# WASHINGTON BOULEVARD AT KIRKWOOD

# 3411, 3415, & 3421 WASHINGTON BLVD & 1122 NORTH KIRKWOOD ROAD

**ADMINISTRATIVE REGULATION 4.1** ARLINGTON COUNTY, VIRGINIA

**CONCEPT PLAN SUBMISSION - DECEMBER 14, 2017** FIRST PRELIMINARY 4.1 SITE PLAN SUBMISSION - FEBRUARY 21, 2018 SECOND PRELIMINARY 4.1 SITE PLAN SUBMISSION - APRIL 27, 2018

## **DEVELOPMENT TEAM**

#### **APPLICANT**

**ELEVENTH STREET DEVELOPMENT, LLC** 24 WEST CEDAR STREET **ALEXANDRIA, VA 22301** 703.519.3881 **CONTACT: GARRETT ERDLE** 

#### **ATTORNEY**

WALSH COLUCCI LUBELEY & WALSH PC 2200 CLARENDON BOULEVARD **SUITE 1300 ARLINGTON, VIRGINIA 22201** 703.528.4700 CONTACT: M. CATHARINE PUSKAR

#### **ARCHITECT**

**ODELL 2700 EAST CARY STREET** RICHMOND, VA 23223 804.287.8200 **CONTACT: SHAWN GLERUM, AIA** 

#### LANDSCAPE ARCHITECT

STUDIO39 LANDSCAPE ARCHITECTURE, P.C. 6416 GROVEDALE DRIVE, SUITE 100-A **ALEXANDRIA, VA 22310** 703.719.6500 CONTACT: DAN DOVE, PLA, LEED AP BD+C

#### **CIVIL ENGINEER**

WALTER L. PHILLIPS, INC. **207 PARK AVENUE** FALLS CHURCH, VA 22046 703.532.6163 CONTACT: KAREN WHITE, P.E.



## SHEET INDEX

#### **CIVIL ENGINEERING**

C-0101 COVER SHEET

C-0306 VACATION PLAT (EXISTING CONDITIONS)
C-0307 VACATION PLAT (PROPOSED CONDITIONS)
C-0308 VACATION PLAT (PROPOSED CONDITIONS)

-0310 CONTEXTUAL PLAN

C-0401 PLOT AND LOCATION PLAN

C-0403 PRESENTATION PLAN

C-1201 TREE INVENTORY AND PRESERVATION PLAN

C-1202 TREE PRESERVATION NOTES

### **ARCHITECTURE**

GARAGE LEVEL 02 PLAN GARAGE LEVEL 01 PLAN

FIRST FLOOR PLAN

SECOND FLOOR PLAN (3-6 SIMILAR)

MASSING CONTEXT

A-109 BUILDING SECTIONS A-110 COMPARATIVE HEIGHT SECTIONS

A-111 STREET FRONTAGE ELEVATIONS

A-112 STREET FRONTAGE ELEVATIONS

A-113 CONTEXT VIEWS

A-114 CONTEXT VIEWS

A-115 FUTURE 12TH ROAD EXHIBITS

A-116 TABULATIONS

A-117 MATERIALS

#### LANDSCAPE ARCHITECTURE

L-100 OVERALL SITE PLAN

WASHINGTON BLVD ENLARGEMENT

L-102 CORNER ENLARGEMENT

L-103 KIRKWOOD ROAD ENLARGEMENT COURTYARD AND ALLEY ENLARGEMENT

HARDSCAPE DETAILS

HARDSCAPE DETAILS

PLANTING DETAILS L-302 PLANT SCHEDULE

#### **COVER SHEET**



Engineers • Surveyors • Planners Landscape Architects • Arborists 207 PARK AVENUE

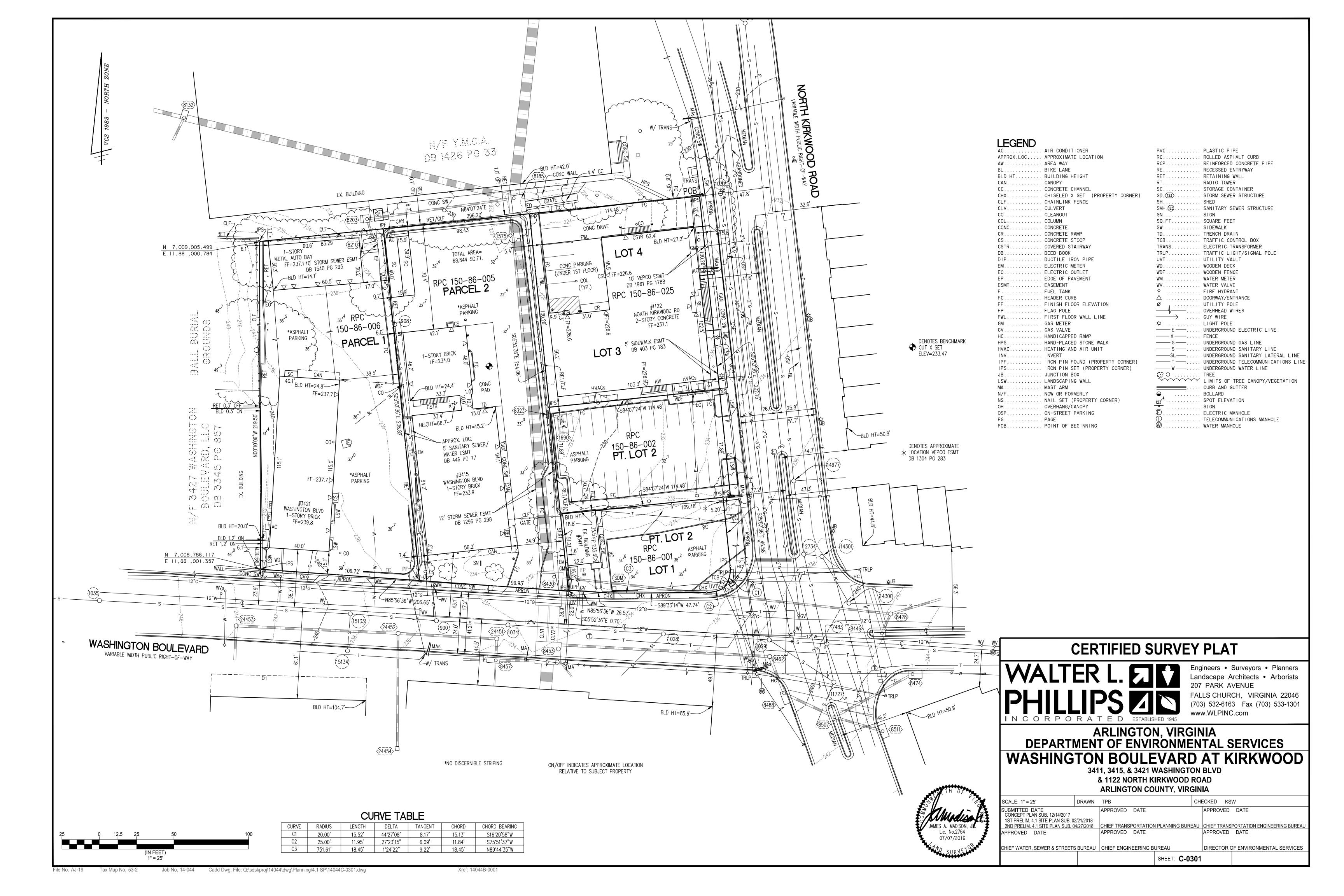
FALLS CHURCH, VIRGINIA 22046 (703) 532-6163 Fax (703) 533-1301

#### ARLINGTON, VIRGINIA DEPARTMENT OF ENVIRONMENTAL SERVICES WASHINGTON BOULEVARD AT KIRKWOOD

3411, 3415, & 3421 WASHINGTON BLVD & 1122 NORTH KIRKWOOD ROAD **ARLINGTON COUNTY. VIRGINIA** 

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SCALE: 1" = 25'	DRAWN	ТРВ		CHECKED KS	W
SUBMITTED DATE CONCEPT PLAN SUB. 12/14/2017 1ST PRELIM. 4.1 SITE PLAN SUB. 0 2ND PRELIM. 4.1 SITE PLAN SUB. 0		APPROVED DATE  CHIEF TRANSPORTATION	I PLANNING BURE	APPROVED  AU CHIEF TRANS	DATE  PORTATION ENGINEERING BUREAU
APPROVED DATE	772772010	APPROVED DATE		APPROVED	
CHIEF WATER, SEWER & STREETS	BUREAU	CHIEF ENGINEERING BI	UREAU	DIRECTOR (	OF ENVIRONMENTAL SERVICES
			SHEET: C-01	01	





#### NOTES:

- I. THE PROPERTIES SHOWN HEREON APPEAR ON ARLINGTON COUNTY REAL PROPERTY IDENTIFICATION MAP NUMBER 53-2, AS REAL PROPERTY CODE (RPC) NUMBERS 15086001, 15086002, 15086005, 15086006, AND 15086025 AND ARE ZONED C-2.
- 2. THE PROPERTIES ARE NOW IN THE NAME OF: 15086001 - GEORGE L. GRAHAM AND DORIS P. GRAHAM, TRUSTEES - DEED BOOK 3661 PAGE 218 15086002/15086025 - VM CLUB PROPERTIES, LLC - DEED BOOK 4639 PAGE 2014 15086005 - BETTY F. SLYE, TRUSTEE - DEED BOOK 4807 PAGE 1924 15086006 - 3421 WASHINGTON BOULEVARD, LLC - DEED BOOK 3439 PAGE 1093
- 3. THIS PLAT AND THE SURVEY UPON WHICH IT IS BASED SHOWS ONLY THOSE IMPROVEMENTS THAT ARE OBSERVABLE AND CAN BE LOCATED USING NORMAL SURVEY METHODS. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION, MISS UTILITY MARKINGS AND EXISTING RECORDS. THERE ARE NO GUARANTEES, EITHER EXPRESS OR IMPLIED, THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED, OR THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THE UNDERGROUND UTILITIES HAVE NOT BEEN PHYSICALLY LOCATED.
- 4. EXISTING SANITARY LATERAL SHOWN FROM ARLINGTON COUNTY SANITARY SEWER SYSTEM MAP, DATED AUGUST 14, 2015. THE UTILIZATION AND INTERPRETATION OF THIS INFORMATION IS AT USER'S RISK. THE LATERAL WAS NOT FIELD LOCATED.
- 5. TOTAL AREA OF THE PROPERTY IS 75,187 SQUARE FEET OR 1.7261 ACRES.
- 6. THIS PLAT IS BASED ON A FIELD SURVEY BY THIS FIRM, DATED 07/07/2016.
- 7. THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAPS FOR ARLINGTON COUNTY, VIRGINIA, MAP NUMBER 51013C0038C. EFFECTIVE DATE AUGUST 19, 2013, DESIGNATES THE PROPERTY AS BEING IN ZONE X, "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN."
- 8. THE PROPERTIES SHOWN HEREON ARE SUBJECT TO ALL DEDICATIONS, EASEMENTS, COVENANTS AND RESTRICTIONS IN THEIR RESPECTIVE CHAINS OF TITLE. THIS SURVEY, AND THE EASEMENTS SHOWN HEREON, WAS PREPARED WITH THE BENEFIT OF THE FOLLOWING:
  - RPC: 15086001 TITLE REPORT PREPARED BY WALKER TITLE LLC, CASE NUBMER A1700519, EFFECTIVE DATE, MAY 21, 2017 RPC: 15086005 - TITLE REPORT PREPARED BY WALKER TITLE, LLC, CASE NUMBER A1500379, EFFECTIVE DATE, MAY 24, 2015 RPC: 15086006 - TITLE REPORT PREPARED BY WALKER TITLE, LLC, CASE NUMBER A1600323, EFFECTIVE DATE, MARCH 6, 2016 RPC: 15086025/15086002 - COMMITMENT FOR TITLE INSURANCE ISSUED BY FIRST AMERICAN TITLE INSURANCE COMPANY, POLICY NUMBER NCS-661249-1-DC72, EFFECTIVE DATE APRIL 4, 2014
- 9. THE SITE SHOWN HEREON IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 AS COMPUTED FROM A FIELD RUN VERTICAL CONTROL SURVEY AND IS REFERENCED TO THE VIRGINIA COORDINATE SYSTEM OF 1983, [NAD 83(2011) (EPOCH:2010.0000)] AS COMPUTED FROM A FIELD RUN BOUNDARY AND HORIZONTAL CONTROL SURVEY THAT TIES THIS SUBDIVISION BOUNDARY AND THE BENCHMARK(S) SHOWN TO NOAA/NGS MONUMENT PID NUMBER DH4I44; STERLING CORS ARP. THE COMBINED FACTOR APPLIED TO THE FIELD DISTANCES TO DERIVE THE REFERENCED COORDINATES IS 0.99995266. THE FOOT DEFINITION USED FOR CONVERSION OF THE MONUMENT COORDINATES AND IN THE PERFORMANCE OF THIS SURVEY IS THE U.S. SURVEY FOOT. CONTOUR INTERVAL IS TWO FEET.
- 10. THIS SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF JAMES A. MADISON, JR., L.S., FROM AN ACTUAL [X] GROUND OR [ ] AIRBORNE SURVEY MADE UNDER MY SUPERVISION; THAT THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED ON JULY 7, 2016; AND THAT THIS PLAT, MAP, OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.
- II. THERE ARE NO HISTORIC DISTRICTS AND/OR STRUCTURES ON THE SITE. THE BALL FAMILY BURIAL GROUNDS ADJACENT TO THE SITE IS DESIGNATED AS HISTORIC.

#### STORM SEWER AS-RUILT

	٥ı	OHM SEWER AS	DOUL	l	
SD 24453		SD 8446		SD 8323	
MANHOLE TOP =	244.07	CURB INLET TOP =	242.33	*STRUCTURE IS BURIED	
18"DIP IN (SOUTH)=	234.52	*UNABLE TO DIP. TOP OF		UNDER PARKING LOT. EDGE	
18"RCP OUT (SD 24452)=	234.46	BOX IS CAVING IN*		OF BOX IS VISIBLE*	
SD 24452		SD 8428		SD 1575	
MANHOLE TOP =	236.59	MANHOLE TOP =	242.23	GRATE TOP =	231.28
18"RCP IN (SD 24453)=	232.69	I5"RCP IN (N.EAST) =	238.40	8"PVC OUT (SD 8185)=	228.98
15"RCP IN (SD 24454)=	231.20	*BOX IS TOO SHALLOW AND			
18"RCP OUT (SD 24451)=	231.09	WIDE TO MEASURE OTHER		SD 8185	
		INVERTS*		INLET TOP =	225.08
SD 24451				15"RCP IN (SD 8203)=	220.83
MANHOLE TOP =	234.39	SD 8453		54"RCP IN (SD 8132)=	217.18
18"RCP IN (SD 24452)=	230.15	MANHOLE TOP =	234.30	4.4' CHANNEL (EAST) =	215.48
18"RCP OUT (SD 8457)=	230.08	IO"PVC IN (S.EAST)=	229.24	84"RCP IN (SD 8430)=	215.23
		18"RCP IN (SD 8457)=	229.02	84"RCP OUT (SD 7917)=	215.18
SD 8457		18"RCP IN (SD 8462)=	228.92		
CURB INLET TOP =	234.21	96"RCP IN (SOUTH)=	225.92	SD 8132	
I5"RCP IN (WEST)=	230.11	6.5'X5' CLVI OUT (NORTH)=	225.72	INLET TOP =	238.77
18"RCP IN (SD 24451)=	229.71	6.5'X4' CLV2 OUT (NORTH)=	225.57	I5"RCP IN (WEST) =	231.07
8"PVC IN (SOUTH)=	229.76			30"RCP IN (S.WEST)=	229.77
18"RCP OUT (SD 8453)=	229.56	SD 8430		54"RCP OUT (SD 8185)=	222.37
		CURB INLET TOP =	233.22		
SD 8488		6.5'X5' CLVI IN (SOUTH)=	224.77	SD 8210	
CURB INLET TOP =	239.82	6.5'X4' CLV2 IN (SOUTH)=	224.77	CURB INLET TOP =	232.28
18"RCP IN (SD 8507)=	235.42	15"RCP IN (SD 8428)=	226.82	*MATERIALS ON TOP OF	
18"RCP OUT (SD 8462)=	235.37	84"RCP OUT (SD 8185)=	221.97	STRUCTURE*	
SD 8462		SD 1690		SD 8203	
CURB INLET TOP =	238.50	GRATE TOP =	227.19	YARD INLET TOP =	231.18
18"RCP IN (SD 8488)=	234.68	BOTTOM OF BOX =	222.64	15"RCP IN (SD 8210)=	225.09
18"RCP OUT (SD 8453)=	234.57	3"PVC IN WIER WALL =	222.24	15"RCP OUT (SD 8185)=	224.95
		18"RCP OUT (SD 8323)=	222.19		

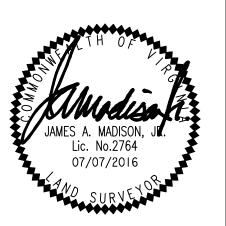
#### SANITARY SEWER AS-BUILT

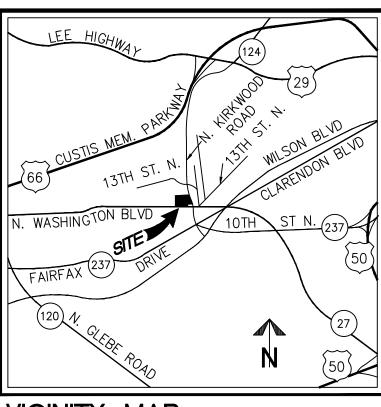
		WEIT AS BOILT	
SMH 14301		SMH 908	
MANHOLE TOP =	238.34	MANHOLE TOP =	233.58
12"INV IN (SMH 14300)=	224.72	*LID IS UNDER WALL*	
12"INV OUT (SMH 12734)=	224.44		
		SMH 1034	
SMH 12734		MANHOLE TOP =	234.37
MANHOLE TOP =	237.65	**8"INV (CL OF INV)=	224.33
12"INV IN (SMH 14301)=	223.55		
24"INV IN (SMH 11727)=	222.25	SMH 1028	
24"INV OUT (SMH 14977)=	222.20	MANHOLE TOP =	235.42
		8"INV IN (SMH 1034)=	223.87
SMH 14977		LATERAL IN (S.WEST) =	223.62
MANHOLE TOP =	236.19	8"INV OUT (SMH 1029)=	223.50
8"INV IN (EAST)			
TOP OF DROP =	230.97	SMH 1029	
BOTTOM OF DROP =	223.42	MANHOLE TOP =	238.51
24"INV IN (SMH 12734)=	220.99	12"INV IN (SMH 11727)=	223.76
24"INV OUT (SMH 12735)=	220.97	8"INV IN (SMH 1028)=	223.26
		8"INV IN (SMH 7483)=	223.23
SMH 1035		12"INV OUT (SMH 1030)=	223.11
MANHOLE TOP =	250.11		
8"INV IN (WEST) =	239.86	SMH 1030	
8"INV OUT (SMH 15133)=	239.66	MANHOLE TOP =	230.75
		12"INV IN (SMH 1029)=	221.16
SMH 15133		12"   NV OUT (NORTH) =	221.05
MANHOLE TOP =	238.92		
8"INV IN (SMH 15134)=	230.82	SMH 7483	
8"INV IN (SMH 1035)=	230.40	MANHOLE TOP =	240.22
8"INV OUT (SMH 900)=	230.25	**8"INV OUT (SMH 1029)=	234.00
SMH 900		SMH 11727	
MANHOLE TOP =	235.59	MANHOLE TOP =	240.64
**8" NV (CL OF  NV) =	227.02	*LID WELDED SHUT*	

#### DESCRIPTION

DESCRIPTION OF: PARCELS I AND 2, AS SHOWN ON THE PLAT ENTITLED PROPERTY OF B.F. WILTSHIRE RECORDED IN DEED BOOK 1296 AT PAGE 298; AND LOTS 1, 2, 3 AND 4 OF THE SUBDIVISION OF THE PROPERTY OF THOMAS H. FAIRBANKS AS RECORDED IN DEED BOOK 403 AT PAGE 183, LESS AND EXCEPT PORTIONS OF AFORESAID LOT I AS RECORDED IN DEED BOOK 910 AT PAGE 283 AND DEED BOOK 1557 AT PAGE 470:

BEGINNING AT A POINT IN THE WEST RIGHT-OF-WAY LINE OF NORTH KIRKWOOD ROAD, SAID POINT BEING THE SOUTHEAST CORNER OF NOW-OR-FORMERLY YOUNG MEN'S CHRISTIAN ASSOCIATION OF THE CITY OF WASHINGTON; THENCE WITH THE WEST RIGHT-OF-WAY LINE OF NORTH KIRKWOOD ROAD, S 05° 52' 36" E, 202.15 FEET TO A POINT; THENCE S 84° 07' 24" W, 5.00 FEET TO A POINT; THENCE S 05° 52' 36" E, 46.58 FEET TO A POINT; THENCE 15.52 FEET CHORD LENGTH 15.13 FEET, CHORD BEARING S 16° 20' 58" W) TO A POINT; THENCE 11.95 FEET WITH THE ARC OF A CURVE BEARING TO THE RIGHT AND HAVING A RADIUS OF 25.00 FEET (TANGENT LENGTH 6.09 FEET, CHORD LENGTH 11.84 FEET TO A POINT: THENCE S 05° 52′ 36″ E, 0.70 FEET TO A POINT: THENCE N 85° 56′ 36″ W, 206.65 FEET TO A POINT, SAID POINT BEING THE SOUTHEAST CORNER OF NOW-OR-FORMERLY 3427 WASHINGTON BOULEVARD, LLC; THENCE WITH 3427 WASHINGTON BOULEVARD, LLC AND CONTINUING WITH THE PROPERTY SHOWN IN PUBLIC RECORDS AS BALL CEMETERY, N 00° 10' 06" W, 219.50 FEET TO A POINT, SAID POINT BEING IN THE SOUTH LINE OF NOW-OR-FORMERLY YOUNG MEN'S CHRISTIAN ASSOCIATION OF THE CITY OF WASHINGTON; THENCE WITH YOUNG MEN'S CHRISTIAN ASSOCIATION OF THE CITY OF WASHINGTON, N 84° 07′ 24″ E, 296.20 FEET TO THE POINT OF BEGINNING AND CONTAINING AN AREA OF 75,187 SQUARE FEET, OR 1.7261 ACRES, MORE OR LESS.





SCALE: 1"=2000

VICINITY MAP

#### AREA TABULATION

PARCEL I	21,543	SQ.FT.	OR	0.4946	ACRES
PARCEL 2	24,159	SQ.FT.	OR	0.5546	ACRES
LOTS 3 & 4	14,912	SQ.FT.	OR	0.3423	ACRES
PART OF LOT 2	8,230	SQ.FT.	OR	0.1889	ACRES
PART LOT 2/RESIDUE LOT I	6,343	SQ.FT.	OR	0.1457	ACRES
TOTAL AREA	75,187	SQ.FT.	OR	1.7261	ACRES

#### ZONING TABULATION

(ZONING LINE PER ARL	_INGTON COUNT	Y TAX MAP	53-02)	
AREA WITHIN C-2	75,187	SQ.FT. OF	1.7261	ACRES
TOTAL ARFA	75.187	SQ FT OF	2   7261	ACRES

#### PARKING TABULATION (BASED ON DISCERNIBLE STRIPING)

REGULAR PARKING SPACES......32 RESERVED FOR DISABLED..... TOTAL SPACES.....

#### **CERTIFIED SURVEY PLAT**



Engineers • Surveyors • Planners Landscape Architects • Arborists 207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046

(703) 532-6163 Fax (703) 533-1301

#### ARLINGTON, VIRGINIA DEPARTMENT OF ENVIRONMENTAL SERVICES WASHINGTON BOULEVARD AT KIRKWOOD

3411, 3415, & 3421 WASHINGTON BLVD & 1122 NORTH KIRKWOOD ROAD ARLINGTON COUNTY, VIRGINIA

			,			
SCALE: NONE	DRAWN	TPB	CH	HECKED KS	N	
SUBMITTED DATE CONCEPT PLAN SUB. 12/14/2017 1ST PRELIM. 4.1 SITE PLAN SUB. 0.	2/21/2018	APPROVED DATE		APPROVED	DATE	
2ND PRELIM. 4.1 SITE PLAN SUB. 0	4/27/2018	CHIEF TRANSPORTATION	I PLANNING BUREAU	CHIEF TRANSF	PORTATION ENGINEERING B	UREAU
APPROVED DATE		APPROVED DATE		APPROVED	DATE	
CHIEF WATER, SEWER & STREETS	BUREAU	CHIEF ENGINEERING BU	JREAU	DIRECTOR C	F ENVIRONMENTAL SER	/ICES
					·	

SHEET: C-0302

Job No. 14-044 Cadd Dwg. File: Q:\sdskproj\14044\dwg\Planning\4.1 SP\14044C-0301.dwg

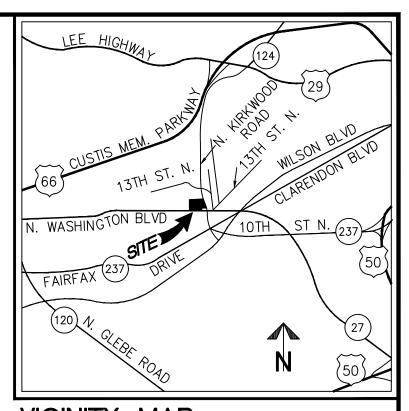
Xref: 14044B-0001

# M/F Y.M.C.A. DB 1426 PG 33 NORTH VARIABLE LOT 4 EXISTING ZONE: C-2 RPC 150-86-005 PARCEL 2 TOTAL AREA= RPC 150-86-025 EXISTING ZONE: C-2 ROAD 150-86-006 PARCEL 1 EXISTING ZONE: C-2 EXISTING ZONE: C-2 PARCEL A ±75,187 SF PROPOSED ZONE: C-0-2.5 RPC EXISTING ZONE: C-2 N 7,008,786.117 LOT 1 EXISTING ZONE: C-2 - N85°56'36"W 206.65' - S89°33'14"W 47.74' (C2)-WASHINGTON BOULEVARD N85°56'36"W 26.57' - S05°52'36"E 0.70' VARIABLE WIDTH PUBLIC RIGHT-OF-WAY **CURVE TABLE** KAREN L. S. WHITE Lic. No.041850 RADIUS LENGTH DELTA TANGENT CHORD CHORD BEARING ×04/27/18 15.52' 44\*27'08" 8.17' S16°20'58"W 25.00' 11.95' 27°23'15" 6.09' 11.84' S75°51'37"W C3 751.61' 18.45' 1°24'22" 9.22' 18.45' N89°44'35"W `1" = 25'

Job No. 14-044 Cadd Dwg. File: Q:\sdskproj\14044\dwg\Planning\4.1 SP\14044C-0303.dwg

#### **NOTES:**

- 1. THE PROPERTIES SHOWN HEREON APPEAR ON ARLINGTON COUNTY REAL PROPERTY IDENTIFICATION MAP NUMBER 53-2, AS REAL PROPERTY CODE (RPC) NUMBERS 15086001, 15086002, 15086005, 15086006, AND 15086025 AND ARE ZONED C-2.
- 2. TOTAL AREA OF THE PROPERTY IS 75,187 SQUARE FEET OR 1.7261 ACRES.
- 3. THIS PLAT IS BASED ON A FIELD SURVEY BY THIS FIRM, DATED 07/07/2016.
- 4. THE SITE SHOWN HEREON IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 AS COMPUTED FROM A FIELD RUN VERTICAL CONTROL SURVEY AND IS REFERENCED TO THE VIRGINIA COORDINATE SYSTEM OF 1983, [NAD 83(2011) (EPOCH: 2010.0000)] AS COMPUTED FROM A FIELD RUN BOUNDARY AND HORIZONTAL CONTROL SURVEY THAT TIES THIS SUBDIVISION BOUNDARY AND THE BENCHMARK(S) SHOWN TO NOAA/NGS MONUMENT PID NUMBER DH4144; STERLING CORS ARP. THE COMBINED FACTOR APPLIED TO THE FIELD DISTANCES TO DERIVE THE REFERENCED COORDINATES IS 0.99995266. THE FOOT DEFINITION USED FOR CONVERSION OF THE MONUMENT COORDINATES AND IN THE PERFORMANCE OF THIS SURVEY IS THE U.S. SURVEY FOOT. CONTOUR INTERVAL IS TWO FEET.
- 5. THE PROPERTY IS TO BE FOR RESIDENTIAL USE.



SCALE: 1"=200

VICINITY MAP

#### **ZONING DESCRIPTION**

DESCRIPTION OF: PARCELS 1 AND 2, AS SHOWN ON THE PLAT ENTITLED PROPERTY OF B.F. WILTSHIRE RECORDED IN DEED BOOK 1296 AT PAGE 298; AND LOTS 1, 2, 3 AND 4 OF THE SUBDIVISION OF THE PROPERTY OF THOMAS H. FAIRBANKS AS RECORDED IN DEED BOOK 403 AT PAGE 183, LESS AND EXCEPT PORTIONS OF AFORESAID LOT 1 AS RECORDED IN DEED BOOK 910 AT PAGE 283 AND DEED BOOK 1557 AT PAGE 470, PROPOSED TO BE REZONED FROM C-2 TO C-0-2.5:

BEGINNING AT A POINT IN THE WEST RIGHT-OF-WAY LINE OF NORTH KIRKWOOD ROAD, SAID POINT BEING THE SOUTHEAST CORNER OF NOW-OR-FORMERLY YOUNG MEN'S CHRISTIAN ASSOCIATION OF THE CITY OF WASHINGTON; THENCE WITH THE WEST RIGHT-OF-WAY LINE OF NORTH KIRKWOOD ROAD, S 05° 52' 36" E, 202.15 FEET TO A POINT; THENCE S 84° 07' 24" W, 5.00 FEET TO A POINT; THENCE S 05° 52' 36" E, 46.58 FEET TO A POINT; THENCE 15.52 FEET WITH THE ARC OF A CURVE BEARING TO THE RIGHT AND HAVING A RADIUS OF 20.00 FEET (TANGENT LENGTH 8.17 FEET, CHORD LENGTH 15.13 FEET, CHORD BEARING S 16° 20' 58" W) TO A POINT; THENCE 11.95 FEET WITH THE ARC OF A CURVE BEARING TO THE RIGHT AND HAVING A RADIUS OF 25.00 FEET (TANGENT LENGTH 6.09 FEET, CHORD LENGTH 11.84 FEET, CHORD BEARING S 75° 51' 37" W) TO A POINT IN THE NORTH RIGHT-OF-WAY LINE OF WILSON BOULEVARD; THENCE WITH THE NORTH RIGHT-OF-WAY LINE OF WILSON BOULEVARD S 89° 33' 14" W, 47.74 FEET TO A POINT; THENCE 18.45 FEET WITH THE ARC OF A CURVE BEARING TO THE RIGHT AND HAVING A RADIUS OF 751.61 FEET (TANGENT LENGTH 9.22 FEET, CHORD LENGTH 18.45 FEET, CHORD BEARING N 89° 44' 35" W) TO A POINT; THENCE N 85° 56' 36" W, 26.57 FEET TO A POINT; THENCE S 05° 52' 36" E, 0.70 FEET TO A POINT; THENCE N 85° 56' 36" W, 206.65 FEET TO A POINT, SAID POINT BEING THE SOUTHEAST CORNER OF NOW-OR-FORMERLY 3427 WASHINGTON BOULEVARD, LLC; THENCE WITH 3427 WASHINGTON BOULEVARD, LLC AND CONTINUING WITH THE PROPERTY SHOWN IN PUBLIC RECORDS AS BALL CEMETERY, N 00° 10' 06" W, 219.50 FEET TO A POINT, SAID POINT BEING IN THE SOUTH LINE OF NOW-OR-FORMERLY YOUNG MEN'S CHRISTIAN ASSOCIATION OF THE CITY OF WASHINGTON; THENCE WITH YOUNG MEN'S CHRISTIAN ASSOCIATION OF THE CITY OF WASHINGTON, N 84° 07' 24" E, 296.20 FEET TO THE POINT OF BEGINNING AND CONTAINING AN AREA OF 75,187 SQUARE FEET, OR 1.7261 ACRES, MORE OR LESS.

