Substantial Conformance. Subject to the provisions of Article 18 of the Fairfax County Zoning Ordinance (hereinafter referred to as the "Zoning Ordinance"), development of the Property shall be in substantial conformance with the Generalized Development Plan (GDP) titled "The Townes at Burke Lake Crossing" prepared by Charles P. Johnson & Associates, Inc. consisting of 15 sheets, dated September 8, 2015.

2. Minor Modifications. Minor modifications from what is shown on the GDP and these Proffers, which may become occasioned as a part of final architectural and/or engineering design, may be permitted as determined by the Zoning Administrator in accordance with the provisions set forth in Section 18-204 of the Zoning Ordinance. Additionally, except as may be further qualified by these proffered conditions, minor modifications to the building envelopes including footprints, lot areas, dimensions, utility layouts and house location may be permitted in accordance with Section 18-204 of the Zoning Ordinance as long as such changes do not materially decrease the amount of open space or tree save.

3. Architectural Design. The primary building materials shall be a combination of brick, stone and siding supplemented with trim and detail features; modifications may be made with final architectural designs provided such modifications are in substantial conformance with the illustrative elevations shown on Sheet 15 of the GDP. Bay windows, patios, chimneys, areaways, stairs, mechanical equipment

and other similar appurtenances may encroach into the minimum yards as permitted by Section 2-412 and Article 10 of the Zoning Ordinance.

- Universal Design. Dwelling units shall offer optional features designed with a selection of Universal Design features as determined by the Applicant which may include, but not be limited to, grab bars in the bathrooms, a seat in the Master Bath shower where possible, emphasis on lighting in stairs and entrances, lever door hardware, slip resistant flooring, optional hand-held shower heads at tubs and showers, and optional front-loading washers and dryers.

4. Noise Study. Prior to issuance of the first building permit, the applicant shall provide a noise study for the lots along Burke Lake Road to Environmental Development Review Branch (EDRB) of the Department of Planning and Zoning (DPZ) for review. Based on the findings of the report, the Applicant shall identify lots on the subdivision plan that are anticipated to be impacted by noise greater that 65dBA Ldn and shall provide noise attenuation measures designed to reduce interior noise to no greater than 45 dBA Ldn and reduce exterior rear yard noise to 65 dBA Ldn for the lots identified in the report. Based on the findings of the report, the Applicant shall take measures to reduce the rear yard noise to 65 dBA.

II. RECREATION FACILITIES

5. Off-Site Recreation. The Applicant shall contribute $26,348..00 to the Fairfax County Park Authority (FCPA) for the cross county trail that is proposed on the adjacent Park Authority Property. If the adjacent trail is not needed as determined by FCPA, then the money shall be used for other park improvements in the vicinity of the site. This contributions shall be made prior to the issuance of the first Residential Use Permit (RUP).

III. SCHOOLS

6. Contribution. Prior to issuance of the first RUP the Applicant shall contribute $58,745.00 to Fairfax County and to transfer to the Fairfax County School Board to be utilized for capital improvements or capacity enhancements to schools within the pyramid which serves the Property. Following approval of this Application and prior to the Applicant's payment of the amount set forth in this Proffer, if Fairfax County should increase the ratio of students per unit or the amount of contribution per student, the Applicant shall increase the amount of the contribution for that phase of development to reflect the then-current ratio, notwithstanding the amount of increase shall not exceed Five Percent (5%) of the original amount.

IV. ESCALATION

7. Escalation. All monetary contributions required by these proffers, with the exception of the Schools Contribution, shall escalate on a yearly basis, from the base month of June 2016, and change effective each January 1 thereafter, by a percentage equal to the annual rate of inflation, as calculated by referring to the Consumer Price Index for all urban consumers (CPI-U), 1982-198=100 (not seasonally adjusted) as reported by the United States Department of Labor, Bureau of Labor Statistics or the Marshall and Swift Building Cost Index, whichever is lesser, as permitted by VA Code Ann. Section 15.2-2303.3(B).

V. CONSTRUCTION HOURS

8. Construction Hours. Construction shall occur between the hours of 7:00 a.m. until 7:00 p.m. Monday through Friday, 9:00 a.m. until 6:00 p.m. on Saturday and Sunday. Construction activities shall not occur on the holidays of New Year's Day, Easter, Memorial Day, Independence Day, Labor Day, Thanksgiving, and Christmas. The construction hours shall be posted on the property. The allowable hours of construction as specified in this proffer shall be listed within any contract with future sub-contractors associated with construction on the site. Construction hours do not apply to any work related to Virginia Department of Transportation (VDOT).

VI. ENERGY CONSERVATION

9. Energy Conservation. The dwelling units shall be constructed to achieve one of the following:

A. Certification in accordance with the 2012 National Green Building Standard (NGBS) using the ENERGY STAR® (version 3.0) Qualified Homes path for energy performance, as demonstrated through a preliminary report submitted to the Environment and Development review Branch of the Department of Planning and Zoning prior to the issuance of the Residential Use Permit for each dwelling from a home energy rater certified through the Home Innovation Research Labs that demonstrates that each dwelling unit has attained the certification and the final report submitted to DPZ within Thirty (30) Days after the issuance of the RUP of each dwelling ; or

B. Certification in accordance with the Earth Craft House Program, as demonstrated through documentation provided to the department of Public Works and Environmental Services (DPWES) and DPZ prior to the issuance of the RUP for each dwelling. Certification testing shall be accomplished prior to the issuance of a RUP for each dwelling. The Certification testing requirement shall be met by emailing the building inspector, the preliminary

inspection report of the third party inspector prior to the issuance of the RUP. Prior to Bond Release, the Applicant shall show proof to DPWES that all units met either condition A or B.

VIII. GARAGE CONVERSION

10. Garage Conversion. Any conversion of garages that will preclude the parking of vehicles within the garage shall be prohibited. A covenant setting forth this restriction shall be recorded among the land records of Fairfax County in a form approved by the County Attorney prior to the sale of any lots and shall run to the benefit of the HOA and the Board of Supervisors. This restriction shall also be disclosed in the HOA documents. Prospective purchasers shall be advised of this use restriction, in writing, prior to entering into a contract of sale. The driveway provided for each unit shall be a minimum of seventeen (17) feet in width and twenty (20) feet in length from the garage door to the sidewalk. Garages shall be designed to accommodate two (2) vehicles.

IX. HOME OWNERS ASSOCIATION

11. Establishment of HOA. The Applicant shall establish a Homeowners Association (HOA) in accordance with Sect. 2-700 of the Zoning Ordinance for the purpose of, among other things, establishing the necessary residential covenants governing the design and operation of the approved development and to provide a mechanism for ensuring the ability to complete the maintenance obligations and other provisions noted in these proffer conditions. The HOA shall be responsible for the maintenance of the common areas and the enforcement of the restrictions on the Property. Maintenance responsibilities shall include, but not limited to, snow removal, private access ways, the private streets, storm water management facilities and common area maintenance. Initial and subsequent homeowners shall be made aware of these maintenance responsibilities in the HOA documents. Prior to the last RUP issued for the Property the Applicant shall contribute $10,000 to the HOA for the following; $5,500 to establish a reserve fund for the maintenance of the private street and $4,500 for maintenance of the storm water management facilities on the Property. If the adjacent property (Tax Map 78-3-((1)) 3) request to become a member of the HOA, then the HOA shall allow it.

12. Dedication to HOA. At the time of Record Plat recordation, open space, common areas, fencing, and amenities not otherwise conveyed or dedicated to the County shall be dedicated to the HOA and maintained by the same. The HOA reserves the right to grant easements for any purpose on the common areas as the HOA deems necessary, provided that any easements are consistent with the GDP.

13. Best Management Practice ("BMP") Maintenance. After establishing the HOA, the Applicant shall provide the HOA with written materials describing proper maintenance of the approved BMP facilities.

14. Disclosure. As part of the contract of sale, prospective purchaser shall be notified in writing by the Applicant of the maintenance responsibility for the storm water management facilities, common area landscaping, any other open space amenities and the obligations. In addition, the prospective purchaser shall be notified in writing that parking on the emergency turn-around shown on the GDP is prohibited. The homeowner association covenants shall contain clear language delineating the tree save areas as shown on the GDP. The covenants shall prohibit the removal of the trees except those trees which are dead, diseased, noxious or hazardous as determined by the Urban Forest Management Division (UFMD) and shall outline the maintenance responsibility of the homeowners association and individual homeowners. The initial deeds of conveyance and HOA governing documents shall expressly contain these disclosures. The HOA documents shall stipulate that a reserve fund to be held by the HOA be established for the maintenance of common facilities and areas.

X. STORMWATER MANAGEMENT

15. Storm water Management and Best Management Practices.

The Applicant shall implement storm water management techniques to control the quantity and quality of storm water runoff from the Property in accordance with the current County Storm water Ordinances and Fairfax County Public Facilities Manual as reviewed and approved by DPWES. Notwithstanding the facilities shown on the GDP, the storm water management techniques may include but not limited to the following: rain gardens, dry ponds, filtera systems, infiltration ditches, bay filters, storm tech chambers and drainage swales. The Applicant reserves the right to pursue additional or alternative storm water management measures provided those measures are in substantial conformance with the GDP.

XI. LANDSCAPING

16. Landscape Plan: As part of the site plan submission, the Applicant shall submit to UFMD for review and approval a detailed landscape and tree cover plan which shall, at a minimum, be generally consistent with the quality and quantity of plantings and materials shown on the GDP. The landscape plan shall be designed to ensure adequate planting space for all trees based on the requirements in the Public Facilities Manual ("PFM"). Plantings shall include only non-invasive species and, to the extent practical, plant species native to Fairfax County. Adjustments to the type and location of vegetation and the design of landscaped areas and streetscape improvements/plantings shall be permitted as approved by UFMD.

XII. TREE PRESERVATION

17. Tree Preservation Plan. The applicant shall submit a Tree Preservation Plan and Narrative as part of the first and all subsequent subdivision plan submissions. The preservation plan and narrative shall be prepared by a Certified Arborist or a Registered Consulting Arborist, and shall be subject to the review and approval of UFMD, Department of Public Works and Environmental Services ("DPWES").

    The tree preservation plan shall include a tree inventory that identifies the location, species, critical root zone, size, crown spread and condition analysis percentage rating for individual trees to be preserved, on and off-site trees, living or dead with trunks 12 inches in diameter and greater (measured at 4 ½ feet from the base of the trunk or as otherwise allowed in the latest edition of the Guide for Plant Appraisal published by the International Society of Arboriculture), located 25 feet outside the limits of clearing and grading and 10 feet inside of the limits of clearing and grading. The tree preservation plan and narrative shall include all applicable items specified in PFM 12-0506 and 12-0508. Specific tree preservation activities designed to maximize the survivability of any tree identified to be preserved, such as crown pruning, root pruning, mulching, fertilization, and others as necessary, shall be included in the plan.

18. Tree Preservation Walk-Through. The applicant shall have the limits of clearing and grading marked with a continuous line of flagging prior to the walk-through meeting. During the tree preservation walk-through meeting, the Applicant's appointed representative and a Certified Arborist (the Project Arborist), shall walk the limits of clearing a grading with a UFMD representative to determine where adjustments to the clearing limits can be made to increase the area of tree preservation and/or to increase the survivability of trees at the edge of the limits of clearing and grading, and such adjustment shall be implemented.

    Trees that are identified as dead or dying within the tree preservation area may be removed as part of the clearing operation. Any tree that is so designated shall be removed using a chain saw and such removal shall be accomplished in a manner that avoids damage to surrounding trees and associated understory vegetation. If a stump must be removed, this shall be done using a stump-grinding machine in a manner causing as little disturbance as possible to adjacent trees and associated understory vegetation and soil conditions.

19. Limits of Clearing and Grading. The Applicant shall conform strictly to the limits of clearing and grading as shown on the GDP, subject to allowances specified in these development conditions and for the installation of utilities and/or trails as determined necessary by the Director of DPWES, as described herein. If it is determined necessary to install utilities and/or trails in areas protected by the limits of clearing and grading as shown on the GDP, they shall be located in the least disruptive manner necessary as determined by UFMD. A replanting plan shall be developed and implemented, subject to approval by UFMD for any area

protected by the limits of clearing and grading that must be disturbed for such utilities.

