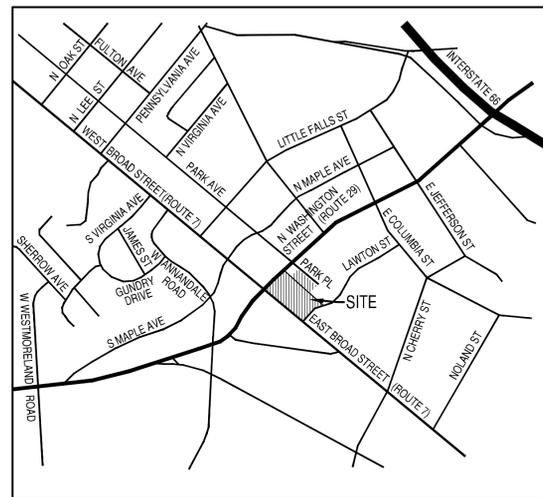


BROAD & WASHINGTON

CITY OF FALLS CHURCH, VIRGINIA

SPECIAL EXCEPTION AND CONCEPTUAL DEVELOPMENT PLAN

MUNIS #2019-



VICINITY MAP
1"=1000'



SHEET INDEX

- C1.0 COVER SHEET
- C2.0 NOTES AND SITE TABULATIONS
- C3.0 EXISTING CONDITIONS SURVEY PLAN
- C4.0 CONCEPTUAL DEVELOPMENT PLAN
- C5.0 PRELIMINARY GRADING AND UTILITY PLAN
- C6.0 CONCEPTUAL LANDSCAPE PLAN
- C7.0 CONCEPTUAL STREETSCAPE PLAN EAST BROAD STREET
- C8.0 CONCEPTUAL STREETSCAPE PLAN LAWTON STREET AND N. WASHINGTON STREET
- C9.0 CONCEPTUAL STREETSCAPE PLAN PARK PLACE
- C10.0 STREET FURNISHING DETAILS
- C11.0 ROADWAY FRONTAGE EXHIBIT
- C12.0 CONCEPTUAL PARKING PLANS
- C13.0 LANDSCAPE SCHEDULE, NOTES, DETAILS AND EXISTING TREE INVENTORY
- C14.0 EXISTING VEGETATIVE MAP
- C15.0 CONCEPTUAL SWM AND BMP PLAN AND DRAINAGE MAP
- C16.0 CONCEPTUAL SWM & BMP COMPUTATIONS AND DETAILS (1 OF 2)
- C17.0 CONCEPTUAL SWM & BMP COMPUTATIONS AND DETAILS (2 OF 2)
- L1.00 PLAZA + PASSAGE PARK LANDSCAPE PLAN
- 18 TOTAL SHEETS

OWNER/APPLICANT:

BROAD & WASHINGTON, LLC
4601 N. Fairfax Drive,
Suite 1150
Arlington, Virginia 22203

DEVELOPER:

Insight Property Group, LLC
4601 N. Fairfax Drive,
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ARCHITECT:

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Washington D.C. 20005

ATTORNEY / AGENT:

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1750 Tyson Boulevard,
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McLean, Virginia 22102

CIVIL ENGINEER:

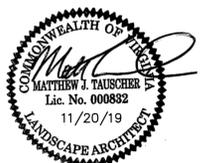
Bowman Consulting Group, LTD.
13461 Sunrise Valley Dr,
Suite 500
Herndon, Virginia 20171

TRAFFIC CONSULTANT:

Grove Slade Associates
3914 Centreville Road,
Suite 330
Chantilly, Virginia 20151

LANDSCAPE ARCHITECT:

Parker Rodriguez, Inc.
101 N. Union Street,
Suite 320
Alexandria, Virginia 22314



GENERAL NOTES:

- THE SUBJECT PROPERTIES SHOWN HEREON ARE CURRENTLY LISTED WITHIN THE CITY OF FALLS CHURCH TAX ASSESSMENT RECORDS AS FOLLOWS:

PARCEL I.D.	ADDRESS	OWNER	DEED BOOK/PAGE	EXISTING ZONE:
53-104-051	100 N. WASHINGTON ST	BROAD & WASHINGTON, LLC	4816/936	B-2 (CENTRAL BUSINESS)
53-104-036	127 E. BROAD ST	BROAD & WASHINGTON, LLC	4816/936	B-2 (CENTRAL BUSINESS)
53-104-050	131 E. BROAD ST	BROAD & WASHINGTON, LLC	4816/936	B-2 (CENTRAL BUSINESS)
53-104-015	PARK PL	CITY OF FALLS CHURCH	1261/0269	B-2 (CENTRAL BUSINESS)
- THE APPLICATION PROPERTY IS CURRENTLY ZONED B-2 (CENTRAL BUSINESS) ZONING DISTRICT. THIS APPLICATION INCLUDES A SPECIAL EXCEPTION IN ORDER TO DEVELOP THE SUBJECT SITE AS A MIXED USE DEVELOPMENT.
- THE SUBJECT PROPERTY LIES WITHIN AN AREA DESIGNATED AS "MIXED-USE AND BUSINESS" ON THE FUTURE LAND USE PLAN MAP OF THE CITY OF FALLS CHURCH COMPREHENSIVE PLAN.
- THE SUBJECT PROPERTY IS CURRENTLY SERVED BY FAIRFAX WATER AND CITY OF FALLS CHURCH SANITARY SEWER AND STORM SEWER UTILITIES.
- BOUNDARY INFORMATION AS SHOWN HEREON IS COMPILED FROM EXISTING LAND RECORDS OF ARLINGTON COUNTY, VIRGINIA AND FAIRFAX COUNTY, VIRGINIA AND A FIELD SURVEY PERFORMED BY BOWMAN CONSULTING GROUP, LTD. DATED SEPTEMBER 17, 2014.
- THE HORIZONTAL AND VERTICAL DATUM'S AS REFERENCED HEREON WERE ESTABLISHED BY STATIC GPS CONTROL METHODS. THE HORIZONTAL DATUM IS REFERENCED TO VIRGINIA COORDINATE SYSTEM OF 1983 (VCS 83), NORTH ZONE AND IS REFERENCED IN U.S. SURVEY FEET AND THE VERTICAL DATUM IS REFERENCED TO NGVD 83 AND WAS ESTABLISHED BY GPS METHODS.
- THE TOPOGRAPHICAL FEATURES AS SHOWN HEREON WERE COMPILED FROM CONVENTIONAL SURVEY METHODS.
- UNDERGROUND UTILITIES SHOWN HEREON ON BASED ON VISUAL OBSERVATION AND HAVE NOT BEEN SPECIFICALLY CONFIRMED.
- TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO UTILITY EASEMENTS HAVING A WIDTH OF TWENTY-FIVE (25) OR GREATER LOCATED WITHIN THE SUBJECT PROPERTY.
- THERE ARE NO AREAS OF SCENIC ASSETS OR NATURAL FEATURES DESERVING OF PROTECTION OR PRESERVATION ON THE SITE.
- THERE IS NO FLOODPLAIN WITHIN THE SUBJECT PROPERTY AS DESIGNATED BY THE FEDERAL INSURANCE ADMINISTRATION AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP FOR CITY OF FALLS CHURCH, VIRGINIA, COMMUNITY-PANEL NUMBER 5100540001C, EFFECTIVE DATE JULY 16, 2004. THERE ARE NO RESOURCE PROTECTION AREAS (RPA) OR ENVIRONMENTAL QUALITY CORRIDOR (EQC) WITHIN THE SUBJECT PROPERTY INDICATED ON CITY OF FALLS CHURCH GIS DATA.
- STORMWATER MANAGEMENT (SWM) AND BEST MANAGEMENT PRACTICES (BMP) ARE PROPOSED WITH THIS APPLICATION AND CONCEPTUAL DESIGN COMPUTATIONS ARE DEMONSTRATED HEREIN. FINAL DESIGN OF SWM/BMP FACILITIES WILL BE PROVIDED AT THE TIE OF FINAL SITE PLAN APPLICATION.
- THIS SITE SHALL BE DEVELOPED IN ONE PHASE SUBJECT TO REQUIRED PLAN APPROVALS AND PERMIT ISSUANCE.