#### **AREA TABULATIONS:**

PARCEL (RPC)	LOT	OWNER	CURRENTLY ZONED C-2		PROPOSED ZONE C-O-2.	
			SQ. FT.	ACRES	SQ. FT.	ACRES
150-86-001	LOT 1, PART LOT 2	GEORGE L. GRAHAM AND DORIS P. GRAHAM, TRUSTEES	6343	0.1456	6343	0.1456
150-86-002	PART LOT 2	VM CLUB PROPERTIES, LLC	8230	0.1889	8230	0.1889
150-86-005	PARCEL 2	BETTY F. SLYE, TRUSTEE	24159	0.5546	24159	0.5546
150-86-006	PARCEL 1	3421 WASHINGTON BOULEVARD, LLC	21543	0.4946	21543	0.4946
150-86-025	LOTS 3, 4	VM CLUB PROPERTIES, LLC	14912	0.3423	14912	0.3423
TOTAL			75187	1.7261	75187	1.7261

#### **REZONING PLAT**



Engineers • Surveyors • Planners Landscape Architects • Arborists 207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046

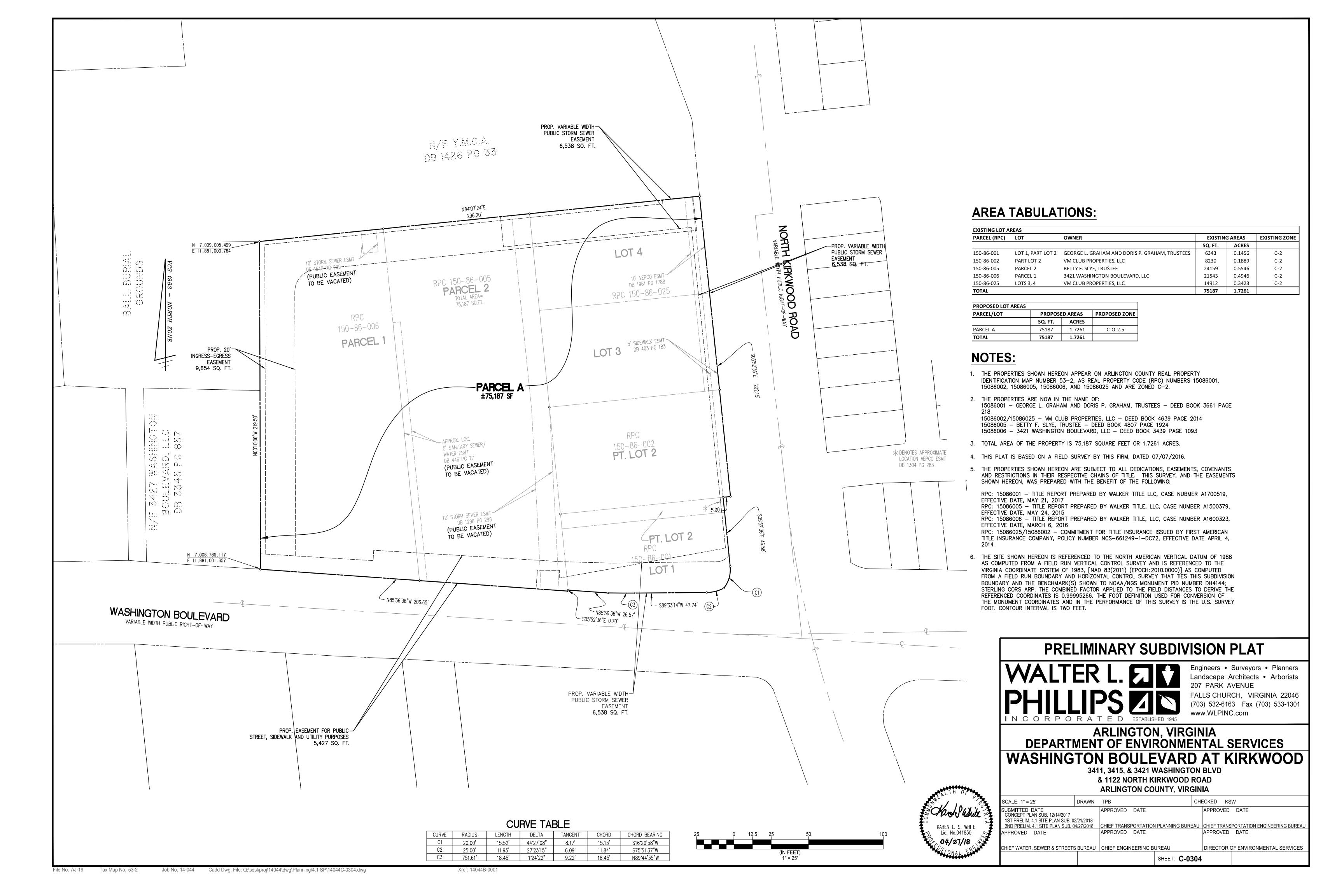
#### ARLINGTON, VIRGINIA DEPARTMENT OF ENVIRONMENTAL SERVICES WASHINGTON BOULEVARD AT KIRKWOOD

3411, 3415, & 3421 WASHINGTON BLVD & 1122 NORTH KIRKWOOD ROAD

ARLINGTON COUNTY, VIRGINIA DRAWN TPB CHECKED KSW SUBMITTED DATE CONCEPT PLAN SUB. 12/14/2017 APPROVED DATE APPROVED DATE 1ST PRELIM. 4.1 SITE PLAN SUB. 02/21/2018 2ND PRELIM. 4.1 SITE PLAN SUB. 04/27/2018 CHIEF TRANSPORTATION PLANNING BUREAU CHIEF TRANSPORTATION ENGINEERING BUREA

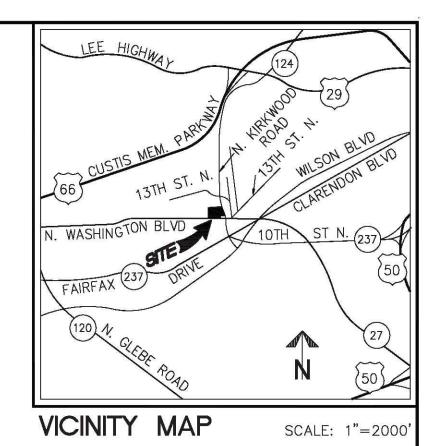
APPROVED DATE DIRECTOR OF ENVIRONMENTAL SERVICES SHEET: **C-0303** 

CHIEF WATER, SEWER & STREETS BUREAU | CHIEF ENGINEERING BUREAU



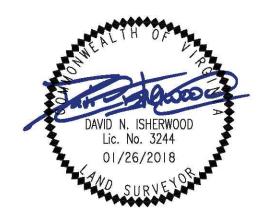
#### LEGEND

AC..... AIR CONDITIONER RECESSED ENTRYWAY APPROX.LOC.... APPROXIMATE LOCATION RETAINING WALL AW..... AREA WAY RADIO TOWER BL..... BIKE LANE ... STORAGE CONTAINER CAN..... CANOPY ..... STORM SEWER STRUCTURE CC..... CONCRETE CHANNEL .... SHED CLF..... CHAINLINK FENCE SMH,(23).... SANITARY SEWER STRUCTURE CLV..... CULVERT SN..... SIGN CO..... CLEANOUT SQ.FT..... SQUARE FEET COL..... COLUMN SW..... SIDEWALK CONC..... CONCRETE TD..... TRENCH DRAIN CR..... CONCRETE RAMP TCB..... TRAFFIC CONTROL BOX CS..... CONCRETE STOOP TRANS..... ELECTRIC TRANSFORMER CSTR..... COVERED STAIRWAY TRLP..... TRAFFIC LIGHT/SIGNAL POLE DB..... DEED BOOK DIP..... DUCTILE IRON PIPE WD..... WOODEN DECK EM..... ELECTRIC METER . WOODEN FENCE EO..... ELECTRIC OUTLET . WATER METER EP..... EDGE OF PAVEMENT WV..... WATER VALVE ♦ ..... FIRE HYDRANT ESMT.... EASEMENT F..... FUEL TANK △ ..... DOORWAY/ENTRANCE Ø , ..... UTILITY POLE FC..... HEADER CURB FP..... FLAG POLE FWL..... FIRST FLOOR WALL LINE — GUY WIRE Ф ..... LIGHT POLE GM..... GAS METER GV..... GAS VALVE HPS..... HAND-PLACED STONE WALK ——— X ——.... FENCE HVAC..... HEATING AND AIR UNIT IPF..... IRON PIN FOUND (PROPERTY CORNER) -----S---.... UNDERGROUND SANITARY LINE -----SL---.... UNDERGROUND SANITARY LATERAL LINE JB..... JUNCTION BOX LSW..... LANDSCAPING WALL T .... UNDERGROUND TELECOMMUNICATIONS LINE N/F..... NOW OR FORMERLY OH..... OVERHANG/CANOPY LIMITS OF TREE CANOPY/VEGETATION ..... ON-STREET PARKING \_\_\_\_\_\_.... CURB AND GUTTER PG..... PAGE ..... BOLLARD PVC..... PLASTIC PIPE ..... SIGN .... ELECTRIC MANHOLE RC..... ROLLED ASPHALT CURB . TELECOMMUNICATIONS MANHOLE WATER MANHOLE



- I. THE PROPERTIES SHOWN HEREON APPEAR ON ARLINGTON COUNTY REAL PROPERTY IDENTIFICATION MAP NUMBER 53-2, AS REAL PROPERTY CODE (RPC) NUMBERS 15086001, 15086002, 15086005, 15086006, AND 15086025 AND ARE ZONED C-2.
- 2. THE PROPERTIES ARE NOW IN THE NAME OF:
  - RPC 15086001 GEORGE L. GRAHAM AND DORIS P. GRAHAM, TRUSTEES DEED BOOK 3661 PAGE 218 RPC 15086002/15086025 - VM CLUB PROPERTIES, LLC - DEED BOOK 4639 PAGE 2014 RPC 15086005 - BETTY F. SLYE, TRUSTEE - DEED BOOK 4807 PAGE 1924
  - RPC 15086006 3421 WASHINGTON BOULEVARD, LLC DEED BOOK 3439 PAGE 1093
- 3. THIS PLAT IS BASED ON A BOUNDARY SURVEY PERFORMED BY WALTER L PHILLIPS, INC. IN JULY, 2016.
- 4. ALL DEDICATIONS AND EASEMENTS BENEFITTING ARLNGTON COUNTY, VIRIGNIA REMAIN IN FULL FORCE AND EFFECT UNLESS OTHERWISE SHOWN HEREON.
- 5. THE SITE SHOWN HEREON IS REFERENCED TO THE VIRGINIA COORDINATE SYSTEM OF 1983, [NAD 83(2011) (EPOCH: 2010.0000)] AS COMPUTED FROM A FIELD RUN BOUNDARY AND HORIZONTAL CONTROL SURVEY THAT TIES THIS BOUNDARY TO NOAA/NGS MONUMENT PID NUMBER DH4144; STERLING CORS ARP. THE COMBINED FACTOR APPLIED TO THE FIELD DISTANCES TO DERIVE THE REFERENCED COORDINATES IS 0.99995266. THE FOOT DEFINITION USED FOR CONVERSION OF THE MONUMENT COORDINATES AND IN THE PERFORMANCE OF THIS SURVEY IS THE U.S. SURVEY FOOT.

JOB NO.: 14-044



**PLAT SHOWING EXISTING CONDITIONS AND VACATION OF STORM, SANITARY SEWER, WATER EASEMENTS** PARCELS ONE AND TWO PROPERTY OF B.F. WILSHIRE **DEED BOOK 1296 PAGE 298 LOTS 1, 2, 3 AND 4** 

THOMAS H. FAIRBANKS DEED BOOK 403 PAGE 183 ARLINGTON COUNTY, VIRGINIA

DATE: JANUARY 26, 2018

FALLS CHURCH, VIRGINIA 22046 (703) 532-6163 Fax (703) 533-1301

SHEET: 1 OF: 2

DWG FILE NAME: 14044X-01



# VACATION PLAT (EXISTING CONDITIONS)



Engineers • Surveyors • Planners Landscape Architects • Arborists 207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046

#### ARLINGTON, VIRGINIA DEPARTMENT OF ENVIRONMENTAL SERVICES WASHINGTON BOULEVARD AT KIRKWOOD

3411, 3415, & 3421 WASHINGTON BLVD & 1122 NORTH KIRKWOOD ROAD ARLINGTON COUNTY, VIRGINIA

SCALE: 1" = 25' DRAWN TPB CHECKED KSW SUBMITTED DATE CONCEPT PLAN SUB. 12/14/2017 APPROVED DATE APPROVED DATE 1ST PRELIM. 4.1 SITE PLAN SUB. 02/21/2018 2ND PRELIM. 4.1 SITE PLAN SUB. 04/27/2018 CHIEF TRANSPORTATION PLANNING BUREAU CHIEF TRANSPORTATION ENGINEERING BUREAU APPROVED DATE APPROVED DATE APPROVED DATE CHIEF WATER, SEWER & STREETS BUREAU | CHIEF ENGINEERING BUREAU DIRECTOR OF ENVIRONMENTAL SERVICES SHEET: **C-0305** 

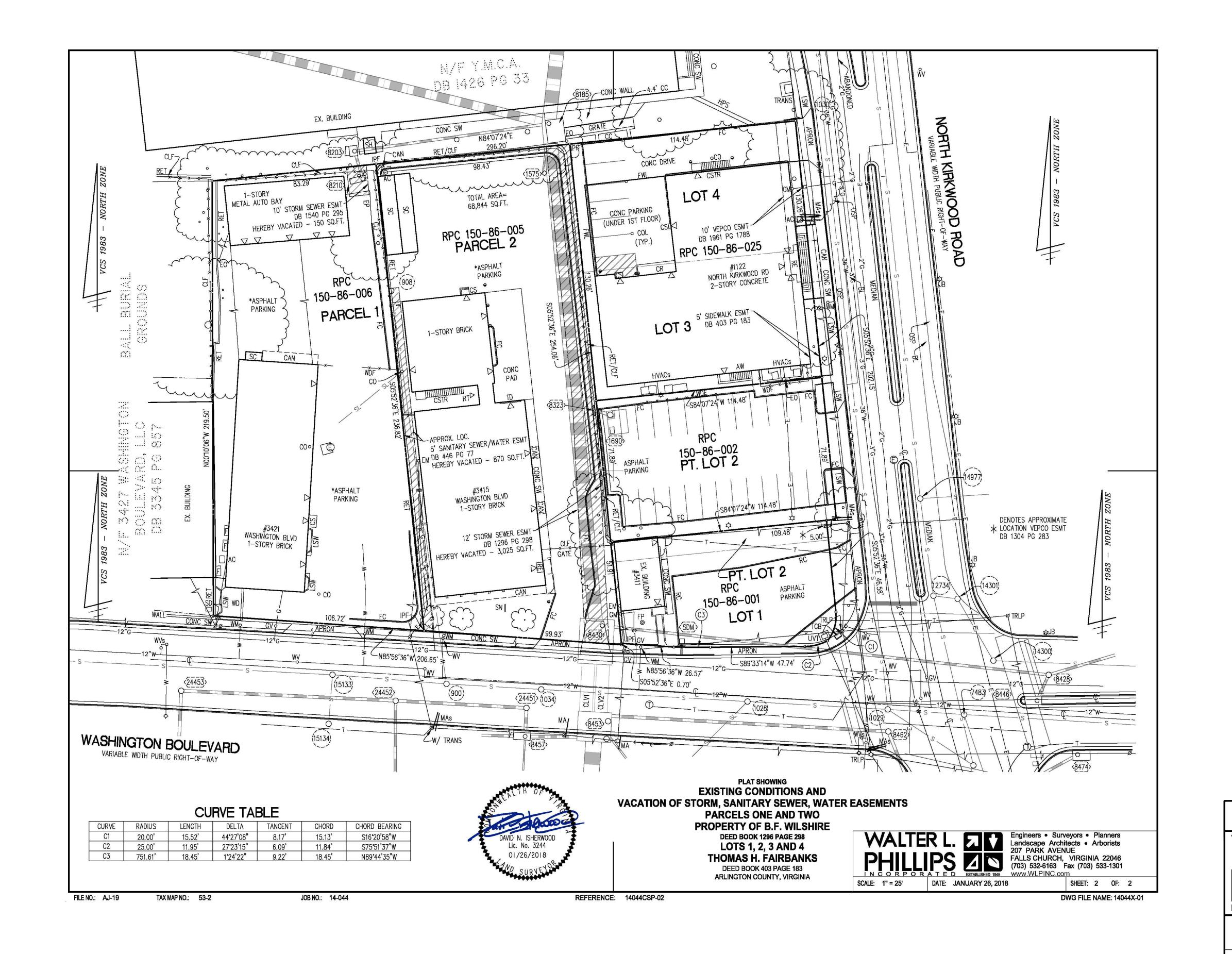
Job No. 14-044 Cadd Dwg. File: Q:\sdskproj\14044\dwg\Planning\4.1 SP\14044C-0304.dwg

TAX MAP NO.: 53-2

FILE NO.: AJ-19

Xref: 14044B-0001

REFERENCE: 14044CSP-02





## **VACATION PLAT (EXISTING CONDITIONS)**

# WALTER L. EL ESTABLISHED 1945

Engineers • Surveyors • Planners
Landscape Architects • Arborists
207 PARK AVENUE
FALLS CHURCH, VIRGINIA 22046

(703) 532-6163 Fax (703) 533-1301 www.WLPINC.com

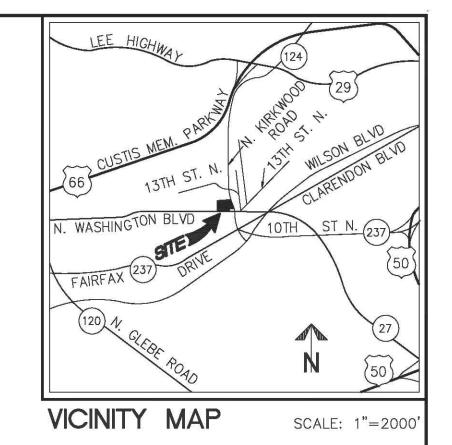
# ARLINGTON, VIRGINIA DEPARTMENT OF ENVIRONMENTAL SERVICES WASHINGTON BOULEVARD AT KIRKWOOD

3411, 3415, & 3421 WASHINGTON BLVD & 1122 NORTH KIRKWOOD ROAD ARLINGTON COUNTY, VIRGINIA

			· · · · · · · · · · · · · · · · · · ·				
SCALE: 1" = 25'	DRAWN	TPB		CHE	ECKED KS	W	
SUBMITTED DATE CONCEPT PLAN SUB. 12/14/2017 1ST PRELIM. 4.1 SITE PLAN SUB. 02 2ND PRELIM. 4.1 SITE PLAN SUB. 04		APPROVED DATE	I DI ANNING BUDE		APPROVED	DATE PORTATION ENGINEERING BU	DEALL
APPROVED DATE	+/2//2010	APPROVED DATE	I F LANNING BOILE		APPROVED	DATE	NLAU
CHIEF WATER, SEWER & STREETS	BUREAU	CHIEF ENGINEERING BI	JREAU		DIRECTOR C	OF ENVIRONMENTAL SERVI	CES
			SHEET: C-03	306			

Job No. 14-044 Cadd Dwg. File: Q:\sdskproj\14044\dwg\Planning\4.1 SP\14044C-0304.dwg

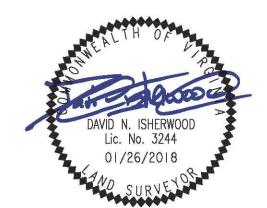
f: 14044B-0001



#### **NOTES**

- 1. THE PROPERTIES SHOWN HEREON APPEAR ON ARLINGTON COUNTY REAL PROPERTY IDENTIFICATION MAP NUMBER 53-2, AS REAL PROPERTY CODE (RPC) NUMBERS 15086001, 15086002, 15086005, 15086006, AND 15086025 AND ARE ZONED C-2.
- 2. THE PROPERTIES ARE NOW IN THE NAME OF:
  - RPC | 1508600| GEORGE L. GRAHAM AND DORIS P. GRAHAM, TRUSTEES DEED BOOK 366| PAGE 2|8 RPC | 15086002/15086025 VM CLUB PROPERTIES, LLC DEED BOOK 4639 PAGE 20|4 RPC | 15086005 BETTY F. SLYE, TRUSTEE DEED BOOK 4807 PAGE | 1924
- RPC 15086006 3421 WASHINGTON BOULEVARD, LLC DEED BOOK 3439 PAGE 1093

  3. THIS PLAT IS BASED ON A BOUNDARY SURVEY PERFORMED BY WALTER L PHILLIPS, INC. IN JULY, 2016.
- 4. ALL DEDICATIONS AND EASEMENTS BENEFITTING ARLNGTON COUNTY, VIRIGNIA REMAIN IN FULL FORCE AND EFFECT UNLESS OTHERWISE SHOWN HEREON.
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PLAT SHOWING
EXISTING CONDITIONS AND
VACATION OF STORM AND SANITARY SEWER EASEMENTS
PARCELS ONE AND TWO
PROPERTY OF B.F. WILSHIRE
DEED BOOK 1296 PAGE 298
LOTS 1, 2, 3 AND 4
THOMAS H. FAIRBANKS
DEED BOOK 403 PAGE 183

ARLINGTON COUNTY, VIRGINIA

WALTER L. DESTABLISHED 1945

CALE: 1" = 25'

DATE: JANUARY 26, 2018

Engineers • Surveyors • Planners
Landscape Architects • Arborists
207 PARK AVENUE
FALLS CHURCH, VIRGINIA 22046
(703) 532-6163 Fax (703) 533-1301

SHEET: 1 OF: 2

FILE NO.: AJ-19 TAX MAP NO.: 53-2 JOB NO.: 14-044 REFERENCE: 14044\DWG\PLANNING\4.1 SP\14044B-001

DWG FILE NAME: 14044X-02

# VACATION PLAT (PROPOSED CONDITIONS) Engineers • Surveyors • Planners



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Landscape Architects • Arborists
207 PARK AVENUE
FALLS CHURCH, VIRGINIA 22046

(703) 532-6163 Fax (703) 533-1301 www.WLPINC.com

# ARLINGTON, VIRGINIA DEPARTMENT OF ENVIRONMENTAL SERVICES WASHINGTON BOULEVARD AT KIRKWOOD

3411, 3415, & 3421 WASHINGTON BLVD & 1122 NORTH KIRKWOOD ROAD ARLINGTON COUNTY, VIRGINIA

SCALE: 1" = 25'

SUBMITTED DATE
CONCEPT PLAN SUB. 12/14/2017
1ST PRELIM. 4.1 SITE PLAN SUB. 02/21/2018
2ND PRELIM. 4.1 SITE PLAN SUB. 04/27/2018
CHIEF TRANSPORTATION PLANNING BUREAU
APPROVED DATE

CHIEF WATER, SEWER & STREETS BUREAU

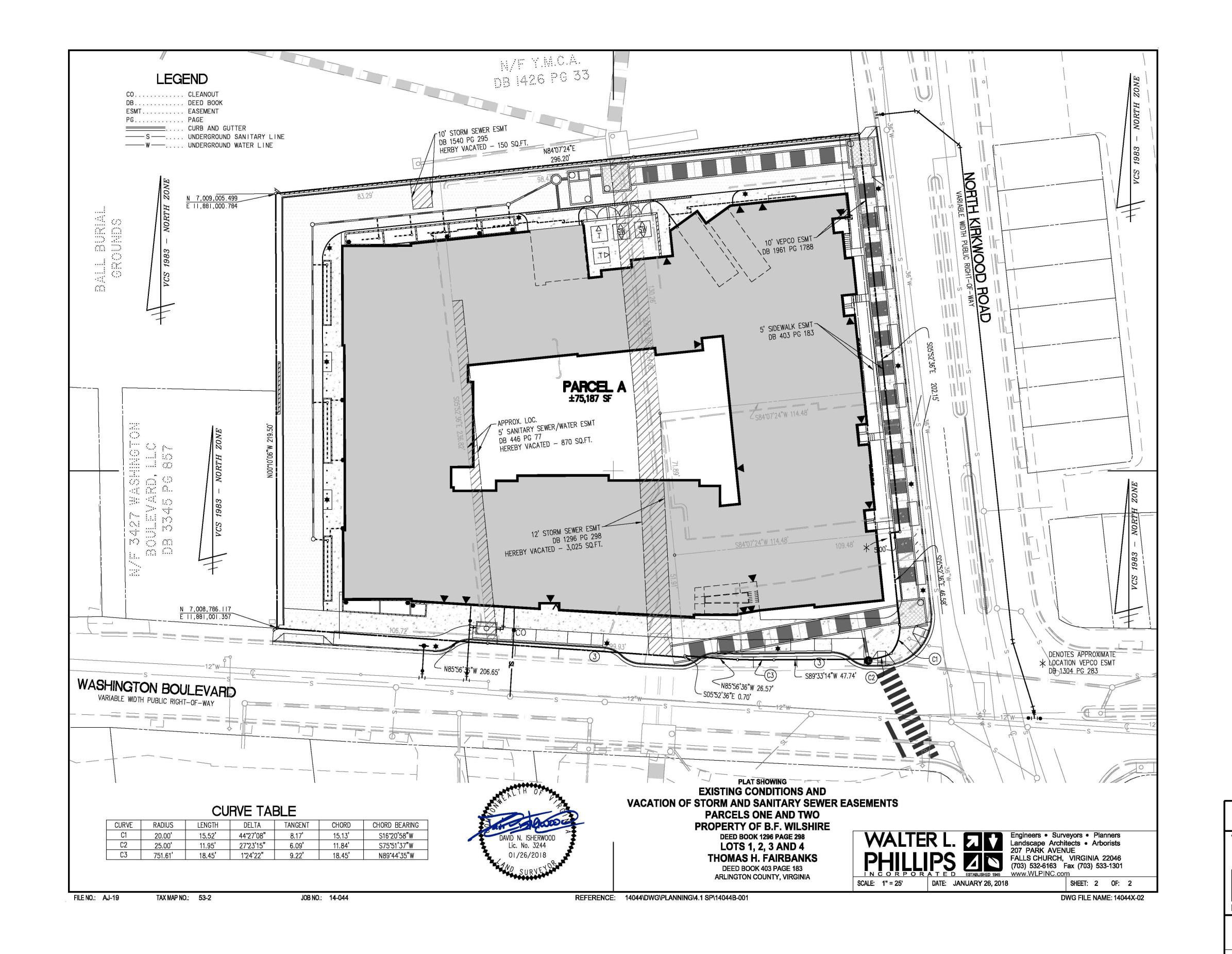
CHIEF ENGINEERING BUREAU

SHEET: C-0307



e No. AJ-19 Tax Map No. 53-2 Job No. 14-044 Cadd Dwg. File: Q:\sdskproj\14044\dwg\Planning\4.1 SP\14044C-0304.dwg

Xref: 14044B-0001



## **VACATION PLAT (PROPOSED CONDITIONS)**

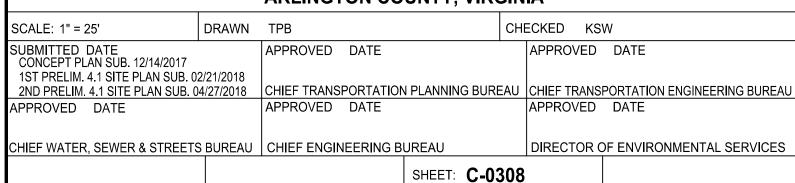


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207 PARK AVENUE

FALLS CHURCH, VIRGINIA 22046 (703) 532-6163 Fax (703) 533-1301 www.WLPINC.com

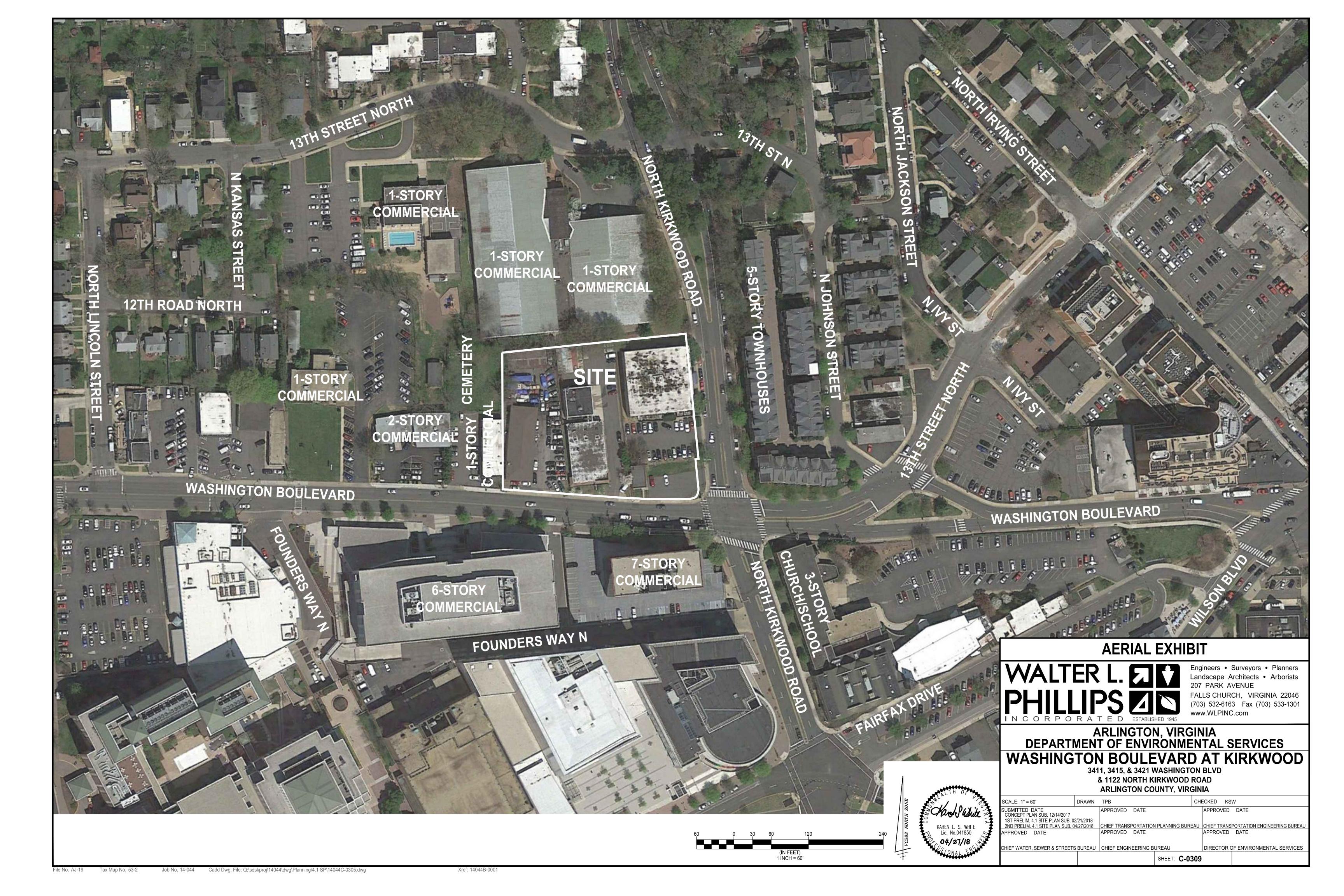
# ARLINGTON, VIRGINIA DEPARTMENT OF ENVIRONMENTAL SERVICES WASHINGTON BOULEVARD AT KIRKWOOD

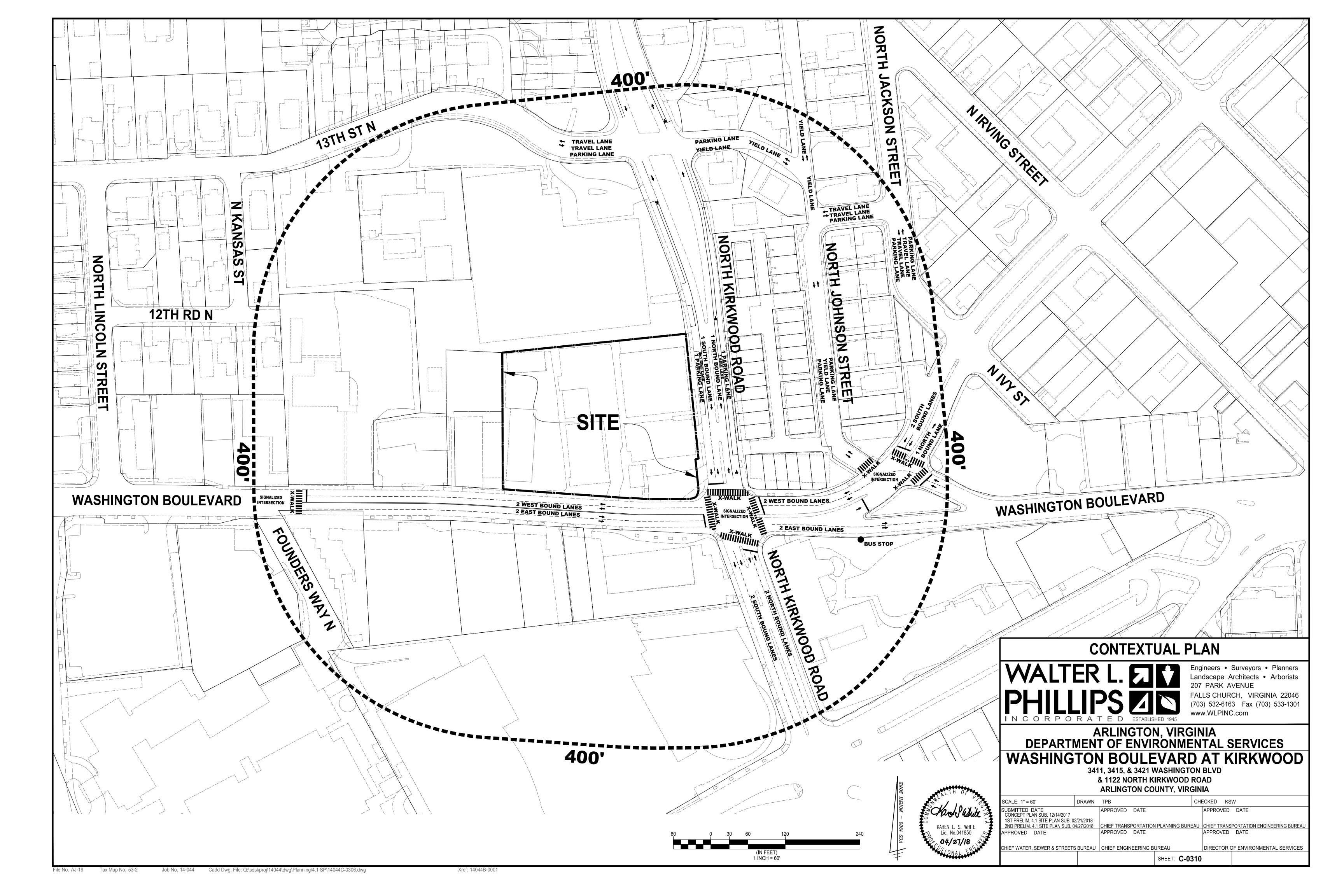
3411, 3415, & 3421 WASHINGTON BLVD & 1122 NORTH KIRKWOOD ROAD ARLINGTON COUNTY, VIRGINIA

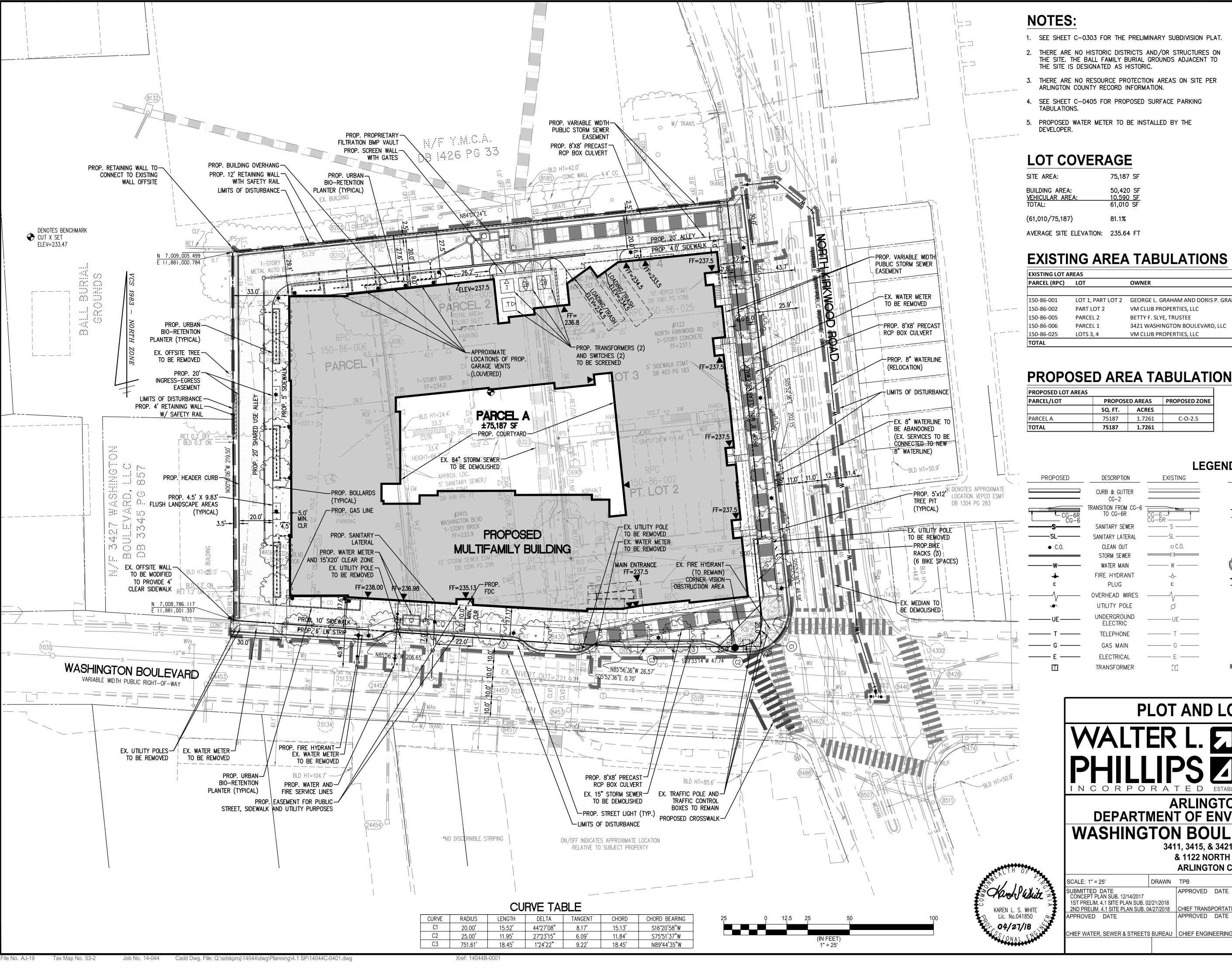




Map No. 53-2 Job No. 14-044 Cadd Dwg. File: Q:\sdskproj\14044\dwg\Planning\4.1 SP\14044C-0304.dwg







- 1. SEE SHEET C-0303 FOR THE PRELIMINARY SUBDIVISION PLAT
- 2. THERE ARE NO HISTORIC DISTRICTS AND/OR STRUCTURES ON THE SITE. THE BALL FAMILY BURIAL GROUNDS ADJACENT TO THE SITE IS DESIGNATED AS HISTORIC.
- 3. THERE ARE NO RESOURCE PROTECTION AREAS ON SITE PER ARLINGTON COUNTY RECORD INFORMATION.
- 4. SEE SHEET C-0405 FOR PROPOSED SURFACE PARKING
- 5. PROPOSED WATER METER TO BE INSTALLED BY THE DEVELOPER.