20. Tree Preservation Fencing. All trees shown to be preserved on the tree preservation plan shall be protected by tree protection fencing. Tree protection fencing in the form of four (4) foot high, fourteen (14) gauge welded wire attached to six (6) foot tall steel posts driven eighteen (18) inches into the ground and placed no further that ten (10) feet apart or, super silt fence to the extent that required trenching for super silt fence does not sever or wound compression roots which can lead to structural failure and/or uprooting of trees shall be erected at the limits of clearing and grading as shown on the demolition, and Phase I & II erosion and sediment control sheets, as may be modified by the "Root Pruning" proffer below.

    All tree protection fencing shall be installed after the tree preservation walk-through meeting but prior to any clearing and grading activities, including the demolition of any existing structures. Root pruning and the installation of all tree protection fencing shall be performed under the supervision of the Project Arborist, and accomplished in a manner that does not harm existing vegetation that is to be preserved. Three (3) days prior to the commencement of any clearing, grading or demolition activities, but subsequent to the installation of the tree protection devices, UFMD shall be notified and given the opportunity to inspect the site to ensure that all tree protection devices have been correctly installed. No grading or construction activities shall occur until the fencing is installed correctly, as determined by UFMD.

21. Root Pruning. The Applicant shall root prune as needed to comply with the tree preservation requirements below. All treatments shall be clearly identified, labeled, and detailed on the erosion and sediment control sheets of the subdivision plan submission. The details for these treatments shall be reviewed and approved by UFMD accomplished in a manner that protects affected and adjacent vegetation to be preserved, and may include, but not be limited to the following:

    - Root pruning shall be done with a trencher or vibratory plow to a minimum depth of 18 inches.
    - Root pruning shall take place prior to any clearing and grading, or demolition of structures.
    - An UFMD representative shall be informed when all root pruning and tree protection fence installation is complete.

22. Monitoring. During any clearing or tree/vegetation/structure removal on the Applicant's Property, a representative of the Applicant shall be present to monitor the process and ensure that the activities are conducted as proffered and as approved by UFMD. The Project Arborist should be present on site and monitor clearing and demolition work during Phase I Erosion and Sediment (E&S) Control Plan implementation. Subsequent to approval of Phase I E&S

implementation, the Project Arborist shall visit the site on a weekly basis to ensure conformance with all tree preservation proffers, and UFMD approvals. During the implementation of Phase II Erosion and Sediment Control and throughout the construction phase of the project, monitoring visits to the site shall be made at least monthly. The monitoring schedule shall be described and detailed in the Landscaping and Tree Preservation Plan, and reviewed and approved by UFMD.

23. Tree Protection Signage. The Applicant shall provide signs that identify and help protect all areas to be left undisturbed. These signs will be highly visible, posted as generally shown on the GDP along the limits of clearing and grading, and attached to the tree protection fencing throughout the duration of construction. Under no circumstances will the signs be nailed or in any manner attached to the trees or vegetation within the areas to be left undisturbed.

XIII TRANSPORTATION

24. Right-of-Way Dedication. As a part of the Record Plat recording or upon demand by Fairfax County or the Virginia Department of Transportation ("VDOT"), whichever occurs first, the Applicant shall dedicate and convey, without encumbrances and in fee simple, to the Board of Supervisors, right-of-way along the Burke Lake Road (Rt. 645) frontage, such that the half-section, as measured from the centerline, shall be approximately 59.5 feet from centerline as shown on the GDP.

25. Future Interparcel Access. The Applicant shall grant an interparcel access easement to parcel 78-3((1)) 3 if access is provided as depicted on Sheets 4, 5 or 5A. If prior to Final Site Plan Approval, parcel 78-3((1)) 3 has not granted the applicant a sight distance easement or waiver obtained from VDOT, then the GDP shall be adjusted as shown on Sheet 5 or Sheet 5A of the GDP. The Applicant reserves the right to make minor modifications to site design in accordance with Sect. 18-204 of the Zoning Ordinance.

A. If access is provided as depicted on Sheets 4, 5 or 5A, then prior to Bond Release, the applicant shall post an escrow to be drawn upon by either the HOA or Fairfax County in the amount of $12,000 which is equivalent to 50% of the construction costs of a future interparcel connection to fund the future construction of the interparcel connection between the Property and the adjacent parcel to the southwest (Tax Map 78-3((1)) 3), as well as the relocation of the site's access point on Burke Lake Road as generally depicted in the GDP. The relocated access point

shall be generally aligned with Burke View Avenue and subject to the review and approval of VDOT.

B. If access is provided as depicted on Sheets 4, 5 or 5A, then at the time of recording the Record Plat, the applicant shall grant an interparcel access easement to the property owner of Tax Map 78-3((1)) 3 as shown on Sheet 4 of the GDP to provide access via a future internal private roadway to the Property.

C. If access is provided as depicted on Sheets 4, 5 or 5A, then the applicant shall install a sign at the terminus of the future interparcel connection on the property signifying that an interparcel connection shall be made in the future.

D. If access is provided as depicted on Sheets 4, 5 or 5A, then as part of the sales contract to a purchaser, a notice in writing by the Applicant of the future interparcel connection and realignment / relocation of the Property's access point on Burke Lake Road.

26. Maintenance Access. The applicant shall provide a maintenance access to the storm water management facility as generally as shown on the GDP.

27. Left Turn Lane. The applicant shall submit, concurrent with the second submission for site plan review, a left turn capacity analysis for review by VDOT. The need for any modifications to the left-turn lane on Burke Lake Road shall be determined by the capacity analysis prior to final site plan approval. The clearing limits may be modified to accommodate any left-turn extension necessary.

XIV. ARCHAEOLOGICAL STUDY

28. Archaeological Review. At least 30 days prior to any land disturbing activities on the Property, the Applicant shall conduct a Phase I archaeological survey on the area to be disturbed and provide the results of such study to the Cultural Resources Management and Protection Section of the Fairfax County Park Authority ("CRMP") for review and approval. The survey shall be conducted by a qualified archaeological professional approved by CRMP. No land disturbance activities shall be conducted until this survey is submitted to CRMP. If the Phase I survey concludes that additional Phase II archaeological testing of the area to be disturbed is warranted, the Applicant shall complete said testing and provide the results to CRMP. If the Phase II survey concludes that additional Phase III evaluation and/or recovery is warranted, the Applicant shall also complete said work in consultation and coordination with CRMP, however that process shall not be a precondition of subdivision plan approval but rather shall be carried out in conjunction with site construction. Within 30 days of the completion of any cultural resource studies, the applicant shall provide a copy of archaeology reports, field notes, photographs, and artifacts to the Fairfax County Park Authority CRMP.

XV. AFFORDABLE HOUSING

29. Affordable Dwelling Units. At the time each residential lot is issued a building permit, the Applicant shall contribute to Habitat for Humanity of Northern Virginia or the Fairfax County Housing Trust Fund, at the direction of the Springfield District Supervisor, the sum of three thousand dollars ($3,000.00) (equal to $36,000 for the (12) new dwelling units), which is equal to one half of one percent (1/2%) of the projected sale price for the new dwelling unit on the residential lot subject to the building permit. At the time of transfer to an initial third party purchaser, the Applicant shall contribute an amount equal to one half of one percent (1/2%) of that portion of the actual sale price over $600,000 (i.e. if the sale price is $650,000, the 1/2% of $50,000) to Habitat for Humanity of Northern Virginia or the Fairfax County Housing Trust Fund, at the direction of the Springfield District Supervisor.

XVI. SIGNS

30. Signs. Any sign installed by the Applicant shall be in conformance with Article 12 of the Zoning Ordinance.

XVII. SUCCESSORS AND ASSIGNS

31. Successors and Assigns. These proffers shall bind and inure to the benefit of the Applicant and his/her successors and assigns.

SIGNATURES BEGIN ON THE FOLLOWING PAGE

APPLICANT/TITLE OWNER OF TAX MAP
78-3 ((1)) 2

_____
Everth Quezada

_____
Rosemary Vega

Appendix 2

REZONING AFFIDAVIT

DATE: 6/5/15
(enter date affidavit is notarized)

I, Christopher Land, LLC, do hereby state that I am an
(enter name of applicant or authorized agent)

128871a

(check one) [✓] applicant
[ ] applicant's authorized agent listed in Par. 1(a) below

in Application No.(s): RZ 2015-SP-003
(enter County-assigned application number(s), e.g. RZ 88-V-001)

and that, to the best of my knowledge and belief, the following information is true:

1(a). The following constitutes a listing of the names and addresses of all **APPLICANTS, TITLE OWNERS, CONTRACT PURCHASERS,** and **LESSEES** of the land described in the application,* and, if any of the foregoing is a **TRUSTEE,**** each **BENEFICIARY** of such trust, and all **ATTORNEYS** and **REAL ESTATE BROKERS,** and all **AGENTS** who have acted on behalf of any of the foregoing with respect to the application:

(**NOTE**: All relationships to the application listed above in **BOLD** print must be disclosed. Multiple relationships may be listed together, e.g., **Attorney/Agent, Contract Purchaser/Lessee, Applicant/Title Owner**, etc. For a multiparcel application, list the Tax Map Number(s) of the parcel(s) for each owner(s) in the Relationship column.)

NAME (enter first name, middle initial, and last name)	**ADDRESS** (enter number, street, city, state, and zip code)	**RELATIONSHIP(S)** (enter applicable relationships listed in **BOLD** above)
Christopher Land, LLC E. John Regan, Jr., Agent W. Craig Havenner, Agent	10461 White Granite Drive, Suite 103 Oakton, Virginia 22124	Applicant, Contract Purchaser
Tetra Corporation Clark L. Massie, Agent Kenneth R. Dondero, Agent	2653 Black Fir Court Reston, Virginia 20191	Real Estate, Agent for Applicant
Charles P. Johnson & Associates, Inc. Allan D. Baker, Agent Henry M. Fox, Jr., Agent Paul B. Johnson, Agent Anthony Owens, Agent Charles P. Johnson II, Agent	3959 Pender Drive, Suite 210 Fairfax, Virginia 22030	Engineer, Agent for Applicant
Everth Quezada and Rosemary Vega	9737 Burke Lake Road, Burke, VA 22015	Title Owners TM 078-3-01-0002

(check if applicable) [ ] There are more relationships to be listed and Par. 1(a) is continued on a "Rezoning Attachment to Par. 1(a)" form.

* In the case of a condominium, the title owner, contract purchaser, or lessee of 10% or more of the units in the condominium.

** List as follows: Name of trustee, Trustee for (name of trust, if applicable), for the benefit of: (state name of each beneficiary).

REZONING AFFIDAVIT

DATE: 6/5/15
(enter date affidavit is notarized)

128871a

for Application No. (s): RZ 2015-SP-003
(enter County-assigned application number(s))

1(b). The following constitutes a listing*** of the **SHAREHOLDERS** of all corporations disclosed in this affidavit who own 10% or more of any class of stock issued by said corporation, and where such corporation has 10 or less shareholders, a listing of all of the shareholders, **and if the corporation is an owner of the subject land, all of the OFFICERS and DIRECTORS of such corporation:**

(**NOTE:** Include **SOLE PROPRIETORSHIPS**, **LIMITED LIABILITY COMPANIES,** and **REAL ESTATE INVESTMENT TRUSTS** herein.)

CORPORATION INFORMATION

NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)
Christopher Land, LLC
10461 White Granite Drive, Suite 103
Oakton, Virginia 22124

DESCRIPTION OF CORPORATION: (check one statement)

[✓] There are 10 or less shareholders, and all of the shareholders are listed below.
[ ] There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
[ ] There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

NAMES OF SHAREHOLDERS: (enter first name, middle initial, and last name)

NAMES OF OFFICERS & DIRECTORS: (enter first name, middle initial, last name & title, e.g. **President**, **Vice President**, **Secretary**, **Treasurer**, etc.)
W. Craig Havenner
E. John Regan, Jr.

(check if applicable) [✓] There is more corporation information and Par. 1(b) is continued on a "Rezoning Attachment 1(b)" form.

*** All listings which include partnerships, corporations, or trusts, to include the names of beneficiaries, must be broken down successively until: (a) only individual persons are listed or (b) the listing for a corporation having more than 10 shareholders has no shareholder owning 10% or more of any class of stock. ***In the case of an APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE* of the land that is a partnership, corporation, or trust, such successive breakdown must include a listing and further breakdown of all of its partners, of its shareholders as required above, and of beneficiaries of any trusts. Such successive breakdown must also include breakdowns of any partnership, corporation, or trust owning 10% or more of the APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE* of the land. Limited liability companies and real estate investment trusts and their equivalents are treated as corporations, with members being deemed the equivalent of shareholders; managing members shall also be listed.*** Use footnote numbers to designate partnerships or corporations, which have further listings on an attachment page, and reference the same footnote numbers on the attachment page.