REQUESTED LAND USE ACTIONS:

COMPREHENSIVE PLAN:

THE PURPOSE OF THIS COMPREHENSIVE PLAN AMENDMENT IS TO AMEND THE FUTURE LAND USE DESIGNATION ON THE CITY OWNED PROPERTY FROM BUSINESS USE TO MIXED-USE.

SPECIAL EXCEPTION:

Z.O. SECTION 48-90 (GENERAL REQUIREMENTS) & SECTION 48-488 (B-2 DISTRICT REQUIREMENTS)

- THE PURPOSE OF THIS SPECIAL EXCEPTION APPLICATION IS TO:
 - ALLOW FOR RESIDENTIAL USE WITHIN A MIXED-USE REDEVELOPMENT WITHIN THE B-2 ZONING DISTRICT.
 - ALLOW FOR ADDITIONAL BUILDING HEIGHT (OF APPROXIMATELY 15 FT)

WAIVER / VARIANCE REQUESTS:

Z.O. SECTION 48-97(2)-PARKING

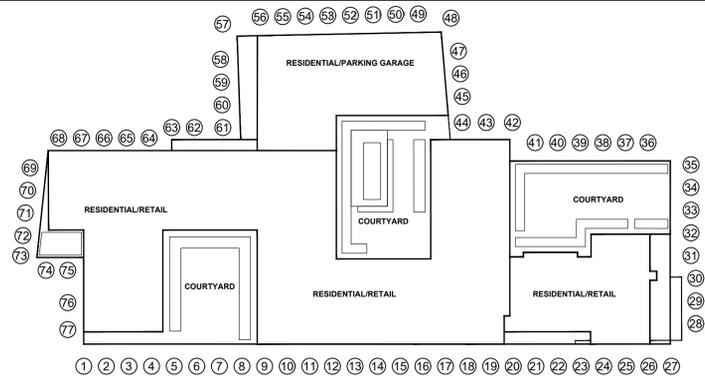
WAIVER OF THE REQUIRED PARKING (895 SPACES) TO THOSE PROVIDED (613 SPACES) AS DEMONSTRATED IN THE PARKING STUDY, TRAFFIC REDUCTION PLAN AND TRAFFIC DEMAND MANAGEMENT PLAN SUBMITTED UNDER SEPARATE COVER.

Z.O. SECTION 48-1181: PERIMETER PARKING LOT LANDSCAPING

WAIVER TO ELIMINATE REQUIRED PERIMETER PARKING LOT LANDSCAPING, AS PROPOSED PARKING IS LOCATED WITHIN AN OFF-STREET PARKING GARAGE STRUCTURE.

Z.O. SECTION 48-1182: INTERIOR PARKING LOT LANDSCAPING

WAIVER TO ELIMINATE REQUIRED INTERIOR PARKING LOT LANDSCAPING, INCLUDING FIVE PERCENT (5%) CANOPY COVERAGE, AS PROPOSED PARKING IS LOCATED WITHIN AN OFF-STREET PARKING GARAGE STRUCTURE.



AVERAGE GRADE SPOT LOCATION

(SPOT ELEVATION CALCULATED AT PROPOSED BUILDING FACE)

DEVELOPMENT NOTE:

- OWNER/CONTRACT OWNER SHALL JOIN IN THE SITE PLAN APPROVAL AND AGREES TO BE BOUND BY ALL SITE PLAN REQUIREMENTS.

AVERAGE GRADE TABULATIONS

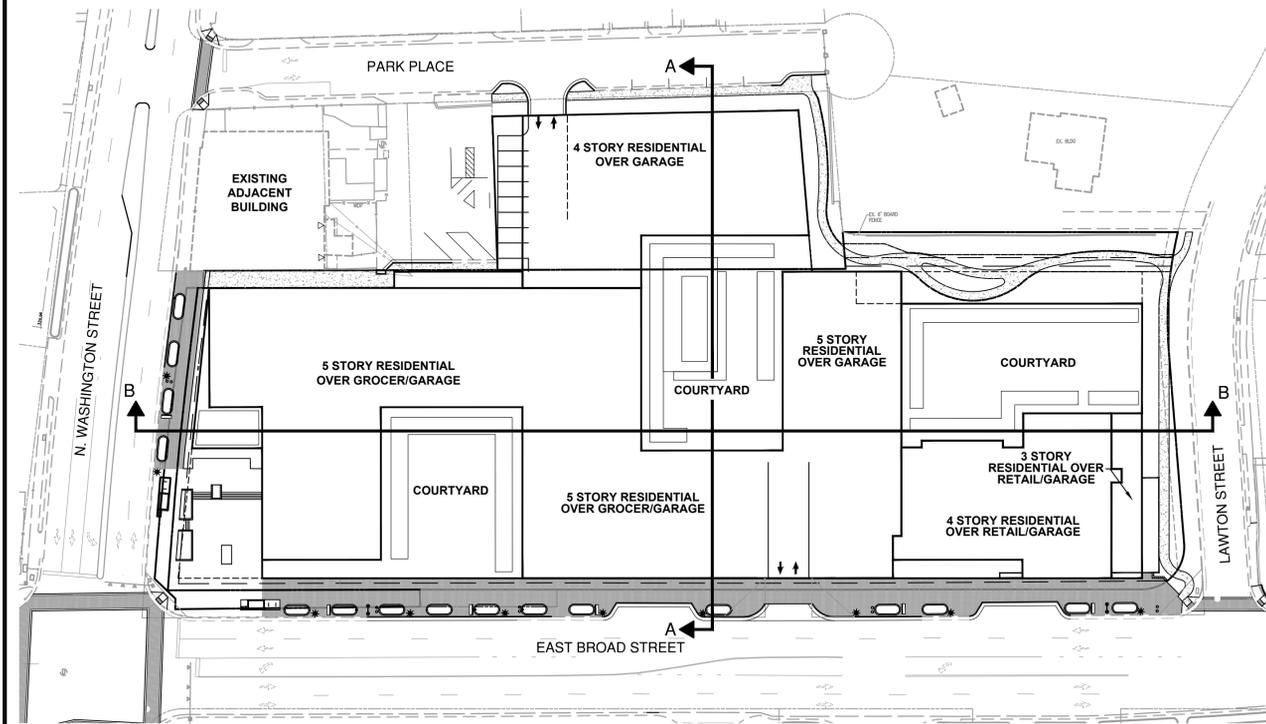
NUMBER	EXISTING GRADE ELEVATION (1)	PROPOSED GRADE ELEVATION (1)	BUILDING HEIGHT GRADE CALCULATION (1) (LOWER OF A OR B)
1	329.70	329.40	329.40
2	329.60	329.70	329.60
3	329.60	329.90	329.60
4	330.55	329.90	329.90
5	330.40	330.10	330.10
6	330.50	330.40	330.40
7	330.70	330.45	330.45
8	330.90	330.40	330.40
9	331.00	330.20	330.20
10	332.50	330.00	330.00
11	333.00	329.80	329.80
12	333.00	329.65	329.65
13	332.20	329.40	329.40
14	331.60	329.20	329.20
15	331.00	329.90	329.90
16	330.10	328.30	328.30
17	329.50	328.30	328.30
18	329.30	328.10	328.10
19	328.30	327.80	327.80
20	328.80	327.70	327.70
21	329.50	327.40	327.40
22	330.50	327.35	327.35
23	331.80	327.60	327.60
24	333.00	327.50	327.50
25	331.00	327.60	327.60
26	330.80	327.80	327.80
27	330.80	328.00	328.00
28	332.30	331.00	331.00
29	332.90	332.20	332.20
30	333.70	333.50	333.50
31	334.00	335.10	334.00
32	335.00	336.10	335.00
33	336.25	337.30	336.25
34	337.50	338.10	337.50
35	338.30	339.00	338.30
36	338.60	340.00	338.60
37	338.55	341.00	338.55
38	338.55	341.00	338.55
39	338.55	341.00	338.55
40	338.55	341.00	338.55
41	338.55	341.00	338.55
42	339.90	340.30	339.90
43	340.00	341.00	340.00
44	341.00	342.00	341.00
45	343.60	343.80	343.60
46	344.50	344.90	344.50
47	345.90	346.00	345.90
48	346.90	347.00	346.90
49	347.00	348.20	347.00
50	346.90	348.70	346.90
51	346.90	349.20	346.90
52	346.90	349.60	346.90
53	346.90	349.80	346.90
54	346.80	350.00	346.80
55	346.80	350.00	346.80
56	346.80	350.00	346.80
57	347.00	347.00	347.00
58	345.30	345.30	345.30
59	344.20	344.20	344.20
60	343.00	343.00	343.00
61	341.50	341.50	341.50
62	341.00	341.00	341.00
63	340.00	340.00	340.00
64	339.20	339.20	339.20
65	337.50	337.50	337.50
66	337.00	337.00	337.00
67	337.00	337.00	337.00
68	337.00	337.70	337.00
69	336.35	336.60	336.35
70	335.00	335.40	335.00
71	334.10	334.30	334.10
72	334.10	333.40	333.40
73	334.10	332.50	332.50
74	329.60	330.00	329.60
75	329.60	330.00	329.60
76	329.60	329.90	329.60
77	329.60	329.80	329.60
AVERAGE	336.36	336.25	335.65