#### **LOT COVERAGE**

75,187 SF 50,420 SF 10,590 SF 61,010 SF

81.1%

AVERAGE SITE ELEVATION: 235.64 FT

# VICINITY MAP

SCALE: 1"=2000

XISTING LOT AREAS									
ARCEL (RPC)	LOT	OWNER	EXISTIN	G AREAS	<b>EXISTING ZONE</b>				
			SQ. FT.	ACRES					
50-86-001	LOT 1, PART LOT 2	GEORGE L. GRAHAM AND DORIS P. GRAHAM, TRUSTEES	6343	0.1456	C-2				
50-86-002	PART LOT 2	VM CLUB PROPERTIES, LLC	8230	0.1889	C-2				
50-86-005	PARCEL 2	BETTY F. SLYE, TRUSTEE	24159	0.5546	C-2				
50-86-006	PARCEL 1	3421 WASHINGTON BOULEVARD, LLC	21543	0.4946	C-2				
50-86-025	LOTS 3, 4	VM CLUB PROPERTIES, LLC	14912	0.3423	C-2				
OTAL			75187	1.7261					

#### PROPOSED AREA TABULATIONS

PROPOSED LOT AREAS			
PARCEL/LOT	PROPOSI	ED AREAS	PROPOSED ZONE
	SQ. FT.	ACRES	
PARCEL A	75187	1.7261	C-O-2.5
TOTAL	75187	1.7261	

DESCRIPTION

#### **LEGEND**

		EXISTINO			
	CURB & GUTTER CG-2			HANDICAP RAMP (CG-12)	
CG-6R CG-6	TRANSITION FROM CG-6 TO CG-6R	CG-6 - CG-6R		GUARDRAIL FENCE	_
s	SANITARY SEWER	—— S ——	-	TRAFFIC FLOW	$\Rightarrow$
———SL———	SANITARY LATERAL	——— SL ———	.4.		\$
• C.O.	CLEAN OUT	o C.O.	*	LIGHT	·
	STORM SEWER	<del></del>	▼	DOOR	$\nabla$
w	WATER MAIN	——— W ———		TREES	
<del>-</del>	FIRE HYDRANT	-6-	260 —		260
Ľ	PLUG	ב	<u> </u>	CONTOURS	264
	OVERHEAD WIRES		+ 264 <sup>50</sup>	SPOT ELEVATION	+264 <del>50</del>
•	UTILITY POLE	Ø	$\Longrightarrow$ DF	RAINAGE FLOW DIRECTI	
———UE———	UNDERGROUND ELECTRIC	——— UE ———	TC BC	TOP OF CURB BOTTOM OF CURB	TC BC
T	TELEPHONE	T	TW BW	TOP OF WALL BOTTOM OF WALL	TW BW
G	GAS MAIN	——— G ———	HP	HIGH POINT	H.P.
— Е —	ELECTRICAL	— Е —	TP 🕕	TEST PIT	
	TRANSFORMER	Π		LIMITS OF CLEARING AND GRADING	

#### PLOT AND LOCATION PLAN



Engineers • Surveyors • Planners Landscape Architects • Arborists 207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046

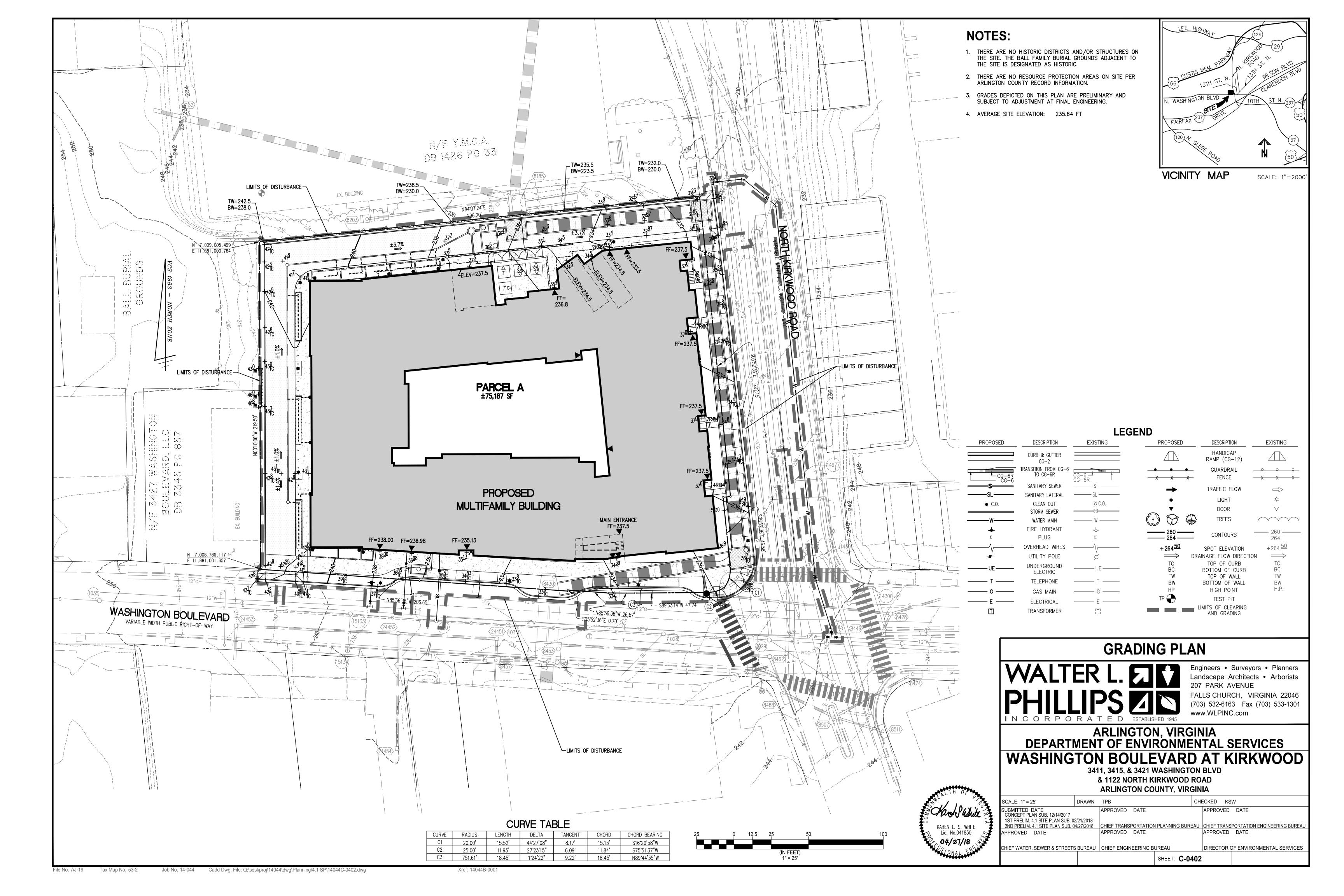
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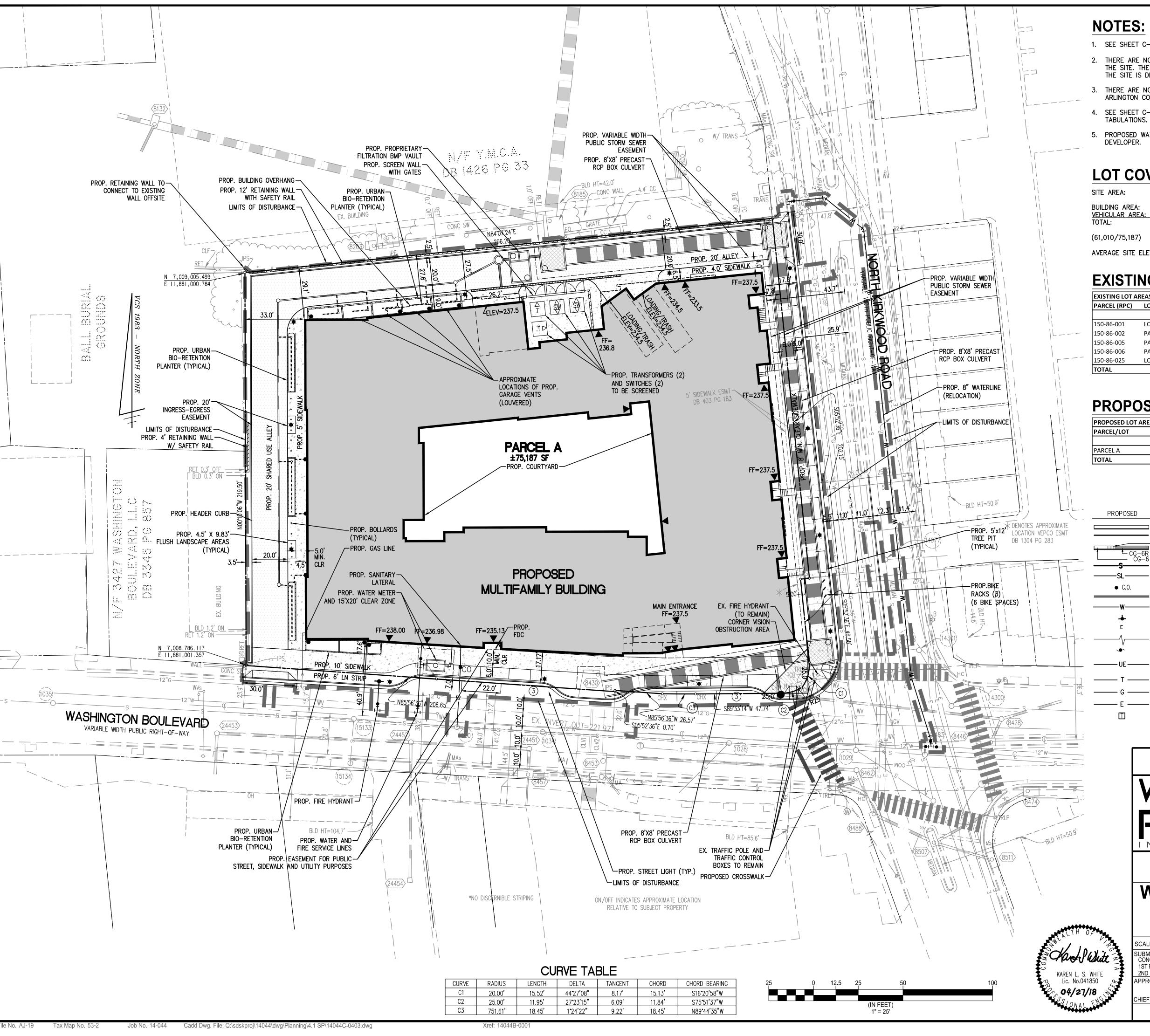
(703) 532-6163 Fax (703) 533-1301

#### ARLINGTON, VIRGINIA DEPARTMENT OF ENVIRONMENTAL SERVICES WASHINGTON BOULEVARD AT KIRKWOOD

3411, 3415, & 3421 WASHINGTON BLVD & 1122 NORTH KIRKWOOD ROAD **ARLINGTON COUNTY, VIRGINIA** 

DRAWN TPB CHECKED KSW SUBMITTED DATE CONCEPT PLAN SUB. 12/14/2017 APPROVED DATE APPROVED DATE 1ST PRELIM. 4.1 SITE PLAN SUB. 02/21/2018 2ND PRELIM. 4.1 SITE PLAN SUB. 04/27/2018 CHIEF TRANSPORTATION PLANNING BUREAU CHIEF TRANSPORTATION ENGINEERING BUREAU APPROVED DATE CHIEF WATER, SEWER & STREETS BUREAU | CHIEF ENGINEERING BUREAU DIRECTOR OF ENVIRONMENTAL SERVICES SHEET: **C-0401** 





- 1. SEE SHEET C-0303 FOR THE PRELIMINARY SUBDIVISION PLAT.
- 2. THERE ARE NO HISTORIC DISTRICTS AND/OR STRUCTURES ON THE SITE. THE BALL FAMILY BURIAL GROUNDS ADJACENT TO THE SITE IS DESIGNATED AS HISTORIC.
- 3. THERE ARE NO RESOURCE PROTECTION AREAS ON SITE PER ARLINGTON COUNTY RECORD INFORMATION.
- 4. SEE SHEET C-0405 FOR PROPOSED SURFACE PARKING
- 5. PROPOSED WATER METER TO BE INSTALLED BY THE

#### **LOT COVERAGE**

75,187 SF 50,420 SF 10,590 SF 61,010 SF

81.1%

AVERAGE SITE ELEVATION: 235.64 FT

# VICINITY MAP

SCALE: 1"=2000

#### **EXISTING AREA TABULATIONS**

EXISTING LOT AREAS								
PARCEL (RPC)	(RPC) LOT OWNER		<b>EXISTING AREAS</b>		<b>EXISTING ZONE</b>			
			SQ. FT.	ACRES				
150-86-001	LOT 1, PART LOT 2	GEORGE L. GRAHAM AND DORIS P. GRAHAM, TRUSTEES	6343	0.1456	C-2			
150-86-002	PART LOT 2	VM CLUB PROPERTIES, LLC	8230	0.1889	C-2			
150-86-005	PARCEL 2	BETTY F. SLYE, TRUSTEE	24159	0.5546	C-2			
150-86-006	PARCEL 1	3421 WASHINGTON BOULEVARD, LLC	21543	0.4946	C-2			
150-86-025	LOTS 3, 4	VM CLUB PROPERTIES, LLC	14912	0.3423	C-2			
TOTAL			75187	1.7261				
•	•		•		•			

#### PROPOSED AREA TABULATIONS

PROPOSED LOT AREAS			
PARCEL/LOT	PROPOSE	ED AREAS	PROPOSED ZONE
	SQ. FT.	ACRES	
PARCEL A	75187	1.7261	C-O-2.5
TOTAL	75187	1.7261	

DESCRIPTION

#### **LEGEND**

	CURB & GUTTER CG-2			HANDICAP RAMP (CG-12)	
CG-6R CG-6	TRANSITION FROM CG-6 TO CG-6R	CG-6 - CG-6R		GUARDRAIL  FENCE	_
	SANITARY SEWER	S	<b>→</b>	TRAFFIC FLOW	$\Longrightarrow$
——SL——	SANITARY LATERAL	—— SL ——	*	LIGHT	<b>\$</b>
• C.O.	CLEAN OUT STORM SEWER	○ C.O.	▼	DOOR	$\nabla$
w	WATER MAIN	w		TREES	
÷ r	FIRE HYDRANT PLUG	-&- r	260 — 264 —	CONTOURS	260 264
	OVERHEAD WIRES		+ 264 <sup><u>50</u></sup>	SPOT ELEVATION	+264 50
•	UTILITY POLE	ý	$\Longrightarrow$	DRAINAGE FLOW DIRECTI	on $\Longrightarrow$
——- UE ———	UNDERGROUND ELECTRIC	——— UE ———	TC BC	TOP OF CURB BOTTOM OF CURB	TC BC
— т —	TELEPHONE	— т —	TW BW	TOP OF WALL BOTTOM OF WALL	TW BW
G	GAS MAIN	G	HP	HIGH POINT	H.P.
— Е —	ELECTRICAL	—— Е ——	TP 🕕	TEST PIT	
	TRANSFORMER	$\square$		LIMITS OF CLEARING AND GRADING	

#### PRESENTATION PLAN



Engineers • Surveyors • Planners Landscape Architects • Arborists 207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046

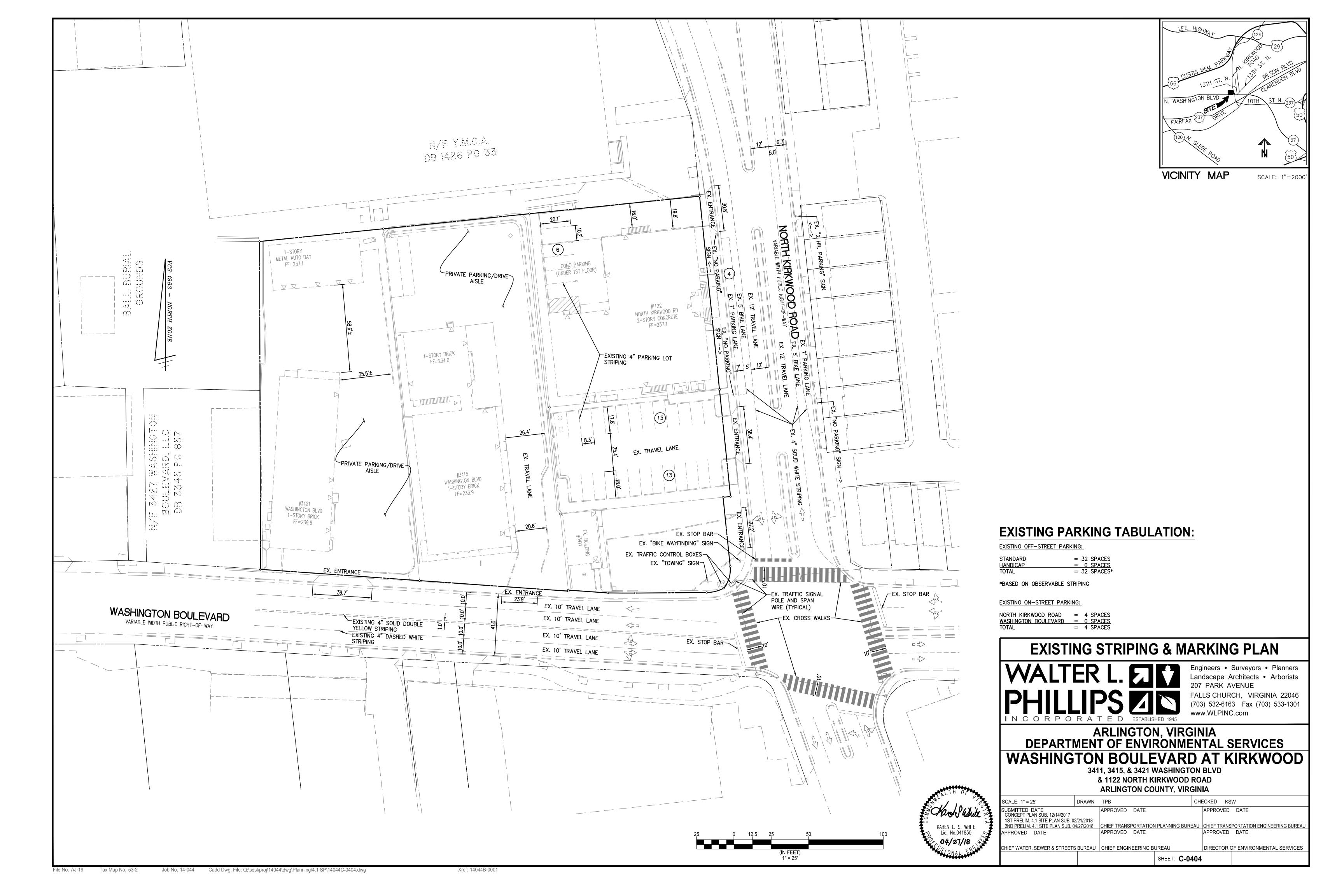
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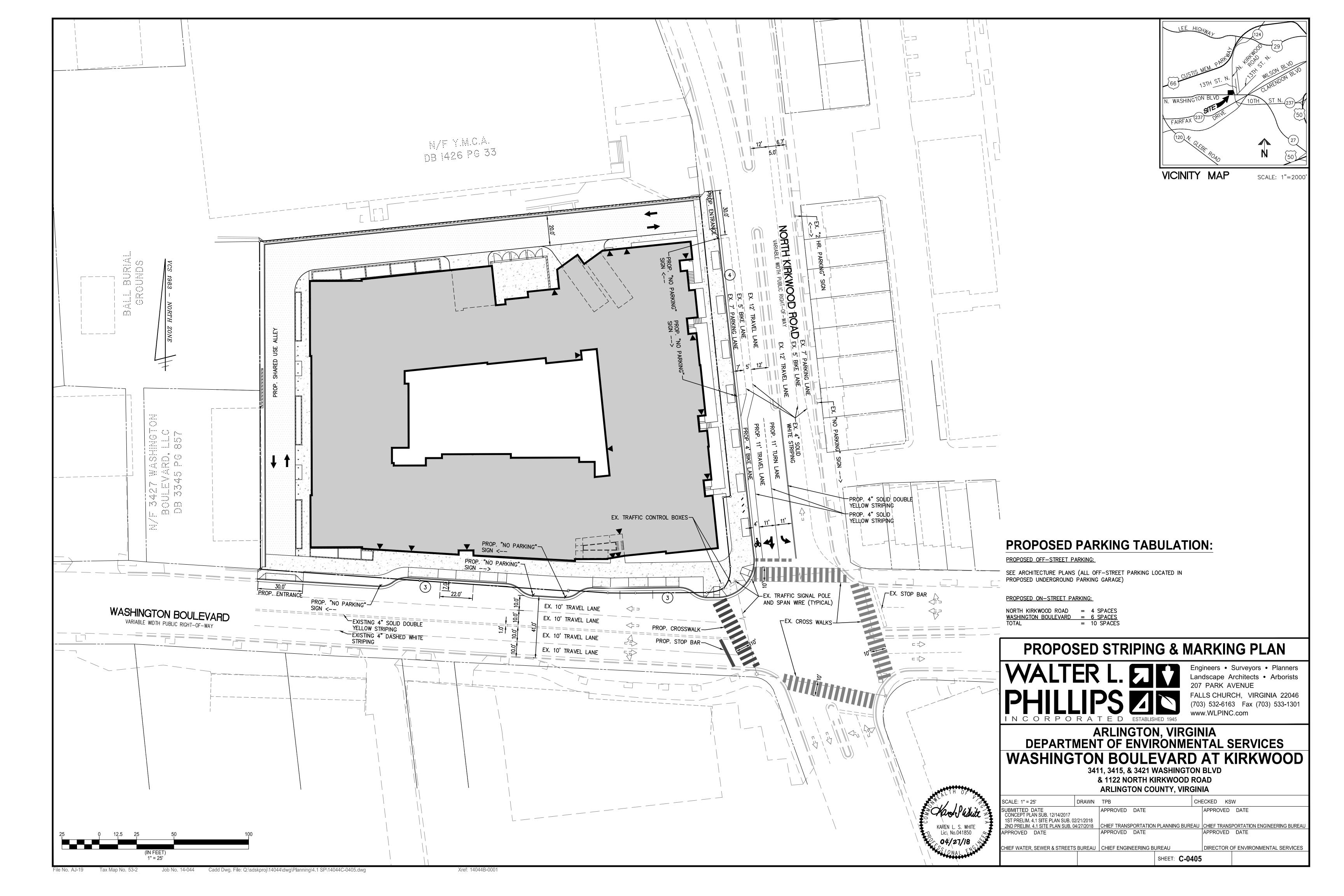
(703) 532-6163 Fax (703) 533-1301

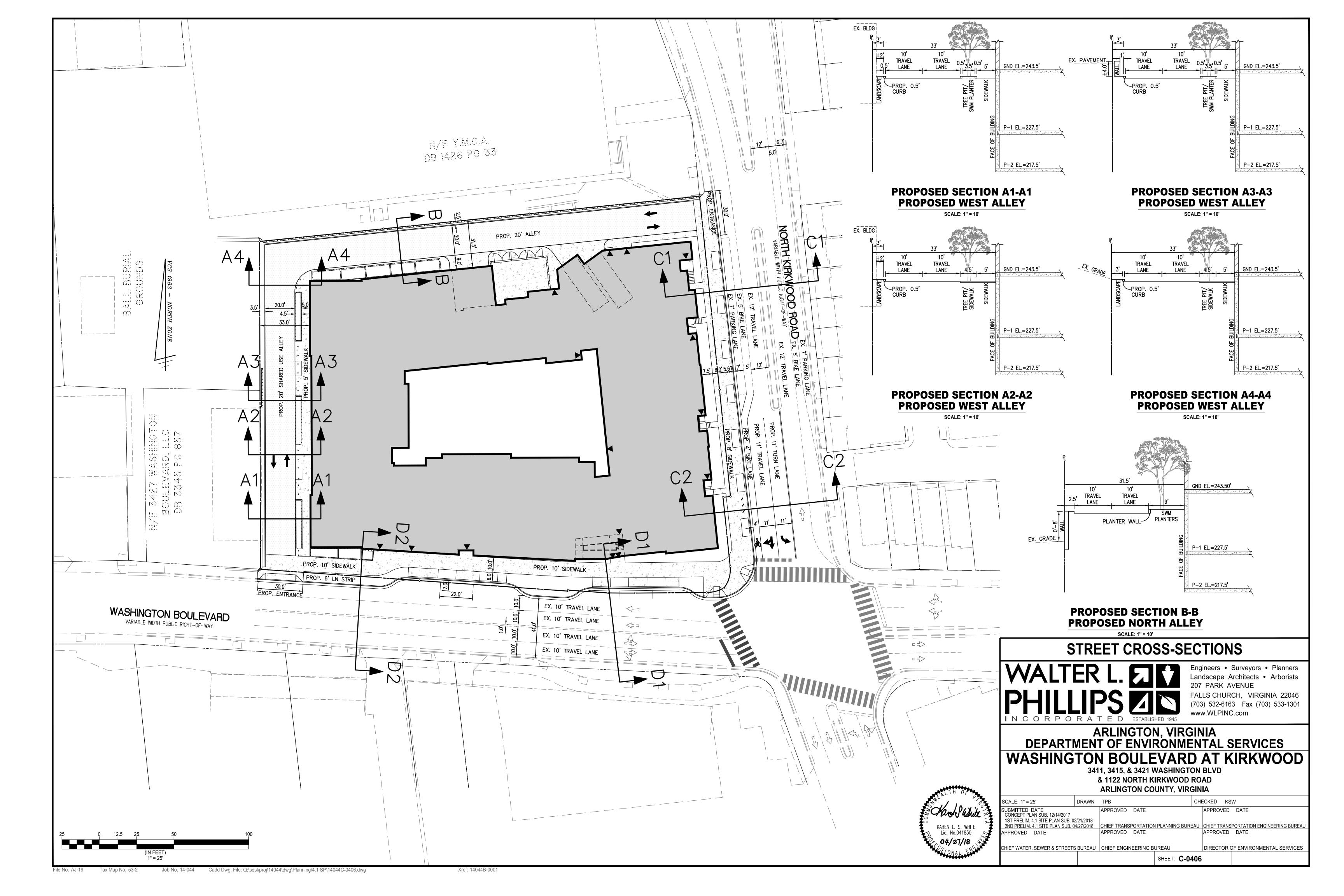
#### ARLINGTON, VIRGINIA DEPARTMENT OF ENVIRONMENTAL SERVICES WASHINGTON BOULEVARD AT KIRKWOOD

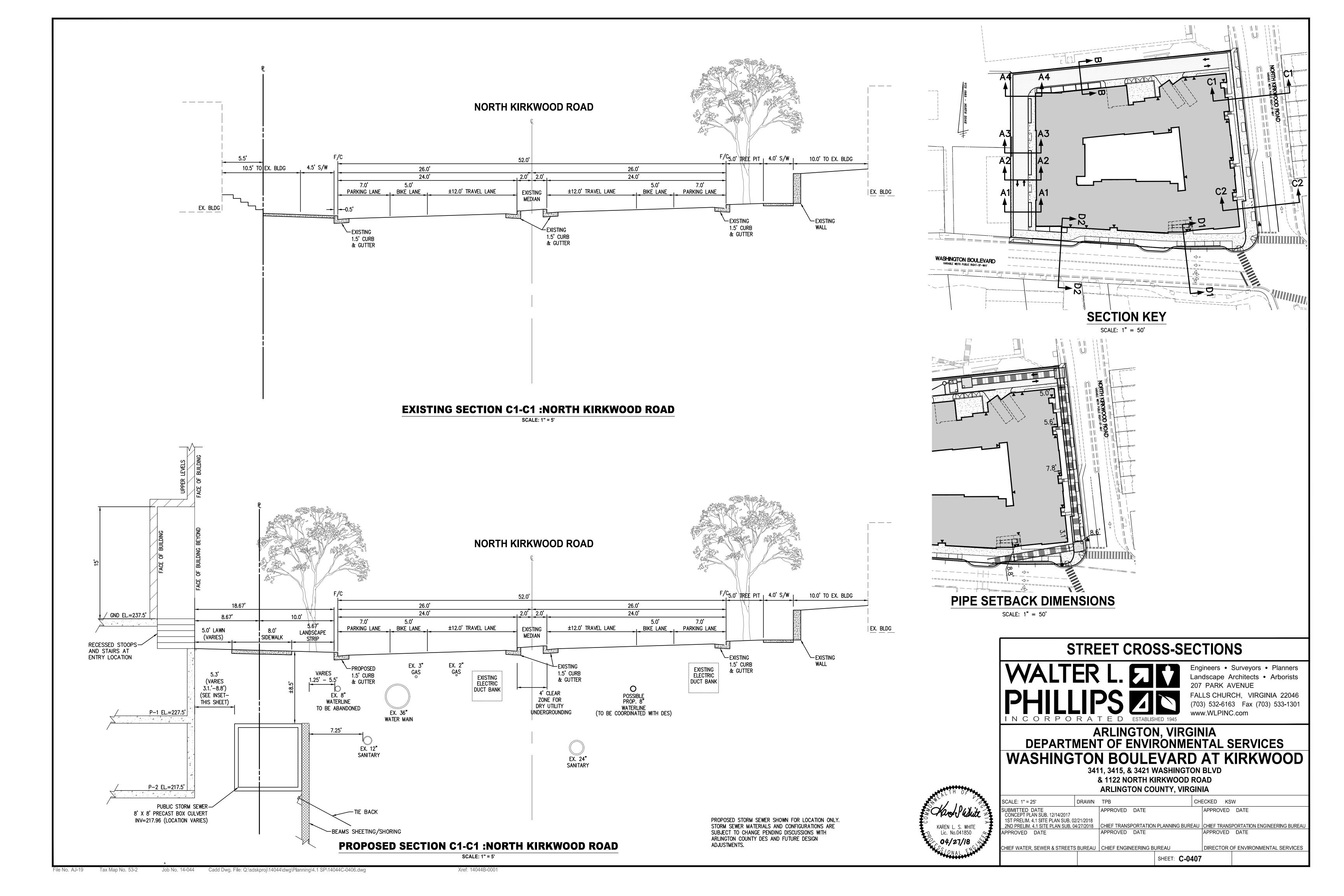
3411, 3415, & 3421 WASHINGTON BLVD & 1122 NORTH KIRKWOOD ROAD **ARLINGTON COUNTY, VIRGINIA** 

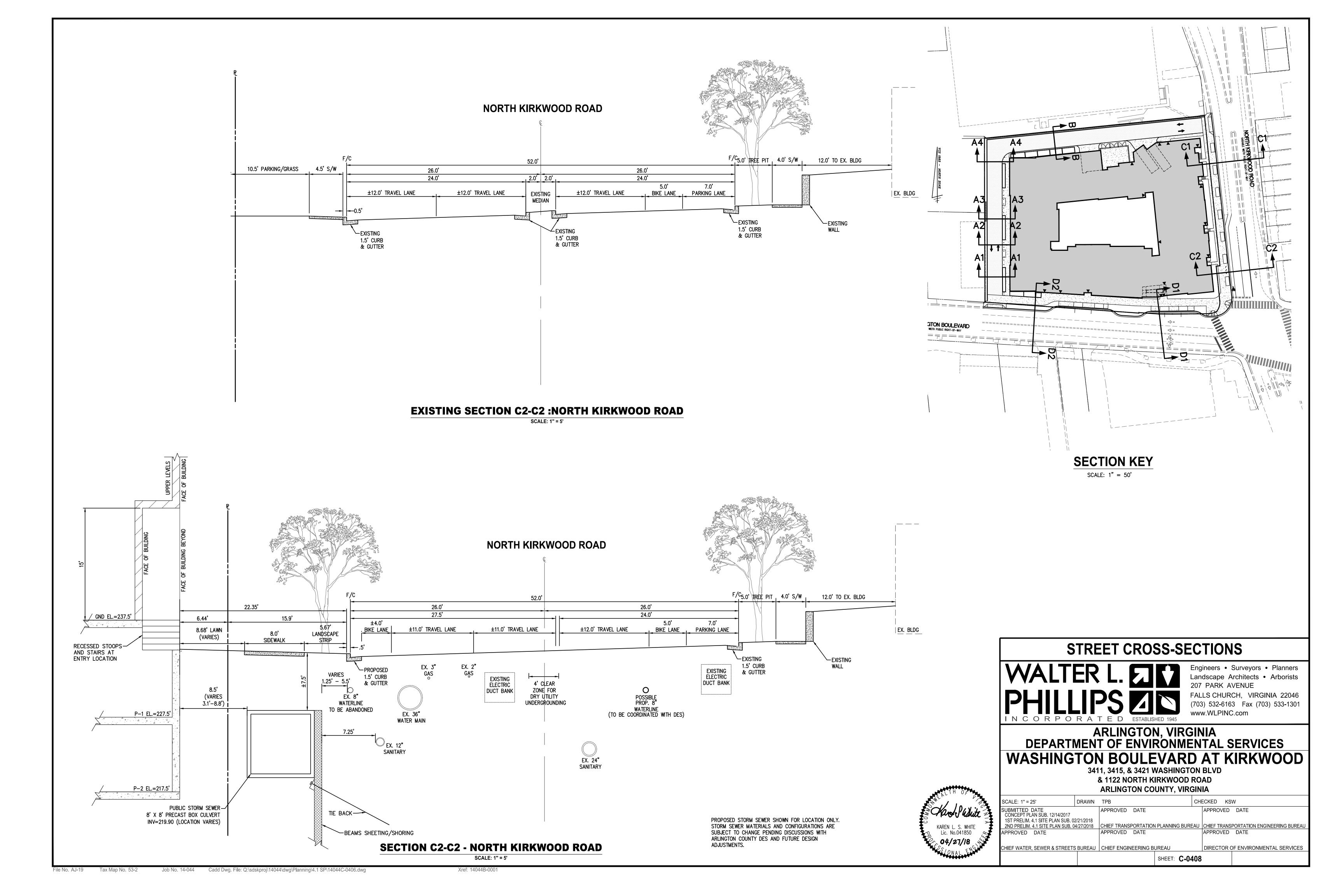
CALE: 1" = 25'	DRAWN	TPB		CHECKED K	SW	
BMITTED DATE CONCEPT PLAN SUB. 12/14/2017	0/04/0040	APPROVED DATE		APPROVED	DATE	
ST PRELIM. 4.1 SITE PLAN SUB. 02 ND PRELIM. 4.1 SITE PLAN SUB. 0 PROVED DATE		CHIEF TRANSPORTATION	I PLANNING BURE	APPROVED		INEERING BUREAU
IEF WATER, SEWER & STREETS	BURFALI	CHIEF ENGINEERING BI	IRFAU	/ /	22	NTAL SERVICES
in which, devel a officer	BOILE	OTHER ENGINEERING BY	SHEET: <b>C-04</b>	1 - 11 - 11 - 11	- LIVINOIVIE	THE SERVICES

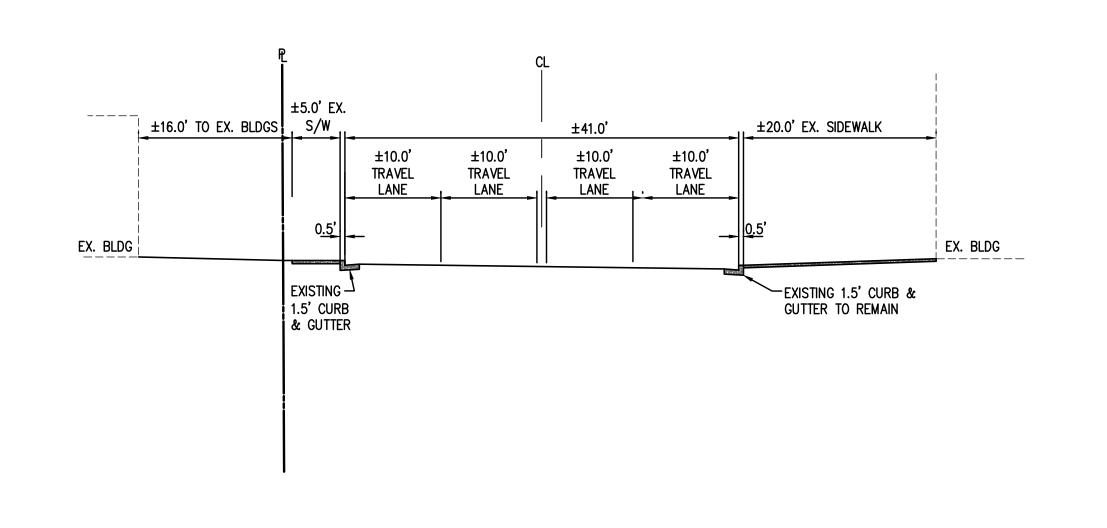








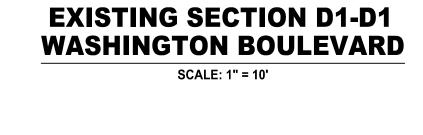


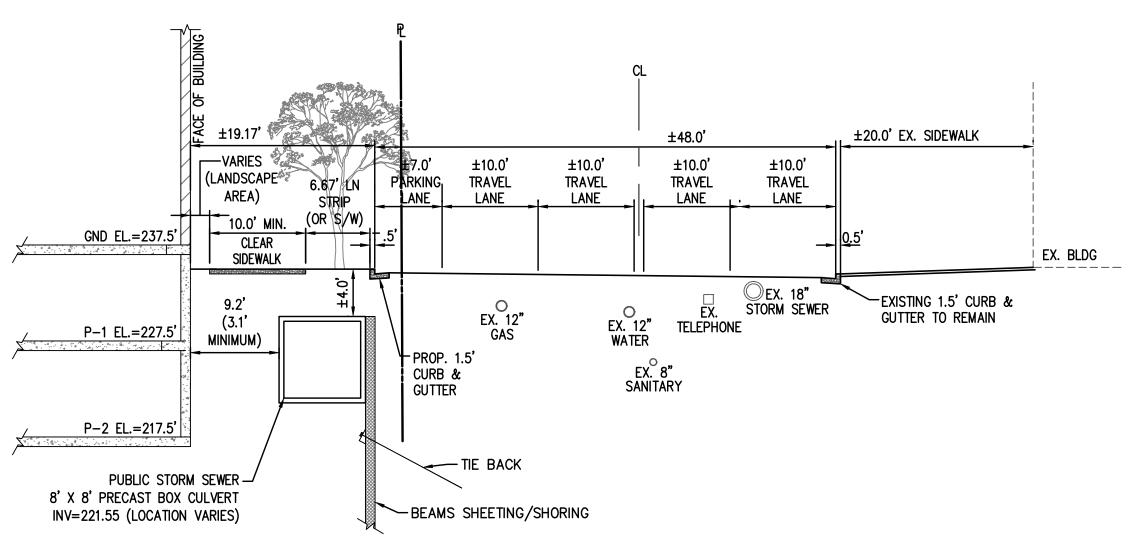


# EX. BLDG LANE LANE LANE EX. BLDG EXISTING 1.5' CURB & GUTTER CL ±41.0' ±41.0' ±10.0' ±10.0' ±10.0' TRAVEL TRAVEL TRAVEL LANE LANE LANE LANE EXISTING 1.5' CURB & GUTTER GUTTER TO REMAIN

# EXISTING SECTION D2-D2 WASHINGTON BOULEVARD

SCALE: 1" = 10'





PROPOSED SECTION D2-D2
WASHINGTON BOULEVARD

SCALE: 1" = 10'

# PROPOSED SECTION D1-D1 WASHINGTON BOULEVARD

SCALE: 1" = 10'

PROPOSED STORM SEWER SHOWN FOR LOCATION ONLY.
STORM SEWER MATERIALS AND CONFIGURATIONS ARE
SUBJECT TO CHANGE PENDING DISCUSSIONS WITH
ARLINGTON COUNTY DES AND FUTURE DESIGN

ADJUSTMENTS.