128871a

Rezoning Attachment to Par. 1(b)

DATE: 6/5/15
(enter date affidavit is notarized)

for Application No. (s): RZ 2015-SP-003
(enter County-assigned application number (s))

NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)

Charles P. Johnson & Associates, Inc.
3959 Pender Drive, Suite 210
Fairfax, Virginia 22030

DESCRIPTION OF CORPORATION: (check one statement)

[✓] There are 10 or less shareholders, and all of the shareholders are listed below.
[ ] There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
[ ] There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

NAMES OF THE SHAREHOLDER: (enter first name, middle initial, and last name)

Charles P. Johnson
Paul B. Johnson

NAMES OF OFFICERS & DIRECTORS: (enter first name, middle initial, last name, and title, e.g. **President, Vice-President, Secretary, Treasurer**, etc.)

NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)
Tetra Corporation
2653 Black Fir Court
Reston, Virginia 20191

DESCRIPTION OF CORPORATION: (check one statement)

[✓] There are 10 or less shareholders, and all of the shareholders are listed below.
[ ] There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
[ ] There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

NAMES OF THE SHAREHOLDERS: (enter first name, middle initial, and last name)

Clark L. Massie

NAMES OF OFFICERS & DIRECTORS: (enter first name, middle initial, last name, and title, e.g. **President, Vice-President, Secretary, Treasurer**, etc.)

Clark L. Massie - President

(check if applicable) [ ] There is more corporation information and Par. 1(b) is continued further on a "Rezoning Attachment to Par. 1(b)" form.

REZONING AFFIDAVIT

DATE: 6/5/15
(enter date affidavit is notarized)

128871a

for Application No. (s): RZ 2015-SP-003
(enter County-assigned application number(s))

1(c). The following constitutes a listing*** of all of the **PARTNERS,** both **GENERAL** and **LIMITED**, in any partnership disclosed in this affidavit:

PARTNERSHIP INFORMATION

PARTNERSHIP NAME & ADDRESS: (enter complete name, number, street, city, state and zip code)

(check if applicable) [ ] The above-listed partnership has no limited partners.

NAMES AND TITLE OF THE PARTNERS (enter first name, middle initial, last name, and title, e.g. **General Partner, Limited Partner, or General and Limited Partner)**

(check if applicable) [ ] There is more partnership information and Par. 1(c) is continued on a "Rezoning Attachment to Par. 1(c)" form.

*** All listings which include partnerships, corporations, or trusts, to include the names of beneficiaries, must be broken down successively until: (a) only individual persons are listed or (b) the listing for a corporation having more than 10 shareholders has no shareholder owning 10% or more of any class of stock. ***In the case of an APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE* of the land that is a partnership, corporation, or trust, such successive breakdown must include a listing and further breakdown of all of its partners, of its shareholders as required above, and of beneficiaries of any trusts. Such successive breakdown must also include breakdowns of any partnership, corporation, or trust owning 10% or more of the APPLICANT, TITLE OWNER, CONTRACT PURCHASER or LESSEE* of the land. Limited liability companies and real estate investment trusts and their equivalents are treated as corporations, with members being deemed the equivalent of shareholders; managing members shall also be listed.*** Use footnote numbers to designate partnerships or corporations, which have further listings on an attachment page, and reference the same footnote numbers on the attachment page.

REZONING AFFIDAVIT

DATE: 6/5/12
(enter date affidavit is notarized)

128871a

for Application No. (s): RZ 2015-SP-003
(enter County-assigned application number(s))

1(d). One of the following boxes **must** be checked:

[ ] In addition to the names listed in Paragraphs 1(a), 1(b), and 1(c) above, the following is a listing of any and all other individuals who own in the aggregate (directly and as a shareholder, partner, and beneficiary of a trust) 10% or more of the **APPLICANT, TITLE OWNER, CONTRACT PURCHASER,** or **LESSEE*** of the land:

[✓] Other than the names listed in Paragraphs 1(a), 1(b), and 1(c) above, no individual owns in the aggregate (directly and as a shareholder, partner, and beneficiary of a trust) 10% or more of the **APPLICANT, TITLE OWNER, CONTRACT PURCHASER,** or **LESSEE*** of the land.

2. That no member of the Fairfax County Board of Supervisors, Planning Commission, or any member of his or her immediate household owns or has any financial interest in the subject land either individually, by ownership of stock in a corporation owning such land, or through an interest in a partnership owning such land.

EXCEPT AS FOLLOWS: (**NOTE**: If answer is none, enter "**NONE**" on the line below.)

None

(check if applicable) [ ] There are more interests to be listed and Par. 2 is continued on a "Rezoning Attachment to Par. 2" form.

REZONING AFFIDAVIT

DATE: 6/5/15
(enter date affidavit is notarized)

128871a

for Application No. (s): RZ 2015-SP-003
(enter County-assigned application number(s))

3. That within the twelve-month period prior to the public hearing of this application, no member of the Fairfax County Board of Supervisors, Planning Commission, or any member of his or her immediate household, either directly or by way of partnership in which any of them is a partner, employee, agent, or attorney, or through a partner of any of them, or through a corporation in which any of them is an officer, director, employee, agent, or attorney or holds 10% or more of the outstanding bonds or shares of stock of a particular class, has, or has had any business or financial relationship, other than any ordinary depositor or customer relationship with or by a retail establishment, public utility, or bank, including any gift or donation having a value of more than $100, singularly or in the aggregate, with any of those listed in Par. 1 above.

EXCEPT AS FOLLOWS: (NOTE: If answer is none, enter "**NONE**" on line below.)

Friends of Supervisor John Cook - In Excess of $100.00 by: W. Craig Havenner

(NOTE: Business or financial relationships of the type described in this paragraph that arise after the filing of this application and before each public hearing must be disclosed prior to the public hearings. See Par. 4 below.)

(check if applicable) [ ] There are more disclosures to be listed and Par. 3 is continued on a "Rezoning Attachment to Par. 3" form.

4. That the information contained in this affidavit is complete, that all partnerships, corporations, and trusts owning 10% or more of the APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE* of the land have been listed and broken down, and that prior to each and every public hearing on this matter, I will reexamine this affidavit and provide any changed or supplemental information, including business or financial relationships of the type described in Paragraph 3 above, that arise on or after the date of this application.

WITNESS the following signature:

(check one) [✓] Applicant [✗] Applicant's Authorized Agent

E. John Regan, Jr., Executive Vice President, Christopher Management Inc.
(type or print first name, middle initial, last name, and title of signee)
Manager of Christopher Land, LLC.

Subscribed and sworn to before me this 5th day of June 2015, in the State/Comm. of Virginia, County/City of Fairfax.

Notary Public

Laurie E. Strong, ID No. 7510728
Notary Public Comm. Of Virginia
My Commission Expires November 30, 2015

My commission expires: _____

Appendix 3

RECEIVED
Department of Planning & Zoning

FEB 19 2015

Zoning Evaluation Division

NARRATIVE STATEMENT OF JUSTIFICATION

Pursuant to Section 1/-204 of the Fairfax County Zoning Ordinance, dated August 14, 1978, as amended (the "Ordinance"), Christopher Land, LLC (the "Applicant"), hereby requests approval of a rezoning application from the R-1 to the R-8 District as further described below.

The Applicant is the contract purchaser of approximately 1.88 acres in the Springfield Magisterial District, which is identified among the Fairfax County tax map records as 78-3 ((1)) 2 (the "Subject Property"). The Subject Property is located on the east side of Burke Lake Road and is bordered on the north by land owned by the Fairfax County Park Authority. The property to the east is developed with a townhouse community identified as Cardinal Glen, Section1. The property to the south is a one acre parcel of land zoned R- 1 and developed with a single family home built in 1940. The area on the opposite side of Burke Lake Road is developed as a single family community known as Burke Hills Association. The surrounding area includes properties zoned and developed to the R-1 and R-5 Districts. The Applicant proposes a rezoning for residential development that will be compatible with the surrounding area.

The Subject Property is located within the Pohick Planning District of the Area III Comprehensive Plan (the "Plan"); specifically, within the P2 Main Branch Planning Sector. The Plan does not provide specific language for the development of the property, however, the Comprehensive Plan Map recommends residential development at a density of 5-8 dwelling per acre. The Applicant is proposing a rezoning of the Subject Property from the R-1 to the R-8 District in accordance with the Plan recommendation. The adjacent neighborhood to the east, Cardinal Glen, is zoned R-5, formerly known as the RTC-5 zoning district. The property was rezoned by the Fairfax County Board of Supervisors on September 11, 1972. Section 1 of Cardinal Glen adjoins the Subject Property and contained 114 townhouses situated on approximately 40.52 acres. Approximately 22.69 acres of the 40.52 acres were dedicated to the Fairfax County Park Authority, resulting in an effective density on the remaining 17.83 acreage of 6.39 dwelling units per acre.

The Applicant proposes a residential community in harmony with the Plan recommendation of five to eight dwelling units per acre and compatible with the surrounding area. The Applicant has prepared and submitted a Generalized Development Plan (GDP) that illustrates thirteen single-family attached dwelling units at a density of 6.9 dwelling units per acre. The proposed residential subdivision results in 30% open space on the Subject Property, substantially greater than the 20% required in the R-8 District. The proposed residential community will allow for the further completion of the infill development.

The Applicant's proposed residential layout is compatible in density and scale with the surrounding development. Surrounding properties are developed with similar use, type, and intensity to the Applicant's proposal. In addition, the Applicant meets the Plan's residential development criteria as follows:

Site Design

A rezoning of the Subject Property to the R-8 District will allow for the further completion of the infill development. The surrounding properties located to the east of the Subject Property are already zoned and developed residentially in accordance with Plan recommendations. The Applicant attempted to coordinate development with the adjacent 1.01 acre parcel of land identified as 78-3 ((1)) parcel 3 but was unsuccessful. The proposed layout integrates the elements of open space, landscaping, and functional quality design in a residential development that conforms to the Plan recommendations. Thirty percent (30%) of the site will be open space. The proposed house locations will allow all the homes to back to open space. Landscape details have been provided on the GDP to illustrate the quality and quantity of the proposed vegetation.

Neighborhood Context

The Applicant proposes a residential development that will allow for further completion of established residential development patterns. The proposed new single-family attached residential units will be developed at a density consistent with the Plan recommendations. Illustrative elevations are included on the GDP. The proposed homes will utilize high quality materials and design. Further, the bulk and massing of the proposed homes are in harmony with the recent construction in the surrounding neighborhood.

Environment

The Applicant's proposed residential development results in 30% open space on the subject Property. The Applicant is proposing to construct a rain garden on the site with underground stone storage and a piped outfall to meet SWM / BMP requirements. The Applicant proposes constructing the units to achieve certification in accordance with either the National Green Building Standard (NGBS) using the ENERGY STAR (version 3.0) Qualified Homes path for energy performance or the Earth Craft House Program.

Tree Preservation and Tree Cover Requirements.

Tree cover requirements will be met through a combination of tree preservation and tree plantings as further depicted on the GDP.

Transportation

The Applicant proposes safe and adequate access to the adjacent road network. The entry to the proposed community from Burke Lake Road has been established in consultation

with VDOT. The Applicant is providing a future interparcel access for the 1.01 acre parcel of land located to the south of the Subject Property. The Applicant will provide sidewalks within the proposed development to tie into the existing 5' concrete walk located along the Burke Lake Road frontage of the Subject Property. A minimum driveway length of twenty feet is provided for each unit to insure adequate parking on site.

Public Facilities

The proposed residential community may be classified as infill development that will be served by existing adequate public facilities. The Applicant's proposal of thirteen new single-family attached homes will not have a measurable impact on public facilities. The Applicant will proffer to make a contribution to public schools in accordance with adopted formulas adopted by the Board of Supervisors.

Affordable Housing

The requirements of the Affordable Dwelling Unit Ordinance do not apply to the Applicant's proposal, as it is less than fifty residential dwelling units. The Applicant will make a contribution for affordable housing in accordance with policies adopted by the Board of Supervisors.

Heritage Resources

The Applicant is unaware of any heritage resources that may be located on the subject Property.