(1) Final elevation subject to change with final site plan design.

SITE TABULATIONS:

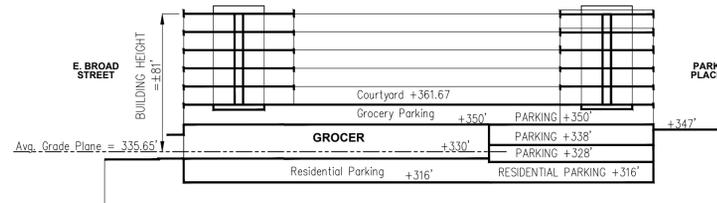
Current Zoning:	B-2 (Central Business)	
Proposed Zoning:	B-2 (Central Business)	
Total Site Area:	3.16 AC (per Field Survey)	
Proposed Use:	Mixed-Use (Residential / Retail)	
FLOOR AREA		
Proposed GFA:		
Retail:	13,400 GFA	
Grocery:	56,600 GFA	
Residential Area (Includes Residential Lobby Area):	352,800 GFA	
Total Gross Floor Area:	422,800 GFA (1)(2)	
FLOOR AREA RATIO (F.A.R.)		
Minimum F.A.R.:	None	
Maximum F.A.R.:	None	
Proposed F.A.R.:	3.07 (2)(3)	
Density		
Total Proposed Dwelling Units:	350 D.U.	
Proposed Residential Density:	111 DU/AC	
Maximum Building Height Allowed:		
	115 FT W/ Bonus (75 FT By-Right + 40 FT By S.E.)	
Proposed Building Height: (measured from average grade)		
	±81 FT	
Open Space (Usable)(%):		
	REQUIRED	PROVIDED
	N/A	±12 % (Public Accessible)
YARD REQUIREMENTS:		
	REQUIRED	PROVIDED
Minimum Front Yard Setback E. Broad Street (To Face of Curb):	20 FT	20 FT
Minimum Front Yard Setback N. Washington Street (To Face of Curb):	20 FT	20 FT
Minimum Front Yard Setback Lawton Street (To Face of Curb):	14 FT	20 FT
Minimum Front Yard Setback Park Place (To Face of Curb):	14 FT	14 FT
Minimum Side/Rear Yard Setback (To Property Line):	20 FT (Adjacent 'R' District) 0 FT (Adjacent B-2 District)	20 FT 0 FT
PARKING TABULATIONS:		
	REQUIRED	PROVIDED
Parking - Trade (Retail):		
Trade/General Merchandise Retail (1 Space/250 SF @ 13,400 SF)	54 Spaces	104 Spaces
Parking - Shopping Center:		
(Grocery) (1 Space/200 SF @ 56,600 SF)	283 Spaces	210 Spaces
Parking - Residence (Multi-Family):		
Studio/Efficiency Unit (1 Space/ D.U. @ 44 DU)	558 Spaces	299 Spaces
One Bedroom Unit (1.5 Space/ D.U. @ 197 DU)		
Two/Three Bedroom Unit (2 Space/ D.U. @ 109 DU)		
TOTAL AUTOMOBILE PARKING:	895 Spaces	613 Spaces (4)(5)
Bike Parking:		
Retail	18 Spaces	18 Spaces
Residential	149 Spaces	149 Spaces
TOTAL BIKE PARKING:	167 Spaces	167 Spaces
LOADING TABULATIONS:		
	REQUIRED	PROVIDED
General Retail-Merchandise/ Grocery	1 Space	2 Space
Residential Multi-Family	0 Space	1 Space

- Gross Floor Area (GFA) reported per code definition.
- F.A.R. / GFA does not include area of structured parking.
- F.A.R. is based on current site area prior to dedication/vacation of road frontage.
- Final provided parking quantity for the residential uses is subject to change with final dwelling unit count and mix, and final retail GFA as determined at final site plan and final parking reduction plan, by the City Planning Commission under Section 48-97(2) of the city code.
- Refer to conceptual parking plan herein, and parking reduction plan under separate cover, for layout and proposed distribution of parking spaces. Restricted parking (Residential uses) is to be located on parking levels P2-P1. Shared parking (Retail and Public access) is to be generally located on level P1, but may include a portion of level P2.



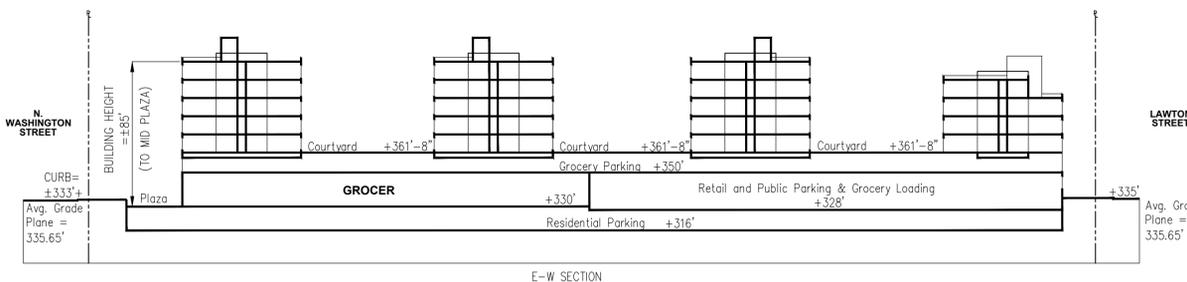
PLAN VIEW - SCHEMATIC PLAN

SCALE: 1" = 60'



CROSS SECTION 'A'-A' SCHEMATIC

SCALE: 1" = 50'



CROSS SECTION 'B'-B' SCHEMATIC

SCALE: 1" = 50'

NOTES AND SITE TABULATIONS

BROAD & WASHINGTON
CITY OF FALLS CHURCH, VIRGINIA

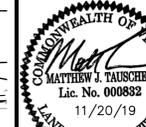
Bowman Consulting Group, Ltd.
13461 Sunrise Valley Drive
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Herndon, Virginia 20171
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Bowman
CONSULTING