## STREET CROSS-SECTIONS

# WALTER L. ELECTRICATION OF THE PARTY OF THE

M/F Y.M.C.A. DB 1426 PG 33

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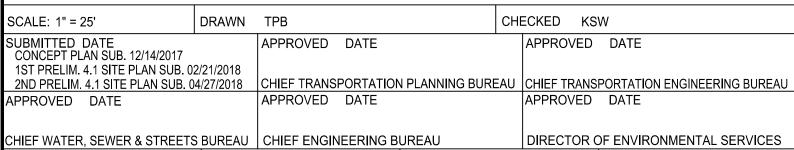
## ARLINGTON, VIRGINIA

**SECTION KEY** 

SCALE: 1" = 50

# DEPARTMENT OF ENVIRONMENTAL SERVICES WASHINGTON BOULEVARD AT KIRKWOOD

3411, 3415, & 3421 WASHINGTON BLVD & 1122 NORTH KIRKWOOD ROAD ARLINGTON COUNTY, VIRGINIA



SHEET: C-0409

KAREN L. S. WHITE Lic. No.041850

GTON BOULEVARD
WIDTH PUBLIC RIGHT-OF-WAY

Job No. 14-044 Cadd Dwg. File: Q:\sdskproj\14044\dwg\Planning\4.1 SP\14044C-0406.dwg

Xref: 14044B-0001

## **LEGEND** ROOF AREA AND ALLEY AREA DIRECTED TOWARD URBAN BIO-RETENTION PLANTERS (25,250) ALLEY AREA DIRECTED TOWARD PROPRIETARY FILTRATION BMP (4,750 SF + UPSTREAM RUNOFF FROM PLANTERS SERVING ALLEY ONLY-6,750 SF) LIMITS OF DISTURBANCE EX. BUILDING URBAN BIO-RETENTION PLANTER (TYPICAL)— 4,750 SF 2500 SF 10,000 SF (4 CELLS) LIMITS OF DISTURBANCE LIMITS OF DISTURBANCE — \_\_\_\_\_ 2500 SF (1 CELLS) j ja o ∕5,250∕SF /(3/CELLS) m M URBAN BIO-RETENTION PLANTER (TYPICA WASHINGTON BOULEVARD -LIMITS OF DISTURBANCE **CURVE TABLE** KAREN L. S. WHITE Lic. No.041850 DELTA TANGENT CHORD CHORD BEARING × 04/27/18 S16°20'58"W 25.00**'** 27**°**23**'**15" 6.09' S75°51'37"W 11.95' 11.84' 751.61' | 18.45' | 1°24'22" | 9.22' 1" = 25' Cadd Dwg. File: Q:\sdskproj\14044\dwg\Planning\4.1 SP\14044C-0701.dwg

#### **SWM/BMP NARRATIVE**

#### EXISTING CONDITIONS:

THE TOTAL PARCEL AREA OF THE SITE IS 75,187 SF OR 1.7261 ACRES. THE LIMITS OF DISTURBANCE AREA FOR THE PROJECT IS 84,850 SF OR 1.9479 ACRES. FOR THE PURPOSES OF STORMWATER MANAGEMENT THE SITE AREA WILL BE THE LIMITS OF DISTURBANCE WHICH IS EQUAL TO 84.850 SF OR 1.9479 ACRES.

CURRENTLY, THE SITE CONSISTS OF SEVERAL COMMERCIAL BUILDINGS AND ACCESSORY STRUCTURES/EQUIPMENT. ADDITIONALLY, SURFACE PARKING, LANDSCAPE AREAS, AND UTILITY INFRASTRUCTURE EXIST ONSITE. THERE ARE NO EXISTING STORMWATER MANAGEMENT QUALITY OR QUANTITY CONTROL MEASURES ON SITE. THE SITE DRAINS FROM SOUTH TO NORTH ACROSS THE SITE AS SHEET FLOW OR VIA STORM SEWERS. ALL STORM WATER ENTERS THE MUNICIPAL STORM SEWER SYSTEM VIA INLETS WITHIN THE SITE AND ALONG THE ADJACENT PUBLIC STREETS. AN 84" STORM SEWER CURRENTLY BIFURCATES THE SITE AND WILL BE RE-ALIGNED TO THE PERIMETER OF THE SITE AS PART OF THIS PROJECT.

#### PROPOSED CONDITIONS:

THE PROJECT INVOLVES THE CONSTRUCTION OF A RESIDENTIAL BUILDING, A PRIVATE ALLEY, SITE WALLS, LEAD WALKS, UTILITY SERVICES, AND STORMWATER MANAGEMENT BMPS. THE PROPOSED STORMWATER MANAGEMENT BMPS INCLUDE A BAYFILTER VAULT AND URBAN BIO-RETENTION PLANTERS.

#### STORMWATER QUALITY:

IN ORDER TO COMPLY WITH CHAPTER 60 OF THE ARLINGTON COUNTY CODE (STORMWATER ORDINANCE) FOR STORMWATER QUALITY, A STORMWATER FILTRATION FACILITY (BAYFILTER) AND URBAN BIO—RETENTION PLANTERS ARE PROPOSED. THESE STORMWATER BMPS WILL REDUCE PHOSPHORUS LEVELS IN ORDER TO COMPLY WITH APPLICABLE ARLINGTON COUNTY AND STATE OF VIRGINIA REQUIREMENTS.

ADDITIONALLY, PER THE ARLINGTON COUNTY MEMORANDUM ON THE USE OF STRUCTURAL STORMWATER TREATMENT SYSTEMS, DATED 9/15/15, PROPRIETARY HYDRODYNAMIC DEVICES AND FILTRATION BMPS MAY NOT BE USED AS THE SOLE TREATMENT METHOD FOR ROOF TOP AREA OR PERVIOUS AREA UNLESS USED IN SERIES WITH UPSTREAM RUNOFF REDUCTION BMPS. ADDITIONALLY, IF STRUCTURAL SYSTEMS ARE TO BE USED AS A STAND—ALONE BMP, AT LEAST 75% OF THE DRAINAGE AREA MUST BE HIGH INTENSITY VEHICULAR PAVEMENT. IN ORDER TO COMPLY WITH THE MEMORANDUM, ROOF AREA WILL BE TREATED BY URBAN BIO—RETENTION PLANTERS AND NO CREDIT WILL BE TAKEN IF THE ROOF TREATMENT PLANTERS OUTFALL TO THE PROPOSED FILTRATION BMP. HOWEVER, PLANTERS TREATING THE ALLEY PAVEMENT AND OUTFALLING INTO THE FILTRATION BMP WILL TAKE CREDIT FOR ADDITIONAL PHOSPHORUS REDUCTION PROVIDED BY THE FILTRATION BMP

SEE SHEET C-0703 FOR STORMWATER QUALITY COMPUTATIONS.

#### STORMWATER QUANTITY:

THE SITE DRAINS FROM SOUTH TO NORTH AND DISCHARGES AS CONCENTRATED FLOW AT A SINGLE OUTFALL, AN 84" RCP STORM SEWER. THE SITE OUTFALL POINT ALSO SERVES AS THE LIMITS OF ANALYSIS FOR BOTH CHANNEL PROTECTION AND FLOOD CONTROL SINCE THE UPSTREAM DRAINAGE AREA TO THE SITE IS GREATER THAN 100 TIMES THE SITE AREA. STORMWATER FROM THE SITE ULTIMATELY DISCHARGES INTO THE POTOMAC RIVER. SEE SHEET C-0703 FOR OUTFALL MAPS AND ANALYSIS.

CHANNEL PROTECTION: THE SITE STORM OUTFALL AND ALL PIPES PROPOSED WITH THIS DEVELOPMENT WILL BE COMPRISED OF CONCRETE OR OTHER NON-ERODIBLE MATERIALS UP TO THE LIMITS OF ANALYSIS. THEREFORE, THE SITE CAN DISCHARGE THE 2-YEAR, 24-HOUR STORM WITHOUT CAUSING EROSION IN THE SYSTEM AND DETENTION IS NOT REQUIRED FOR THE PURPOSES OF CHANNEL PROTECTION.

BASED ON THIS ANALYSIS, IT IS THE OPINION OF THE SUBMITTING ENGINEER THAT THE SITE COMPLIES WITH THE CHANNEL PROTECTION CRITERIA OUTLINED IN THE STATE STORMWATER REGULATIONS (9VAC25-870-66).

FLOOD PROTECTION: THE SITE STORM OUTFALL AND ALL PIPES PROPOSED WITH THIS DEVELOPMENT WILL BE ADEQUATE TO RECEIVE THE 10-YEAR, 24-HOUR STORMWATER DISCHARGE FROM THE SITE AND UPSTREAM DRAINAGE AREA, UP TO THE LIMITS OF ANALYSIS (SEE SHEET C-0703 FOR OUTFALL MAP AND SUPPORTING INFORMATION ON THIS SHEET). ADDITIONALLY, THERE IS NO EVIDENCE, BASED ON REVIEW OF AVAILABLE RECORDS, THAT LOCALIZED FLOODING OCCURS DURING THE 10-YEAR, 24-HOUR STORM. THEREFORE, DETENTION IS NOT REQUIRED FOR THE PURPOSES OF FLOOD CONTROL.

BASED ON THIS, IT IS THE OPINION OF THE SUBMITTING ENGINEER THAT THE SITE COMPLIES WITH THE FLOOD PROTECTION CRITERIA OUTLINED IN THE STATE STORMWATER REGULATIONS (9VAC25-870-66).

NOTE THAT IMPLEMENTATION OF RUNOFF REDUCTION PRACTICES ON THIS SITE WILL BRING THE POST-DEVELOPMENT FLOW RATE DOWN TO PRE-DEVELOPMENT CONDITIONS.

#### SEE SHEET C-0705 FOR STORMWATER QUANTITY COMPUTATIONS.

#### ACENT PROPERTIES:

ALL UNCONTROLLED SHEET FLOW FROM THE SITE WILL BE DIRECTED TO EXISTING OR PROPOSED CURB INLETS WITHIN THE PUBLIC RIGHT-OF-WAY AND INTO THE MUNICIPAL STORM SEWER SYSTEM. THERE WILL NOT BE ANY ADVERSE IMPACT TO ADJACENT PROPERTIES AS A RESULT OF THIS PROJECT AND THE PROPOSED IMPROVEMENTS.

#### LOODPLAIN BOUNDARY:

THIS SITE IS LOCATED OUTSIDE OF THE 100-YEAR FLOODPLAIN BOUNDARY.

#### RESOURCE PROTECTION AREAS:

THERE ARE NO RESOURCE PROTECTION AREAS KNOWN TO EXIST ON THE SITE AND NO RESOURCE PROTECTION AREAS ARE DEPICTED ON THE ARLINGTON COUNTY GIS MAP.

#### THE SITE IS LOCATED IN THE SPROUT RUN WATERSHED.

THE STORMWATER MANAGEMENT PLAN PROVIDED ON THIS PLAN IS SUBJECT TO ADJUSTMENT AT THE TIME OF FINAL ENGINEERING.

#### PRELIMINARY STORMWATER MANAGEMENT PLAN



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# ARLINGTON, VIRGINIA DEPARTMENT OF ENVIRONMENTAL SERVICES

# WASHINGTON BOULEVARD AT KIRKWOOD 3411, 3415, & 3421 WASHINGTON BLVD

& 1122 NORTH KIRKWOOD ROAD
ARLINGTON COUNTY, VIRGINIA

SCALE: 1" = 25'

DRAWN TPB

CHECKED KSW

APPROVED DATE
CONCEPT PLAN SUB. 12/14/2017
1ST PRELIM. 4.1 SITE PLAN SUB. 02/21/2018
2ND PRELIM. 4.1 SITE PLAN SUB. 04/27/2018
APPROVED DATE

CHIEF TRANSPORTATION PLANNING BUREAU
APPROVED DATE

CHIEF WATER, SEWER & STREETS BUREAU

CHIEF ENGINEERING BUREAU

CHIEF ENGINEERING BUREAU

DIRECTOR OF ENVIRONMENTAL SERVICES

SHEET: C-0701



#### **EXISTING IMPERVIOUS AREA TABULATIONS**

MITS OF DISTURBANCE (SWM AREA): 84,850 SQ. FT. (1.9479 ACRES)

EXISTING IMPERVIOUS AREA: 74,894 SQ. FT. (1.7245 ACRES)

 $CN = [(74,894 \times 98) + (9,956 \times 80)] / 84,850 = 96$ 

IMPERVIOUS AREA

#### PROPOSED IMPERVIOUS AREA TABULATIONS

LIMITS OF DISTURBANCE (SWM AREA): 84,850 SQ. FT. (1.9479 ACRES)
PROPOSED IMPERVIOUS AREA: 77,865 SQ. FT. (1.7875 ACRES)

CN = 96 (SEE RRM SPREADSHEET - C-0705)

IMPERVIOUS AREA

NOTE: SEE SHEETS C-0701, C-0703 - C-0705 FOR ADDITIONAL STORMWATER MANAGEMENT INFORMATION.

### PRELIMINARY IMPERVIOUS AREA ANALYSIS



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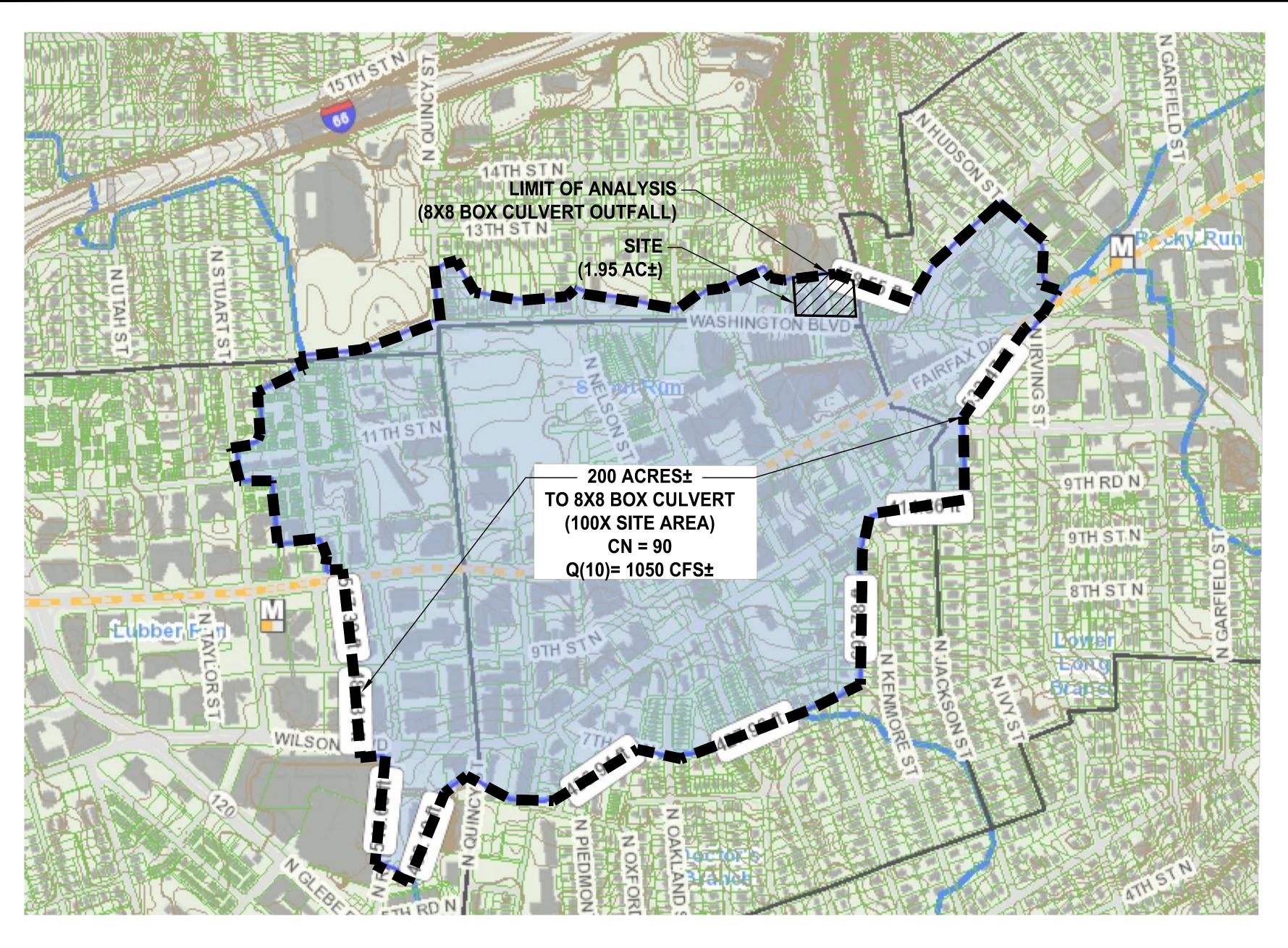
# ARLINGTON, VIRGINIA DEPARTMENT OF ENVIRONMENTAL SERVICES WASHINGTON BOULEVARD AT KIRKWOOD

3411, 3415, & 3421 WASHINGTON BLVD & 1122 NORTH KIRKWOOD ROAD ARLINGTON COUNTY, VIRGINIA



			•					
ALE: 1" = 30'	DRAWN	TPB		CHE	ECKED KS	W		
BMITTED DATE ONCEPT PLAN SUB. 12/14/2017 ST PRELIM. 4.1 SITE PLAN SUB. 02	2/21/2018	APPROVED DATE			APPROVED	DATE		
ND PRELIM. 4.1 SITE PLAN SUB. 0	4/27/2018	CHIEF TRANSPORTATION	I PLANNING BURE	EAU	CHIEF TRANSI	PORTATION E	ENGINEERING BUR	.EAU
PROVED DATE		APPROVED DATE			APPROVED	DATE		
EF WATER, SEWER & STREETS	BUREAU	CHIEF ENGINEERING B	UREAU		DIRECTOR C	F ENVIRON	MENTAL SERVIC	ES
			SHEET: C-07	702				

(IN FEET) 1 INCH = 30' WASHINGTON BOULEVARD
VARIABLE WIDTH PUBLIC RIGHT-OF-WAY



# INV=215.23-/-INV=2<u>15,</u>50 **EXISTING 242'-84" RCP @-**INV=217.00 INV=217.25 2.8% CAPACITY = ±1,068 CFS -PROPOSED 445' 8'X8' RCP BOX CULVERT @ ±1.35% CAPACITY = ±1,635 CFS PROPOSED MULTIFAMILY BUILDING -INV<del>-</del>220.18 INV=220.43-INV=222.00 SITE DRAINAGE MAP SCALE: 1" = 40'

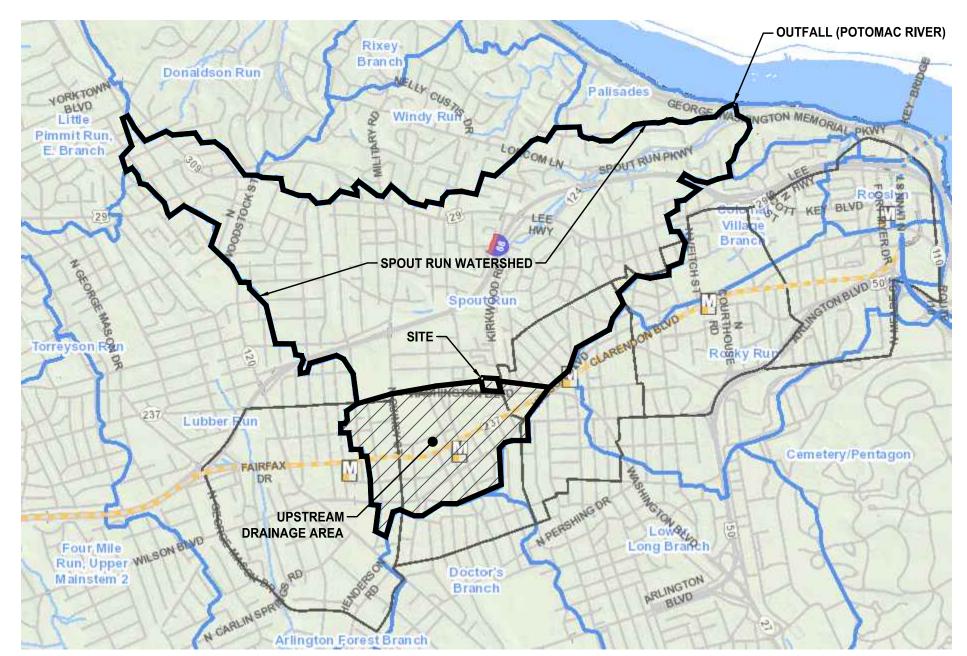
#### PIPE CAPACITY INFORMATION

DRAINAGE AREA TO 8'X8' BOX CULVERT = 200 ACRES $\pm$  CN = 90 Q(10)= 1,184 CFS $\pm$ 

CAPACITY OF 8'X8' BOX CULVERT = \*1,635 CFS $\pm$ 

\*THE PROPOSED CAPACITY OF THE 8'X8' BOX CULVERT WILL BE GREATER THAN THE ESTIMATED FLOW RECEIVED BY THE CULVERT.

# STORMWATER OUTFALL MAP NOT TO SCALE



**WATERSHED MAP** 

NOT TO SCALE

#### **OUTFALL NARRATIVE**

OUTFALL: THE SITE DRAINS FROM SOUTH TO NORTH AND DISCHARGES AS CONCENTRATED FLOW AT A SINGLE OUTFALL, AN 84" RCP STORM SEWER. THE SITE OUTFALL POINT ALSO SERVES AS THE LIMITS OF ANALYSIS FOR BOTH CHANNEL PROTECTION AND FLOOD CONTROL SINCE THE UPSTREAM DRAINAGE AREA TO THE SITE IS GREATER THAN 100 TIMES THE SITE AREA. STORMWATER FROM THE SITE ULTIMATELY DISCHARGES INTO THE POTOMAC RIVER. THE SITE IS LOCATED IN THE SPOUT RUN WATERSHED.

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#### PRELIMINARY OUTFALL ANALYSIS

# WALTER L. ELLO STABILISHED 1045

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3411, 3415, & 3421 WASHINGTON BLVD & 1122 NORTH KIRKWOOD ROAD ARLINGTON COUNTY, VIRGINIA

SCALE: 1" = 40'

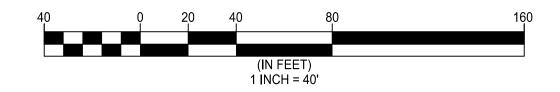
SUBMITTED DATE
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2ND PRELIM. 4.1 SITE PLAN SUB. 04/27/2018

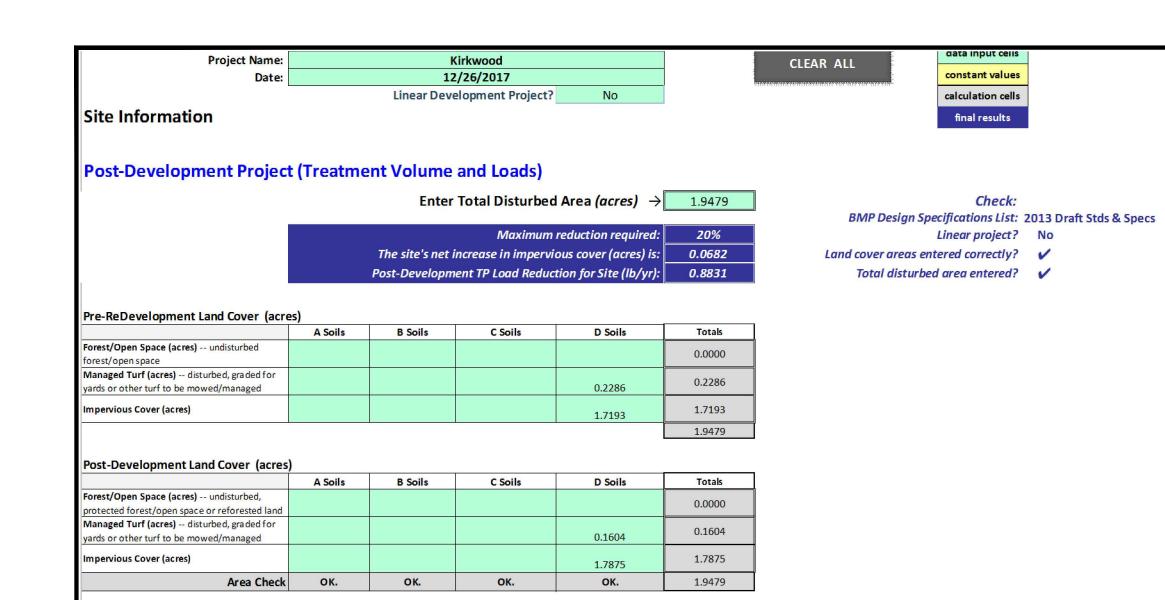
APPROVED DATE
CHIEF TRANSPORTATION PLANNING BUREAU
APPROVED DATE

CHIEF ENGINEERING BUREAU

CHIEF ENGINEERING BUREAU

SHEET: C-0703





Annual Rainfall (inches)

Target Rainfall Event (inches)

otal Phosphorus (TP) EMC (mg/L)

Pre-Re Development

Forest/Open Space Cover (acres)

Weighted Rv(forest)

% Forest

Managed Turf Cover (acres)

Weighted Rv(turf)

% Managed Turf

Adjusted Land Cover Summary:

Impervious Cover (acres)

Total Nitrogen (TN) EMC (mg/L)

Farget TP Load (lb/acre/yr) j (unitless correction factor) 0.26

1.86 0.41 0.90

0.0000

0.0000

0%

0.2286

0.2500

12%

1.7193

0.9500

9%

1.7193

0.9500

LAND COVER SUMMARY -- PRE-REDEVELOPMEN

Land Cover Summary-Pre

	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		
OPMENT			T.	AND COVER	SUMMARY PO	ST DEVEL	OPMENT
OTWIENT				AND COVER	SOMMAN PC	OI DEVEL	OFMENT
	4		- (- 1)	1			1
		Land Cover Summo	ary-Post (Final)		Land Cover Sum	mary-Post	Land Cover Summary-Post
				1			
Adjusted <sup>1</sup>	1	Post ReDev. & Ne	w Impervious		Post-ReDevel	opment	Post-Development New Impervious
		Post ReDev. & Ne Forest/Open Space			Post-ReDevel	•	Post-Development New Impervious
Adjusted <sup>1</sup>	1		0.0000			0.0000	Post-Development New Impervious
		Forest/Open Space			Forest/Open Space	•	Post-Development New Impervious
0.0000		Forest/Open Space Cover (acres)	0.0000		Forest/Open Space Cover (acres)	0.0000	Post-Development New Impervious
0.0000 0.0000 0%		Forest/Open Space Cover (acres) Weighted Rv(forest)	0.0000 0.0000 0%		Forest/Open Space Cover (acres) Weighted Rv(forest)	0.0000 0.0000 0%	Post-Development New Impervious
0.0000		Forest/Open Space Cover (acres) Weighted Rv(forest) % Forest	0.0000		Forest/Open Space Cover (acres) Weighted Rv(forest) % Forest	0.0000	Post-Development New Impervious
0.0000 0.0000 0% 0.1604		Forest/Open Space Cover (acres) Weighted Rv(forest) % Forest Managed Turf Cover (acres)	0.0000 0.0000 0% 0.1604		Forest/Open Space Cover (acres) Weighted Rv(forest) % Forest Managed Turf Cover (acres)	0.0000 0.0000 0% 0.1604	Post-Development New Impervious
0.0000 0.0000 0%		Forest/Open Space Cover (acres) Weighted Rv(forest) % Forest Managed Turf Cover	0.0000 0.0000 0%		Forest/Open Space Cover (acres) Weighted Rv(forest) % Forest Managed Turf Cover	0.0000 0.0000 0%	Post-Development New Impervious

% Managed Turf

ReDev. Impervious

Cover (acres)

Rv(impervious)

1.7193

0.9500

New Impervious Cover

(acres)

Rv(impervious)

0.9500

0.0054

235.2042

0.1478

B Soils C Soils D Soils

% Impervious	88%	91%	% Impervious	92%		% Impervious	91%			
Total Site Area (acres)	1.9479	1.8797	Final Site Area (acres)	1.9479		Total ReDev. Site Area (acres)	1.8797			
Site Rv	0.8679	0.8903	Final Post Dev Site Rv	0.8924		ReDev Site Rv	0.8903			
Treatment Volume and Nutrient Load		Treatment Volume and Nutrient Load								
Pre-ReDevelopment Treatment Volume (acre-ft)	0.1409	0.1395	Final Post-Development Treatment Volume (acre-ft)	0.1449		Post-ReDevelopment Treatment Volume (acre-ft)	0.1395		Post-Development Treatment Volume (acre-ft)	
Pre-ReDevelopment Treatment Volume (cubic feet)	6,136.5250	6,074.6292	Final Post-Development Treatment Volume (cubic feet)	6,309.8333		Post-ReDevelopment Treatment Volume (cubic feet)	6,074.6292		Post-Development Treatment Volume (cubic feet)	
Pre-ReDevelopment TP Load (Ib/γr)	3.8556	3.8167	Final Post- Development TP Load (Ib/yr)	3.9645		Post-ReDevelopment Load (TP) (lb/yr)*	3.8167		Post-Development TP Load (lb/yr)	
Pre-ReDevelopment TP Load per acre (lb/acre/yr)	1.9800	2.0300	Final Post-Development TP Load per acre (lb/acre/yr)	2.0400		Post-ReDevelopment TP Load per acre (lb/acre/yr)	2.0300			
Baseline TP Load (lb/yr) (0.41 lbs/acre/yr applied to pre-redevelopmen pervious land proposed for new impervio	1.1	0.7707				Max. Reduction Required (Below Pre- ReDevelopment Load)	20%			

% Managed Turf

mpervious Cover (acres)

Rv(impervious)

1.7875

0.9500

Pre ReDevelopment land cover minus pervious land cover (forest/open space or managed turf) acreage proposed for new impervious cover.				Required for Redeveloped Area (lb/yr)	0.7633	Required for New Impervious Area (lb/yr)	0.1198	
Adjusted total acreage is consistent with Post-ReDevelopment acreage (minus acreage of new impervious cover).								
Column I shows load reduction requriement for new impervious cover (based on new development load limit, 0.41 lbs/acre/year).								
	Post-Dev	elopment Requirement for	Site Area					
	TP Load	Reduction Required (lb/yr)	0.8831					
				-,				
	Nitr	ogen Loads (Informational Pu	rposes Only)					
Pre-ReDevelopment TN Load (lb/yr)	27.5821			pevelopment TN Load oment & New Impervious) (lb/yr)	28.3611			

#### Drainage Area A

A Soils C Soils **D** Soils Totals **B** Soils Land Cover Rv 0.0000 0.0000 Forest/Open Space (acres) 0.1604 0.2500 0.1604 Managed Turf (acres) 1.7875 1.7875 0.9500 Impervious Cover (acres) **Total** 1.9479

Total Phosphorus Available for Removal in D.A. A (lb/yr) 3.9645

Post Development Treatment Volume in D.A. A (ft³) 6,309.8333

CLEAR BMP AREAS

Stormwater Best Management Practices (RR = Runoff Reduction)												Select from dropdown lists	
Practice	Runoff Reduction Credit (%)	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	Volume from Upstream Practice (ft <sup>3</sup> )	Runoff Reduction (ft <sup>3</sup> )	Remaining Runoff Volume (ft <sup>3</sup> )	Total BMP Treatment Volume (ft <sup>3</sup> )	Phosphorus Removal Efficiency (%)	Phosphorus Load from Upstream Practices (lb)	Untreated Phosphorus Load to Practice (Ib)	Phosphorus Removed By Practice (Ib)	Remaining Phosphorus Load (Ib)	Downstream Practice to be Employed
2. Rooftop Disconnection (RR)													
2.i. To Stormwater Planter, Urban Bioretention (Spec #9, Appendix A)	40		0.1550	0.0000	213.7500	320.6250	534.3750	25	0.0000	0.3354	0.1845	0.1509	14.b. MTD - Filtering
6. Bioretention (RR)													
6.a. Bioretention #1 or Micro-Bioretention #1 or Urban Bioretention (Spec #9)	40		0.4247	0.0000	585.8333	878.7500	1,464.5833	25	0.0000	0.9192	0.5055	0.4136	
14. Manufactured Treatment Devices (no	RR)												
14.a. Manufactured Treatment Device- Hydrodynamic	0			0.0000	0.0000	0.0000	0.0000	20	0.0000	0.0000	0.0000	0.0000	
14.b. Manufactured Treatment Device-Filtering	0		0.1090	320.6250	0.0000	696.6667	696.6667	50	0.1509	0.2360	0.1935	0.1935	

Nitrogen Removal Efficiency (%)	Nitrogen Load from Upstream Practices (lbs)	Untreated Nitrogen Load to Practice (Ibs)	Nitrogen Removed By Practice (lbs)	Remaining Nitrogen Load (Ibs)
2. Rooftop Disc	onnection (RR)			
40	0.0000	2.3992	1.5355	0.8637
6. Bioretention	(RR)			
40	0.0000	6.5755	4.2083	2.3672
	14. Manufacture	d BMP (no RR)		
0	0.0000	0.0000	0.0000	0.0000
0	0.8637	1.6883	0.0000	2.5520

Site Results	(Water Quality	Compliance)

Area Checks	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	AREA CHECK
FOREST/OPEN SPACE (ac)	0.0000	0.0000	0.0000	0.0000	0.0000	OK.
IMPERVIOUS COVER (ac)	1.7875	0.0000	0.0000	0.0000	0.0000	OK.
IMPERVIOUS COVER TREATED (ac)	0.6887	0.0000	0.0000	0.0000	0.0000	OK.
MANAGED TURF AREA (ac)	0.1604	0.0000	0.0000	0.0000	0.0000	OK.
MANAGED TURF AREA TREATED (ac)	0.0000	0.0000	0.0000	0.0000	0.0000	OK.
AREA CHECK	OK.	OK.	OK.	OK.	OK.	

Site Treatment Volume (ft<sup>3</sup>) 6,309.8333

#### Runoff Reduction Volume and TP By Drainage Area

Drainage Area A Land Cover (acres)

ion volume and ir by brainage Area						
	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	TOTAL
RUNOFF REDUCTION VOLUME ACHIEVED (ft³)	799.5833	0.0000	0.0000	0.0000	0.0000	799.5833
TP LOAD AVAILABLE FOR REMOVAL (lb/yr)	3.9645	0.0000	0.0000	0.0000	0.0000	3.9645
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.8834	0.0000	0.0000	0.0000	0.0000	0.8834
TP LOAD REMAINING (lb/yr)	3.0810	0.0000	0.0000	0.0000	0.0000	3.0810

NITROGEN LOAD REDUCTION ACHIEVED (lb/yr) 5.7438 0.0000 0.0000 0.0000 0.0000 5.7438

Total Phosphorus FINAL POST-DEVELOPMENT TP LOAD (lb/yr) 3.9645 TP LOAD REDUCTION REQUIRED (lb/yr) 0.8831 TP LOAD REDUCTION ACHIEVED (lb/yr) 0.8834 TP LOAD REMAINING (lb/yr): 3.0810

REMAINING TP LOAD REDUCTION REQUIRED (lb/yr): 0.0000 \*\* \*\*No further TP load reduction required

**Total Nitrogen (For Information Purposes)** 

POST-DEVELOPMENT LOAD (lb/yr) 28.3611 NITROGEN LOAD REDUCTION ACHIEVED (lb/yr) 5.7438 REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr) 22.6173

#### WATER QUALITY NARRATIVE

IN ORDER TO COMPLY WITH CHAPTER 60 OF THE ARLINGTON COUNTY CODE (STORMWATER ORDINANCE) FOR STORMWATER QUALITY, A STORMWATER FILTRATION FACILITY (BAYFILTER) AND URBAN BIO-RETENTION PLANTERS ARE PROPOSED. THESE STORMWATER BMPS WILL REDUCE PHOSPHORUS LEVELS IN ORDER TO COMPLY WITH APPLICABLE ARLINGTON COUNTY AND STATE OF VIRGINIA REQUIREMENTS.

ADDITIONALLY, PER THE ARLINGTON COUNTY MEMORANDUM ON THE USE OF STRUCTURAL STORMWATER TREATMENT SYSTEMS. DATED 9/15/15. PROPRIETARY HYDRODYNAMIC DEVICES AND FILTRATION BMPS MAY NOT BE USED AS THE SOLE TREATMENT METHOD FOR ROOF TOP AREA OR PERVIOUS AREA UNLESS USED IN SERIES WITH UPSTREAM RUNOFF REDUCTION BMPS. ADDITIONALLY, IF STRUCTURAL SYSTEMS ARE TO BE USED AS A STAND-ALONE BMP, AT LEAST 75% OF THE DRAINAGE AREA MUST BE HIGH INTENSITY VEHICULAR PAVEMENT. IN ORDER TO COMPLY WITH THE MEMORANDUM, ROOF AREA WILL BE TREATED BY URBAN BIO-RETENTION PLANTERS AND NO CREDIT WILL BE TAKEN IF THE ROOF TREATMENT PLANTERS OUTFALL TO THE PROPOSED FILTRATION BMP. HOWEVER, PLANTERS TREATING THE ALLEY PAVEMENT AND OUTFALLING INTO THE FILTRATION BMP WILL TAKE CREDIT FOR ADDITIONAL PHOSPHORUS REDUCTION PROVIDED BY THE FILTRATION BMP.