Summary

The Applicants proposal meets the objectives of the Plan, which recommends residential development at a density of five to eight dwelling units per acre. Further, the Applicant's proposal may be characterized as infill development that is compatible in use, type, and intensity with the surrounding area. The Applicant's proposal will allow for further completion of an existing and established residential development pattern. Further, the layout and design of the proposed residential developments satisfies the residential development criteria as outlined herein. Lastly, the proposed development may be supported by existing transportation and public facilities.

Christopher Land, LLC

2/19/2015

By: E. John Regan, Jr. Date

APPENDIX 9

RESIDENTIAL DEVELOPMENT CRITERIA

Fairfax County expects new residential development to enhance the community by: fitting into the fabric of the neighborhood, respecting the environment, addressing transportation impacts, addressing impacts on other public facilities, being responsive to our historic heritage, contributing to the provision of affordable housing and, being responsive to the unique site specific considerations of the property. To that end, the following criteria are to be used in evaluating zoning requests for new residential development. The resolution of issues identified during the evaluation of a specific development proposal is critical if the proposal is to receive favorable consideration.

Where the Plan recommends a possible increase in density above the existing zoning of the property, achievement of the requested density will be based, in substantial part, on whether development related issues are satisfactorily addressed as determined by application of these development criteria. Most, if not all, of the criteria will be applicable in every application; however, due to the differing nature of specific development proposals and their impacts, the development criteria need not be equally weighted. If there are extraordinary circumstances, a single criterion or several criteria may be overriding in evaluating the merits of a particular proposal. Use of these criteria as an evaluation tool is not intended to be limiting in regard to review of the application with respect to other guidance found in the Plan or other aspects that the applicant incorporates into the development proposal. Applicants are encouraged to submit the best possible development proposals. In applying the Residential Development Criteria to specific projects and in determining whether a criterion has been satisfied, factors such as the following may be considered:

- the size of the project
- site specific issues that affect the applicant's ability to address in a meaningful way relevant development issues
- whether the proposal is advancing the guidance found in the area plans or other planning and policy goals (e.g. revitalization).

When there has been an identified need or problem, credit toward satisfying the criteria will be awarded based upon whether proposed commitments by the applicant will significantly advance problem resolution. In all cases, the responsibility for demonstrating satisfaction of the criteria rests with the applicant.

1. Site Design:

All rezoning applications for residential development should be characterized by high quality site design. Rezoning proposals for residential development, regardless of the proposed density, will be evaluated based upon the following principles, although not all of the principles may be applicable for all developments.

a) *Consolidation:* Developments should provide parcel consolidation in conformance with any site specific text and applicable policy recommendations of the Comprehensive Plan. Should the Plan text not specifically address consolidation, the nature and extent of any proposed parcel consolidation should further the integration of the development with adjacent parcels. In any event, the proposed consolidation should not preclude nearby properties from developing as recommended by the Plan.

b) *Layout:* The layout should:

- provide logical, functional and appropriate relationships among the various parts (e. g. dwelling units, yards, streets, open space, stormwater management facilities, existing vegetation, noise mitigation measures, sidewalks and fences);
- provide dwelling units that are oriented appropriately to adjacent streets and homes;
- include usable yard areas within the individual lots that accommodate the future construction of decks, sunrooms, porches, and/or accessory structures in the layout of the lots, and that provide space for landscaping to thrive and for maintenance activities;
- provide logical and appropriate relationships among the proposed lots including the relationships of yards, the orientation of the dwelling units, and the use of pipestem lots;
- provide convenient access to transit facilities;
- Identify all existing utilities and make every effort to identify all proposed utilities and stormwater management outfall areas; encourage utility collocation where feasible.

c) *Open Space:* Developments should provide usable, accessible, and well-integrated open space. This principle is applicable to all projects where open space is required by the Zoning Ordinance and should be considered, where appropriate, in other circumstances.

d) *Landscaping:* Developments should provide appropriate landscaping: for example, in parking lots, in open space areas, along streets, in and around stormwater management facilities, and on individual lots.

e) *Amenities:* Developments should provide amenities such as benches, gazebos, recreational amenities, play areas for children, walls and fences, special paving treatments, street furniture, and lighting.

2. Neighborhood Context:

All rezoning applications for residential development, regardless of the proposed density, should be designed to fit into the community within which the development is to be located. Developments should fit into the fabric of their adjacent neighborhoods, as evidenced by an evaluation of:

- transitions to abutting and adjacent uses;
- lot sizes, particularly along the periphery;
- bulk/mass of the proposed dwelling units;
- setbacks (front, side and rear);
- orientation of the proposed dwelling units to adjacent streets and homes;
- architectural elevations and materials;
- pedestrian, bicycle and vehicular connections to off-site trails, roadways, transit facilities and land uses;
- existing topography and vegetative cover and proposed changes to them as a result of clearing and grading.

It is not expected that developments will be identical to their neighbors, but that the development fit into the fabric of the community. In evaluating this criterion, the individual circumstances of the property will be considered: such as, the nature of existing and planned development surrounding and/or adjacent to the property; whether the property provides a transition between different uses or densities; whether access to an infill development is through an existing neighborhood; or, whether the property is within an area that is planned for redevelopment.

3. Environment:

All rezoning applications for residential development should respect the environment. Rezoning proposals for residential development, regardless of the proposed density, should be consistent with the policies and objectives of the environmental element of the Policy Plan, and will also be evaluated on the following principles, where applicable.

a) *Preservation:* Developments should conserve natural environmental resources by protecting, enhancing, and/or restoring the habitat value and pollution reduction potential of floodplains, stream valleys, EQCs, RPAs, woodlands, wetlands and other environmentally sensitive areas.

b) *Slopes and Soils:* The design of developments should take existing topographic conditions and soil characteristics into consideration.

c) *Water Quality:* Developments should minimize off-site impacts on water quality by commitments to state of the art best management practices for stormwater management and better site design and low impact development (LID) techniques.

d) *Drainage:* The volume and velocity of stormwater runoff from new development should be managed in order to avoid impacts on downstream properties. Where drainage is a particular concern, the applicant should demonstrate that off-site drainage impacts will be mitigated and that stormwater management facilities are designed and sized appropriately. Adequate drainage outfall should be verified, and the location of drainage outfall (onsite or offsite) should be shown on development plans.

e) *Noise:* Developments should protect future and current residents and others from the adverse impacts of transportation generated noise.

f) *Lighting:* Developments should commit to exterior lighting fixtures that minimize neighborhood glare and impacts to the night sky.

g) *Energy:* Developments should use site design techniques such as solar orientation and landscaping to achieve energy savings, and should be designed to encourage and facilitate walking and bicycling. Energy efficiency measures should be incorporated into building design and construction.

4. Tree Preservation and Tree Cover Requirements:

All rezoning applications for residential development, regardless of the proposed density, should be designed to take advantage of the existing quality tree cover. If quality tree cover exists on site as determined by the County, it is highly desirable that developments meet most or all of their tree cover requirement by preserving and, where feasible and appropriate, transplanting existing trees. Tree cover in excess of ordinance requirements is highly desirable. Proposed utilities, including stormwater management and outfall facilities and

sanitary sewer lines, should be located to avoid conflicts with tree preservation and planting areas. Air quality-sensitive tree preservation and planting efforts (see Objective 1, Policy c in the Environment section of this document) are also encouraged.

5. Transportation:

All rezoning applications for residential development should implement measures to address planned transportation improvements. Applicants should offset their impacts to the transportation network. Accepted techniques should be utilized for analysis of the development's impact on the network. Residential development considered under these criteria will range widely in density and, therefore, will result in differing impacts to the transportation network. Some criteria will have universal applicability while others will apply only under specific circumstances. Regardless of the proposed density, applications will be evaluated based upon the following principles, although not all of the principles may be applicable.

a) *Transportation Improvements:* Residential development should provide safe and adequate access to the road network, maintain the ability of local streets to safely accommodate traffic, and offset the impact of additional traffic through commitments to the following:

- Capacity enhancements to nearby arterial and collector streets;
- Street design features that improve safety and mobility for non-motorized forms of transportation;
- Signals and other traffic control measures;
- Development phasing to coincide with identified transportation improvements;
- Right-of-way dedication;
- Construction of other improvements beyond ordinance requirements;
- Monetary contributions for improvements in the vicinity of the development.

b) *Transit/Transportation Management:* Mass transit usage and other transportation measures to reduce vehicular trips should be encouraged by:

- Provision of bus shelters;
- Implementation and/or participation in a shuttle bus service;
- Participation in programs designed to reduce vehicular trips;
- Incorporation of transit facilities within the development and integration of transit with adjacent areas;
- Provision of trails and facilities that increase safety and mobility for non-motorized travel.

c) *Interconnection of the Street Network: Vehicular connections between neighborhoods should be provided, as follows:*

- Local streets within the development should be connected with adjacent local streets to improve neighborhood circulation;
- When appropriate, existing stub streets should be connected to adjoining parcels. If street connections are dedicated but not constructed with development, they should be identified with signage that indicates the street is to be extended;
- Streets should be designed and constructed to accommodate safe and convenient usage by buses and non-motorized forms of transportation;
- Traffic calming measures should be implemented where needed to discourage cut-through traffic, increase safety and reduce vehicular speed;

- The number and length of long, single-ended roadways should be minimized;
- Sufficient access for public safety vehicles should be ensured.

d) *Streets:* Public streets are preferred. If private streets are proposed in single-family detached developments, the applicant shall demonstrate the benefits for such streets. Applicants should make appropriate design and construction commitments for all private streets so as to minimize maintenance costs which may accrue to future property owners. Furthermore, convenience and safety issues such as parking on private streets should be considered during the review process.

e) *Non-motorized Facilities:* Non-motorized facilities, such as those listed below, should be provided:

- Connections to transit facilities;
- Connections between adjoining neighborhoods;
- Connections to existing non-motorized facilities;
- Connections to off-site retail/commercial uses, public/community facilities, and natural and recreational areas;
- An internal non-motorized facility network with pedestrian and natural amenities, particularly those included in the Comprehensive Plan;
- Offsite non-motorized facilities, particularly those included in the Comprehensive Plan;
- Driveways to residences should be of adequate length to accommodate passenger vehicles without blocking walkways;
- Construction of non-motorized facilities on both sides of the street is preferred. If construction on a single side of the street is proposed, the applicant shall demonstrate the public benefit of a limited facility.

f) *Alternative Street Designs:* Under specific design conditions for individual sites or where existing features such as trees, topography, etc. are important elements, modifications to the public street standards may be considered.

6. Public Facilities:

Residential development impacts public facility systems (i.e., schools, parks, libraries, police, fire and rescue, stormwater management and other publicly owned community facilities). These impacts will be identified and evaluated during the development review process. For schools, a methodology approved by the Board of Supervisors, after input and recommendation by the School Board, will be used as a guideline for determining the impact of additional students generated by the new development.

Given the variety of public facility needs throughout the County, on a case-by-case basis, public facility needs will be evaluated so that local concerns may be addressed.

All rezoning applications for residential development are expected to offset their public facility impact and to first address public facility needs in the vicinity of the proposed development. Impact offset may be accomplished through the dedication of land suitable for the construction of an identified public facility need, the construction of public facilities, the contribution of specified in-kind goods, services or cash earmarked for those uses, and/or monetary contributions to be used toward funding capital improvement projects. Selection of the appropriate offset mechanism should maximize the public benefit of the contribution.

Furthermore, phasing of development may be required to ensure mitigation of impacts.