PLAN STATUS		
11/20/19	1ST SUBMISSION	
DATE	DESCRIPTION	
MT	KF	MT
DESIGN	DRAWN	CHKD
SCALE	H: N/A	V:
JOB No. 8366-01-001		
DATE : NOVEMBER 2019		
FILE No. 8366-D-RZ-001		

SHEET C2.0



PLAN STATUS

11/20/19 1ST SUBMISSION

DATE DESCRIPTION

MT KF MT

DESIGN DRAWN CHKD

SCALE H: 1" = 25'

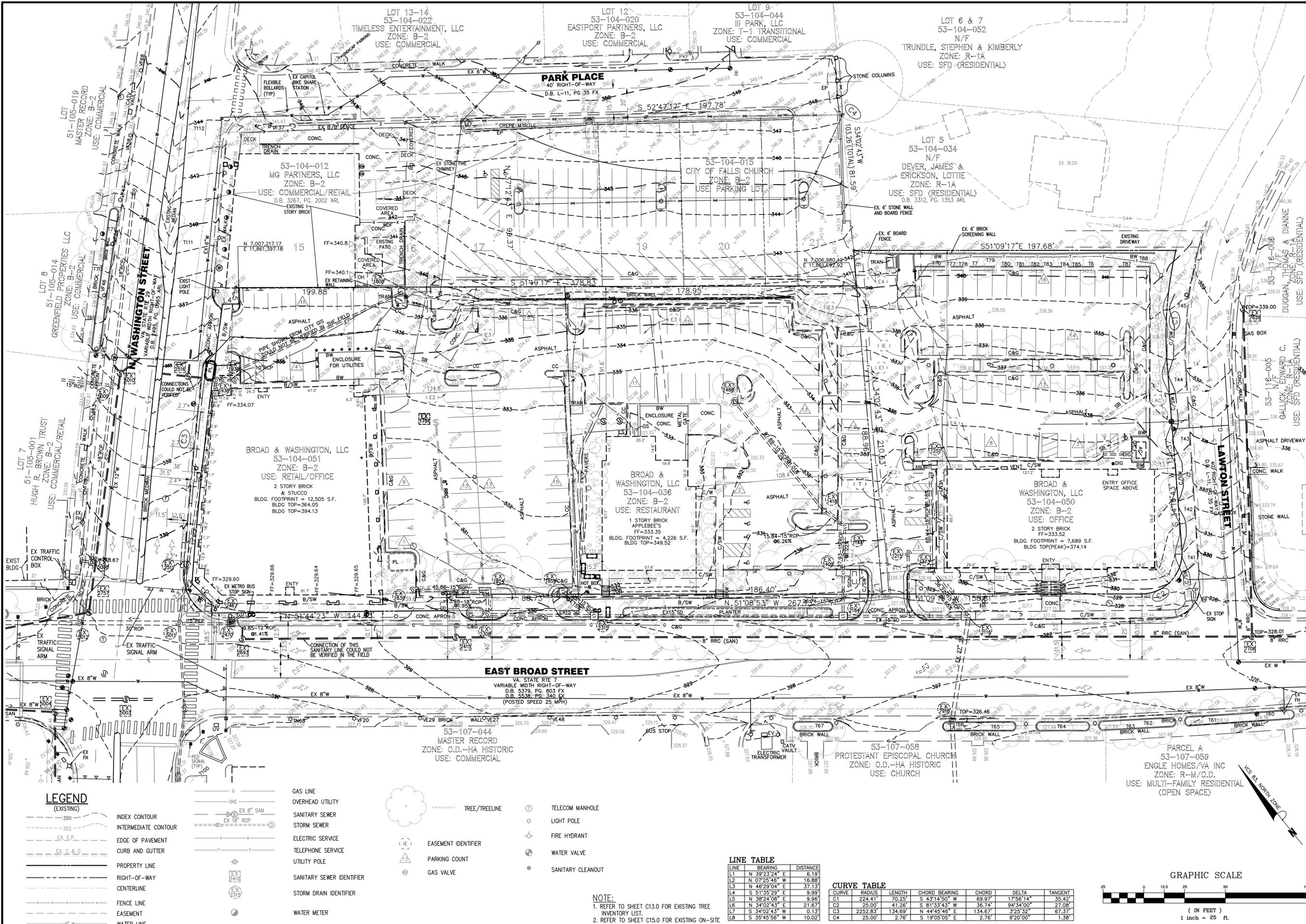
V:

JOB No. 8366-01-001

DATE : NOVEMBER 2019

FILE No. 8366-D-RZ-001

SHEET C3.0



LEGEND
(EXISTING)

--- 350 ---	INDEX CONTOUR	--- EX 8" SAN ---	GAS LINE
--- 352 ---	INTERMEDIATE CONTOUR	--- EX 18" RCP ---	OVERHEAD UTILITY
---	EDGE OF PAVEMENT	---	SANITARY SEWER
---	CURB AND GUTTER	---	STORM SEWER
---	PROPERTY LINE	---	ELECTRIC SERVICE
---	RIGHT-OF-WAY	---	TELEPHONE SERVICE
---	CENTERLINE	---	UTILITY POLE
---	FENCE LINE	---	SANITARY SEWER IDENTIFIER
---	EASEMENT	---	STORM DRAIN IDENTIFIER
---	WATER LINE	---	WATER METER

---	INDEX CONTOUR	---	GAS LINE
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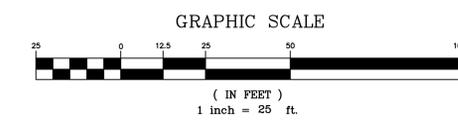
NOTE:
 1. REFER TO SHEET C13.0 FOR EXISTING TREE INVENTORY LIST.
 2. REFER TO SHEET C15.0 FOR EXISTING ON-SITE EASEMENTS DESCRIPTION.

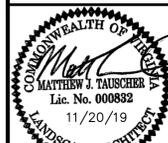
LINE TABLE

LINE	BEARING	LENGTH	DISTANCE
L1	N 39°23'24" E	6.19'	
L2	N 07°25'46" W	16.88'	
L3	N 48°29'04" E	37.13'	
L4	S 51°35'29" E	9.99'	
L5	N 38°24'08" E	9.96'	
L6	N 34°02'43" E	21.67'	
L7	S 34°02'43" W	0.13'	
L8	S 35°45'56" W	10.02'	