## PRELIMINARY BMP COMPUTATIONS



Engineers • Surveyors • Planners Landscape Architects • Arborists 207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046

#### ARLINGTON, VIRGINIA DEPARTMENT OF ENVIRONMENTAL SERVICES WASHINGTON BOULEVARD AT KIRKWOOD

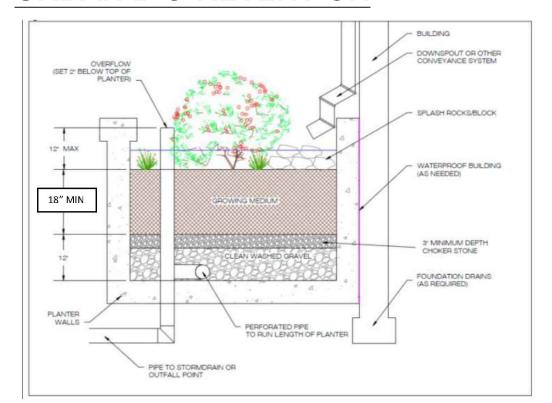
3411, 3415, & 3421 WASHINGTON BLVD & 1122 NORTH KIRKWOOD ROAD ARI INGTON COUNTY VIRGINIA



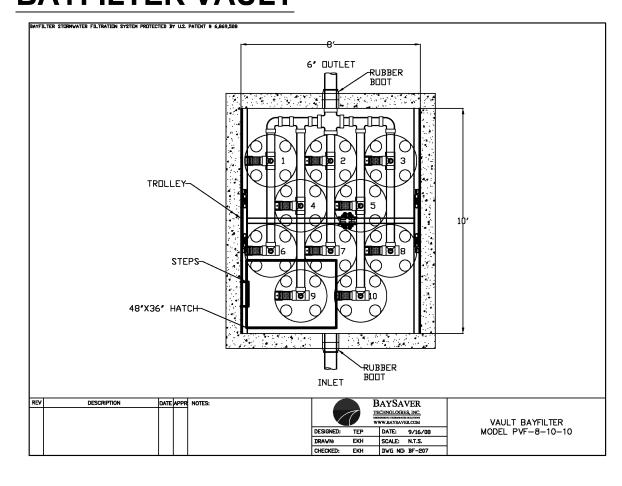
ARLINGTON COUNTY, VIRGINIA								
SCALE: 1" = 25'	DRAWN	ТРВ		CHEC	CKED KS	N		
SUBMITTED DATE CONCEPT PLAN SUB. 12/14/2017 1ST PRELIM. 4.1 SITE PLAN SUB. 0.		APPROVED DATE			PPROVED	DATE		
2ND PRELIM. 4.1 SITE PLAN SUB. 0	4/27/2018	CHIEF TRANSPORTATION	N PLANNING BURE			PORTATION ENGINEERIN	IG BUREAU	
APPROVED DATE		APPROVED DATE		A	PPROVED	DATE		
CHIEF WATER, SEWER & STREETS BUREAU		CHIEF ENGINEERING BUREAU			DIRECTOR OF ENVIRONMENTAL SERVICES		ERVICES	
			SHEET: <b>C-07</b>	704				

#### **TYPICAL DETAILS**

#### **URBAN BIO-RETENTION**



#### **BAYFILTER VAULT**



#### **OVERALL SITE RUNOFF HYDROGRAPHS**

#### PRE-DEVELOPMENT

PRE-DEVELOPMENT				Q (cfs)	PRE-DEVELOPMENT Hyd. No. 2 – 1 Year	G (c
Hydrograph type	= SCS Runoff	Peak discharge	= 6.751 cfs	6.00		6,00
Storm frequency	= 1 yrs	Time to peak	= 716 min	5.00		5.00
Time interval	= 2 min	Hyd. volume	= 14,898 cuft			5.00
Drainage area	= 1.948 ac	Curve number	= 96	400		4.00
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft	3.00		3.00
Tc method	= User	Time of conc. (Tc)	= 5.00 min	2.00		2.00
Total precip.	= 2.69 in	Distribution	= Type II	1.00		1.00
Storm duration	= 24 hrs	Shape factor	= 484	0.00	120 240 360 480 600 720 840 960	1080 1200
	z Z i me				PRE-DEVELOPMENT	Time (min
PRE-DEVELOPMENT				Q (ofs) 10.00	Hyd. No. 2 — 2 Year	Q (ofe)
Hydrograph type	= SCS Runoff	Peak discharge	= 8.015 cfs	8.00		8.00
Storm frequency	= 2 yrs	Time to peak	= 716 min	8.00		8,00
Time interval	= 2 min	Hyd. volume	= 17,897 cuft	6,00		6.00
Drainage area	= 1.948 ac	Curve number	= 96			
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft	4.00		4.00
Tc method	= User	Time of conc. (Tc)	= 5.00 min	2.00		200
Total precip.	= 3.15 in	Distribution	= Type II			
Storm duration	= 24 hrs	Shape factor	= 484	0.00	120 240 360 480 600 720 840 960	0.00 1060 1200 Time (min)
PRE-DEVELOPMENT		9		Q (cfs)	Hyd No. 2:  PRE-DEVELOPMENT  Hyd. No. 2 10 Year	Q (cfs
				14.00		14.00
Hydrograph type	<u> </u>	Peak discharge	= 12.61 cfs	12 00		12.00
Storm frequency	= 10 yrs	Time to peak	= 716 min	10.00		10.00
Time interval	= 2 min	Hyd. volume	= 28,992 cuft	5.00		8.00
Drainage area	= 1.948 ac	Curve number	= 96	6.00		6.00
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft	4.00		4.00
Tc method	= User	Time of conc. (Tc)	= 5.00 min			
Total precip.	= 4.84 in	Distribution	= Type II	2.00		2.00
Storm duration	= 24 hrs	Shape factor	= 484	0.00	120 240 360 480 600 720 840 960	1080 1200

#### **POST-DEVELOPMENT**

I GOI-DEV	LLOF WILIT			
POST-DEVELOPMEN	ΙΤ			Q(ds) POST-DEVELOPMENT Hyd No. 2—1 Year Q (ds)
Hydrograph type Storm frequency Time interval Drainage area Basin Slope Tc method Total precip. Storm duration	= SCS Runoff = 1 yrs = 2 min = 1.948 ac = 0.0 % = User = 2.69 in = 24 hrs	Peak discharge Time to peak Hyd. volume Curve number Hydraulic length Time of conc. (Tc) Distribution Shape factor	= 6.751 cfs = 716 min = 14,898 cuft = 96 = 0 ft = 5.00 min = Type II = 484	700 700 700 700 700 700 700 700 700 700
POST-DEVELOPMEN	IT			Q (cfs) POST-JEVELDYNENT Q (cfs) Hyd No. 2 – 2 Year Q (cfs) 10.00
Hydrograph type Storm frequency Time interval Drainage area Basin Slope Tc method Total precip. Storm duration	= SCS Runoff = 2 yrs = 2 min = 1.948 ac = 0.0 % = User = 3.15 in = 24 hrs	Peak discharge Time to peak Hyd. volume Curve number Hydraulic length Time of conc. (Tc) Distribution Shape factor	= 8.015 cfs = 716 min = 17,897 cuft = 96 = 0 ft = 5.00 min = Type II = 484	8.00
POST-DEVELOPMEN Hydrograph type Storm frequency Time interval Drainage area Basin Slope Tc method Total precip. Storm duration	= SCS Runoff = 10 yrs = 2 min = 1.948 ac = 0.0 % = User = 4.84 in = 24 hrs	Peak discharge Time to peak Hyd. volume Curve number Hydraulic length Time of conc. (Tc) Distribution Shape factor	= 12.61 cfs	O <sub>2</sub> (efs)  POST-JEVELO/PINENT Hyd. No. 2 - 10 Year  O <sub>3</sub> (efs)  14.00  12.00  10.00  6.00  4.00  0 120 240 380 480 600 720 840 980 1888 1000  Time (ren)

#### **OVERALL SITE CURVE NUMBERS**

#### PRE-DEVELOPMENT

CURVE NUMBER = 96 (SEE SHEET C-0702)

#### **POST-DEVELOPMENT**

Drainage Area A	A Soils	B Soils	C Soils	D Soils	
Forest/Open Space undisturbed, protected	Area (acres)	0.0000	0.0000	0.0000	0.0000
forest/open space or reforested land	CN	30	55	70	77
Managed Turf disturbed, graded for yards or other	Area (acres)	0.0000	0.0000	0.0000	0.1604
turf to be mowed/managed	CN	39	61	74	80
Impervious Cover	Area (acres)	0.0000	0.0000	0.0000	1.7875
Impervious Cover	CN	98	98	98	98

Total Area (acres): 1.9479 **Runoff Reduction** 799.5833 Volume (ft<sup>3</sup>):

	1-year storm	2-year storm	10-year storm	-			
RV <sub>Developed</sub> (watershed-inch) with no Runoff Reduction*	2.3514	2.8070	4.4877		1-year storm	2-year storm	10-year storm
RV <sub>Developed</sub> (watershed-inch) with Runoff Reduction*		2.6939	4.3746	]	2.69	3.15	4.84
Adjusted CN*	96	96	96		Use NOAA Atlas 1	4 (http://hdsc.nws.no	aa.gov/hdsc/pfds/)

#### **WATER QUANTITY NARRATIVE**

THE SITE DRAINS FROM SOUTH TO NORTH AND DISCHARGES AS CONCENTRATED FLOW AT A SINGLE OUTFALL, AN 84" RCP STORM SEWER. THE SITE OUTFALL POINT ALSO SERVES AS THE LIMITS OF ANALYSIS FOR BOTH CHANNEL PROTECTION AND FLOOD CONTROL SINCE THE UPSTREAM DRAINAGE AREA TO THE SITE IS GREATER THAN 100 TIMES THE SITE AREA. STORMWATER FROM THE SITE ULTIMATELY DISCHARGES INTO THE POTOMAC RIVER. SEE SHEET C-0703 FOR OUTFALL MAPS AND ANALYSIS.

CHANNEL PROTECTION: THE SITE STORM OUTFALL AND ALL PIPES PROPOSED WITH THIS DEVELOPMENT WILL BE COMPRISED OF CONCRETE OR OTHER NON-ERODIBLE MATERIALS UP TO THE LIMITS OF ANALYSIS. THEREFORE, THE SITE CAN DISCHARGE THE 2-YEAR, 24-HOUR STORM WITHOUT CAUSING EROSION IN THE SYSTEM AND DETENTION IS NOT REQUIRED FOR THE PURPOSES OF CHANNEL PROTECTION.

BASED ON THIS ANALYSIS, IT IS THE OPINION OF THE SUBMITTING ENGINEER THAT THE SITE COMPLIES WITH THE CHANNEL PROTECTION CRITERIA OUTLINED IN THE STATE STORMWATER REGULATIONS (9VAC25-870-66).

FLOOD PROTECTION: THE SITE STORM OUTFALL AND ALL PIPES PROPOSED WITH THIS DEVELOPMENT WILL BE ADEQUATE TO RECEIVE THE 10—YEAR, 24—HOUR STORMWATER DISCHARGE FROM THE SITE AND UPSTREAM DRAINAGE AREA, UP TO THE LIMITS OF ANALYSIS (SEE SHEET C-0703 FOR OUTFALL MAP AND SUPPORTING INFORMATION ON THIS SHEET) ADDITIONALLY, THERE IS NO EVIDENCE, BASED ON REVIEW OF AVAILABLE RECORDS, THAT LOCALIZED FLOODING OCCURS DURING THE 10-YEAR, 24-HOUR STORM. THEREFORE,

BASED ON THIS, IT IS THE OPINION OF THE SUBMITTING ENGINEER THAT THE SITE COMPLIES WITH THE FLOOD PROTECTION CRITERIA OUTLINED IN THE STATE STORMWATER REGULATIONS (9VAC25-870-66).

NOTE THAT IMPLEMENTATION OF RUNOFF REDUCTION PRACTICES ON THIS SITE WILL BRING THE POST-DEVELOPMENT FLOW RATE DOWN TO PRE-DEVELOPMENT

NOTE: SEE SHEET C-0703 FOR OUTFALL ANALYSIS.

# PRELIMINARY SWM COMPUTATIONS



Engineers • Surveyors • Planners Landscape Architects • Arborists 207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046

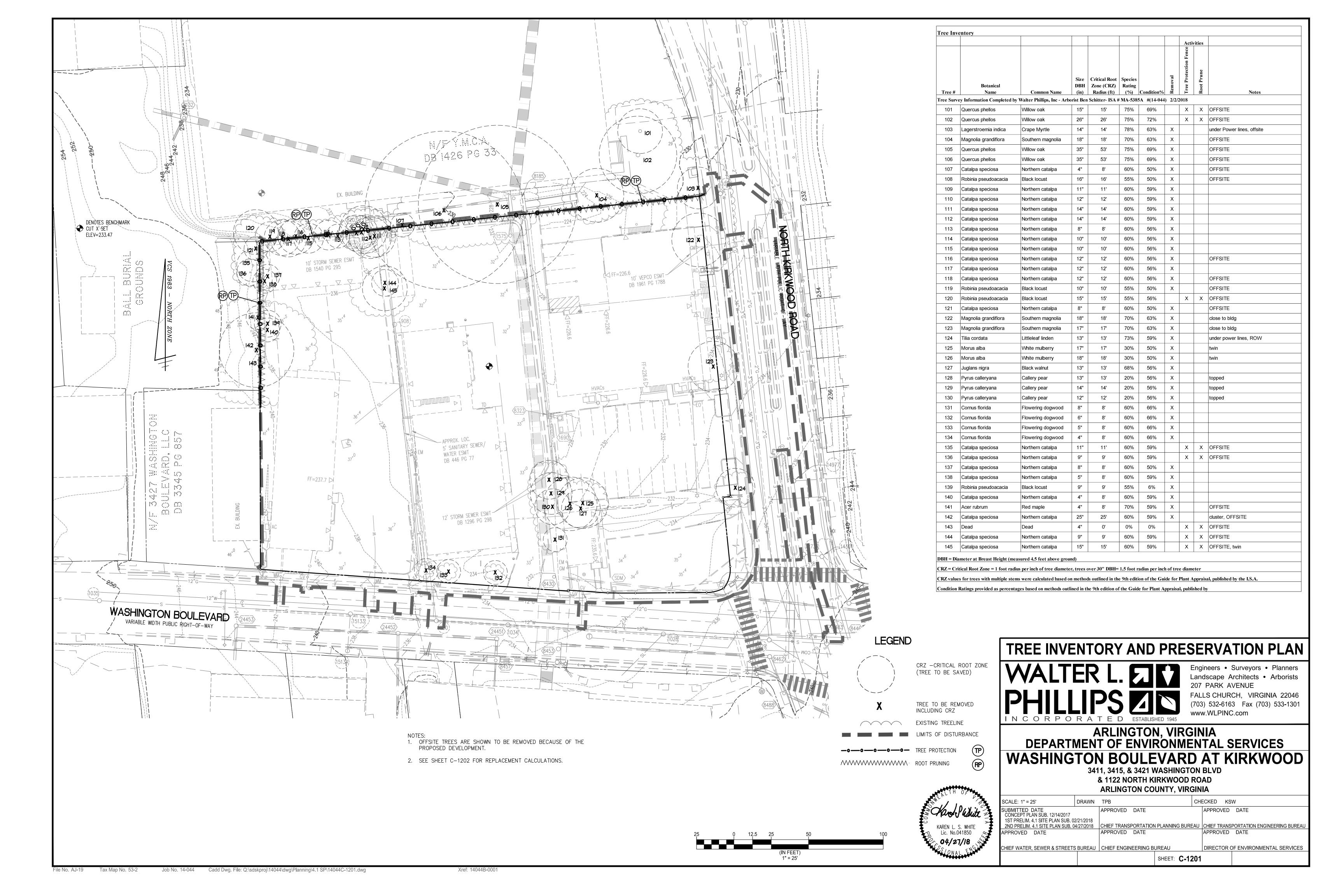
## DEPARTMENT OF ENVIRONMENTAL SERVICES WASHINGTON BOULEVARD AT KIRKWOOD

3411, 3415, & 3421 WASHINGTON BLVD & 1122 NORTH KIRKWOOD ROAD ARLINGTON COUNTY, VIRGINIA

ARLINGTON, VIRGINIA



SCALE: 1" = 25' DRAWN TPB CHECKED KSW SUBMITTED DATE CONCEPT PLAN SUB. 12/14/2017 APPROVED DATE APPROVED DATE 1ST PRELIM. 4.1 SITE PLAN SUB. 02/21/2018 2ND PRELIM. 4.1 SITE PLAN SUB. 04/27/2018 CHIEF TRANSPORTATION PLANNING BUREAU CHIEF TRANSPORTATION ENGINEERING BUREAU APPROVED DATE APPROVED DATE APPROVED DATE DIRECTOR OF ENVIRONMENTAL SERVICES CHIEF WATER, SEWER & STREETS BUREAU | CHIEF ENGINEERING BUREAU SHEET: C-0705



- 2. have a pH between 5.2 and 7.5 (a narrower range may be specified for particular plant
- 3. have an organic matter content not less than 3%
- 4. have low salinity as indicated by an electrical conductivity of less than 4.0 mmhos/cm
- 5. be free of debris, stones, gravel, trash, large sticks, heavy metals, and other deleterious contaminants, (if screening is used to remove debris, screen size must be ¾ inch or larger).
- 6. have a nutrient profile such that it is able to support plant growth
- 7. be free of noxious weed seeds

Compost feedstock shall be leaves, yardwaste, or foodwaste. Biosolid-based composts shall not be used. A compost sample with analysis shall be submitted for approval to the client before application.

Stability refers to the rate of biological breakdown, measured by carbon dioxide release. Maturity refers to completeness of the aerobic composting process and suitability (lack of plant toxicity) as a plant growth media, often measured by ammonia release and by plant growth tests. Compost manufacturers that subscribe to the US Composting Council's testing program may document stability as compost testing 7 or below in accordance with TMECC 05.08-B, "Carbon Dioxide Evolution Rate". Maturity (suitability for plant growth) may be documented as compost testing greater than 80% in accordance with TMECC 05.05-A, "Germination and Vigor". Compost is considered mature and stable if it tests at 6.0 or higher on the Solvita Compost Maturity Index Rating, which is a combination of Carbon Dioxide and Ammonia Maturity Tests (test information and equipment available at www.solvita.com).

#### Compost shall also:

- Free of weed seeds
- 2. Free of heavy metals or other deleterious contaminants
- 3. Have an EC of less than 4.0 mmhos/cm

#### 3.3 Severely Disturbed Soil

Soil shall be considered severely disturbed if grade was lowered more than 14 inches OR soil was compacted in lifts regardless of the final grade.

#### 4. SUBMITTALS

#### 4.1 Soil Map

A soil map indicating soil areas to be protected and those to be restored via Soil Profile Rebuilding shall be submitted by the contractor for approval by the owner, arborist, or landscape architect before construction begins.

A compost sample with analysis certifying it is stable, mature, from acceptable feedstocks and free of contaminants and weed seeds shall be submitted for approval to the landscape architect or owner before compost is applied to the soil.

A topsoil sample with analysis from a certified testing laboratory and verification of source shall be submitted for approval to the landscape architect or owner before application. Separate documentation is required for each 100 cubic yards of topsoil unless otherwise approved by the landscape architect or owner

#### **REFERENCES & PERMISSIONS**

Use of this specification has been documented to increase tree canopy and soil carbon stores compared with typical practices. See www.urbanforestry.frec.vt.edu/SRES for more information.

Soil Profile Rebuilding Specification by Susan Day et al. is licensed under a Creative Commons Attribution-NonCommercial 3.0 United States License. It may be used freely as is, or modified. However use of the term "Soil Profile Rebuilding" should only be used when soil restoration is performed as  $described in this specification. See \underline{www.urbanforestry.frec.vt.edu/SRES/specification.html} \ for \ full \\$ 

#### 2.6 Replacement of topsoil

#### 2.6.1 Standard procedure

Stockpiled topsoil, or additional topsoil if none is available from the site, shall be returned to the site to a 4 inch minimum depth (see Section 3.3 Definitions for definition of topsoil). If soil was severely disturbed (see definitions), a 6-8 inch minimum shall be replaced.

2.6.2 Modification if significant topsoil is already present before Profile Rebuilding is initiated

At least four inches of topsoil is present on the site after construction activities are completed AND soil is not severely disturbed (see Section 3.3 Definitions for description of severely disturbed).

Less than 4 inches of topsoil is present on site after construction activities were completed but before Profile Rebuilding is initiated, OR soil is severely disturbed (see Section 3.3 Definitions for description of severely disturbed).

For Case 1: A minimum of 3 inches additional topsoil shall be placed over the subsoiled layer before tilling.

For Case 2: Follow Section 2.6.1 Standard procedure, as if no topsoil had been present.

Rototill topsoil to a depth of 6-8 inches when soil is neither dry nor very moist. Rototilling depth should cross the interface with the subsoiled layer by a minimum of 1 inch and can be verified with a random sampling with a push tube soil sampler.

2.8 Planting Plant the site with woody plants, trees or shrubs, at a density that insure a minimum of 50% of the site will be occupied with roots within 10 years. Planting of at least one large stature tree (e.g., one that will mature at approximately 60-70 feet in height) or 20 medium stature shrubs per 5,000 sq. ft. shall be considered to achieve this.

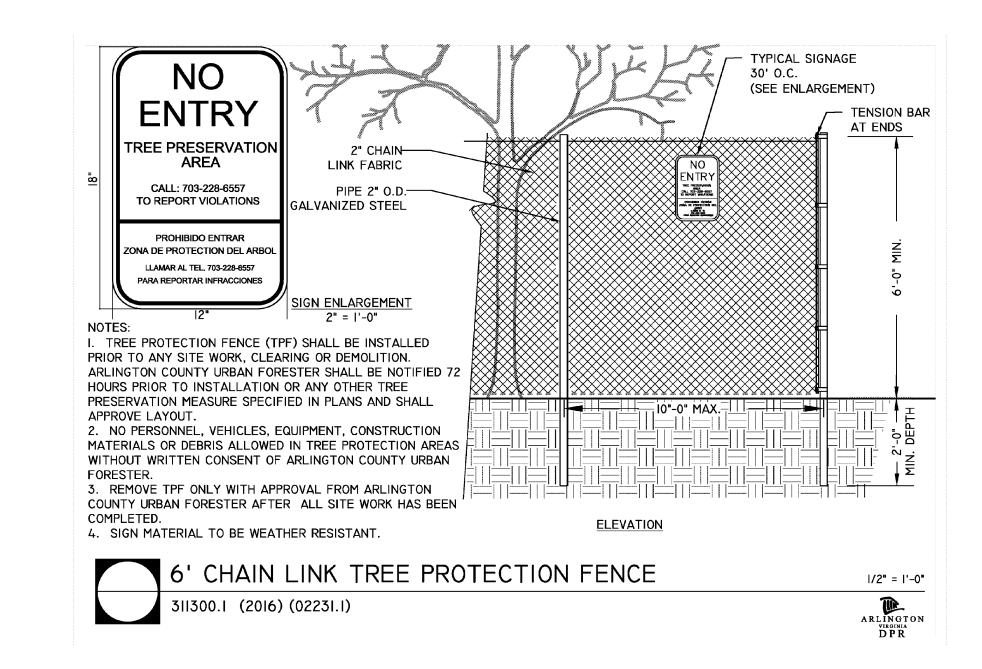
#### 3. DEFINITIONS

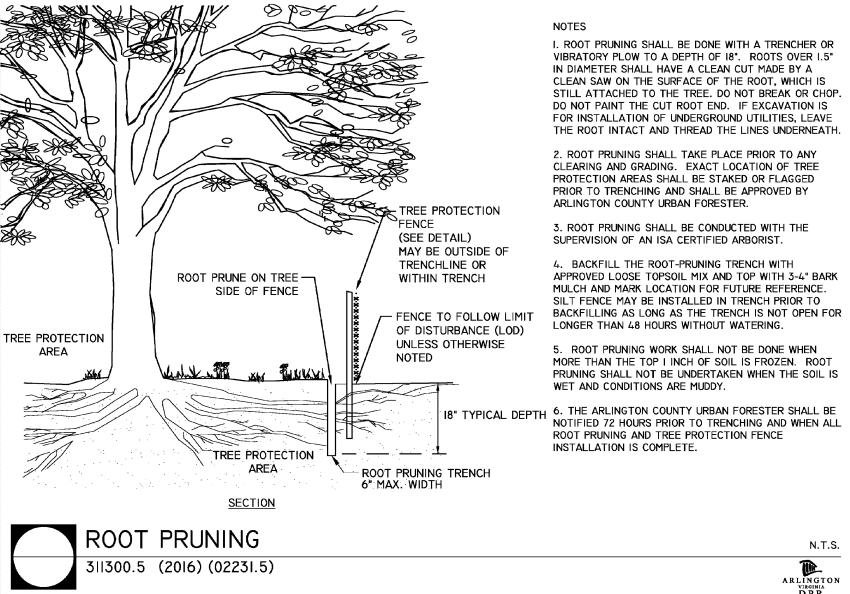
#### 3.1 Topsoil

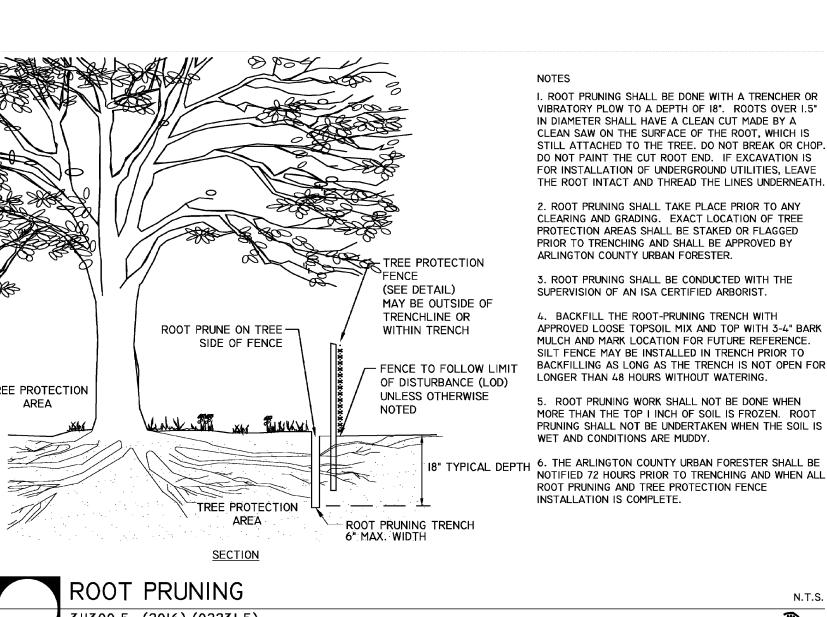
Soil can be considered topsoil if it originates from an A horizon of a natural soil or is a mineral soil with 3% or greater organic matter content and a NRCS textural class similar to pre-development A horizon soils for the site or as specified by the owner, arborist, or landscape architect. Blended soils shall not be used unless specified by the owner, arborist, or landscape architect. In addition topsoil shall:

1. Be friable and well drained

- 1. BEFORE ANY GRADING, DEMOLITION, OR OTHER DISTURBANCE, TREE PROTECTION NEEDS TO BE INSTALLED PER PLAN, AND INSPECTED BY AN ARLINGTON COUNTY PARKS AND RECREATION URBAN FORESTER. EROSION AND SEDIMENT CONTROLS ARE INSPECTED BY THE DEPARTMENT OF ENVIRONMENTAL SERVICES.
- 2. PLANTS SHALL BE FURNISHED AND INSTALLED AS INDICATED, INCLUDING ALL PLANTS, MATERIALS, AND EQUIPMENT.
- 3. PLANTS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY; HAVE NORMAL GROWTH HABITS, WELL-DEVELOPED DENSELY FOLIATED BRANCHES, AND VIGOROUS ROOT SYSTEMS; AND BE FREE FROM DEFECTS AND INJURIES.
- 4. PLANTS SHALL BE PLANTED ON THE DAY OF DELIVERY IF/WHEN PRACTICAL. IN THE EVENT THAT THIS IS NOT POSSIBLE, THE CONTRACTOR SHALL PROTECT STOCK NOT PLANTED. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE-DAY PERIOD AFTER DELIVERY. ANY PLANTS NOT INSTALLED DURING THIS PERIOD SHALL BE REJECTED, UNLESS OWNER AND CONTRACTOR PROVIDE OTHERWISE BY WRITTEN AGREEMENT. ALL PLANTS KEPT ON SITE FOR ANY PERIOD OF TIME SHOULD BE WATERED AND CARED FOR USING ANSI A300 STANDARDS.
- 5. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES. PLANTS SHALL BE HANDLED FROM THE BOTTOM OF THE ROOT BALL ONLY.
- 6. PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE. PLANTS SHALL NOT BE INSTALLED IN TOP SOIL THAT IS IN MUDDY OR FROZEN CONDITION. LAWNS, TREES AND SHRUBS SHALL BE INSTALLED BETWEEN 03/15 AND 06/15 OR BETWEEN 09/15 AND 12/01. IF A PROJECT COMPLETION IS OUTSIDE OF THIS PLANTING PERIOD, CONTACT THE ARLINGTON COUNTY URBAN FORESTER TO OBTAIN A DEFERRAL OR APPROVAL FOR PLANTING OUT OF SEASON.
- 7. NO PLANT, EXCEPT GROUNDCOVERS, SHALL BE PLANTED WITHIN TWO FEET OF A
- 8. TREES AND SHRUBS SHALL BE PLANTED IN HOLES TWO TO THREE TIMES AS WIDE AND TO THE DEPTH OF THE ROOT BALL.
- 9. PLANTS SHALL BE PLANTED IN IN SITU SOIL THAT IS THOROUGHLY WATERED.
- 10. SET ALL PLANTS PLUMB AND STRAIGHT SET AT SUCH LEVEL THAT NORMAL OR NATURAL RELATIONSHIP BETWEEN THE PLANT AND THE GROUND SURFACE WILL BE ESTABLISHED. LOCATE THE PLANT IN THE CENTER OF THE PIT.
- 11. INJURED ROOTS SHALL BE PRUNED TO CLEAN ENDS BEFORE PLANTING WITH CLEAN, SHARP TOOLS. THE LEADER OF TREES SHALL NOT BE CUT BACK.
- 12. PRESERVED AND PLANTED TREES MUST BE INSPECTED AND APPROVED BY A DEPARTMENT OF PARKS AND RECREATION URBAN FORESTER.
- 13. ALL DISTURBED AREAS SHALL BE TREATED WITH 4" TOP SOIL OR COMPOST AND SEEDED IN ACCORDANCE WTH PERMANENT STABILIZATION METHODS INDICATED ON SOIL EROSION AND SEDIMENT CONTROL SHEET AND/OR LANDSCAPE PLAN.







#### Tree Replacement Formula - Street Name, City, Virginia

Tree #	Botanical Name	Common Name	Size DBH (in)	Species Rating (%)	Condition %	Total Score	Replace- ments	Removal
Comp	outations Completed by Walter L.					A		-
101	Quercus phellos	Willow oak	15	0.75	0.69			
102	Quercus phellos	Willow oak	26	0.75	0.72			
103	-	Crape Myrtle	14	0.78	0.63	6.9	2	Х
104	Magnolia grandiflora	Southern magnolia	18	0.7	0.63	7.9	2	Х
105	-	Willow oak	35	0.75	0.69	18.1	4	Х
106	-	Willow oak	35	0.75	0.69	18.1	4	Х
107	-	Northern catalpa	4	0.6	0.5	1.2	1	Х
108		Black locust	16	0.55	0.5	4.4	1	Х
109	-	Northern catalpa	11	0.6	0.59	3.9	1	Х
110		Northern catalpa	12	0.6	0.59	4.2	1	X
111		Northern catalpa	14	0.6	0.59	5.0	1	Х
112	· · ·	Northern catalpa	14	0.6	0.59	5.0	1	X
113	' ' '	• • • • • • • • • • • • • • • • • • •	8	0.6	0.56	2.7	1	X
114	<u> </u>	Northern catalpa	10	0.6	0.56	3.4	1	X
115	' '	Northern catalpa	10	0.6	0.56	3.4	1	X
116	· · ·	Northern catalpa	12	0.6	0.56	4.0	1	X
117		Northern catalpa	12	0.6	0.56	4.0	1	X
118	<u> </u>	Northern catalpa	12	0.6	0.56	4.0	1	X
119		Black locust	10	0.55	0.5	2.8	1	X
120	<u>'</u>	Black locust	15	0.55	0.56	2.0		
121	-		8	0.6	0.5	2.4	1	Х
122		Southern magnolia	18	0.7	0.63	7.9	2	X
123		Southern magnolia	17	0.7	0.63	7.5	2	X
124			13	0.73	0.59	5.6	2	X
125		White mulberry	17	0.3	0.5	2.6	1	X
126		White mulberry	18	0.3	0.5	2.7	1	X
127		Black walnut	13	0.68	0.56	5.0	1	X
128	<del> </del>	Callery pear	13	0.2	0.56	1.5	1	X
129	-	Callery pear	14	0.2	0.56	1.6	1	X
130	-	Callery pear	12	0.2	0.56	1.3	1	X
131	-	Flowering dogwood		0.6	0.66	3.2	1	X
132		Flowering dogwood		0.6	0.66	2.4	1	X
133		Flowering dogwood		0.6	0.66	2.0	1	X
134		Flowering dogwood		0.6	0.66	1.6	1	X
135		Northern catalpa	<del>1</del> 11	0.6	0.59	1.0	<u>'</u>	<b>A</b>
136	' '	Northern catalpa	9	0.6	0.59			
137	' '		8	0.6	0.5	2.4	1	X
138	· · ·	Northern catalpa	5	0.6	0.59	1.8	1	X
139		Black locust	9	0.55	0.06	0.3	1	X
140		Northern catalpa	4	0.55	0.59	1.4	1	X
141		Red maple	<del>4</del> 4	0.7	0.59	1.4	1	X
142		Northern catalpa	<del>4</del> 25	0.6	0.59	8.9	2	X
143		Dead	<u>25</u> 4	0.6	0.59	0.9		^
143			<del>4</del> 9	0.6	0.59			
144	· '	Northern catalpa	9 15	0.6	0.59			
i ⊤U	Jaraipa opoolood	i witi witi wataipa		J. U	5.55		1	1

(3) TREES TO BE PLANTED ON NEIGHBORING SITE (BALL BURIAL GROUNDS) TO REPLACE TREES

(17) TREES TO BE PLANTED ON NEIGHBORING SITE (YMCA) TO REPLACE TREES #103, 104, 105, 106, 107, 108, 116, 118, 119,

RATING:	1-4.9		1 TREE
	5-9.9	II	2 TREE
	10-14.9	=	3 TREES
	15-19.9	=	4 TREES
	20-24.5	=	5 TREES
	25+	=	6 TREES

### TREE PRESERVATION NOTES



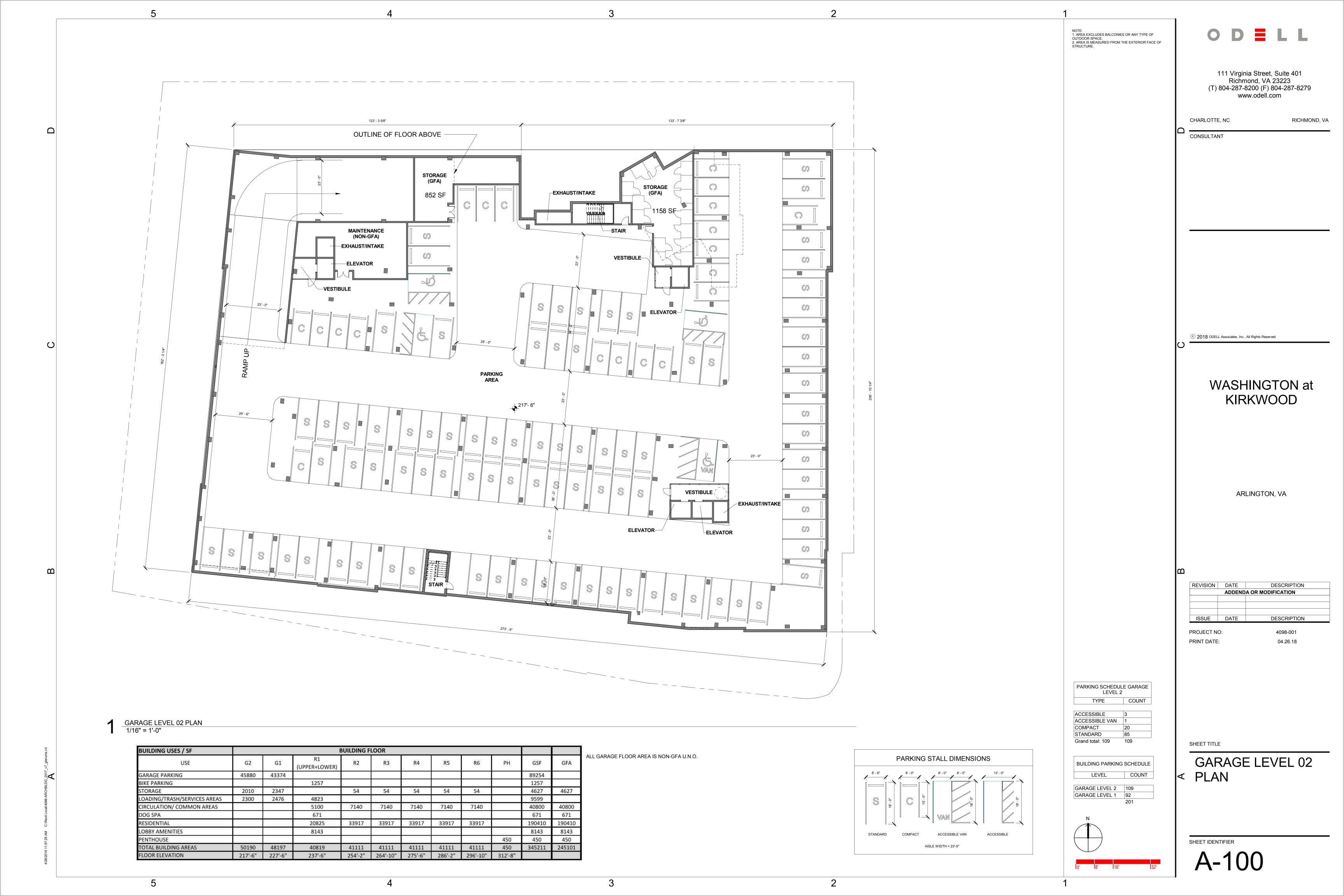
Engineers • Surveyors • Planners Landscape Architects • Arborists 207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046