7. Affordable Housing:

Ensuring an adequate supply of housing for low and moderate income families, those with special accessibility requirements, and those with other special needs is a goal of the County. Part 8 of Article 2 of the Zoning Ordinance requires the provision of Affordable Dwelling Units (ADUs) in certain circumstances. Criterion #7 is applicable to all rezoning applications and/or portions thereof that are not required to provide any Affordable Dwelling Units, regardless of the planned density range for the site.

a) *Dedication of Units or Land:* If the applicant elects to fulfill this criterion by providing affordable units that are not otherwise required by the ADU Ordinance: a maximum density of 20% above the upper limit of the Plan range could be achieved if 12.5% of the total number of single-family detached and attached units are provided pursuant to the Affordable Dwelling Unit Program; and, a maximum density of 10% or 20% above the upper limit of the Plan range could be achieved if 6.25% or 12.5%, respectively of the total number of multifamily units are provided to the Affordable Dwelling Unit Program. As an alternative, land, adequate and ready to be developed for an equal number of units may be provided to the Fairfax County Redevelopment and Housing Authority or to such other entity as may be approved by the Board.

b) *Housing Trust Fund Contributions:* Satisfaction of this criterion may also be achieved by a contribution to the Housing Trust Fund or, as may be approved by the Board, a monetary and/or in-kind contribution to another entity whose mission is to provide affordable housing in Fairfax County, equal to 0.5% of the value of all of the units approved on the property except those that result in the provision of ADUs. This contribution shall be payable prior to the issuance of the first building permit. For for-sale projects, the percentage set forth above is based upon the aggregate sales price of all of the units subject to the contribution, as if all of those units were sold at the time of the issuance of the first building permit**,** and is estimated through comparable sales of similar type units. For rental projects, the amount of the contribution is based upon the total development cost of the portion of the project subject to the contribution for all elements necessary to bring the project to market, including land, financing, soft costs and construction. The sales price or development cost will be determined by the Department of Housing and Community Development, in consultation with the Applicant and the Department of Public Works and Environmental Services. If this criterion is fulfilled by a contribution as set forth in this paragraph, the density bonus permitted in a) above does not apply.

8. Heritage Resources:

Heritage resources are those sites or structures, including their landscape settings, that exemplify the cultural, architectural, economic, social, political, or historic heritage of the County or its communities. Such sites or structures have been 1) listed on, or determined eligible for listing on, the National Register of Historic Places or the Virginia Landmarks Register; 2) determined to be a contributing structure within a district so listed or eligible for listing; 3) located within and considered as a contributing structure within a Fairfax County Historic Overlay District; or 4) listed on, or having a reasonable potential as determined by the County, for meeting the criteria for listing on, the Fairfax County Inventories of Historic or Archaeological Sites.

In reviewing rezoning applications for properties on which known or potential heritage resources are located, some or all of the following shall apply:

a) Protect heritage resources from deterioration or destruction until they can be documented, evaluated, and/or preserved;

b) Conduct archaeological, architectural, and/or historical research to determine the presence, extent, and significance of heritage resources;

c) Submit proposals for archaeological work to the County for review and approval and, unless otherwise agreed, conduct such work in accordance with state standards;

d) Preserve and rehabilitate heritage resources for continued or adaptive use where feasible;

e) Submit proposals to change the exterior appearance of, relocate, or demolish historic structures to the Fairfax County Architectural Review Board for review and approval;

f) Document heritage resources to be demolished or relocated;

g) Design new structures and site improvements, including clearing and grading, to enhance rather than harm heritage resources;

h) Establish easements that will assure continued preservation of heritage resources with an appropriate entity such as the County's Open Space and Historic Preservation Easement Program; and

i) Provide a Fairfax County Historical Marker or Virginia Historical Highway Marker on or near the site of a heritage resource, if recommended and approved by the Fairfax County History Commission.

ROLE OF DENSITY RANGES IN AREA PLANS

Density ranges for property planned for residential development, expressed generally in terms of dwelling units per acre, are recommended in the Area Plans and are shown on the Comprehensive Plan Map. Where the Plan text and map differ, the text governs. In defining the density range:

- the "base level" of the range is defined as the lowest density recommended in the Plan range, i.e., 5 dwelling units per acre in the 5-8 dwelling unit per acre range;
- the "high end" of the range is defined as the base level plus 60% of the density range in a particular Plan category, which in the residential density range of 5-8 dwelling units per acre would be considered as 6.8 dwelling units per acre and above; and,
- the upper limit is defined as the maximum density called for in any Plan range, which, in the 5-8 dwelling unit per acre range would be 8 dwelling units per acre.
- In instances where a range is not specified in the Plan, for example where the Plan calls for residential density up to 30 dwelling units per acre, the density cited in the Plan shall be construed to equate to the upper limit of the Plan range, and the base level shall be the upper limit of the next lower Plan range, in this instance, 20 dwelling units per acre.

County of Fairfax, Virginia

MEMORANDUM

DATE: August 27, 2015

TO: Barbara C. Berlin, Director
Zoning Evaluation Division, DPZ

FROM: Denise M. James, Chief
Environment and Development Review Branch, DPZ

SUBJECT: **ENVIRONMENTAL ASSESSMENT** for: **RZ 2015-SP-003**
Burke Lake Crossing

This memorandum, prepared by John R. Bell, includes citations from the Comprehensive Plan that provide guidance for the evaluation of the above referenced development plan as revised through August 4, 2015. Possible solutions to remedy identified environmental impacts are suggested. Other solutions may be acceptable, provided that they achieve the desired degree of mitigation and are also compatible with Plan policies.

COMPREHENSIVE PLAN CITATIONS:

The Comprehensive Plan is the basis for the evaluation of this application. The assessment of the proposal for conformity with the environmental recommendations of the Comprehensive Plan is guided by the following citations from the Plan:

Fairfax County Comprehensive Plan, 2013 Edition, Policy Plan, Environment, as amended through July 1, 2014, page 19-20:

"Objective 13: Design and construct buildings and associated landscapes to use energy and water resources efficiently and to minimize short- and long-term negative impacts on the environment and building occupants.

Policy a. In consideration of other Policy Plan objectives, encourage the application of energy conservation, water conservation and other green building practices in the design and construction of new development and redevelopment projects. These practices may include, but are not limited to:

- Environmentally-sensitive siting and construction of development;

- Application of low impact development practices, including minimization of impervious cover (See Policy k under Objective 2 of this section of the *Policy Plan*);

- Optimization of energy performance of structures/energy-efficient design;

- Use of renewable energy resources;

- Use of energy efficient appliances, heating/cooling systems, lighting and/or other products;

- Application of best practices for water conservation, such as water efficient landscaping and innovative wastewater technologies, that can serve to reduce the use of potable water and/or reduce stormwater runoff volumes;

- Reuse of existing building materials for redevelopment projects;

- Recycling/salvage of non-hazardous construction, demolition, and land clearing debris;

- Use of recycled and rapidly renewable building materials;

- Use of building materials and products that originate from nearby sources;

- Reduction of potential indoor air quality problems through measures such as increased ventilation, indoor air testing and use of low-emitting adhesives, sealants, paints/coatings, carpeting and other building materials;

- Reuse, preservation and conservation of existing buildings, including historic structures;

- Retrofitting of other green building practices within existing structures to be preserved, conserved and reused;

- Energy and water usage data collection and performance monitoring;

- Solid waste and recycling management practices; and

- Natural lighting for occupants.

Encourage commitments to implementation of green building practices through certification under established green building rating systems for individual buildings (e.g., the U.S. Green Building Council's Leadership in Energy and Environmental Design for New Construction [LEED-NC®] or the U.S. Green Building Council's Leadership in Energy and Environmental Design for Core and Shell [LEED-CS®] program or other equivalent programs with third party certification). An equivalent program is one that is

independent, third-party verified, and has regional or national recognition or one that otherwise includes multiple green building concepts and overall levels of green building performance that are at least similar in scope to the applicable LEED rating system. Encourage commitments to the attainment of the ENERGY STAR® rating where available. Encourage certification of new homes through an established residential green building rating system that incorporates multiple green building concepts and has a level of energy performance that is comparable to or exceeds ENERGY STAR qualification for homes. Encourage the inclusion of professionals with green building accreditation on development teams. Encourage commitments to the provision of information to owners of buildings with green building/energy efficiency measures that identifies both the benefits of these measures and their associated maintenance needs."

Fairfax County Comprehensive Plan, 2013 Edition, Policy Plan, Environment, as amended through July 1, 2014, page 11-12:

"Objective 4: Minimize human exposure to unhealthful levels of transportation generated noise.

Policy a: Regulate new development to ensure that people are protected from unhealthful levels of transportation noise.

New development should not expose people in their homes, or other noise sensitive environments, to noise in excess of DNL 45 dBA, or to noise in excess of DNL 65 dBA in the outdoor recreation areas of homes. To achieve these standards new residential development in areas impacted by highway noise between DNL 65 and 75 dBA will require mitigation. New residential development should not occur in areas with projected highway noise exposures exceeding DNL 75 dBA."

ENVIRONMENTAL ANALYSIS:

This section characterizes the environmental concerns raised by an evaluation of this site and the proposed land use. Solutions are suggested to remedy the concerns that have been identified by staff. There may be other acceptable solutions.

Green Building

The Comprehensive Plan provides guidance recommends green building commitments for all new residential zoning proposals. A number of green building certification options are available for such developments, such as, LEED-Homes, EarthCraft and National Green Building Standard (NGBS) with the Energy Star path for energy performance. The applicant has provided a commitment to develop the property with options to pursue either EarthCraft or NGBS with the Energy Star path. Either of these options would meet the recommendations of the Comprehensive Plan for green building development. Staff feels that the proposed measures satisfy staff's recommendations on this issue.

Noise

The proposed development includes frontage on a portion of Burke Lake Road. Burke Lake Road can experience high traffic volumes with a mixture of vehicles including passenger vehicles, trucks and buses. Staff has expressed concerns to the applicant that the traffic noise impacts from this roadway are likely to exceed 65 dBA Ldn. As a result of this concern, staff had requested that the applicant provide a noise study to determine the extent of noise impacts to the proposed development. Staff feels that the applicant should provide a typical drawing of a noise barrier as part of the development plans.

The applicant has proffered to provide a noise study for staff review and comment prior to the issuance of the first building permit. The study should include information regarding daily traffic counts. The date and time of the noise study, as well as any measures which might be recommended in order to mitigate interior noise to levels no greater than 45 dBA and exterior noise levels for rear yards and designated outdoor activity areas no greater than 65 dBA Ldn should also be included. In order to be in conformance with the recommendations of the Comprehensive Plan, the applicant should commit to mitigation measures which will achieve the recommended noise attenuation levels.

DMJ:JRB

County of Fairfax, Virginia

MEMORANDUM

DATE: September 4, 2015

TO: Barbara Berlin, Director
Zoning Evaluation Division, Department of Planning & Zoning

CC: Nick Rogers, Staff Coordinator
Zoning Evaluation Division, Department of Planning & Zoning

FROM: Michael A. Davis, Acting Chief
Site Analysis Section, Department of Transportation

FILE: RZ 2015-SP-003

SUBJECT: RZ 2015-SP-003 Christopher Land, LLC (The Townes at Burke Lake Crossing)
9537 Burke Lake Road, VA 22015
Tax Map: 78-3 ((1)) 02

This department reviewed the subject application, the Generalized Development Plan (GDP) dated March 13, 2015, revised through September 3, 2015, and proffers dated August 4, 2015, and offers the following comments. Proffer comments were submitted under separate cover.

- FCDOT does not support following entrance designs depicted on Sheets 5 and 5B. These sheets should be removed from the GDP.
  - Sheet 5 depicts three access points that has the potential for multiple vehicle conflicts into and out of the site. The proposed mountable curb at the center does not preclude any vehicles from utilizing this driveway. It would need clear sight distance for drivers exiting at this point; an easement would be required from the adjacent property. If the adjacent property located at Tax Map 78-3 ((1)) 03 is redeveloped and the expected interparcel access is provided, that property's developer would need to extensively reconstruct access and circulation on the subject site, to consolidate the entrances.

  - Sheet 5B with the central right-in, right-out driveway would still require a sight distance easement from the adjacent property owner. The central location does not provide a safe merge and weave distance for drivers making a U-turn at the median to enter the northbound traffic flow to enter into the site.

- FCDOT staff supports the following entrance designs depicted on Sheets 4 and 5A.
  - Sheet 4 provides an entrance depicting a one-way access into the site opposite the Burke View Avenue intersection and a separate exit driveway at the center to permit drivers to turn right from the site to travel northbound on Burke Lake Road.
    - The applicant would need to submit a sight distance waiver to VDOT for approval during site plan review for the vehicle egress.
    - The applicant should provide interparcel access to the adjacent property, located at Tax Map 78-3 ((1)) 03.

- Sheet 5A solves the offsite sight distance requirement by providing a right-in, right-out entrance proximate to the northern boundary. This design would locate vehicle movement conflicts further away from the Burke View Avenue intersection. Maintaining a clear sight distance would not need an easement from the adjacent property owner.

- The applicant should provide entrance and exit driveways meeting VDOT road design standards.

- The Applicant has addressed a previous FCDOT comment regarding Burke Lake Road right-of-way (ROW) dedication. The Applicant proposes to dedicate 14.5 feet of ROW which would result in a 59.5-foot half street section, per the Comprehensive Plan. The applicant has demonstrated that a buffered bike lane (a 3-foot wide painted buffer and a 5-foot wide bike lane), as identified in the Fairfax County Bicycle Master Plan for Burke Lake Road, can be accommodated within the dedicated right-of-way.