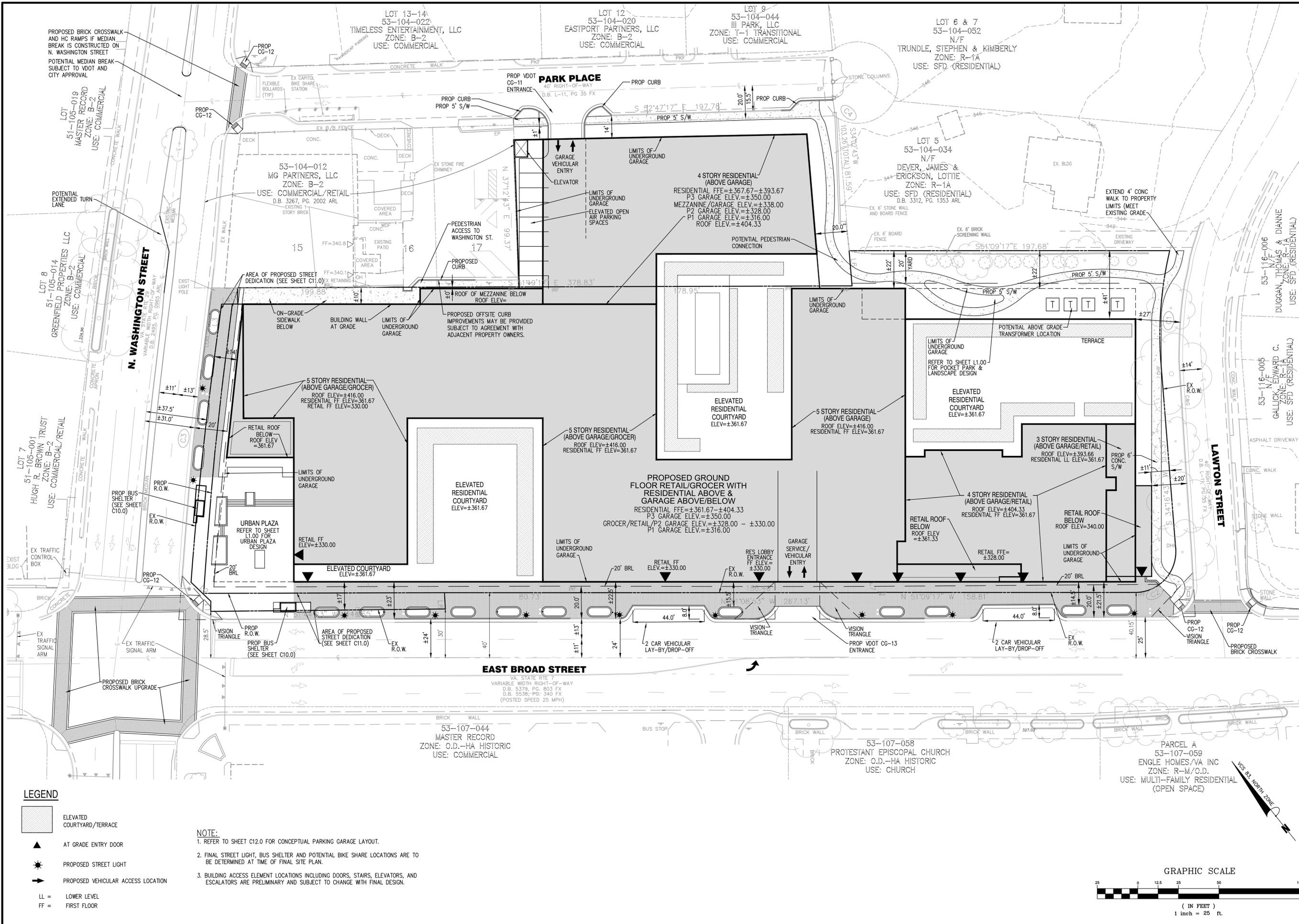
CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C1	224.41'	70.25'	S 43°14'50" W	69.97'	17°56'14"	35.42'
C2	25.00'	41.26'	S 81°33'43" W	36.74'	94°34'00"	27.08'
C3	2252.83'	134.69'	N 44°45'46" E	134.67'	3°25'32"	67.37'
C4	25.00'	2.76'	S 19°05'05" E	2.76'	6°20'00"	1.38'





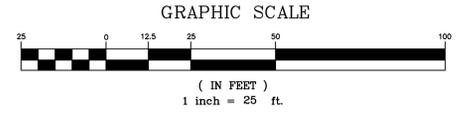
PLAN STATUS		
DATE	DESCRIPTION	BY
11/20/19	1ST SUBMISSION	
MT	KF	MT
DESIGN	DRAWN	CHKD
SCALE: H: 1" = 25'		
V:		
JOB No. 8366-01-001		
DATE: NOVEMBER 2019		
FILE No. 8366-D-RZ-001		
SHEET C4.0		

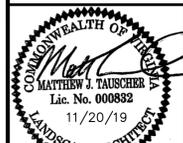


- LEGEND**
- ELEVATED COURTYARD/TERRACE
 - AT GRADE ENTRY DOOR
 - PROPOSED STREET LIGHT
 - PROPOSED VEHICULAR ACCESS LOCATION
 - LL = LOWER LEVEL
 - FF = FIRST FLOOR

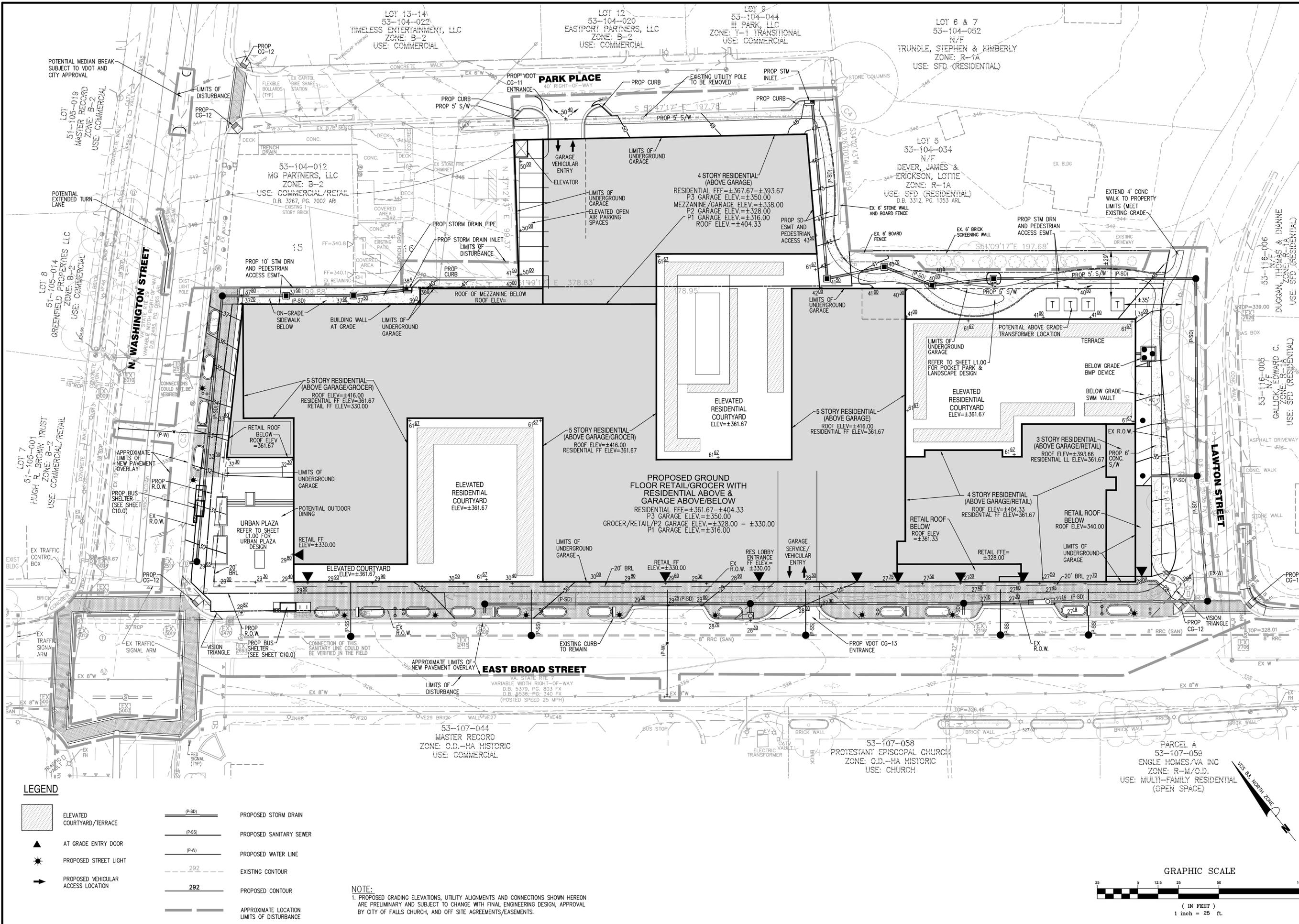
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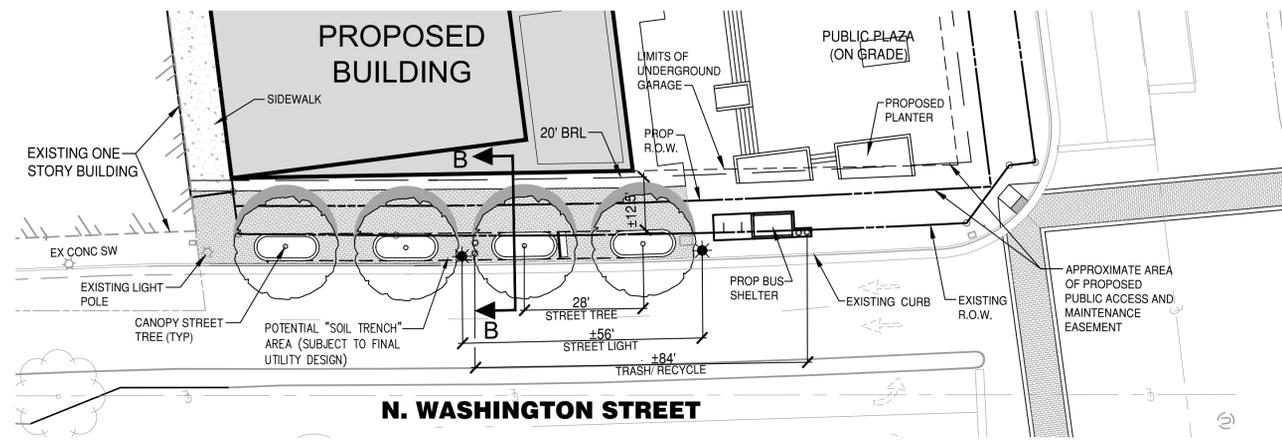
- REFER TO SHEET C12.0 FOR CONCEPTUAL PARKING GARAGE LAYOUT.
- FINAL STREET LIGHT, BUS SHELTER AND POTENTIAL BIKE SHARE LOCATIONS ARE TO BE DETERMINED AT TIME OF FINAL SITE PLAN.
- BUILDING ACCESS ELEMENT LOCATIONS INCLUDING DOORS, STAIRS, ELEVATORS, AND ESCALATORS ARE PRELIMINARY AND SUBJECT TO CHANGE WITH FINAL DESIGN.