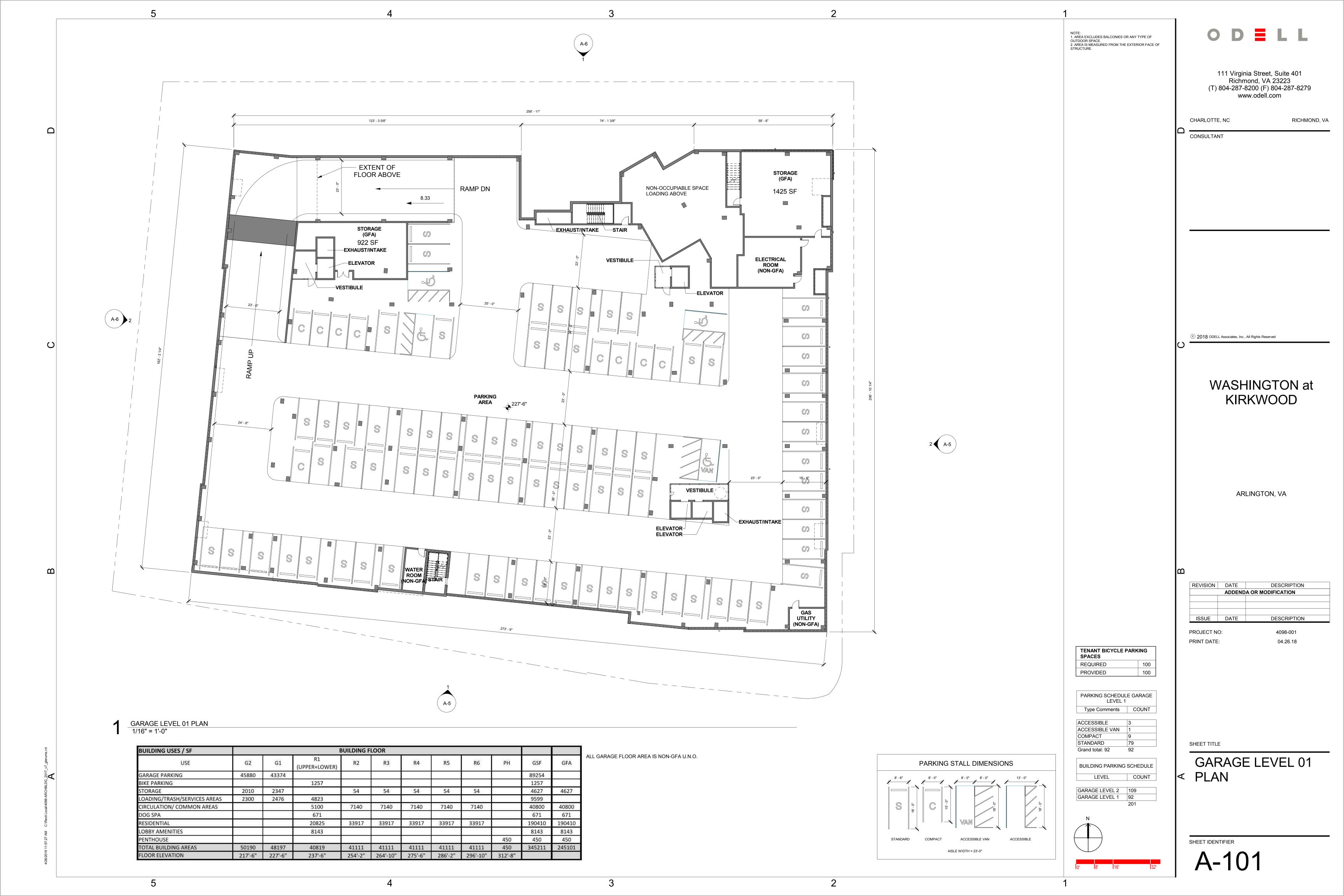
#### ARLINGTON, VIRGINIA DEPARTMENT OF ENVIRONMENTAL SERVICES WASHINGTON BOULEVARD AT KIRKWOOD

3411, 3415, & 3421 WASHINGTON BLVD & 1122 NORTH KIRKWOOD ROAD ARLINGTON COUNTY, VIRGINIA

CALE: 1" = 25' DRAWN TPB CHECKED KSW SUBMITTED DATE CONCEPT PLAN SUB. 12/14/2017 APPROVED DATE APPROVED DATE 1ST PRELIM. 4.1 SITE PLAN SUB. 02/21/2018 2ND PRELIM. 4.1 SITE PLAN SUB. 04/27/2018 CHIEF TRANSPORTATION PLANNING BUREAU CHIEF TRANSPORTATION ENGINEERING BUREAU APPROVED DATE APPROVED DATE HIEF WATER, SEWER & STREETS BUREAU | CHIEF ENGINEERING BUREAU DIRECTOR OF ENVIRONMENTAL SERVICES SHEET: **C-1202** 

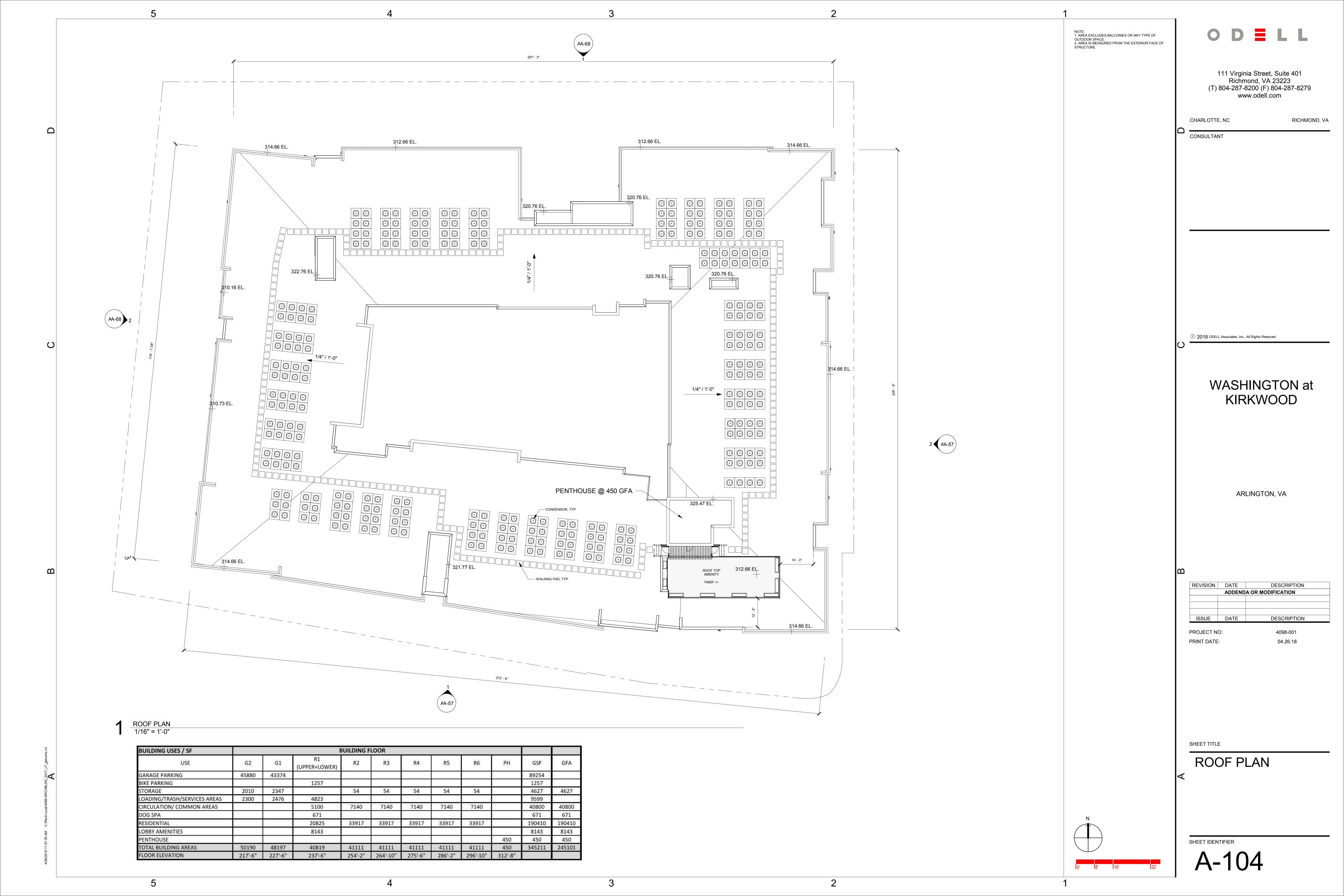






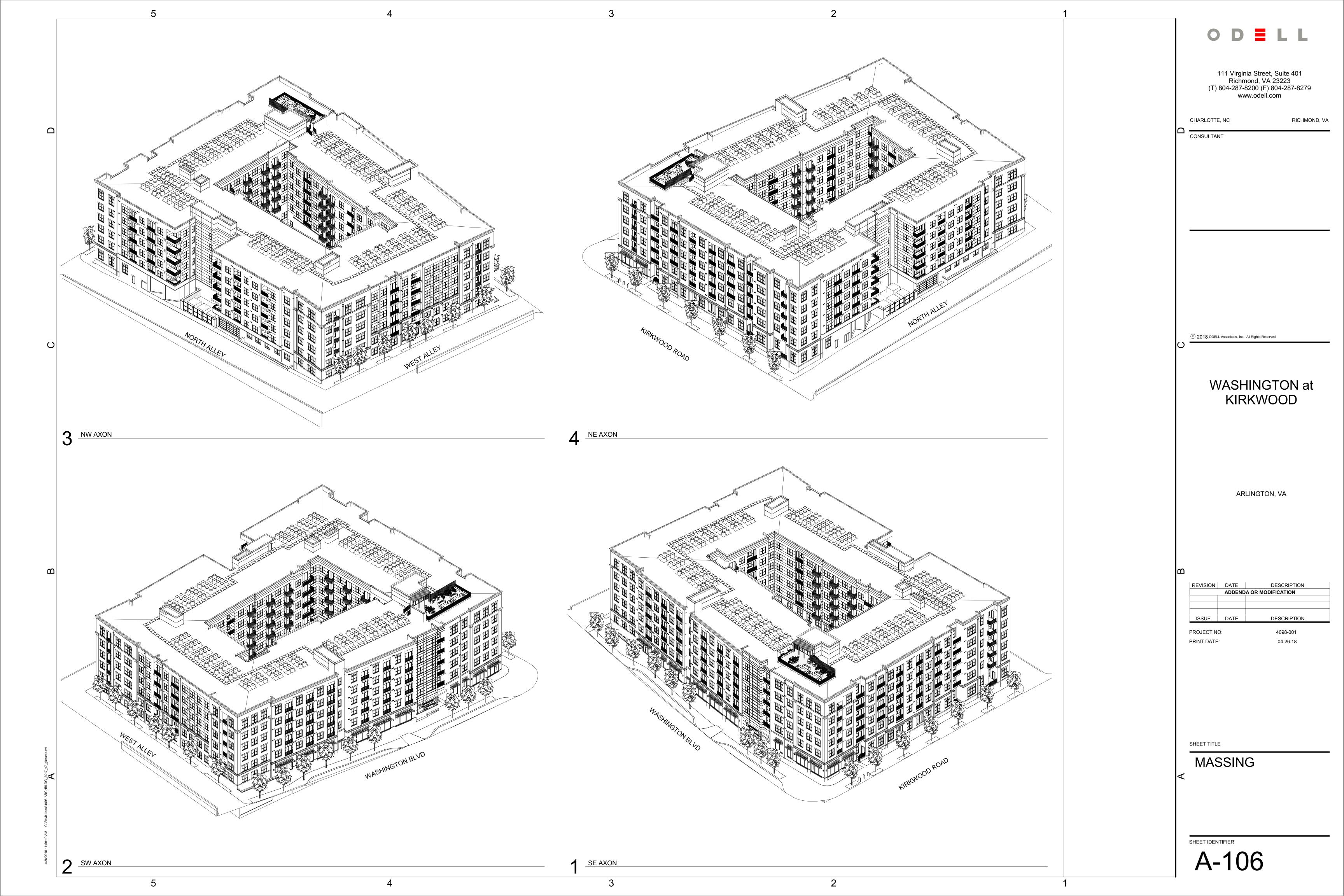




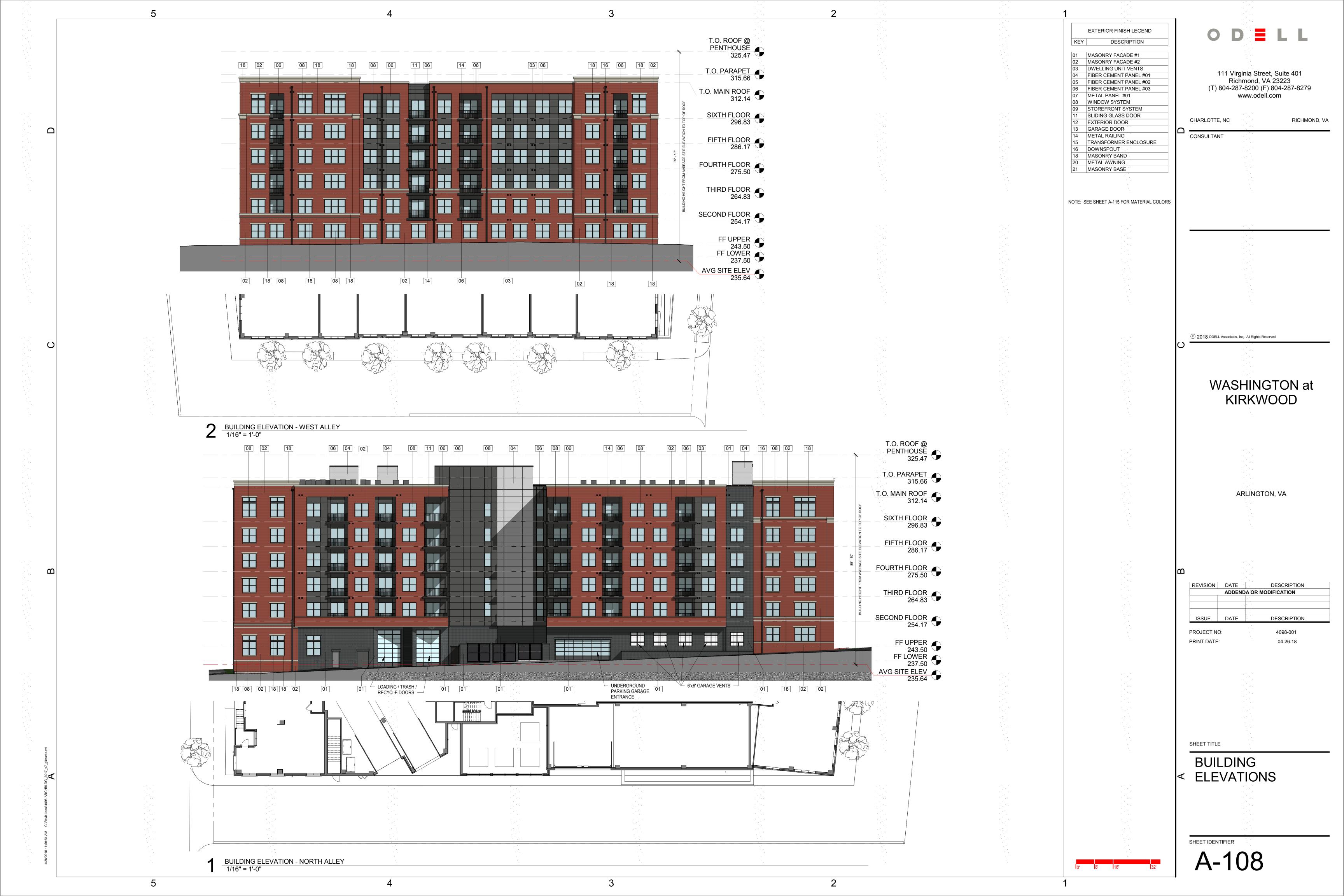


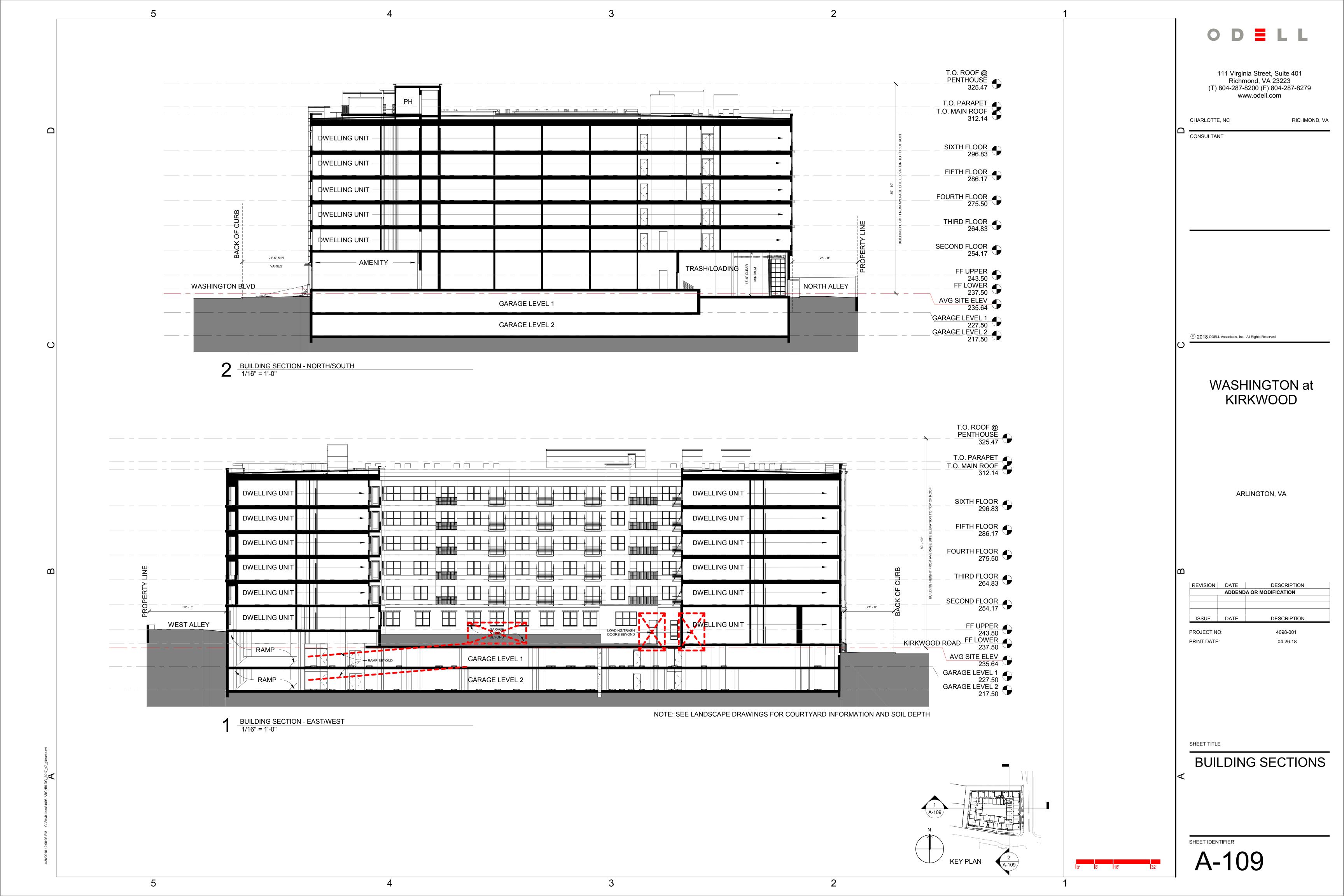


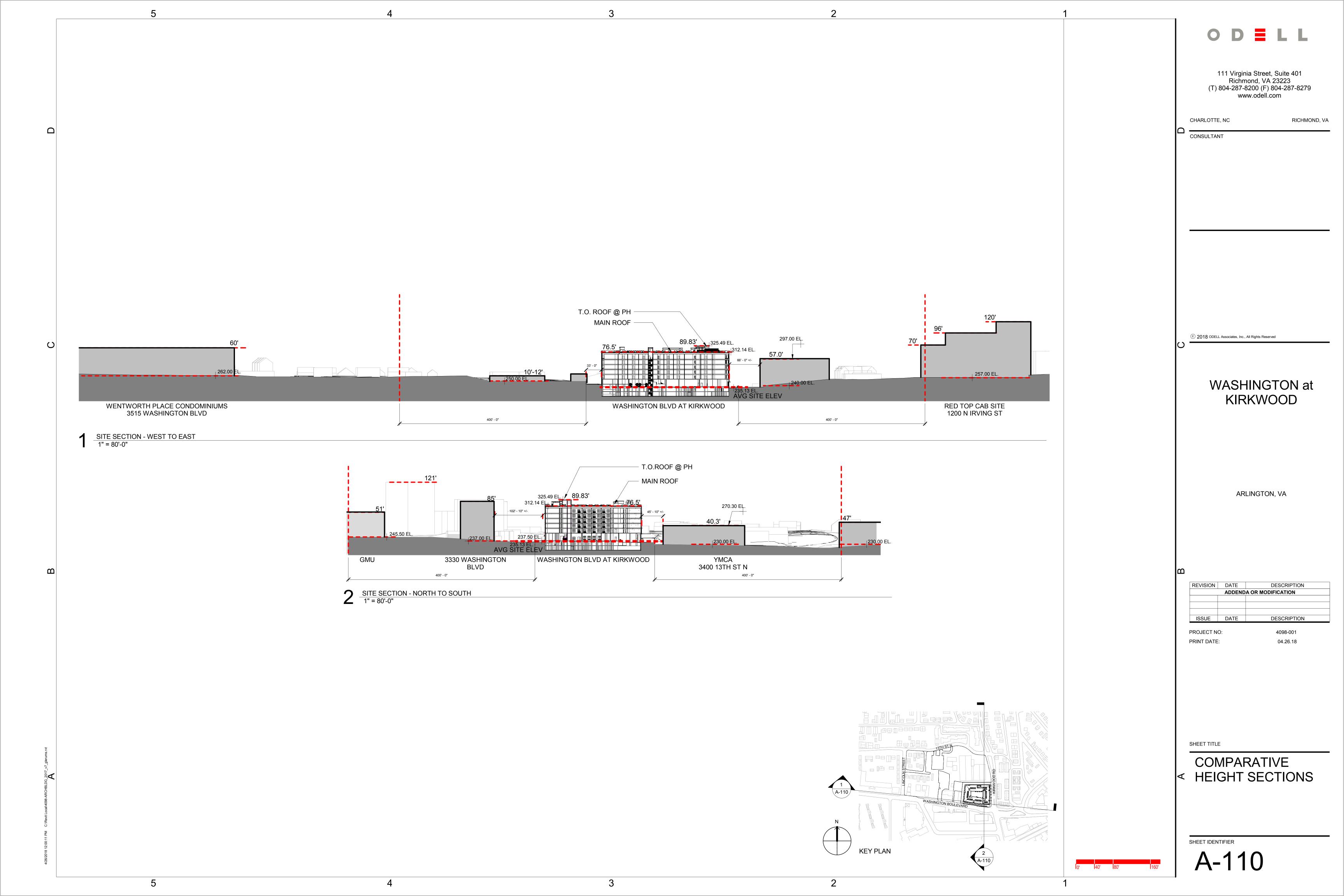
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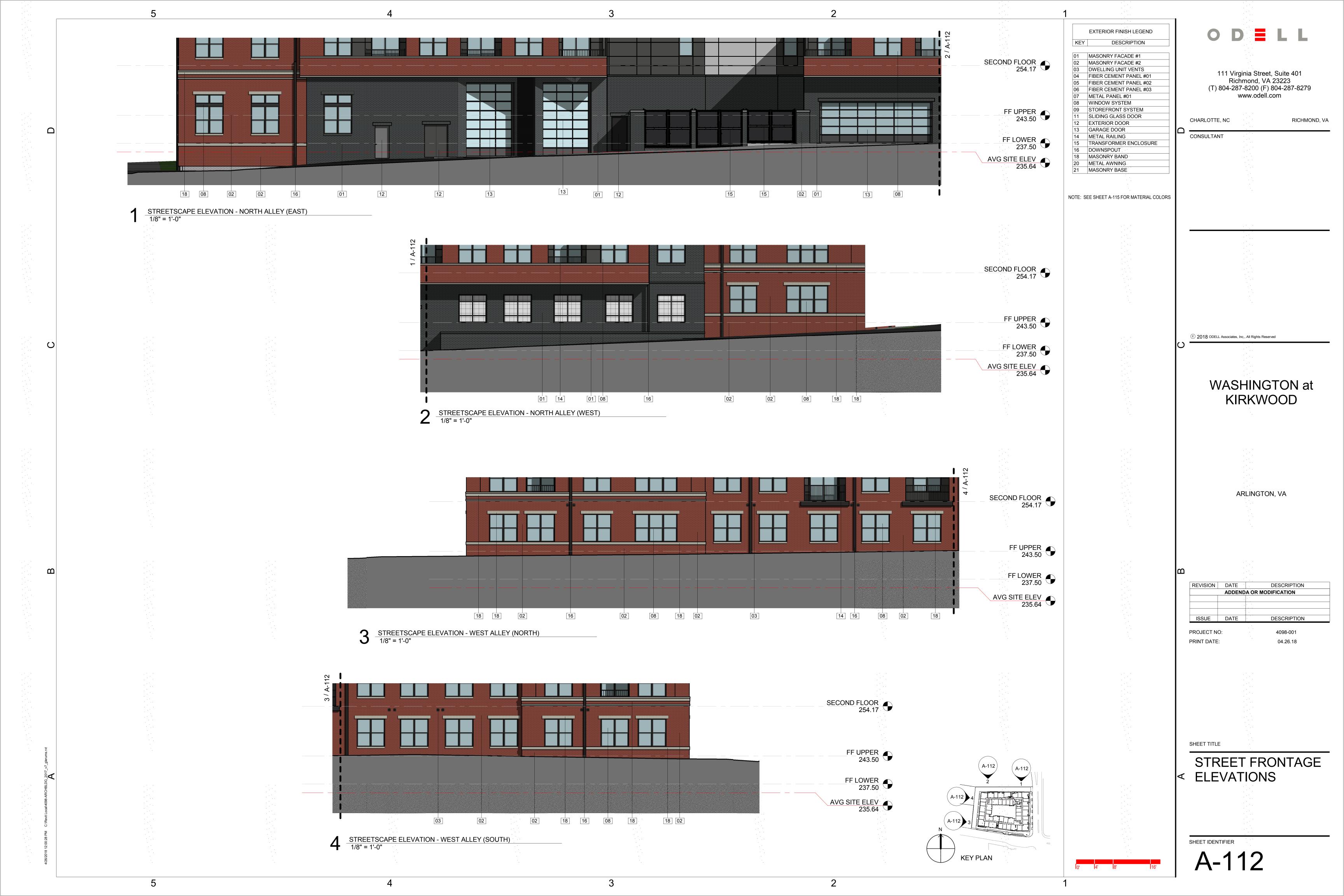


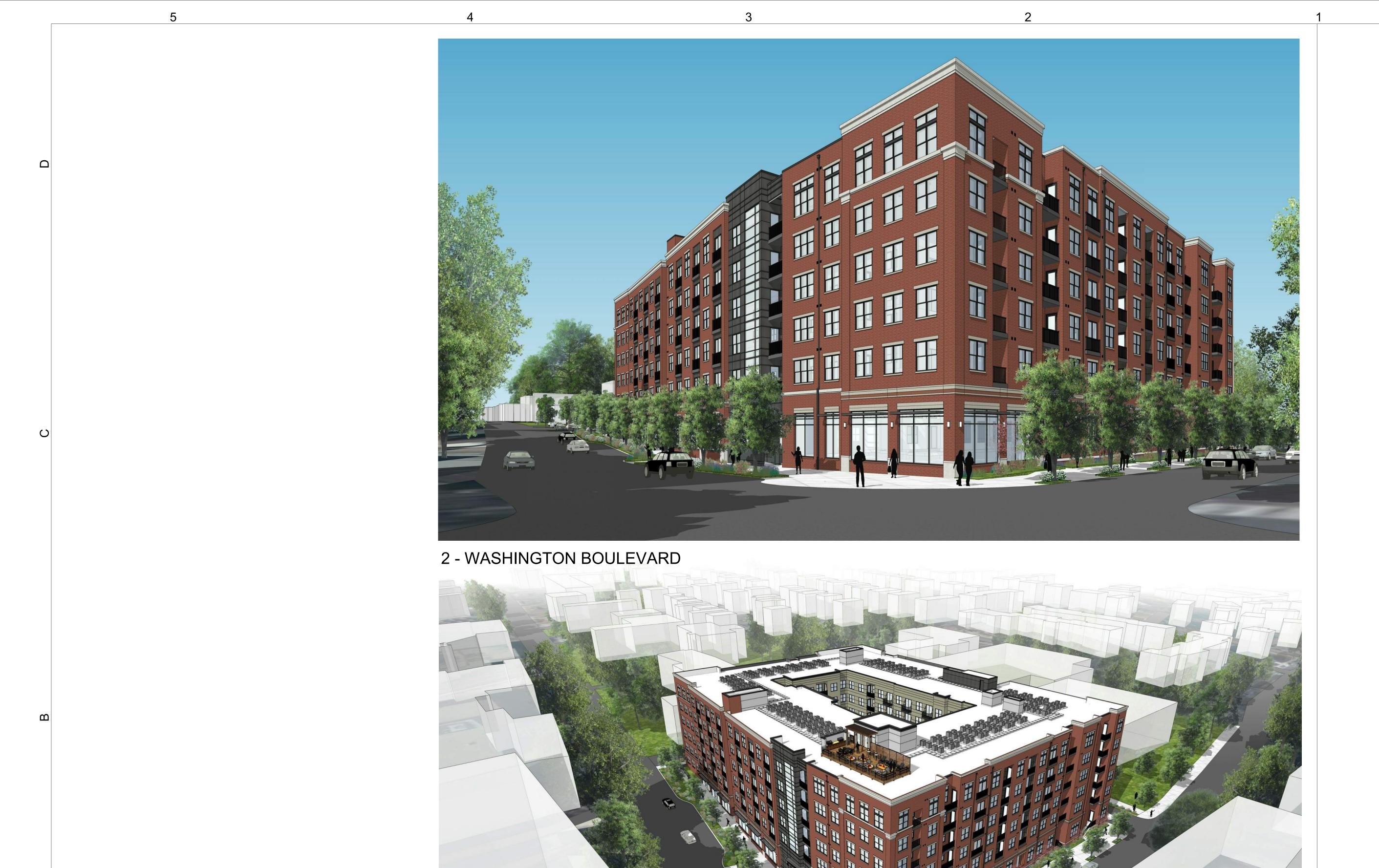












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## WASHINGTON at KIRKWOOD

ARLINGTON, VA

REVISION DATE DATE DESCRIPTION
ADDENDA OR MODIFICATION DESCRIPTION ISSUE DATE

PROJECT NO: PRINT DATE:

4098-001 04.26.18

SHEET TITLE

CONTEXT VIEWS

SHEET IDENTIFIER

KEY PLAN

A-113

1 - OVERALL SITE

5 2 1



## 2 - WEST ALLEY



1 - KIRKWOOD RD

3



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## WASHINGTON at KIRKWOOD

ARLINGTON, VA

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DATE										
DATE	DESCRIPTION									
ADDENDA OR MODIFICATION										
DATE	DESCRIPTION									
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PROJECT NO:

04.26.18

SHEET TITLE

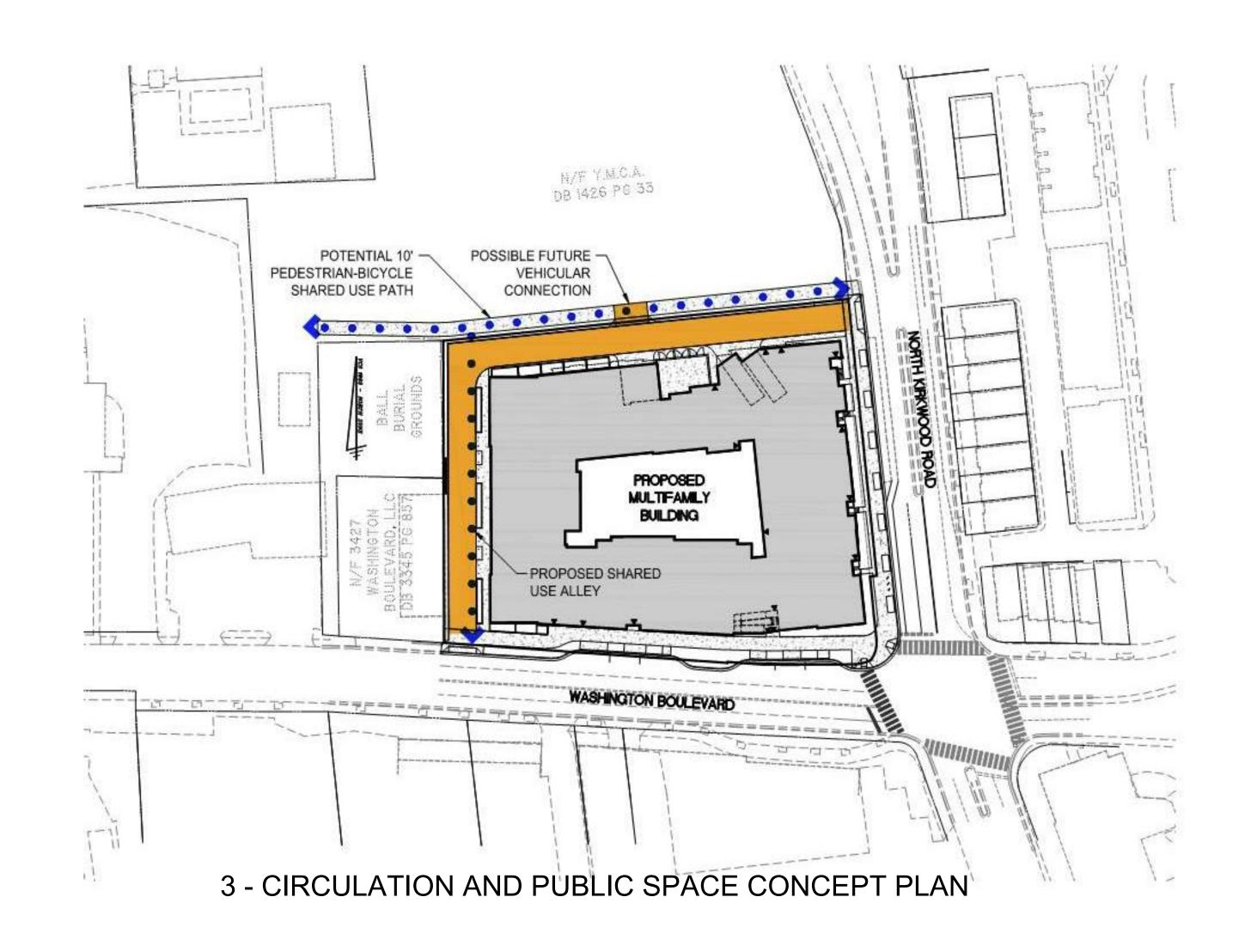
CONTEXT VIEWS

SHEET IDENTIFIER

A-114

CIRCULATION AND PUBLIC SPACE CONCEPT MAP CONNECTION FROM CEMETERY TO 13TH ST N EXPAND OPEN SPACE & PROVIDE BETTER ACCESS STRENGTHEN PED/BIKE CONNECTION TO GMU CAMPUS & VA SQUARE METRO STATION

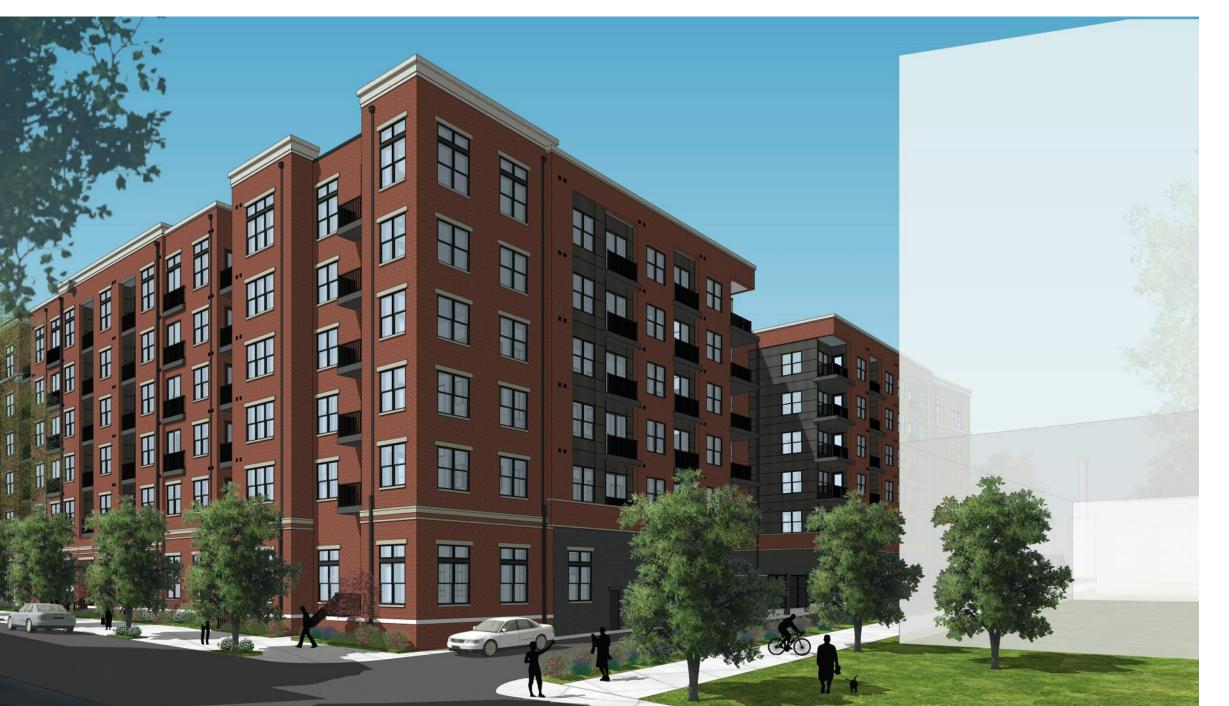
SPECIAL GLUP STUDY "PLUS" CONCEPT PLAN



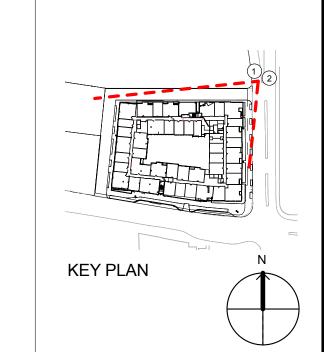
4 - CIRCULATION AND PUBLIC SPACE CONCEPT MAP FROM