MAD/RP

FAIRFAX COUNTY PARK AUTHORITY

M E M O R A N D U M

TO: Barbara Berlin, AICP, Director
Zoning Evaluation Division
Department of Planning and Zoning

FROM: Sandy Stallman, AICP, Manager
Park Planning Branch, PDD

DATE: April 14, 2015

SUBJECT: RZ 2015-SP-003, The Townes at Burke Lake Crossing
Tax Map Number: 78-3((1)) 2

BACKGROUND

The Park Authority staff has reviewed the proposed Development Plan dated March 13, 2015, for the above referenced application. The Development Plan shows 13 single-family attached dwelling units on a 1.88 acre parcel to be rezoned from R1 to R8 with proffers. Based on an average single-family attached household size of 3.00 in the Pohick Planning District, the development could add 36 new residents ([13 new single-family attached units x 3.00] – [1 existing single-family detached unit x 3.10] = 35.9 new residents) to the Springfield Supervisory District.

COMPREHENSIVE PLAN GUIDANCE

The County Comprehensive Plan includes both general and specific guidance regarding parks and resources. The Policy Plan describes the need to mitigate adverse impacts to park and recreation facilities caused by growth and development; it also offers a variety of ways to offset those impacts, including contributions, land dedication, development of facilities, and others (Parks and Recreation, Objective 6, p.8). Resource protection is addressed in multiple objectives, focusing on protection, preservation, and sustainability of resources (Parks and Recreation Objectives 2 and 5, p.5-7).

Finally, text from the Pohick Planning District chapter of the Great Parks, Great Communities Park Comprehensive Plan echoes recommendations in the Countywide Comprehensive Plan. Specific District chapter recommendations include ensuring open and natural space for future generations, meeting the need for new recreational facilities, protecting natural open areas for future generations, identifying and protecting cultural resources, collaborating with Department of Public Works and Environmental Services and private property owners to capture and treat stormwater on-site, and encouraging private property to adopt conservation landscape practices such as limiting non-native plant species.

ANALYSIS AND RECOMMENDATIONS

Park Needs:
Using adopted service level standards, staff has identified a need for local parkland and all types of recreational facilities in this area. Existing nearby parks (Burke Ridge Park, Burke Station Park, Greenfield Park, Lake Braddock Park, Monticello Park, Pohick Stream Valley Park, Rolling Valley West Park, Royal Lake Park, and Silas Burke Park) meet only a portion of the demand for parkland generated by residential development in the Pohick Planning District. In addition to parkland, the recreational facilities in greatest need in this area include rectangle fields, youth softball and baseball fields, basketball courts, playgrounds, neighborhood dog parks, neighborhood skate parks, and trails.

Recreational Impact of Residential Development:
With the Countywide Comprehensive Policy Plan as a guide (Appendix 9, #6 of the Land Use section, as well as Objective 6, Policy a, b and c of the Parks and Recreation section), the Park Authority requests a fair share contribution of $893 per new resident with any residential rezoning application to offset impacts to park and recreation service levels. This allows the Park Authority to build additional facilities needed as the population increases. To offset the additional impact caused by the proposed development, the applicant should contribute $32,148 to the Park Authority for recreational facility development at one or more park sites located within the service area of the subject property.

On-site Facilities:
The Applicant is proposing approximately 0.56 acres of open space with approximately 0.17 of that open space to be used as landscape buffers and rain garden landscaping. There are no proposed on-site recreational facilities.

Cultural Resources Impact:
The parcel was subjected to archival review. The parcel has been disturbed by previous construction and development; however, it appears to have structures on the east side on the 1937 aerial photography of the county. These structures may be associated with the Logan House (VDHR architectural number 029-0332). Those structures were likely demolished during the construction of the current structure. However, undisturbed portions of the parcel may contain archaeological resources. Therefore, the Park Authority recommends the parcel undergo a Phase I archaeological survey on undisturbed portions of the parcel in order to determine the presence or absence of archaeological resources. If significant resources are found, it is recommended they be subjected to Phase II archaeological testing in order to determine eligibility for inclusion onto the National Register of Historic Resources. If sites are found eligible, avoidance or Phase III data recovery is recommended.

At the completion of any cultural resource studies, the Park Authority requests that the applicant provide two copies (one hard copy, one digital copy) of the archaeology report as well as field notes, photographs, and artifacts to the Park Authority's Resource Management Division (Attention: Liz Crowell) within 30 days of completion of the study. Materials can be sent to 2855 Annandale Road Falls Church, VA 20110 for review and concurrence. For artifact catalogues,

please include the database in Access ™ format, as well as digital photography, architectural assessments, including line drawings. If any archaeological, architectural or other sites are found during cultural resources assessments, the applicant should update files at VDHR, using the VCRIS system.

SUMMARY OF RECOMMENDATIONS

This section summarizes the recommendations included in the preceding analysis section.

- Contribute $32,148 to the Park Authority for recreational facility development at park sites located within the service area of the subject property
- Conduct a Phase I archaeological study and any needed follow up studies

Please note the Park Authority would like to review and comment on proffers related to park and recreation issues. We request that draft and final proffers be submitted to the assigned reviewer noted below for review and comment prior to completion of the staff report and prior to final Board of Supervisors approval.

FCPA Reviewer: Andrea L. Dorlester / Paul Ngo
DPZ Coordinator: Nick Rogers

Copy: Cindy Walsh, Director, Resource Management Division
Liz Crowell, Manager, Cultural Resource Management & Protection Section
Nick Rogers, DPZ Coordinator
Chron File
File Copy

FAIRFAX COUNTY PARK AUTHORITY

M E M O R A N D U M

TO: Barbara Berlin, AICP, Director
Zoning Evaluation Division
Department of Planning and Zoning

FROM: Sandy Stallman, AICP, Manager
Park Planning Branch, PDD

DATE: 10 August 2015

SUBJECT: RZ 2015-SP-003, The Townes at Burke Lake Crossing - **ADDENDUM**
Tax Map Number: 78-3((1)) 2

The Park Authority staff has reviewed the proposed Development Plan dated 04 August 2015 and draft proffers dated 04 August 2015, for the above referenced application. The comments in this memorandum are in addition to those provided in a previous memorandum dated 14 April 2015.

ANALYSIS AND RECOMMENDATIONS

On-site Facilities:
Draft Proffer 06 states that the Applicant shall provide recreational facilities to serve the property shown on the revised GDP though there are not any recreational facilities designated on the plan. Providing on-site active recreational facilities is not required for this development but if elements are to be incorporated into the design, it should be designated on the plan.

Recreational Impact of Residential Development:
The Policy Plan-guided fair share contribution request of $893 per new resident is intended to allow the Park Authority to build additional recreational facilities at nearby parks as the population increases. Draft Proffer 07 provides a $17,100 contribution for the Cross County Trail that is proposed in Pohick Stream Valley Park or to asphalt/concrete the Accotink Stream Valley Park Trail. The drafted-proffered amount is inadequate to fund the specified trail improvements and would require additional funding sources to be completed which may not be available. The Park Authority staff would also like the flexibility to determine for which trail improvements within the service area the proffered contribution would be most effectively used. The Park Authority staff requests that the full fair share contribution amount of $32,148 be provided and that Draft Proffer 07 be reworded to provide the fair share contribution amount of $32,148 for trail improvements at park sites located within the service area of the subject property rather than providing only $17,100 for the Cross County Trail that is proposed in Pohick Stream Valley Park or to asphalt/concrete the Accotink Stream Valley Park Trail.

SUMMARY OF RECOMMENDATIONS

This section summarizes the recommendations included in the preceding analysis section.

- Designate on the plan where the recreational facilities would be incorporated.
- Contribute $32,148 to the Park Authority for trail improvements at park sites located within the service area of the subject property.

Please note the Park Authority would like to review and comment on proffers related to park and recreation issues. We request that draft and final proffers be submitted to the assigned reviewer noted below for review and comment prior to completion of the staff report and prior to final Board of Supervisors approval.

FCPA Reviewer: Andrea L. Dorlester / Paul Ngo
DPZ Coordinator: Nicholas Rogers

Copy: Cindy Walsh, Director, Resource Management Division
Nicholas Rogers, DPZ Coordinator
Chron File
File Copy

FAIRFAX COUNTY
PUBLIC SCHOOLS

Department of Facilities and Transportation Services
Office of Facilities Planning Services
8115 Gatehouse Road, Suite 3300
Falls Church, Virginia 22042

July 30, 2015

RECEIVED
Department of Planning & Zoning
AUG 11 2015
Zoning Evaluation Division

TO: Barbara Berlin, Director
Zoning Evaluation Division
Fairfax County Department of Planning & Zoning

FROM: Aimee Holleb, Assistant Director
Office of Facilities Planning Services

SUBJECT: RZ 2015-SP-003, Christopher Land (Updated)

ACREAGE: 1.88

TAX MAP: 78-3 ((1)) 2

PROPOSAL:
The rezoning application requests to rezone the site from the R1 District to R8 District. The proposal would permit a maximum of 12 townhouse units. The site currently contains one single family home. A prior review memo for this application was provided on April 1, 2015.

ANALYSIS:
The schools serving this area are White Oaks Elementary and Lake Braddock Secondary schools. The chart below shows the existing school capacity, enrollment, and projected enrollment.

School	Capacity 2014 / 2019	Enrollment (9/30/14)	Projected Enrollment 2015-2016	Capacity Balance 2015-2016	Projected Enrollment 2019-20	Capacity Balance 2019-20
White Oaks ES	901 / 850	840	841	60	830	20
Lake Braddock MS	1,641 / 1,641	1,383	1,347	294	1,435	206
Lake Braddock HS	2,958 / 2,958	2,660	2,778	180	2,862	96

Capacities based on 2016-20 Capital Improvement Program (December 2014)
Project Enrollments based on 2014-15 to 2019-20 6-Year Projections (April 2014)

The school capacity chart above shows a snapshot in time for student enrollments and school capacity balances. Student enrollment projections are done on a six year timeframe, currently through school year 2019-20 and are updated annually. At this time, if development occurs within the next five years, all three schools are projected to have surplus capacity. Beyond the six year projection horizon, enrollment projections are not available.

Capital Improvement Program Projects
The 2016-20 Capital Improvement Program (CIP) includes an unfunded project for the renovation of White Oaks Elementary School to be completed school year 2019-20.

Development Impact
Based on the number of residential units proposed, the chart below shows the number of anticipated students by school level based on the current countywide student yield ratio.

Existing

School level	Single-family detached ratio	Existing # of units	Existing Student yield
Elementary	.270	1	0
Middle	.085	1	0
High	.175	1	0

0 total

2013 Countywide student yield ratios (November 2014)

Proposed

School level	Single-family attached ratio	Proposed # of units	Proposed Student yield
Elementary	.252	12	3
Middle	.062	12	1
High	.127	12	2

6 total

2013 Countywide student yield ratios (November 2014)

RECOMMENDATIONS:

Proffer Contribution

A net of 6 new students is anticipated (3 Elementary, 1 Middle, and 2 High). Based on the approved Residential Development Criteria, a proffer contribution of $70,494 (6 x $11,749) is recommended to offset the impact that new student growth will have on surrounding schools. It is recommended that the proffer contribution funds be directed as follows:

> *...to be utilized for capital improvements to Fairfax County public schools to address impacts on the school division resulting from [the applicant's development].*

It is also recommended proffer payment occur at the time of site plan or first building permit approval. A proffer contribution at the time of occupancy is not recommended since this does not allow the school system adequate time to use the proffer contribution to offset the impact of new students.

In addition, an "escalation" proffer is recommended. The suggested per student proffer contribution is updated on an annual basis to reflect current market conditions. As a result, an escalation proffer would allow for payment of the school proffer based on the current suggested per student proffer contribution in effect at the time of development. This would better offset the impact that new student yields will have on surrounding schools at the time of development. For your reference, below is an example of an escalation proffer that was included as part of an approved proffer contribution to FCPS.

> *Adjustment to Contribution Amounts. Following approval of this Application and prior to the Applicant's payment of the amount(s) set forth in this Proffer, if Fairfax County should modify the ratio of students per unit or the amount of contribution per student, the Applicant shall pay the modified contribution amount for that phase of development to reflect the then-current ratio and/or contribution.*

Proffer Notification

It is also recommended that the developer proffer notification be provided to FCPS when development is likely to occur or when a site plan has been filed with the County. This will allow the school system adequate time to plan for anticipated student growth to ensure classroom availability.