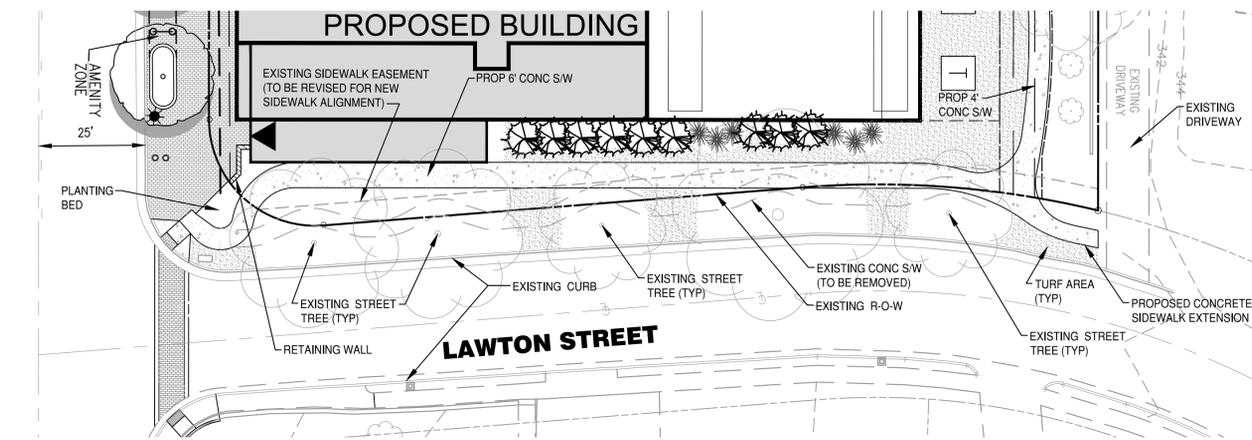


PLAN STATUS		
DATE	DESCRIPTION	BY
11/20/19	1ST SUBMISSION	
MT	KF	MT
DESIGN	DRAWN	CHKD
SCALE	H: 1" = 25'	V:
JOB No. 8366-01-001		
DATE : NOVEMBER 2019		
FILE No. 8366-D-RZ-001		
SHEET	C5.0	

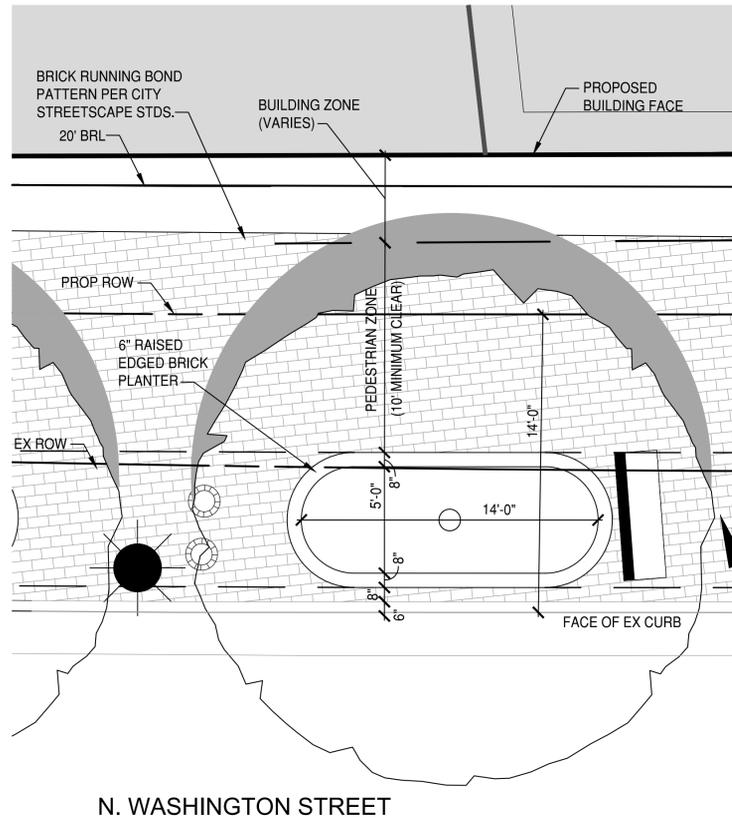




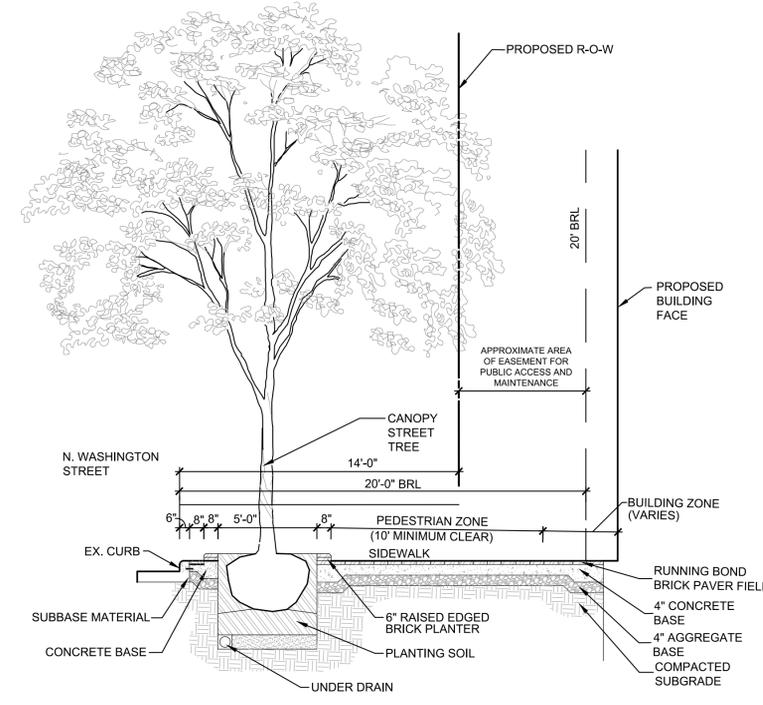
1 N. WASHINGTON STREET PLAN
Scale: 1"=20'