1 - PROPOSED DEVELOPMENT WITH EXISTING YMCA



2 - PROPOSED DEVELOPMENT WITH FUTURE YMCA WITH SHARED USE PATH CONSTRUCTED BY OTHERS



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REVISION	DATE	DESCRIPTION								
ADDENDA OR MODIFICATION										
ISSUE	DATE	DESCRIPTION								
PROJECT N	O:	4098-001								

**FUTURE 12TH RD EXHIBITS** 

SHEET IDENTIFIER

A-115

PARKING SPACES									
TYPE	GARAGE LEVEL 2	GARAGE LEVEL 1	% OF TOTAL	TOTAL					
STANDARD PARKING	85	79	82%	164					
COMPACT PARKING	20	9	14%	29					
HANDICAP PARKING	3	3	3%	6					
HANDICAP VAN PARKING	1	1	1%	2					
TOTAL PARKING SPACES	109	92		201					

PROPOSED PARKING RATIO: 247 UNITS \* .8 STALLS/UNIT = 198 SPACES

TOTAL PERCENTAGE COMPACT: 14%

BICYCLE SP		BUILDING I				
TYPES	UNITS	RATIO	REQUIRED	FIRST FLOOR	EXTERIOR	TOTAL PROVIDED
RESIDENTIAL BICYCLE SPACES	247	1/2.5	99	104		104
VISITOR BICYCLE SPACES	247	1/50	5		6	6
TOTAL BICYCLE SPACE	104			110		

UNIT TYPES			BUILDING FLOOR								
TYPE	BEDROOMS	AREA	G2	G1	R1	R2	R3	R4	R5	R6	TOTAL
S	STUDIO	530			3	2	2	2	2	2	13
1	1 BR, 1 BA	637			15	27	27	27	27	27	150
2	2 BR, 2 BA	990			9	15	15	15	15	15	84
	UNIT TOTALS				27	44	44	44	44	44	247

BUILDING USES / SF	BUILDING FLOOR										
USE	G2	G1	R1 (UPPER+LOWER)	R2	R3	R4	R5	R6	РН	GSF	GFA
GARAGE PARKING	45880	43374								89254	
BIKE PARKING			1257							1257	
STORAGE	2010	2347		54	54	54	54	54		4627	4627
LOADING/TRASH/SERVICES AREAS	2300	2476	4823							9599	
CIRCULATION/ COMMON AREAS			5100	7140	7140	7140	7140	7140		40800	40800
DOG SPA			671				:			671	671
RESIDENTIAL			20825	33917	33917	33917	33917	33917		190410	190410
LOBBY AMENITIES	i i		8143		0	Ď.				8143	8143
PENTHOUSE	7.1								450	450	450
TOTAL BUILDING AREAS	50190	48197	40819	41111	41111	41111	41111	41111	450	345211	245101
FLOOR ELEVATION	217'-6"	227'-6"	237'-6"	254'-2"	264'-10"	275'-6"	286'-2"	296'-10"	312'-8"		

TOTAL SITE AREA	75187 SF (1.726 ACRES)				
BASE DENSITY - SITE PLAN	115 UNITS/ACRE				
BASE UNITS	198 UNITS				
PROBLEMS AND/OR ONSITE ADUS*					
TOTAL BONUS UNITS	49				
TOTAL UNITS (BASE + BONUS)	247 UNITS				
THE ADDITIONAL WILL COORDINATE WITH AD	HINOTON COLINTY STATE ON TH				

<sup>\*</sup> THE APPLICANT WILL COORDINATE WITH ARLINGTON COUNTY STAFF ON THE COMMUNITY BENEFITS PACKAGE AND BONUS DENSITY

 $OD \equiv LL$ 

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WASHINGTON at KIRKWOOD

ARLINGTON, VA

REVISION DATE DESCRIPTION

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ISSUE DATE DESCRIPTION

PROJECT NO: PRINT DATE: 4098-001 04.26.18

SHEET TITLE

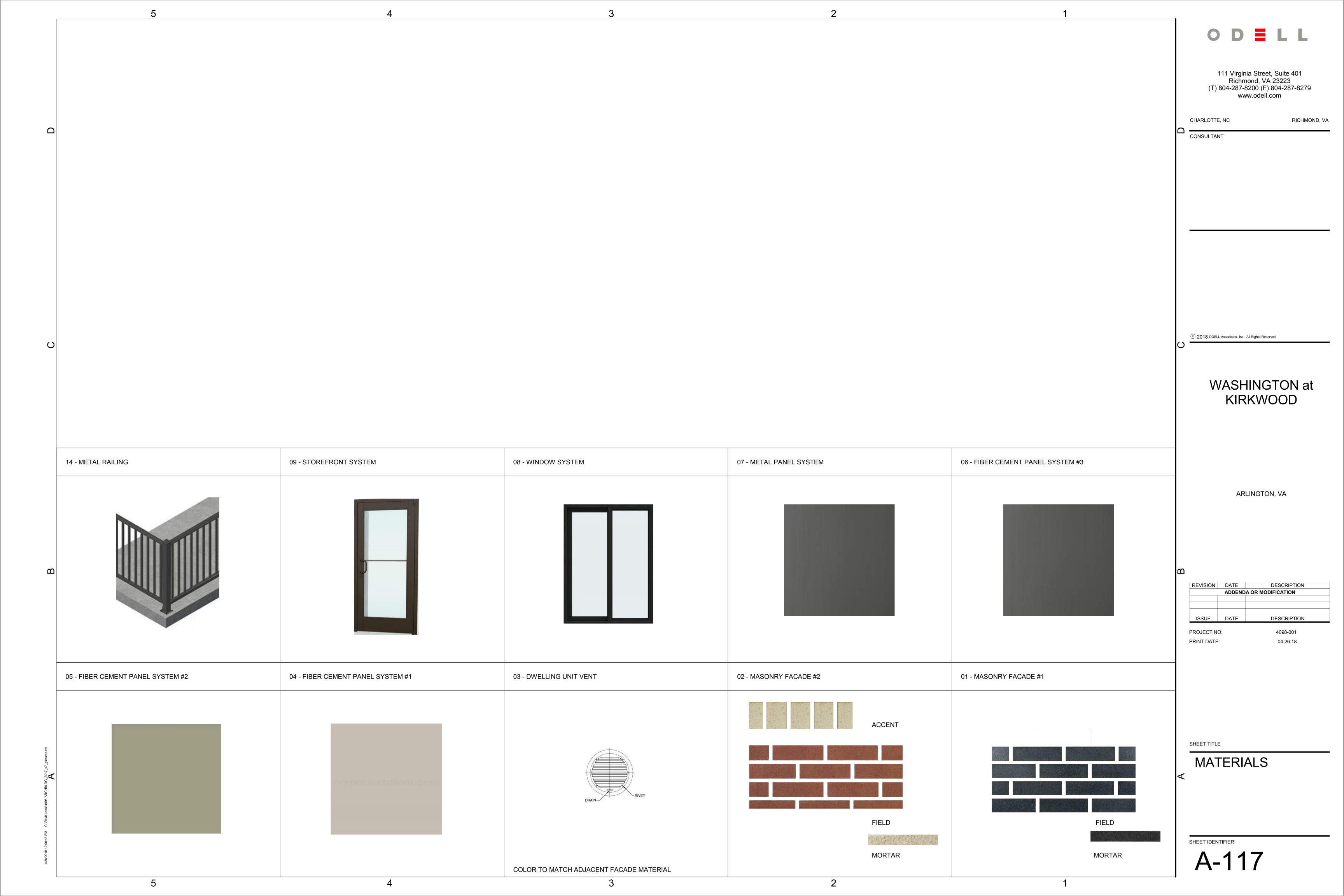
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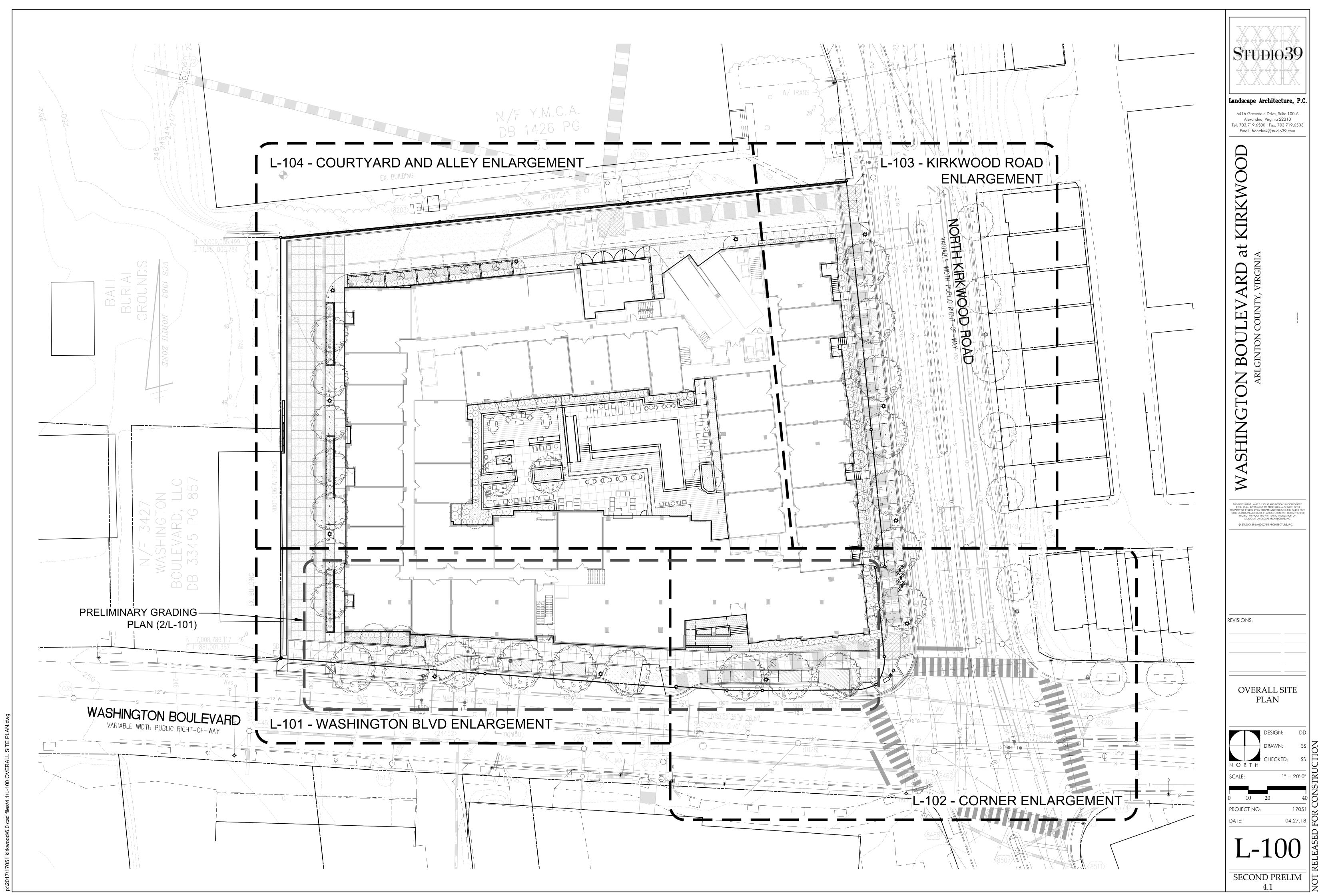
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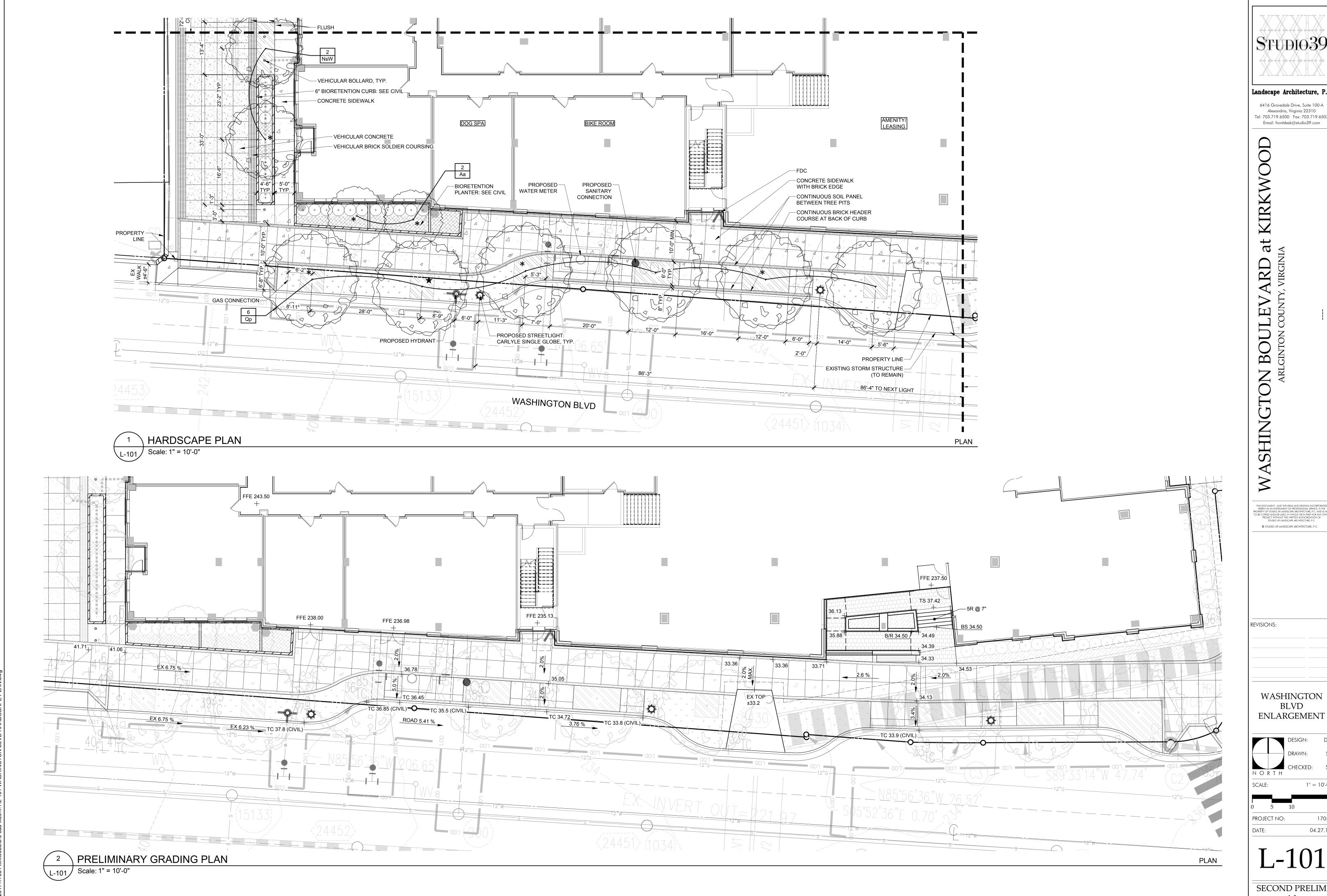
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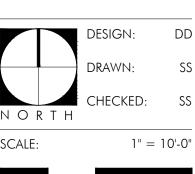
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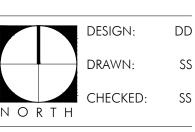
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ARLGINTON COUNTY, VIRGIN

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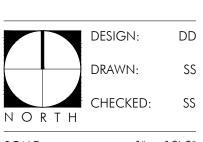
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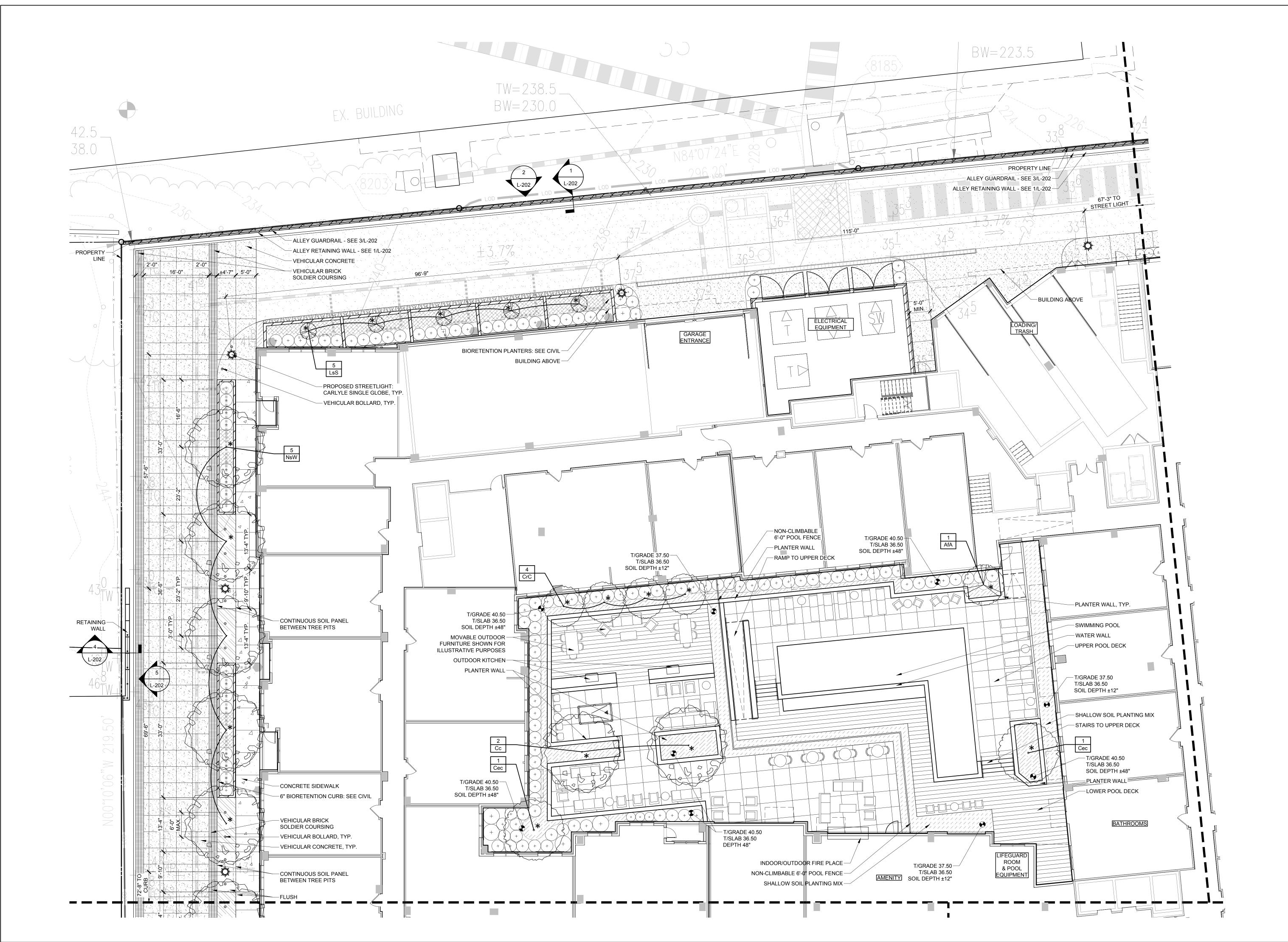
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KIRKWOOD ROAD ENLARGEMENT



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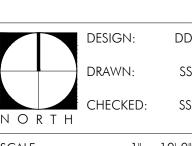
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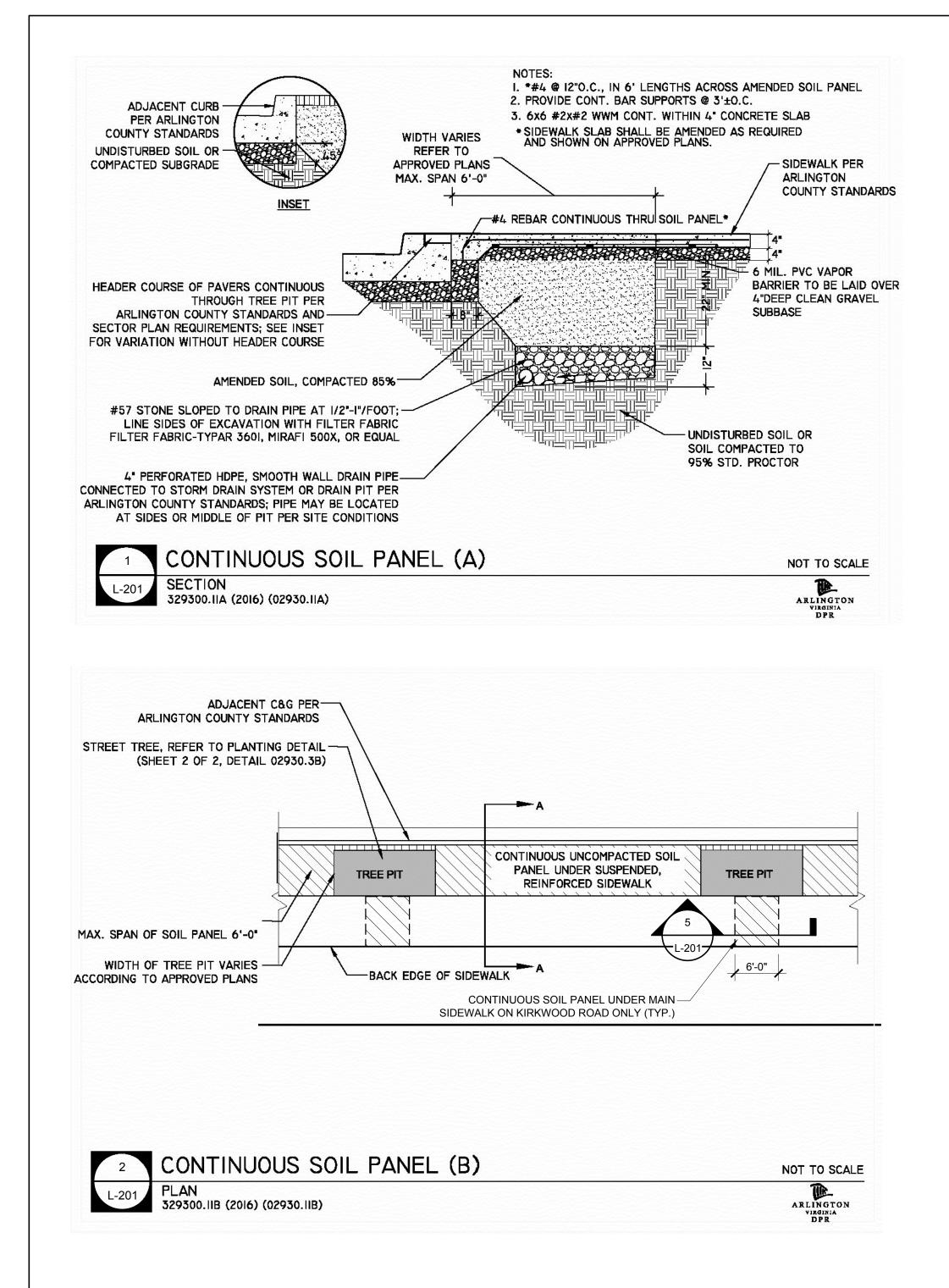
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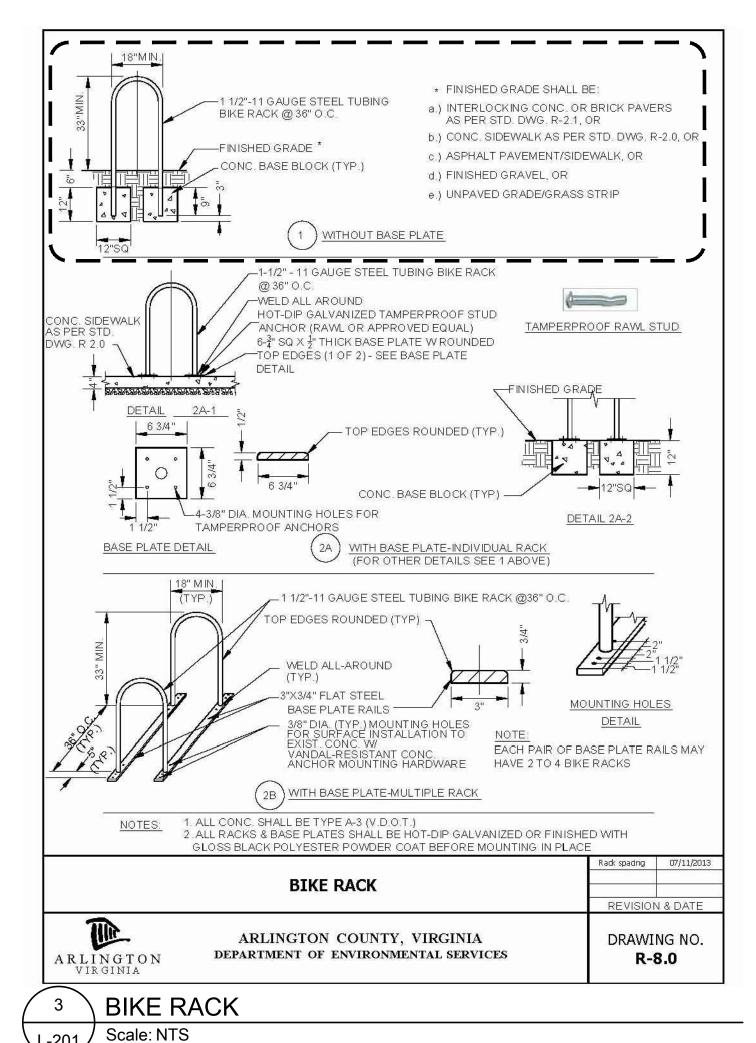
COURTYARD AND ALLEY **ENLARGEMENT** 

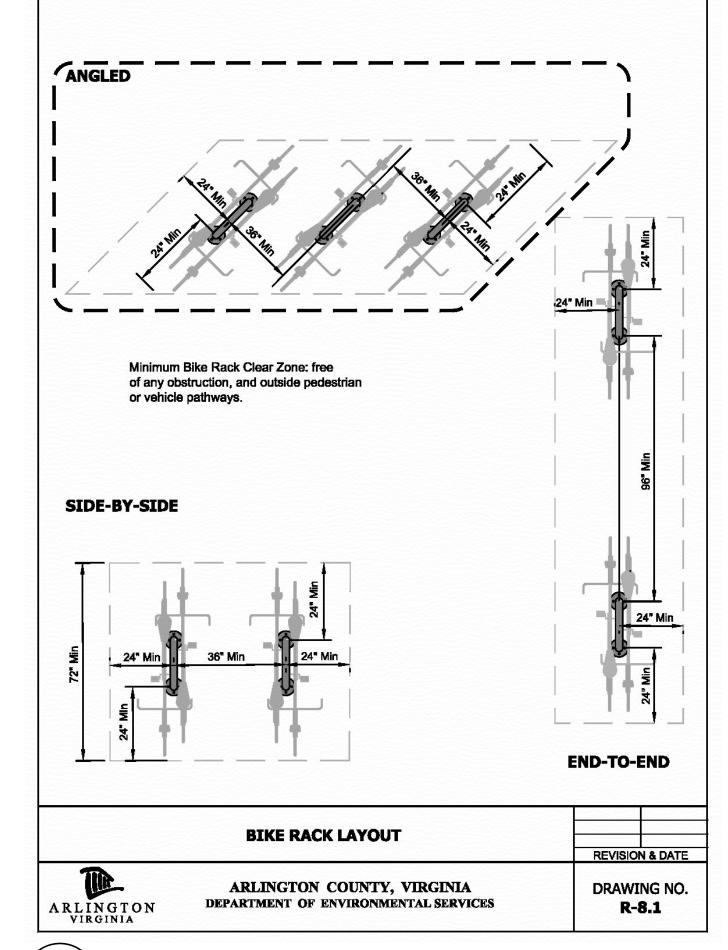


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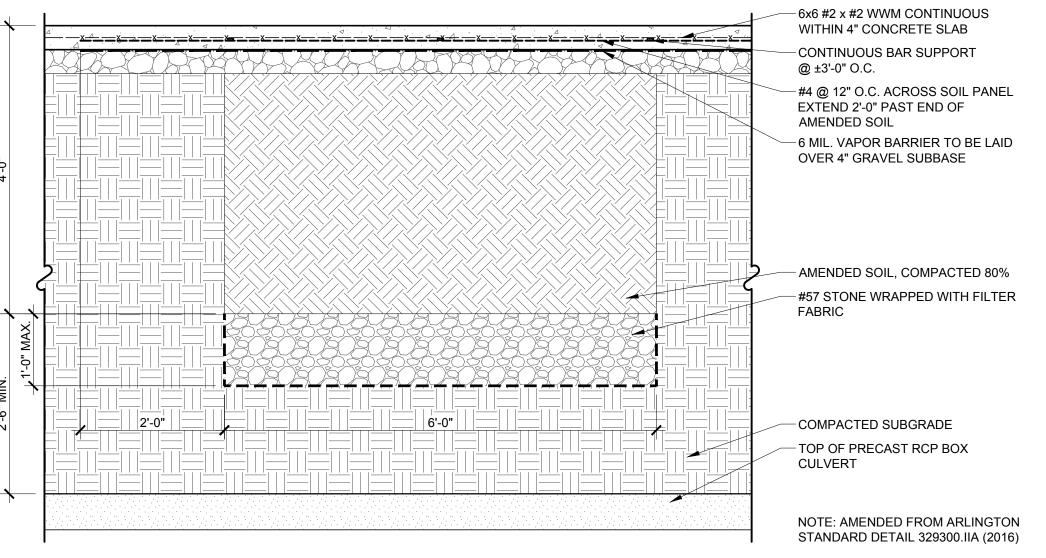
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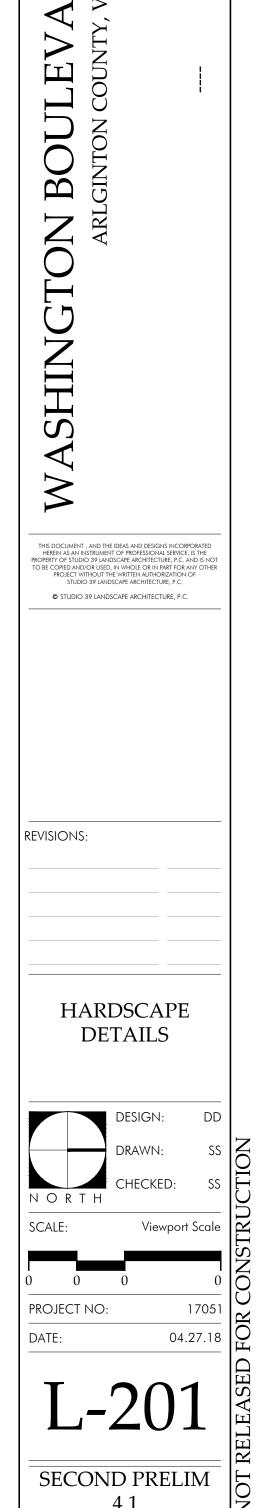
**BIKE RACK LAYOUT** Scale: NTS



SECTION

CONTINUOUS SOIL PANEL UNDER MAIN SIDEWALK

L-201 Scale: 3/4" = 1'-0"



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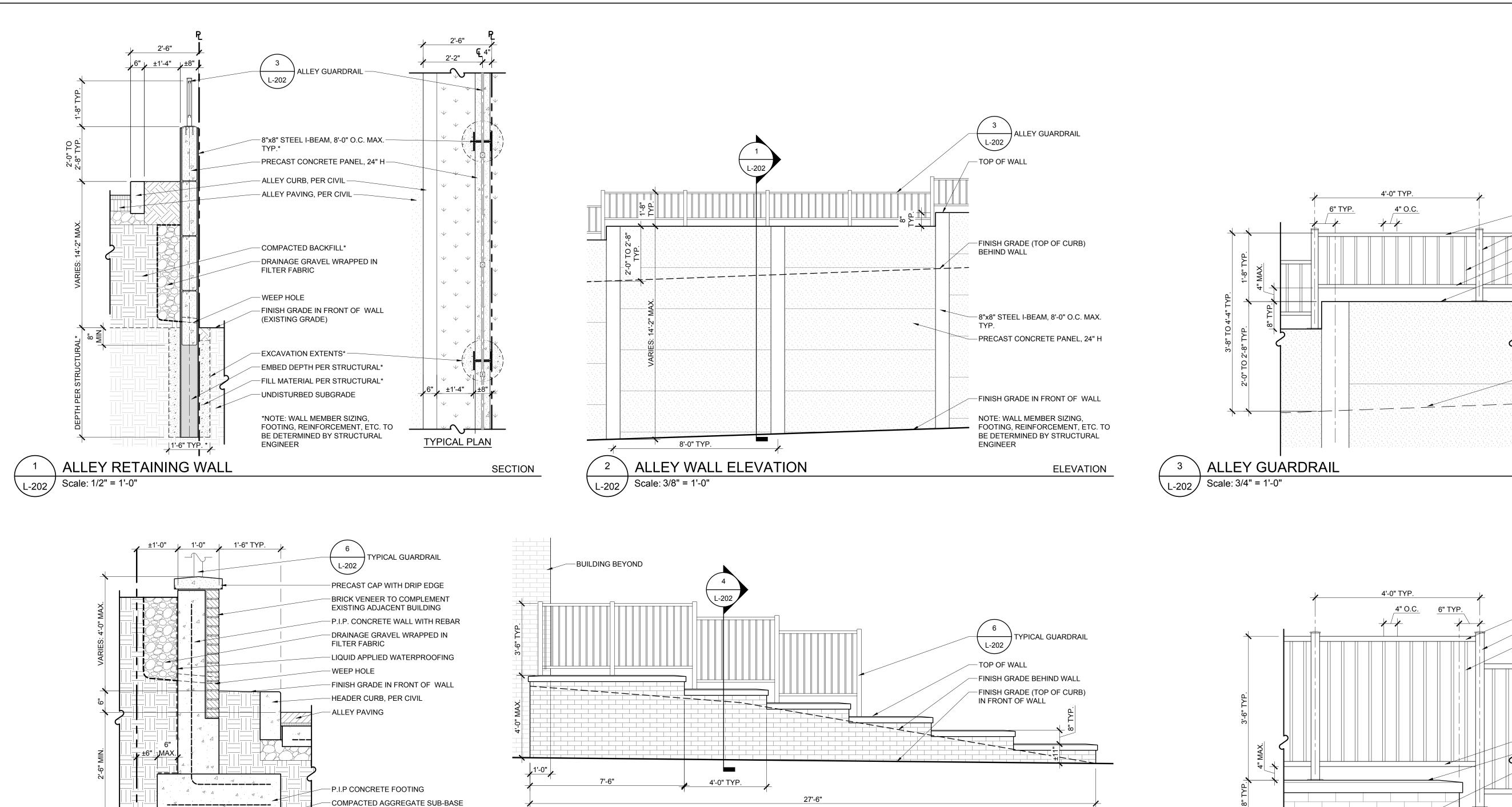
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KIRKWOO

at



SHARED STREET RETAINING WALL ELEVATION

/ Scale: 3/8" = 1'-0"

\L-202*/* 

NOTE: RETAINING WALL FOOTING, REINFORCEMENT, ETC. TO BE DETERMINED BY STRUCTURAL

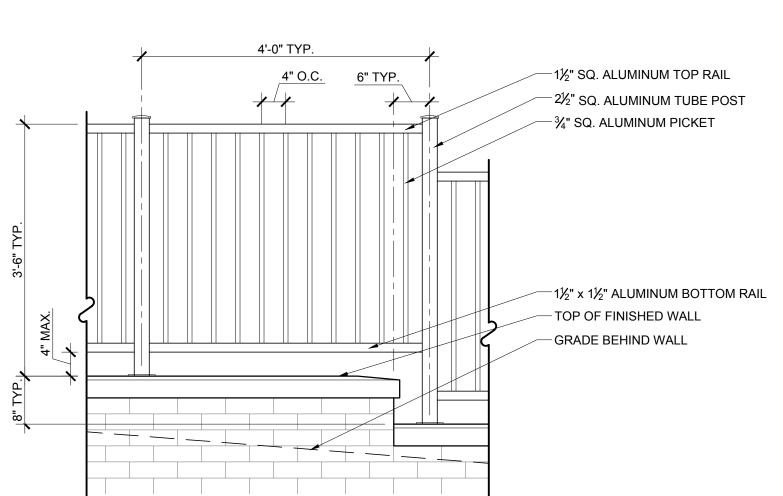
SECTION

**ENGINEER** 

SHARED STREET RETAINING WALL

Scale: 3/4" = 1'-0"

\L-202



TYPICAL GUARDRAIL L-202 | Scale: 3/4" = 1'-0"

**ELEVATION** 

**ELEVATION** 

-1" SQ. ALUMINUM TOP RAIL — 2" SQ ALUMINUM TUBE POST  $-\frac{3}{4}$ " SQ. ALUMINUM PICKET

—1" SQ. ALUMINUM BOTTOM RAIL

FINISHED GRADE BEHIND WALL

**ELEVATION** 

—FINISHED TOP OF WALL

HARDSCAPE **DETAILS** 

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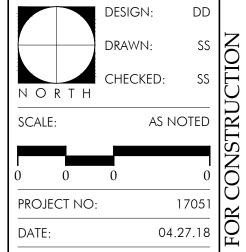
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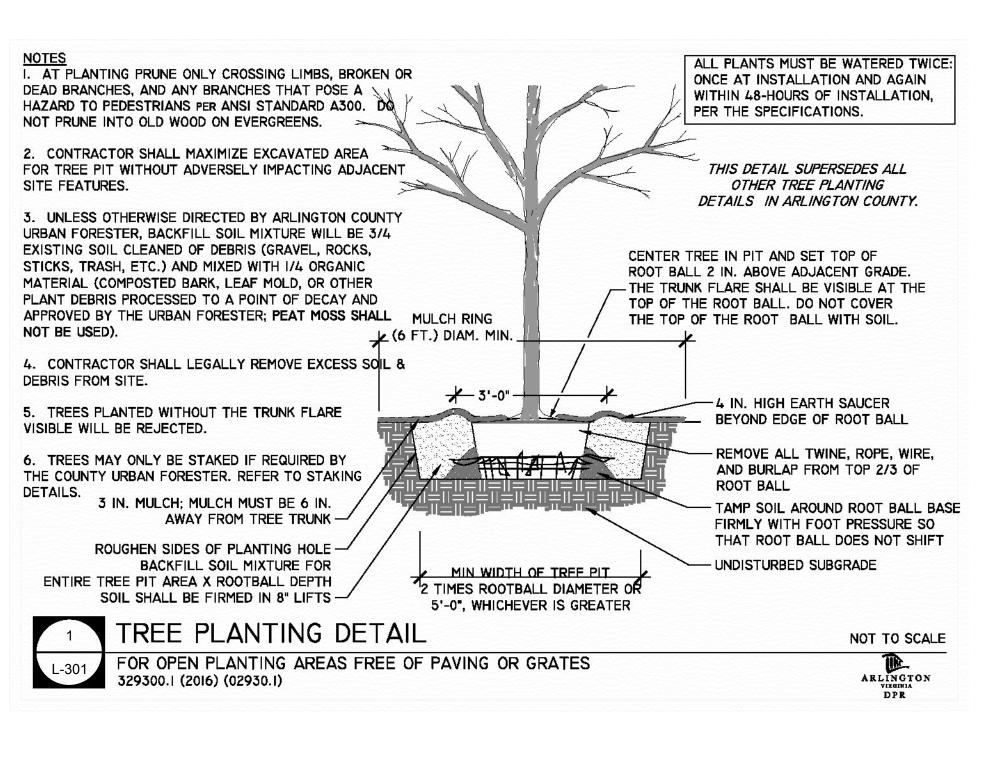
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BOULE

SHINGTON

KIRK





CENTER TREE IN PIT AND SET TOP OF

THE TRUNK FLARE SHALL BE VISIBLE

DO NOT COVER THE TOP OF THE ROOT

-3 IN. MULCH; MULCH MUST BE 6" AWAY

-REMOVE ALL TWINE, ROPE,

BACKFILL SOIL MIXTURE FOR ENTIRE TREE

BACKFILL SOIL MIXTURE BENEATH ROOTBALL;

UNDISTURBED SOIL OR SOIL COMPACTED TO

1/2" - 1'-0"

HARDWOOD STAKE

ARBORTIE OR APPROVED

TREE TRUNK

**EQUAL** 

ARLINGTON VIRGINIA

COMPACT TO 80-85% STD. PROCTOR IN 8" LIFTS

PIT PLANTING AREA AT DEPTH INDICATED;

COMPACT TO 95% STD. PROCTOR

95% STD. PROCTOR

WIRE, AND BURLAP FROM

TOP 2/3 OF ROOT BALL

AT THE TOP OF THE ROOT BALL.