AJH/gjb

Attachment: Locator Map

cc: Elizabeth Schultz, School Board Member, Springfield District
Megan McLaughlin, School Board Member, Braddock District
Dan Storck, School Board Member, Mount Vernon District
Sandy Evans, Vice Chairman, School Board Member, Mason District
Tamara Derenak Kaufax, School Board Member, Lee District
Ted Velkoff, School Board Member, At-Large
Ilryong Moon, School Board Member, At-Large
Ryan McElveen, School Board Member, At-Large
Jeffrey Platenberg, Assistant Superintendent, Facilities and Transportation Services
Angela Atwater, Assistant Superintendent, Region 4
Kevin Sneed, Special Projects Administrator, Capital Projects and Planning
David Thomas, Principal, Lake Braddock Secondary School
Ryan Richardson, Principal, White Oaks Elementary School

Appendix 9

FAIRFAX COUNTY WATER AUTHORITY
8560 Arlington Boulevard, Fairfax, Virginia 22031
www.fairfaxwater.org

RECEIVED
Department of Planning & Zoning
MAR 26 2015
Zoning Evaluation Division

PLANNING & ENGINEERING DIVISION
Jamie Bain Hedges, P.E.
Director
(703) 289-6325
Fax (703) 289-6382

March 25, 2015

Ms. Barbara Berlin, Director
Fairfax County Department of Planning and Zoning
12055 Government Center Parkway, Suite 801
Fairfax, Virginia 22035-5505

Re: RZ 2015-SP-003
The Townes at Burke Lake Crossing
Tax Map: 78-3

Dear Ms. Berlin:

The following information is submitted in response to your request for a water service analysis for the above application:

1. The property can be served by Fairfax Water.

2. Adequate domestic water service is available at the site from an existing 12-inch water main located in Burke Lake Road. See the enclosed water system map.

3. Depending upon the configuration of any proposed on-site water mains, additional water main extensions may be necessary to satisfy fire flow requirements and accommodate water quality concerns.

If you have any questions regarding this information please contact Ross Stilling, Chief, Site Plan Review at (703) 289-6385.

Sincerely,

Gregory J. Prelewicz, P.E.
Manager, Planning Department

Enclosure

County of Fairfax, Virginia

MEMORANDUM

DATE: April 30, 2015

TO: Nick Rogers
Zoning Evaluation Division
Department of Planning and Zoning

FROM: Sharad Regmi, P.E.
Engineering Analysis and Planning Branch

SUBJECT: Sanitary Sewer Analysis Report

REF: **Application No. RZ 2015-SP-003**
Tax Map No. 078-3-((01))-0002

The following information is submitted in response to your request for a sanitary sewer analysis for above referenced application:

1. The application property is located in Pohick Creek (N-1) watershed. It would be sewered into the Noman M. Cole Pollution Control Plant (NMCPCP).

2. Based upon current and committed flow, there is excess capacity in the NMCPCP. For purposes of this report, committed flow shall be deemed that for which fees have been paid, building permits have been issued, or priority reservations have been established by the Board of Supervisors. No commitment can be made, however, as to the availability of treatment capacity for the development of the subject property. Availability of treatment capacity will depend upon the current rate of construction and the timing for development of this site.

3. An existing 8 inch line located approximately 52 ft from the property is adequate for the proposed use at this time.

4. The following table indicates the condition of all related sewer facilities and the total effect of this application.

	Existing Use +Application		Existing Use + Application +Previous Applications		Existing Use + Application + Comp Plan	
Sewer Network	Adeq.	Inadeq	Adeq.	Inadeq	Adeq.	Inadeq
Collector	X		X		X	
Submain	X		X		X	
Main/Trunk	X		X		X	

5. **Other pertinent comments**:

Department of Public Works and Environmental Services
Wastewater Planning & Monitoring Division
12000 Government Center Parkway, Suite 358
Fairfax, VA 22035
Phone: 703-324-5030, **Fax**: 703-803-3297
www.fairfaxcounty.gov/dpwes

County of Fairfax, Virginia

MEMORANDUM

DATE: August 20, 2015

TO: Nicholas Rogers, Staff Coordinator
Zoning Evaluation Division, DPZ

FROM: Hugh C. Whitehead, Urban Forester III HCW
Forest Conservation Branch, DPWES

SUBJECT: Townes at Burke Lake, RZ 2015-SP-003

I have reviewed the above referenced rezoning application, consisting of the proposed GDP stamped as received by the Zoning Evaluation Division on August 4, 2015; the comment response letter dated July 24, 2015; and draft proffers dated August 4, 2015.

1. **Comment:** Landscaping is shown in the proposed 10-foot utility easement along Burke Lake Road. Planting is not permitted in utility easements without permission from the easement holder. Tree canopy credit shall not be taken for trees planted in utility easements, even when permission to plant is granted by the easement holder.

   Recommendation: To avoid any misconception regarding landscaping to be implemented on the site, a signed letter of permission from the easement holder should be provided with this application if planting is to occur within the proposed utility easement as shown. Canopy credit should be deleted from the calculation for all trees shown to be planted in utility easements.

2. **Comment:** Draft proffer 27 requires the Applicant to provide a Tree Value Determination for specified trees on the site. There is no accompanying language specifying a Tree Bond for replacement of bonded trees that may die or be damaged as a result of unauthorized construction activities on the site. The Tree Value Determination seems of little use if trees are not bonded.

   Recommendation: The draft proffer for Tree Value Determination should be removed or language should be added requiring a tree bond to ensure the replacement of tree canopy that may be damaged or destroyed as a result of unauthorized construction activity on the site. The Tree Bond proffer language could be similar to the following:

   "Tree Bond: A letter of credit, or a cash contribution equal to one half (50%) of the total monetary value of trees to be designated to be preserved as identified above shall be placed

Department of Public Works and Environmental Services
Urban Forest Management Division
12055 Government Center Parkway, Suite 518
Fairfax, Virginia 22035-5503
Phone 703-324-1770, TTY: 711, Fax: 703-653-9550
www.fairfaxcounty.gov/dpwes

with the County. The Tree Bond letter of credit shall be prepared in a manner acceptable to the County Attorney naming the County as beneficiary to ensure the replacement, removal and/or treatment of the trees for which a value has been determined.

If the applicant fails to complete any work identified in the approved site plan, then the County may use cash or money from the Tree Bond to accomplish the required work.

Any cash or funds remaining in the Tree Bond shall be released along with the project's final bond-release, or sooner, if approved in writing by UFM, DPWES.

If there are any questions or further assistance is desired, please contact me at (703)324-1770.

HCW/
UFMDID #: 200001

cc: DPZ File

Department of Public Works and Environmental Services
Urban Forest Management Division
12055 Government Center Parkway, Suite 518
Fairfax, Virginia 22035-5503
Phone 703-324-1770, TTY: 711, Fax: 703-653-9550
www.fairfaxcounty.gov/dpwes

GLOSSARY

This Glossary is provided to assist the public in understanding
the staff evaluation and analysis of development proposals.
It should not be construed as representing legal definitions.
Refer to the Fairfax County Zoning Ordinance, Comprehensive Plan
or Public Facilities Manual for additional information.

ABANDONMENT: Refers to road or street abandonment, an action taken by the Board of Supervisors, usually through the public hearing process, to abolish the public's right-of-passage over a road or road right-of way. Upon abandonment, the right-of-way automatically reverts to the underlying fee owners. If the fee to the owner is unknown, Virginia law presumes that fee to the roadbed rests with the adjacent property owners if there is no evidence to the contrary.

ACCESSORY DWELLING UNIT (OR APARTMENT): A secondary dwelling unit established in conjunction with and clearly subordinate to a single family detached dwelling unit. An accessory dwelling unit may be allowed if a special permit is granted by the Board of Zoning Appeals (BZA). Refer to Sect. 8-918 of the Zoning Ordinance.

AFFORDABLE DWELLING UNIT (ADU) DEVELOPMENT: Residential development to assist in the provision of affordable housing for persons of low and moderate income in accordance with the affordable dwelling unit program and in accordance with Zoning Ordinance regulations. Residential development which provides affordable dwelling units may result in a density bonus (see below) permitting the construction of additional housing units. See Part 8 of Article 2 of the Zoning Ordinance.

AGRICULTURAL AND FORESTAL DISTRICTS: A land use classification created under Chapter 114 or 115 of the Fairfax County Code for the purpose of qualifying landowners who wish to retain their property for agricultural or forestal use for use/value taxation pursuant to Chapter 58 of the Fairfax County Code.

BARRIER: A wall, fence, earthen berm, or plant materials which may be used to provide a physical separation between land uses. Refer to Article 13 of the Zoning Ordinance for specific barrier requirements.

BEST MANAGEMENT PRACTICES (BMPs): Stormwater management techniques or land use practices that are determined to be the most effective, practicable means of preventing and/or reducing the amount of pollution generated by nonpoint sources in order to improve water quality.

BUFFER: Graduated mix of land uses, building heights or intensities designed to mitigate potential conflicts between different types or intensities of land uses; may also provide for a transition between uses. A landscaped buffer may be an area of open, undeveloped land and may include a combination of fences, walls, berms, open space and/or landscape plantings. A buffer is not necessarily coincident with transitional screening.

CHESAPEAKE BAY PRESERVATION ORDINANCE: Regulations which the State has mandated must be adopted to protect the Chesapeake Bay and its tributaries. These regulations must be incorporated into the comprehensive plans, zoning ordinances and subdivision ordinances of the affected localities. Refer to Chesapeake Bay Preservation Act, Va. Code Section 10.1-2100 et seq and VR 173-02-01, Chesapeake Bay Preservation Area Designation and Management Regulations.

CLUSTER DEVELOPMENT: Residential development in which the lots are clustered on a portion of a site so that significant environmental/historical/cultural resources may be preserved or recreational amenities provided. While smaller lot sizes are permitted in a cluster subdivision to preserve open space, the overall density cannot exceed that permitted by the applicable zoning district. See Sect. 2-421 and Sect. 9-615 of the Zoning Ordinance.

COUNTY 2232 REVIEW PROCESS: A public hearing process pursuant to Sect. 15.2-2232 (Formerly Sect. 15.1-456) of the Virginia Code which is used to determine if a proposed public facility not shown on the adopted Comprehensive Plan is in substantial accord with the plan. Specifically, this process is used to determine if the general or approximate location, character and extent of a proposed facility is in substantial accord with the Plan.

dBA: The momentary magnitude of sound weighted to approximate the sensitivity of the human ear to certain frequencies; the dBA value describes a sound at a given instant, a maximum sound level or a steady state value. See also Ldn.

DENSITY: Number of dwelling units (du) divided by the gross acreage (ac) of a site being developed in residential use; or, the number of dwelling units per acre (du/ac) except in the PRC District when density refers to the number of persons per acre.

DENSITY BONUS: An increase in the density otherwise allowed in a given zoning district which may be granted under specific provisions of the Zoning Ordinance when a developer provides excess open space, recreation facilities, or affordable dwelling units (ADUs), etc.

DEVELOPMENT CONDITIONS: Terms or conditions imposed on a development by the Board of Supervisors (BOS) or the Board of Zoning Appeals (BZA) in connection with approval of a special exception, special permit or variance application or rezoning application in a "P" district. Conditions may be imposed to mitigate adverse impacts associated with a development as well as secure compliance with the Zoning Ordinance and/or conformance with the Comprehensive Plan. For example, development conditions may regulate hours of operation, number of employees, height of buildings, and intensity of development.

DEVELOPMENT PLAN: A graphic representation which depicts the nature and character of the development proposed for a specific land area: information such as topography, location and size of proposed structures, location of streets trails, utilities, and storm drainage are generally included on a development plan. A development plan is s submission requirement for rezoning to the PRC District. A GENERALIZED DEVELOPMENT PLAN (GDP) is a submission requirement for a rezoning application for all conventional zoning districts other than a P District. A development plan submitted in connection with a special exception (SE) or special permit (SP) is generally referred to as an SE or SP plat. A CONCEPTUAL DEVELOPMENT PLAN (CDP) is a submission requirement when filing a rezoning application for a P District other than the PRC District; a CDP characterizes in a general way the planned development of the site. A FINAL DEVELOPMENT PLAN (FDP) is a submission requirement following the approval of a conceptual development plan and rezoning application for a P District other than the PRC District; an FDP further details the planned development of the site. See Article 16 of the Zoning Ordinance.