2 LAWTON STREET PLAN
Scale: 1"=20'



3 N. WASHINGTON STREET-PLAN ENLARGEMENT - SECTION B
Scale: 1/4" = 1'-0"

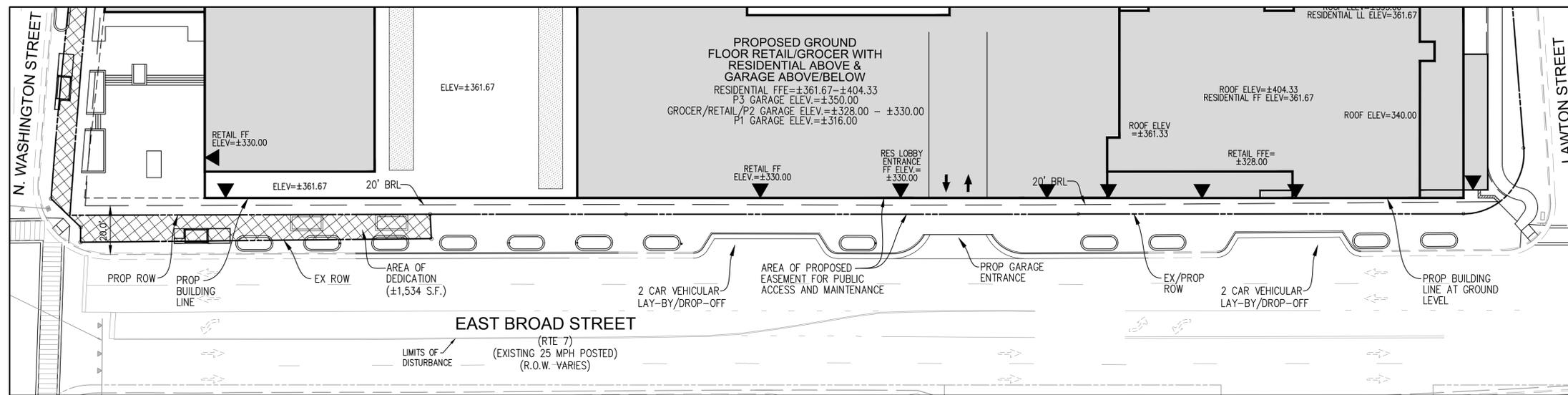


4 N. WASHINGTON STREET-SECTION B
Scale: 1/4" = 1'-0"

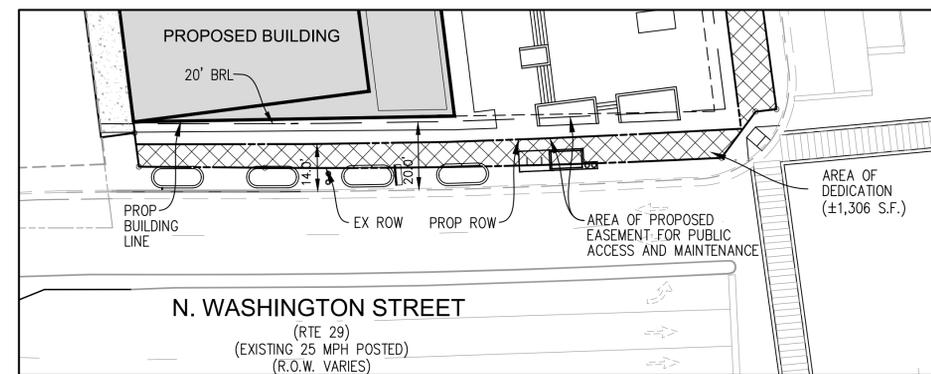
LEGEND

- EXISTING TREES TO REMAIN
- PROPOSED DECIDUOUS CANOPY STREET TREE
- PROPOSED BUS SHELTER W/ BIKE RACK (SEE DETAIL SHEET C10.0) (FINAL LOCATION TO BE DETERMINED WITH SITE PLAN APPLICATION)
- PROPOSED STREET LIGHT (SEE DETAIL SHEET C10.0) (FINAL LOCATION TO BE DETERMINED WITH SITE PLAN APPLICATION)
- PROPOSED BIKE RACK (SEE DETAIL SHEET C10.0) (FINAL LOCATION TO BE DETERMINED WITH SITE PLAN APPLICATION)
- PROPOSED BENCH (SEE DETAIL SHEET C10.0) (FINAL LOCATION TO BE DETERMINED WITH SITE PLAN APPLICATION)
- PROPOSED TRASH/RECYCLE RECEPTACLE (SEE DETAIL SHEET C10.0) (FINAL LOCATION TO BE DETERMINED WITH SITE PLAN APPLICATION)

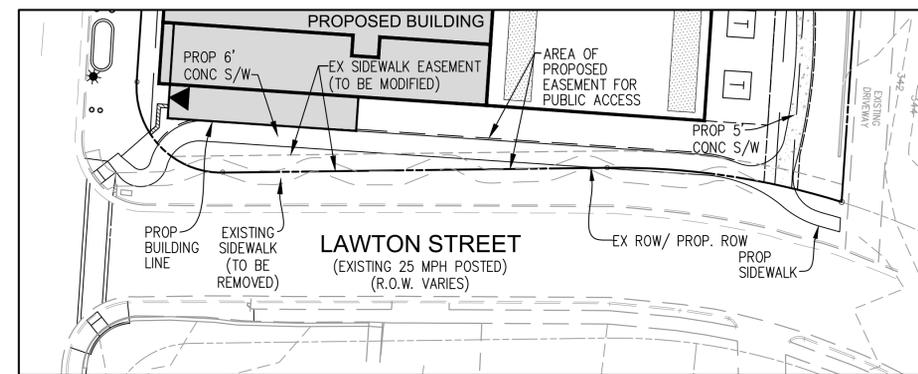
PLAN STATUS		
DATE	DESCRIPTION	BY
11/20/19	1ST SUBMISSION	
MT	KF	MT
DESIGN	DRAWN	CHKD
SCALE	H: 1" = 20'	V:
JOB No. 8366-01-001		
DATE : NOVEMBER 2019		
FILE No. 8366-D-RZ-001		
SHEET C8.0		



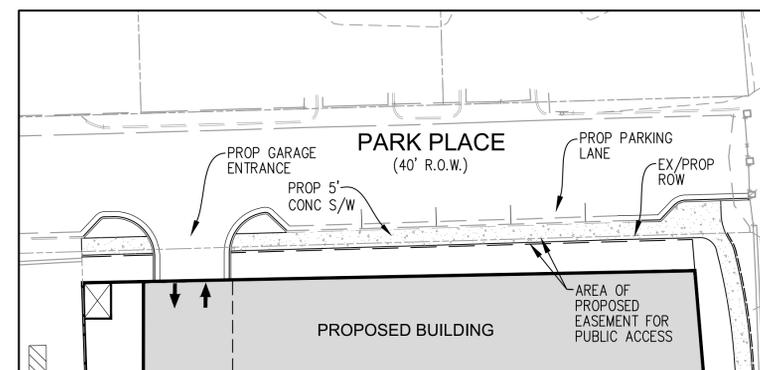
EAST BROAD STREET FRONTAGE EXHIBIT
SCALE: 1"=25'



N. WASHINGTON STREET FRONTAGE EXHIBIT
SCALE: 1"=25'



LAWTON STREET FRONTAGE EXHIBIT
SCALE: 1"=25'