BALL WITH SOIL.

FROM TREE TRUNK

ROOT BALL 2 IN. ABOVE ADJACENT SOIL.

THIS DETAIL SUPERSEDES ALL OTHER TREE STRIP PLANTING DETAILS IN ARLINGTON COUNTY.

WIDTH VARIES

TREE PLANTING STRIP (I of 2)

FOR TREE PLANTING STRIPS IN RIGHT-OF-WAY

329300.4A (2016) (02939.4A)

I. STAKING AND GUYING MAY ONLY BE

IMPLEMENTED WHERE SITE

CONDITIONS WARRANT THEIR USE.

URBAN FORESTER. STAKING AND

REQUIRED BY ARLINGTON COUNTY

PLANTED TREES WILL BE ASSESSED

INDIVIDUALLY BY ARLINGTON COUNTY

GUYING WILL BE INSTALLED ONLY IF

329300.6 (2016) (02930.6)

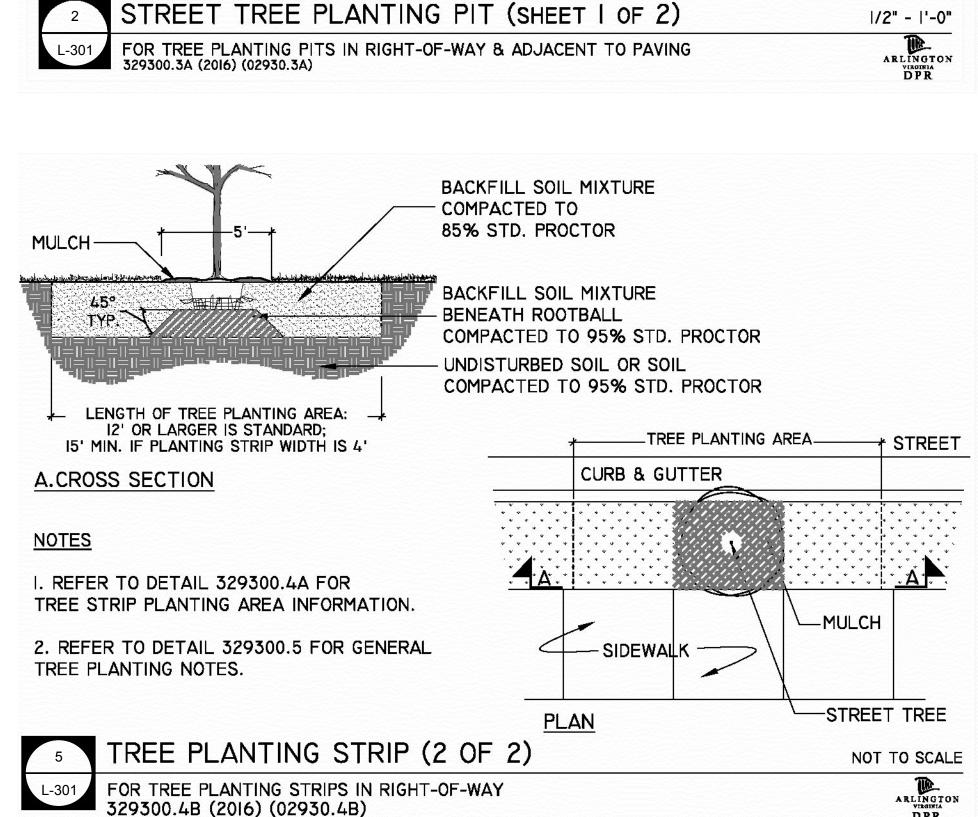
I. REFER TO DETAIL 329300.4B FOR

OF TREE PLANTING STRIP DETAIL.

2. REFER TO DETAIL 329300.5 FOR

GENERAL STREET TREE PLANTING

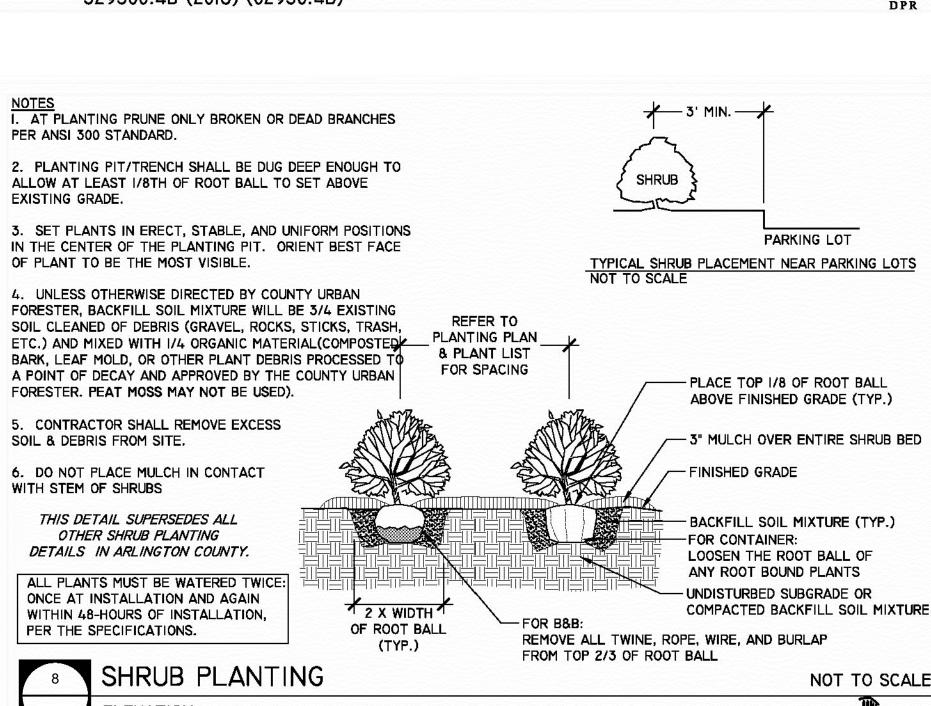
ADDITIONAL CROSS SECTION AND PLAN

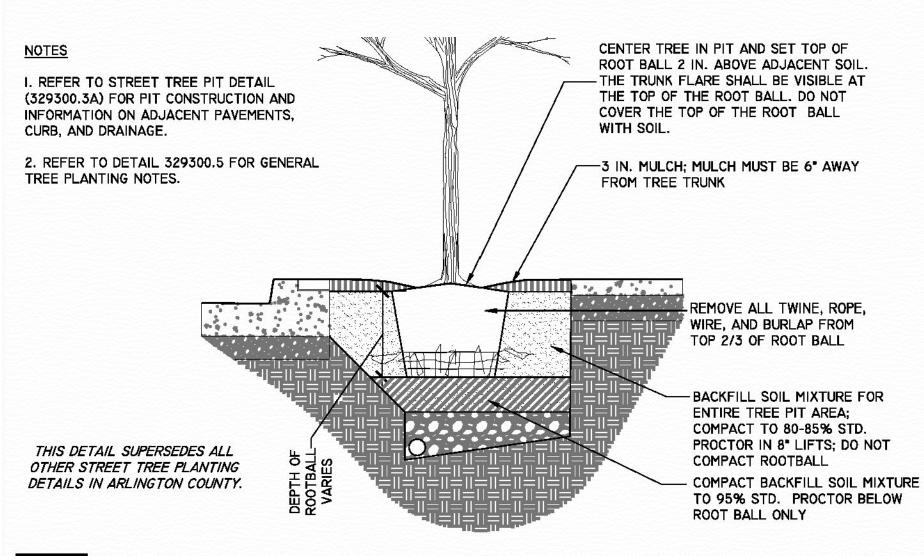


WIDTH VARIES

REFER TO

APPROVED PLANS





STREET TREE PLANTING PIT (SHEET 2 OF 2) FOR TREE PLANTING PITS IN RIGHT-OF-WAY & ADJACENT TO PAVING

ARLINGTON VIRGINIA

1/2" = 1'-0"

ADJACENT CURB

PER ARLINGTON

SIDEWALK PER ARLINGTON

COUNTY STANDARDS

- UNDISTURBED SOIL OR

SOIL COMPACTED TO

95% STD. PROCTOR

THIS DETAIL SUPERSEDES ALL OTHER

STREET TREE PIT CONSTRUCTION

DETAILS IN ARLINGTON COUNTY.

**COUNTY STANDARDS** 

UNDISTURBED SOIL OR

COMPACTED SUBGRADE

I. A PERMIT IS REQUIRED WHEN TREES ARE PLANTED IN PUBLIC RIGHT-OF-WAY OR IN A PUBLIC EASEMENT. THE DEPARTMENT OF ENVIRONMENTAL SERVICES SHALL ISSUE THE PERMIT ACCORDING TO THE PROVISIONS OF THE CURRENT ARLINGTON COUNTY ADMINISTRATIVE REGULATION 4.3.

329300.3B (2016) (02930.3B)

2. TREE SPECIES SHALL BE SELECTED FROM THE "ARLINGTON COUNTY STREET TREE LIST" OR PER SECTOR PLAN REQUIREMENTS.

3. TREES SHALL BE NURSERY GROWN SPECIMENS THAT MEET THE LATEST EDITION OF THE AMERICAN STANDARDS FOR NURSERY STOCK (ANSI Z60). BALLED AND BURLAPPED TREES SHALL BE SECURELY HELD IN PLACE BY UNTREATED BURLAP AND STOUT ROPE (NYLON ROPE IS NOT ACCEPTABLE). LOOSE, BROKEN OR MANUFACTURED BALLS ARE UNACCEPTABLE.

4. CALL MISS UTILITY AT (800) 552-7001 FOR UTILITY LOCATIONS PRIOR TO EXCAVATION.

5. AT TIME OF PLANTING PRUNE ONLY CROSSING LIMBS, BROKEN OR DEAD BRANCHES, AND ANY BRANCHES THAT POSE A HAZARD TO PEDESTRIANS. DO NOT PRUNE INTO OLD WOOD ON EVERGREENS.

6. TREE PIT AND TREE STRIP PLANTING AREA DIMENSIONS: (A) 5' X I2' OR LARGER IS STANDARD (B) 4' X 15' MINIMUM IS ALLOWED PER SITE CONDITIONS AND COUNTY URBAN FORESTER'S APPROVAL.

7. SPACE TREES 25'-30' APART OR PER SECTOR PLAN REQUIREMENTS OR SITE CONDITIONS.

8. SITE CHARACTERISTICS, SUCH AS OVERHEAD POWER LINES, EXISTING VEGETATION, AND INFRASTRUCTURE ITEMS SUCH AS CURBS, SIDEWALKS AND UTILITIES SHALL BE CONSIDERED. TREES THAT GROW TALLER THAN 25 FEET SHOULD NOT BE PLANTED DIRECTLY UNDER POWER LINES. WHEN POSSIBLE THE TREE LEADER SHALL BE OFFSET FROM POWER LINES.

9. BACKFILL SOIL MIXTURE SHALL BE 3/4 EXISTING SOIL CLEANED OF DEBRIS (GRAVEL, ROCKS, STICKS, TRASH, ETC.) AND MIXED WITH 1/4 ORGANIC MATERIAL (COMPOSTED BARK, LEAF MOLD, OR OTHER PLANT DEBRIS PROCESSED TO A POINT OF DECAY AND APPROVED BY THE COUNTY URBAN FORESTER, PEAT MOSS MAY NOT BE USED.

10. IF THE QUANTITY OF ACCEPTABLE EXISTING SOIL IS INSUFFICIENT FOR THE PLANTING REQUIREMENTS, THE CONTRACTOR MAY USE TOPSOIL. SOIL TEST REPORT RESULTS FOR THE TOPSOIL WILL BE MADE AVAILABLE TO THE COUNTY URBAN FORESTER UPON REQUEST. CONTRACTOR SHALL SUBMIT TOPSOIL FOR APPROVAL TO COUNTY URBAN FORESTER THAT MEETS THE

FOLLOWING SPECIFICATIONS: (A.) TOPSOIL CONSISTS OF A SANDY LOAM WITH UNIFORM COMPOSITION AND IS FREE OF STONES, LUMPS, PLANTS, ROOTS, AND OTHER DEBRIS OVER I/2" IN LENGTH.

(B.) TOPSOIL HAS A PH RANGE OF 5.5 TO 6.5 AND A MINIMUM CONTENT OF 1.0% ORGANIC MATTER (C.) TOPSOIL DOES NOT CONTAIN TOXIC SUBSTANCES HARMFUL TO PLANT GROWTH. SOLUBLE SALT LEVEL SHALL NOT EXCEED 3 MILLIOHMS PER CENTIMETER.

II. TREES PLANTED WITHOUT THE TRUNK FLARE VISIBLE WILL BE REJECTED.

12. TREES MAY ONLY BE STAKED IF REQUIRED BY THE COUNTY URBAN

FORESTER. REFER TO ARLINGTON COUNTY STANDARD STAKING DETAILS. 13. MULCH SHALL BE CLEAN, SCREENED, DOUBLE-HAMMERED HARDWOOD BARK MULCH, UNIFORM IN SIZE AND FREE OF STONES, CLODS, NON-ORGANIC DEBRIS AND OTHER FOREIGN MATERIAL.

14. ALL PLANTS SHALL BE WATERED TWICE: ONCE AT INSTALLATION AND AGAIN WITHIN 48-HOURS OF INSTALLATION. EACH WATERING WILL CONSIST

OF 20 GALLONS PER TREE. 15. CONTRACTOR SHALL LEGALLY REMOVE EXCESS SOIL & DEBRIS FROM

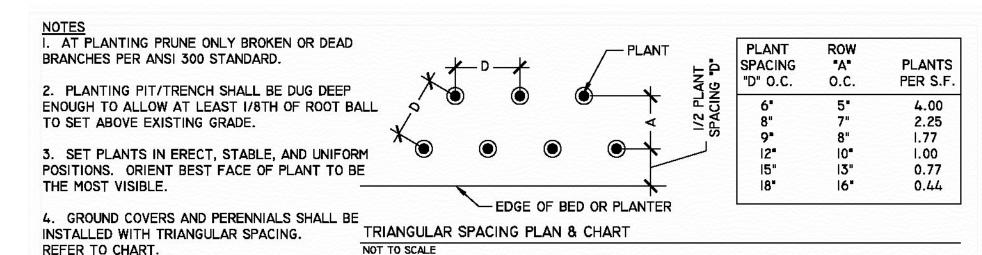


GENERAL NOTES FOR STREET TREE PLANTINGS

FOR TREES PLANTED IN RIGHT-OF-WAY

ARLINGTON

329300.5 (2016) (02930.5)



& SCHEDULE

REFER TO CHART. SEE PLANTING PLAN 4. UNLESS OTHERWISE DIRECTED BY PROJECT SPECIFICATIONS OR COUNTY URBAN FORESTER, BACKFILL SOIL MIXTURE WILL BE 3/4 EXISTING SOIL CLEANED OF DEBRIS (GRAVEL, ROCKS, STICKS, TRASH, ETC.) AND MIXED WITH 1/4 ORGANIC MATERIAL (COMPOSTED BARKO) LEAF MOLD, OR OTHER PLANT DEBRIS PROCESSED TO A POINT OF DECAY AND APPROVED BY THE COUNTY URBAN FORESTER; PEAT MOSS SHALL NOT BE USED).

5. CONTRACTOR SHALL REMOVE EXCESS SOIL & DEBRIS FROM SITE.

6. DO NOT PLACE MULCH IN CONTACT WITH STEM OF PLANTS.

ALL PLANTS MUST BE WATERED TWICE: ONCE AT INSTALLATION AND AGAIN WITHIN 48-HOURS OF INSTALLATION, PER THE SPECIFICATIONS.

PLANTING BED BACKFILL SOIL MIXTURE LOOSEN THE ROOT BALL OF ANY ROOT BOUND PLANTS (TYP.) UNDISTURBED SUBGRADE OR

COMPACTED BACKFILL SOIL MIXTURE THIS DETAIL SUPERSEDES ALL OTHER GROUND COVER PLANTING DETAILS IN ARLINGTON COUNTY.

- PLACE TOP I/8 OF ROOT BALL

- 3" MULCH OVER ENTIRE

ABOVE FINISHED GRADE (TYP.)

GROUND COVERS & PERENNIAL PLANTING NOT TO SCALE ARLINGTON VIRGINIA

**REVISIONS:** 

PLANTING **DETAILS** 

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STUDIO39

Landscape Architecture, P.C.

6416 Grovedale Drive, Suite 100-A

Alexandria, Virginia 22310

Tel: 703.719.6500 Fax: 703.719.6503

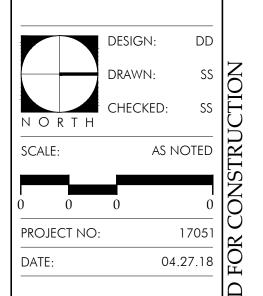
Email: frontdesk@studio39.com

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4.1

- ROOT BALL URBAN FORESTER. CONDITIONS WHERE STAKING AND GUYING MAY BE - PLANTING PIT PLAN VIEW NECESSARY TO ENSURE STABILITY NOT TO SCALE INCLUDE: WINDY LOCATIONS, STEEP SLOPES, OR WHERE VANDALISM MAY BE A CONCERN. -SURVEYOR'S FLAG 2. STAKES OR GUYS WILL BE INSTALLED USING ACCEPTED (2) 2" X 2" X 8' HARDWOOD STAKES ARBORICULTURE PRACTICES. TREES SET OUTSIDE OF ROOTBALL SHALL STAND PLUMB AFTER STAKING. \* WIDE, FLAT, WOVEN POLYPROPLENE MATERIAL 3. INSTALLATION WILL INCLUDE THE 900 LB. BREAK STRENGTH ("ARBOR TIE" OR AN REMOVAL OF ALL STAKING AND APPROVED EQUAL) SHALL BE LOOPED AROUND GUYING MATERIAL ONE YEAR AFTER THE TREE THROUGH EACH OTHER, TWISTED AND INSTALLATION. ANY HOLES LEFT BY SECURED TO THE STAKE IN A MANNER WHICH REMOVING STAKING SHALL BE FILLED PERMITS TREE MOVEMENT AND SUPPORTS THE WITH APPROVED TOPSOIL/BACKFILL MIXTURE. 4. REFER TO DETAILS FOR TREE PLANTING INFORMATION. THIS DETAIL SUPERSEDES ALL OTHER DECIDUOUS TREE STAKING DETAILS IN ARLINGTON COUNTY. DECIDUOUS TREE STAKING **ELEVATION** 

NOT TO SCALE ARLINGTON

ELEVATION 329300.8 (2016) (02930.8)

I. TREE GRATES MAY ONLY BE USED UPON

APPROVAL OF ARLINGTON COUNTY URBAN

2. REFER TO DETAIL 329300.5 FOR GENERAL

3. INSTALL RAILING, RAISED CURB, OR BORDER

STREET TREE, REFER TO PLANTING DETAIL

(SHEET 2 OF 2, DETAIL 329300.3B)

ARLINGTON COUNTY STANDARDS

ARLINGTON COUNTY STANDARDS AND-

HEADER COURSE OF PAVERS CONTINUOUS

SECTOR PLAN REQUIREMENTS; SEE INSET FOR VARIATION WITHOUT HEADER COURSE

ADJACENT CURB PER

THROUGH TREE PIT PER

#57 STONE SLOPED TO DRAIN PIPE AT 1/2"-1"/FOOT;

CONNECTED TO STORM DRAIN SYSTEM OR DRAIN PIT PER

ARLINGTON COUNTY STANDARDS; PIPE MAY BE LOCATED

LINE SIDES OF EXCAVATION WITH FILTER FABRIC

4" PERFORATED HDPE, SMOOTH WALL DRAIN PIPE

AT SIDES OR MIDDLE OF PIT PER SITE CONDITIONS

STREET TREE PLANTING NOTES.

PER APPROVED PLANS.

FORESTER.

NOT TO SCALE ARLINGTON

**ELEVATION** 329300.10 (2016) (02930.10)

QTY	KEY	BOTANICAL NAME	COMMON NAME	HEIGHT	CALIPER/ SPREAD	REMARKS	QTY FOR CREDIT	COVERAGE	TOTAL
OFFSITE	TREE	S (NOT COUNTED FOR CREDIT)							
20	TBD	Medium or Large Shade locations to be determine		14`-16`	3" - 3 1/2"		0	0.00	0.0
DECIDU	OUS S	HADE TREES							
2	Сс	Carpinus caroliniana	American Hornbeam	10`-12`	3" - 3 1/2"		2	218.75	437.5
7	NsW	Nyssa sylvatica `Wildfire`	Wildfire Sour Gum	14`-16`	3" - 3 1/2"		5	312.50	1,562.5
16	Qp	Quercus phellos	Willow Oak	14`-16`	3" - 3 1/2"		10	312.50	3,125.0
25	SHAE	DE TREE SUBTOTAL	1				17		
ORNAMI	 ENTAL	TREES							
2	Aa	Amelanchier arborea	Downy Serviceberry	8`-10`	1 1/2" min.	Multi-trunk	2	218.75	437.5
2	Cec	Cercis canadensis	Eastern Redbud	8`-10`	1 1/2" min.	Multi-trunk	2	218.75	437.5
7	CrC	Cornus `Rutdan` Celestial	Celestial Dogwood	8`-10`	1 1/2" min.	Multi-trunk	7	175.00	1,225.0
11	ORNA	AMENTAL TREE SUBTO	ΓAL				11		
UPRIGH	T SHAI	DE TREES							
1	AfA	Acer x freemanii `Armstrong`	Freeman Maple	14`-16`	3" min.		1	110.00	110.0
4	GbF	Ginkgo biloba `Fastigiata`	Upright Ginkgo	12`-14`	3" min.		4	50.00	200.0
5	LsS	Liquidambar styraciflua `Slender Silhouette`	Columnar Sweet Gum	14`-16`	3" min.		5	62.50	312.5
10	UPRI	GHT SHADE TREE SUBT	OTAL				10		
TOTAL (	COVER	AGE AREA							7,847.5
SITE AR	EA								75,187
TOTAL	SITI	E COVERAGE							10.4%

1. All trees to be B&B, full uniform crown, symmetrical branching, full specimen.

• • •	7 th troop to be Bab, ran armorni brown, by
2.	Multi-trunk trees to have 3 trunks minimum

TREE REPLACEMENT									
REPLACEMENT TREES REQUIRED (SEE SHEET C-1202)									
PROVIDED	REPLACEMENT VAUE	TOTAL							
OFFSITE SHADE TREES	20	1.00	20						
SHADE TREES	17	1.00	17						
ORNAMENTAL TREES	11	0.33	3.67						
UPRIGHT SHADE TREES	10	0.33	3.33						
TOTAL PROVIDED			44						
ADDITIONAL TREES REQUIRED	)		5						
REQUIRED TREE FUND CONTR	\$2,400	\$12,000							

## CONCEPT PLANT SCHEDULE

	MEDIUM SHRUB	173
( + )	Clethra alnifolia `Hummingbird` / Summersweet	
	Cornus sericea `Arctic Fire` / Arctic Fire Dogwood	
	llex glabra `Shamrock` / Inkberry	
	Prunus laurocerasus `Otto Luyken` / Luykens Laurel	
	Rhododendron azalea `Girard`s Crimson` / Girard`s Crimson Azalea	

73

525 sf

+ Buxus microphylla 'Winter Gem' / Globe Winter Gem Boxwood Cornus sericea `Kelseyi` / Kelseyi Dogwood Hydrangea quercifolia `Pee Wee` / Oakleaf Hydrangea Itea virginica `Little Henry` / Virginia Sweetspire

LARGE SHRUB Abelia x grandiflora `Edward Goucher` / Glossy Abelia Callicarpa americana / American Beautyberry Hydrangea arborescens `Annabelle` / Annabelle Smooth Hydrangea Itea virginica 'Henry's Garnet / Henry's Garnet Sweetspire Rhus aromatica `Gro-Low` / Gro-Low Fragrant Sumac Viburnum carlesii / Korean Spice Viburnum

BIORETENTION SHRUB Callicarpa americana / American Beautyberry Cornus sericea `Arctic Fire` / Arctic Fire Dogwood Fothergilla gardenii / Dwarf Fothergilla llex glabra `Shamrock` / Inkberry Itea virginica `Henry`s Garnet` / Henry`s Garnet Sweetspire Myrica pensylvanica / Northern Bayberry

> **BIORETENTION PLANTS** Amsonia hubrichtii / Threadlef Bluestar Bouteloua gracilis 'Blonde Ambition' / Blue Grama Carex pensylvanica / Pennsylvania Sedge Chasmanthium latifolium / Wood Oats Echinacea purpurea / Purple Coneflower Eupatorium purpureum `Little Joe` / Dwarf Joe-Pye Weed Helianthus angustifolius 'Low Down' / Swamp Sunflower Juncus effusus / Soft Rush Panicum virgatum `Shenendoah` / Burgundy Switch Grass Pycnanthemum muticum / Clustered Mountainmint Solidago rugosa `Golden Fleece` / Autumn Goldenrod Sporobolus heterolepis / Prairie Dropseed

1,186 sf PERENNIALS, GRASSES & GROUNDCOVERS Amsonia hubrichtii / Threadlef Bluestar Chasmanthium latifolium / Wood Oats Echinacea purpurea / Purple Coneflower Helianthus angustifolius 'Low Down' / Swamp Sunflower Hypericum calycinum / Creeping St. John's Wort Liatris spicata / Spike Gayfeather Nepeta x faassenii 'Walkers Low' / Walkers Low Catmint Panicum virgatum `Shenendoah` / Burgundy Switch Grass Rudbeckia fulgida sullivantii `Goldsturm` / Black-eyed Susan Salvia nemorosa `May Night` / May Night Sage Sisyrinchium angustifolium `Lucerne` / Lucerne Blue Eyed Grass Solidago rugosa 'Golden Fleece' / Autumn Goldenrod Sporobolus heterolepis / Prairie Dropseed

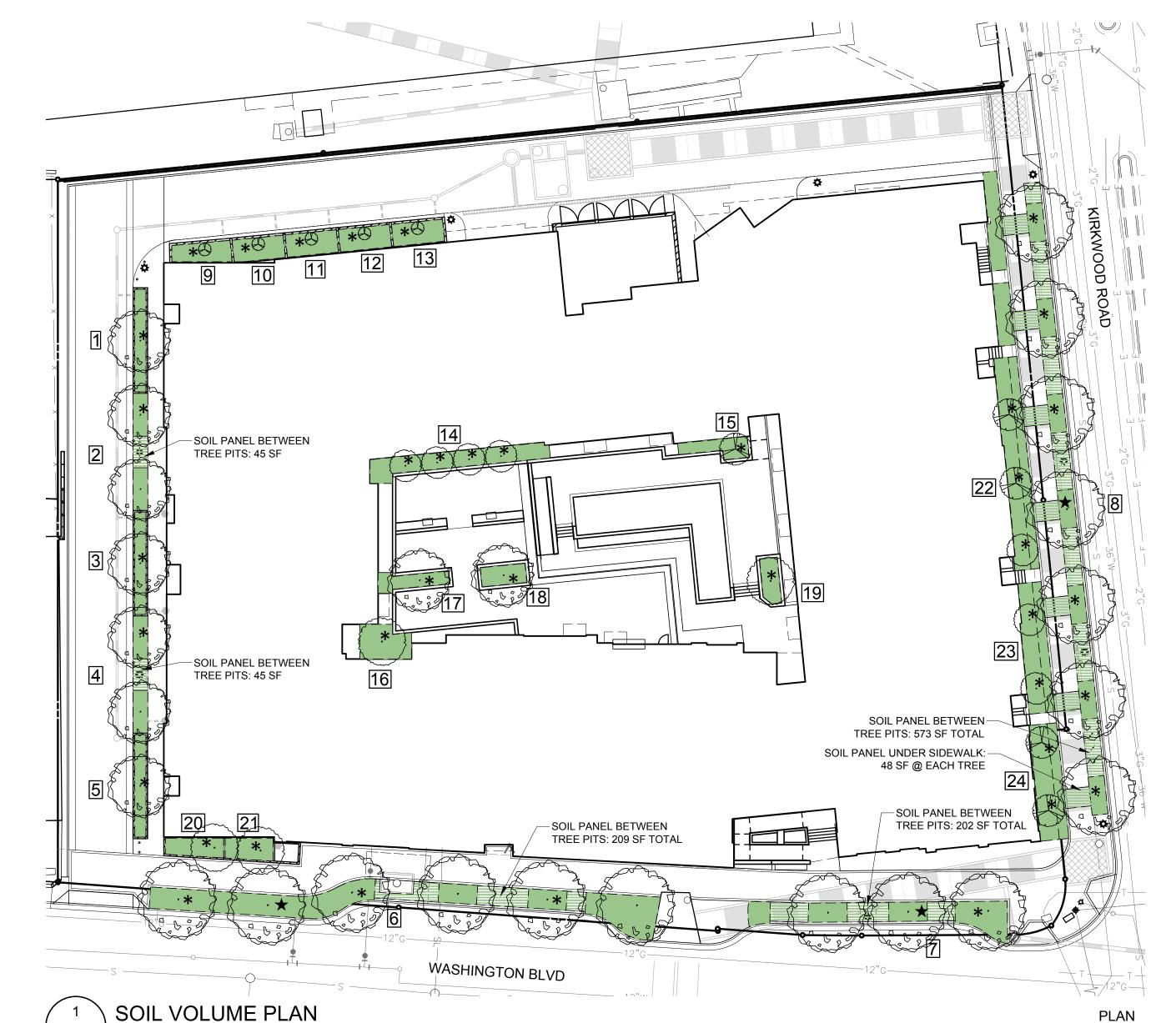
Stipa tenuissima / Finestem Needlegrass

Carex pensylvanica / Pennsylvania Sedge Hypericum calycinum / Creeping St. John's Wort

692 sf SHALLOW SOIL PLANTING MIX Allium schoenoprasum / Common Chives Allium tanguticum `Summer Beauty` / Summer Beauty Globe Lily Bouteloua gracilis 'Blonde Ambition' / Blue Grama Delosperma cooperi / Purple Ice Plant Phedimus takesimensis `Golden Carpet` / Golden Carpet Evergreen Sedum Sedum album 'Murale' / Chubby Fingers Sedum hybridum `Immergrunchen` / Hybrid Stonecrop

Talinum calycinum / Largeflower Fameflower 1,202 sf TREE PIT GROUNDCOVERS Carex elata / Tufted Sedge

782 sf Festuca arundinacea 'Rebel IV' / Tall Fescue



SO	IL VOLUMES							
	REC		PRO	VIDED		FOR C	REDIT*	
KEY	TREE TYPE I		AREA (FT <sup>2</sup> )	DEPTH (FT)	VOLUME (CU FT)	TREE QTY	TREE QTY	CU FT PER TREE
1	Bio-Planter Deciduous Medium	300	112.0	3.0	336.0	1	1	336
2	Alley Medium Tree	600	167.4	4.0	669.6	2	1	670
3	Bio-Planter Deciduous Medium	300	112.0	3.0	336.0	1	1	336
4	Alley Medium Tree	600	167.7	4.0	670.8	2	1	671
5	Bio-Planter Deciduous Medium	300	112.0	3.0	336.0	1	1	336
6	Street Deciduous Large★	1,200	1071.5	4.0	4,286.0	6	3	1429
7	Street Deciduous Large★	1,200	550.5	4.0	2,202.0	3	1	2202
8	Street Deciduous Large★	1,200	1,971.8	4.0	7,887.2	7	6	1315
9	Bio-Planter Deciduous Small	300	108.6	3.0	325.8	1	1	326
10	Bio-Planter Deciduous Small	300	111.8	3.0	335.4	1	1	335
11	Bio-Planter Deciduous Small	300	112.0	3.0	336.0	1	1	336
12	Bio-Planter Deciduous Small	300	112.0	3.0	336.0	1	1	336
13	Bio-Planter Deciduous Small	300	110.7	3.0	332.1	1	1	332

Scale: 1" = 25'-0"

REQU		QUIRED			FOR CREDIT*			
KEY	TREE TYPE	CU FT PER TREE	AREA (FT <sup>2</sup> )	DEPTH (FT)	VOLUME (CU FT)	TREE QTY	TREE QTY	CU FT PER TREE
14	Deciduous Small	300	300.0	4.0	1,200.0	4	4	300
15	Deciduous Small	300	100.0	4.0	400.0	1	1	400
16	Deciduous Small	300	158.4	4.0	633.6	1	1	634
17	Deciduous Small	300	100.5	4.0	402.0	1	1	402
18	Deciduous Small	300	84.0	4.0	336.0	1	1	336
19	Deciduous Small	300	75.5	4.0	302.0	1	1	302
20	Bio-Planter Deciduous Small	300	101.9	3.0	305.7	1	1	306
21	Bio-Planter Deciduous Small	300	100.0	3.0	300.0	1	1	300
22	Deciduous Small	300	300.1	4.0	1,200.4	3	3	400
23	Deciduous Small	300	200.4	4.0	801.6	2	2	40
24	Deciduous Small	300	206.5	4.0	826.0	2	2	413

★ NOTE: 2 ADDITIONAL LARGE SHADE TREES WOULD MEET SOIL VOLUME MINIMUMS IF DEPTH IS COUNTED TO 5 FEET. CANOPY COVERAGE WOULD THEN EQUAL 11.3%.

STUDIO39

Landscape Architecture, P.C.

6416 Grovedale Drive, Suite 100-A Tel: 703.719.6500 Fax: 703.719.6503

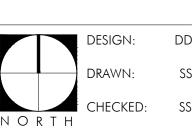
Alexandria, Virginia 22310 Email: frontdesk@studio39.com

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REVISIONS:

PLANT SCHEDULE



17051 X 04.27.18 OH PROJECT NO:

SECOND PRELIM 4.1 4.1