EASEMENT: A right to or interest in property owned by another for a specific and limited purpose. Examples: access easement, utility easement, construction easement, etc. Easements may be for public or private purposes.

ENVIRONMENTAL QUALITY CORRIDORS (EQCs): An open space system designed to link and preserve natural resource areas, provide passive recreation and protect wildlife habitat. The system includes stream valleys, steep slopes and wetlands. For a complete definition of EQCs, refer to the Environmental section of the Policy Plan for Fairfax County contained in Vol. 1 of the Comprehensive Plan.

ERODIBLE SOILS: Soils that wash away easily, especially under conditions where stormwater runoff is inadequately controlled. Silt and sediment are washed into nearby streams, thereby degrading water quality.

FLOODPLAIN: Those land areas in and adjacent to streams and watercourses subject to periodic flooding; usually associated with environmental quality corridors. The 100 year floodplain drains 70 acres or more of land and has a one percent chance of flood occurrence in any given year.

FLOOR AREA RATIO (FAR): An expression of the amount of development intensity (typically, non-residential uses) on a specific parcel of land. FAR is determined by dividing the total square footage of gross floor area of buildings on a site by the total square footage of the site itself.

FUNCTIONAL CLASSIFICATION: A system for classifying roads in terms of the character of service that individual facilities are providing or are intended to provide, ranging from travel mobility to land access. Roadway system functional classification elements include Freeways or Expressways which are limited access highways, Other Principal (or Major) Arterials, Minor Arterials, Collector Streets, and Local Streets. Principal arterials are designed to accommodate travel; access to adjacent properties is discouraged. Minor arterials are designed to serve both through traffic and local trips. Collector roads and streets link local streets and properties with the arterial network. Local streets provide access to adjacent properties.

GEOTECHNICAL REVIEW: An engineering study of the geology and soils of a site which is submitted to determine the suitability of a site for development and recommends construction techniques designed to overcome development on problem soils, e.g., marine clay soils.

HYDROCARBON RUNOFF: Petroleum products, such as motor oil, gasoline or transmission fluid deposited by motor vehicles which are carried into the local storm sewer system with the stormwater runoff, and ultimately, into receiving streams; a major source of non-point source pollution. An oil-grit separator is a common hydrocarbon runoff reduction method.

IMPERVIOUS SURFACE: Any land area covered by buildings or paved with a hard surface such that water cannot seep through the surface into the ground.

INFILL: Development on vacant or underutilized sites within an area which is already mostly developed in an established development pattern or neighborhood.

INTENSITY: The magnitude of development usually measured in such terms as density, floor area ratio, building height, percentage of impervious surface, traffic generation, etc. Intensity is also based on a comparison of the development proposal against environmental constraints or other conditions which determine the carrying capacity of a specific land area to accommodate development without adverse impacts.

Ldn: Day night average sound level. It is the twenty-four hour average sound level expressed in A-weighted decibels; the measurement assigns a "penalty" to night time noise to account for night time sensitivity. Ldn represents the total noise environment which varies over time and correlates with the effects of noise on the public health, safety and welfare.

LEVEL OF SERVICE (LOS): An estimate of the effectiveness of a roadway to carry traffic, usually under anticipated peak traffic conditions. Level of Service efficiency is generally characterized by the letters A through F, with LOS-A describing free flow traffic conditions and LOS-F describing jammed or grid-lock conditions.

MARINE CLAY SOILS: Soils that occur in widespread areas of the County generally east of Interstate 95. Because of the abundance of shrink-swell clays in these soils, they tend to be highly unstable. Many areas of slope failure are evident on natural slopes. Construction on these soils may initiate or accelerate slope movement or slope failure. The shrink-swell soils can cause movement in structures, even in areas of flat topography, from dry to wet seasons resulting in cracked foundations, etc. Also known as slippage soils.

OPEN SPACE: That portion of a site which generally is not covered by buildings, streets, or parking areas. Open space is intended to provide light and air; open space may be function as a buffer between land uses or for scenic, environmental, or recreational purposes.

OPEN SPACE EASEMENT: An easement usually granted to the Board of Supervisors which preserves a tract of land in open space for some public benefit in perpetuity or for a specified period of time. Open space easements may be accepted by the Board of Supervisors, upon request of the land owner, after evaluation under criteria established by the Board. See Open Space Land Act, Code of Virginia, Sections 10.1-1700, et seq.

P DISTRICT: A "P" district refers to land that is planned and/or developed as a Planned Development Housing (PDH) District, a Planned Development Commercial (PDC) District or a Planned Residential Community (PRC) District. The PDH, PDC and PRC Zoning Districts are established to encourage innovative and creative design for land development; to provide ample and efficient use of open space; to promote a balance in the mix of land uses, housing types, and intensity of development; and to allow maximum flexibility in order to achieve excellence in physical, social and economic planning and development of a site. Refer to Articles 6 and 16 of the Zoning Ordinance.

PROFFER: A written condition, which, when offered voluntarily by a property owner and accepted by the Board of Supervisors in a rezoning action, becomes a legally binding condition which is in addition to the zoning district regulations applicable to a specific property. Proffers are submitted and signed by an owner prior to the Board of Supervisors public hearing on a rezoning application and run with the land. Once accepted by the Board, proffers may be modified only by a proffered condition amendment (PCA) application or other zoning action of the Board and the hearing process required for a rezoning application applies. See Sect. 15.2-2303 (formerly 15.1-491) of the Code of Virginia.

PUBLIC FACILITIES MANUAL (PFM): A technical text approved by the Board of Supervisors containing guidelines and standards which govern the design and construction of site improvements incorporating applicable Federal, State and County Codes, specific standards of the Virginia Department of Transportation and the County's Department of Public Works and Environmental Services.

RESOURCE MANAGEMENT AREA (RMA): That component of the Chesapeake Bay Preservation Area comprised of lands that, if improperly used or developed, have a potential for causing significant water quality degradation or for diminishing the functional value of the Resource Protection Area. See Fairfax County Code, Ch. 118, Chesapeake Bay Preservation Ordinance.

RESOURCE PROTECTION AREA (RPA): That component of the Chesapeake Bay Preservation Area comprised of lands at or near the shoreline or water's edge that have an intrinsic water quality value due to the ecological and biological processes they perform or are sensitive to impacts which may result in significant degradation of the quality of state waters. In their natural condition, these lands provide for the removal, reduction or assimilation of sediments from runoff entering the Bay and its tributaries, and minimize the adverse effects of human activities on state waters and aquatic resources. New development is generally discouraged in an RPA. See Fairfax County Code, Ch. 118, Chesapeake Bay Preservation Ordinance.

SITE PLAN: A detailed engineering plan, to scale, depicting the development of a parcel of land and containing all information required by Article 17 of the Zoning Ordinance. Generally, submission of a site plan to DPWES for review and approval is required for all residential, commercial and industrial development except for development of single family detached dwellings. The site plan is required to assure that development complies with the Zoning Ordinance.

SPECIAL EXCEPTION (SE) / SPECIAL PERMIT (SP): Uses, which by their nature, can have an undue impact upon or can be incompatible with other land uses and therefore need a site specific review. After review, such uses may be allowed to locate within given designated zoning districts if appropriate and only under special controls, limitations, and regulations. A special exception is subject to public hearings by the Planning Commission and Board of Supervisors with approval by the Board of Supervisors; a special permit requires a public hearing and approval by the Board of Zoning Appeals. Unlike proffers which are voluntary, the Board of Supervisors or BZA may impose reasonable conditions to assure, for example, compatibility and safety. See Article 8, Special Permits and Article 9, Special Exceptions, of the Zoning Ordinance.

STORMWATER MANAGEMENT: Engineering practices that are incorporated into the design of a development in order to mitigate or abate adverse water quantity and water quality impacts resulting from development. Stormwater management systems are designed to slow down or retain runoff to re-create, as nearly as possible, the pre-development flow conditions.

SUBDIVISION PLAT: The engineering plan for a subdivision of land submitted to DPWES for review and approved pursuant to Chapter 101 of the County Code.

TRANSPORTATION DEMAND MANAGEMENT (TDM): Actions taken to reduce single occupant vehicle automobile trips or actions taken to manage or reduce overall transportation demand in a particular area.

TRANSPORTATION SYSTEM MANAGEMENT (TSM) PROGRAMS: This term is used to describe a full spectrum of actions that may be applied to improve the overall efficiency of the transportation network. TSM programs usually consist of low-cost alternatives to major capital expenditures, and may include parking management measures, ridesharing programs, flexible or staggared work hours, transit promotion or operational improvements to the existing roadway system. TSM includes Transportation Demand Management (TDM) measures as well as H.O.V. use and other strategies associated with the operation of the street and transit systems.

URBAN DESIGN: An aspect of urban or suburban planning that focuses on creating a desirable environment in which to live, work and play. A well-designed urban or suburban environment demonstrates the four generally accepted principles of design: clearly identifiable function for the area; easily understood order; distinctive identity; and visual appeal.

VACATION: Refers to vacation of street or road as an action taken by the Board of Supervisors in order to abolish the public's right-of-passage over a road or road right-of-way dedicated by a plat of subdivision. Upon vacation, title to the road right-of-way transfers by operation of law to the owner(s) of the adjacent properties within the subdivision from whence the road/road right-of-way originated.

VARIANCE: An application to the Board of Zoning Appeals which seeks relief from a specific zoning regulation such as lot width, building height, or minimum yard requirements, among others. A variance may only be granted by the Board of Zoning Appeals through the public hearing process and upon a finding by the BZA that the variance application meets the required Standards for a Variance set forth in Sect. 18-404 of the Zoning Ordinance.

WETLANDS: Land characterized by wetness for a portion of the growing season. Wetlands are generally delineated on the basis of physical characteristics such as soil properties indicative of wetness, the presence of vegetation with an affinity for water, and the presence or evidence of surface wetness or soil saturation. Wetland environments provide water quality improvement benefits and are ecologically valuable. Development activity in wetlands is subject to permitting processes administered by the U.S. Army Corps of Engineers

TIDAL WETLANDS: Vegetated and nonvegetated wetlands as defined in Chapter 116 Wetlands Ordinance of the Fairfax County Code: includes tidal shores and tidally influenced embayments, creeks, and tributaries to the Occoquan and Potomac Rivers. Development activity in tidal wetlands may require approval from the Fairfax County Wetlands Board.

Abbreviations Commonly Used in Staff Reports

A&F	Agricultural & Forestal District
ADU	Affordable Dwelling Unit
ARB	Architectural Review Board
BMP	Best Management Practices
BOS	Board of Supervisors
BZA	Board of Zoning Appeals
COG	Council of Governments
CBC	Community Business Center
CDP	Conceptual Development Plan
CRD	Commercial Revitalization District
DOT	Department of Transportation
DP	Development Plan
DPWES	Department of Public Works and Environmental Services
DPZ	Department of Planning and Zoning
DU/AC	Dwelling Units Per Acre
EQC	Environmental Quality Corridor
FAR	Floor Area Ratio
FDP	Final Development Plan
GDP	Generalized Development Plan
GFA	Gross Floor Area
HC	Highway Corridor Overlay District
HCD	Housing and Community Development
LOS	Level of Service
Non-RUP	Non-Residential Use Permit
OSDS	Office of Site Development Services, DPWES
PCA	Proffered Condition Amendment
PD	Planning Division
PDC	Planned Development Commercial
PDH	Planned Development Housing
PFM	Public Facilities Manual
PRC	Planned Residential Community
RC	Residential-Conservation
RE	Residential Estate
RMA	Resource Management Area
RPA	Resource Protection Area
RUP	Residential Use Permit
RZ	Rezoning
SE	Special Exception
SEA	Special Exception Amendment
SP	Special Permit
TDM	Transportation Demand Management
TMA	Transportation Management Association
TSA	Transit Station Area
TSM	Transportation System Management
UP & DD	Utilities Planning and Design Division, DPWES
VC	Variance
VDOT	Virginia Dept. of Transportation
VPD	Vehicles Per Day
VPH	Vehicles per Hour
WMATA	Washington Metropolitan Area Transit Authority
WS	Water Supply Protection Overlay District
ZAD	Zoning Administration Division, DPZ
ZED	Zoning Evaluation Division, DPZ
ZPRB	Zoning Permit Review Branch