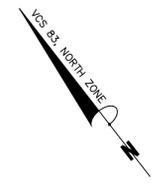
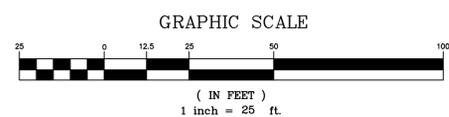


PARK PLACE FRONTAGE EXHIBIT
SCALE: 1"=25'

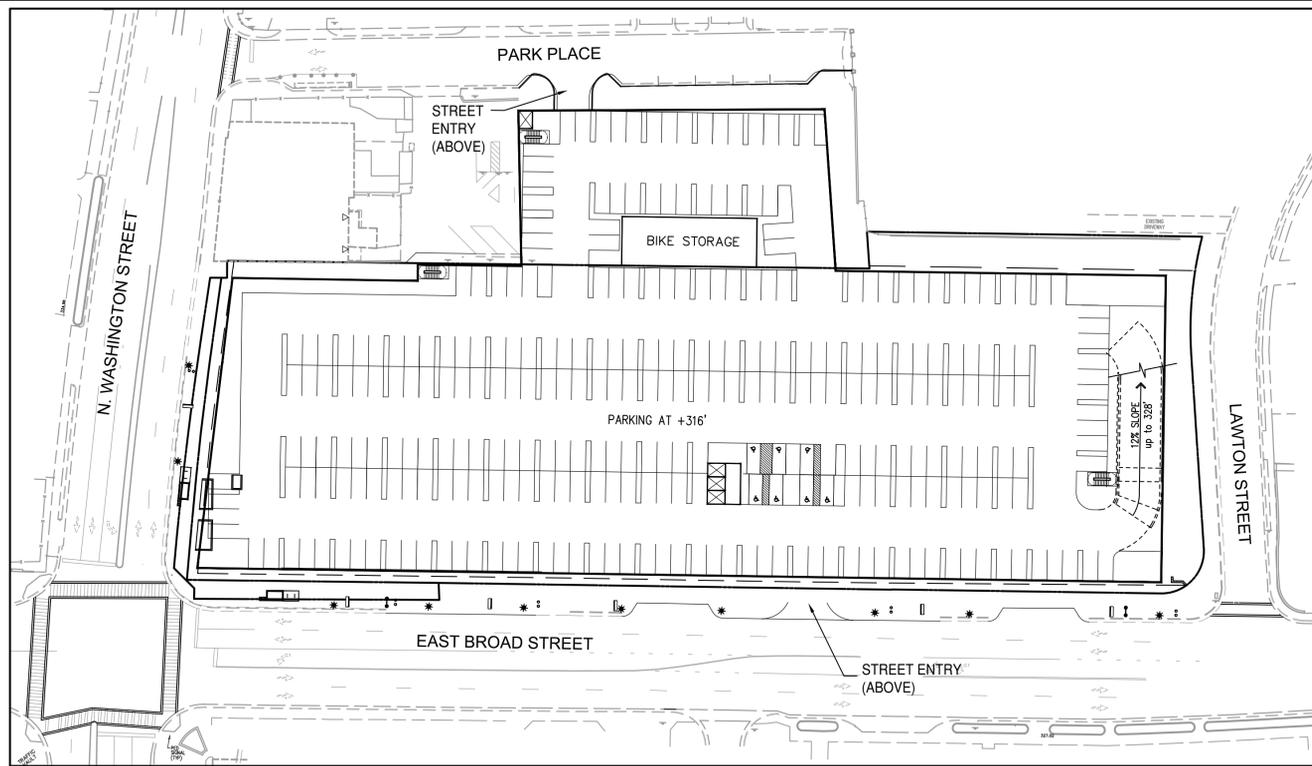
LEGEND:

- PROPOSED ROW DEDICATION (±1,534 S.F.) E. BROAD STREET (±1,306 S.F.) N. WASHINGTON STREET

NOTE:
1. FINAL AREA OF DEDICATION AND PUBLIC ACCESS EASEMENTS ARE SUBJECT TO CHANGE WITH FINAL SITE PLAN APPROVAL.

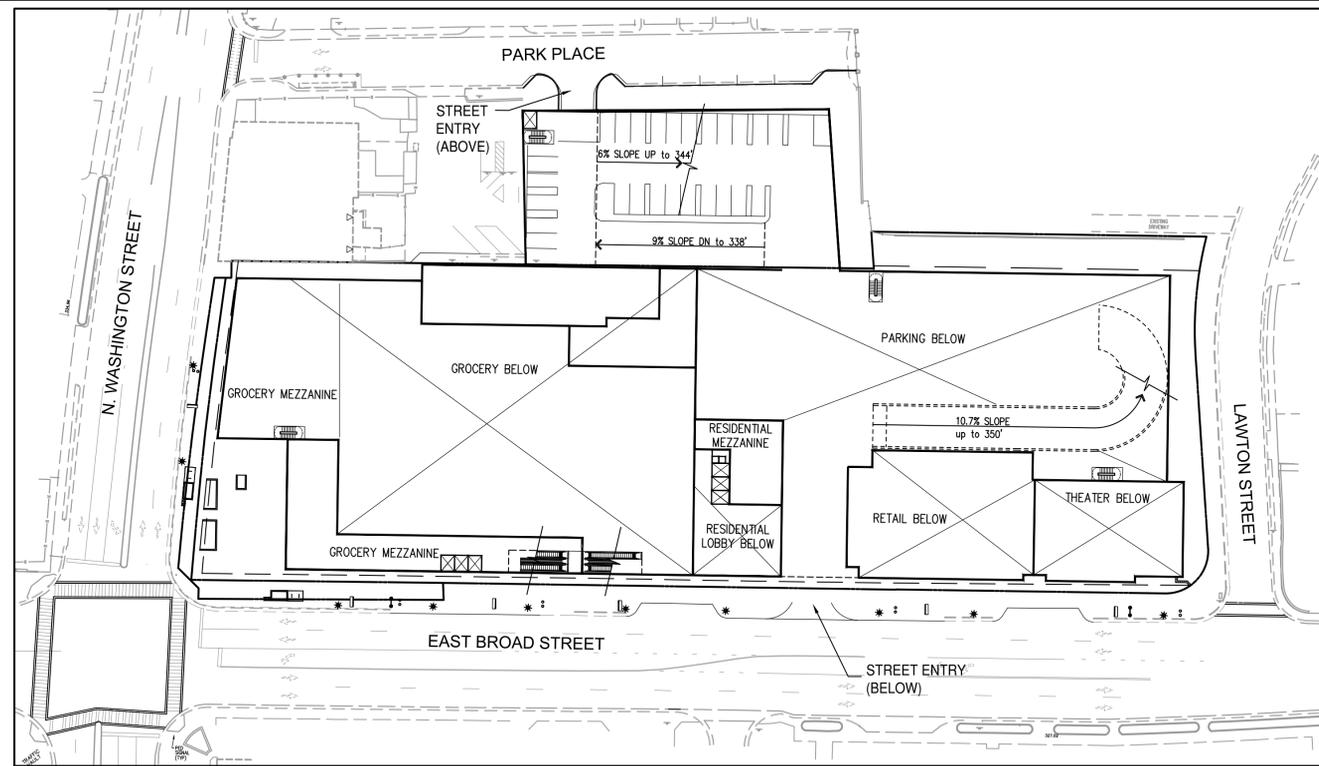


PLAN STATUS		
DATE	DESCRIPTION	
11/20/19	1ST SUBMISSION	
DESIGN	DRAWN	CHKD
SCALE	H: AS SHOWN V:	
JOB No. 8366-01-001		
DATE : NOVEMBER 2019		
FILE No. 8366-D-RZ-001		
SHEET C11.0		



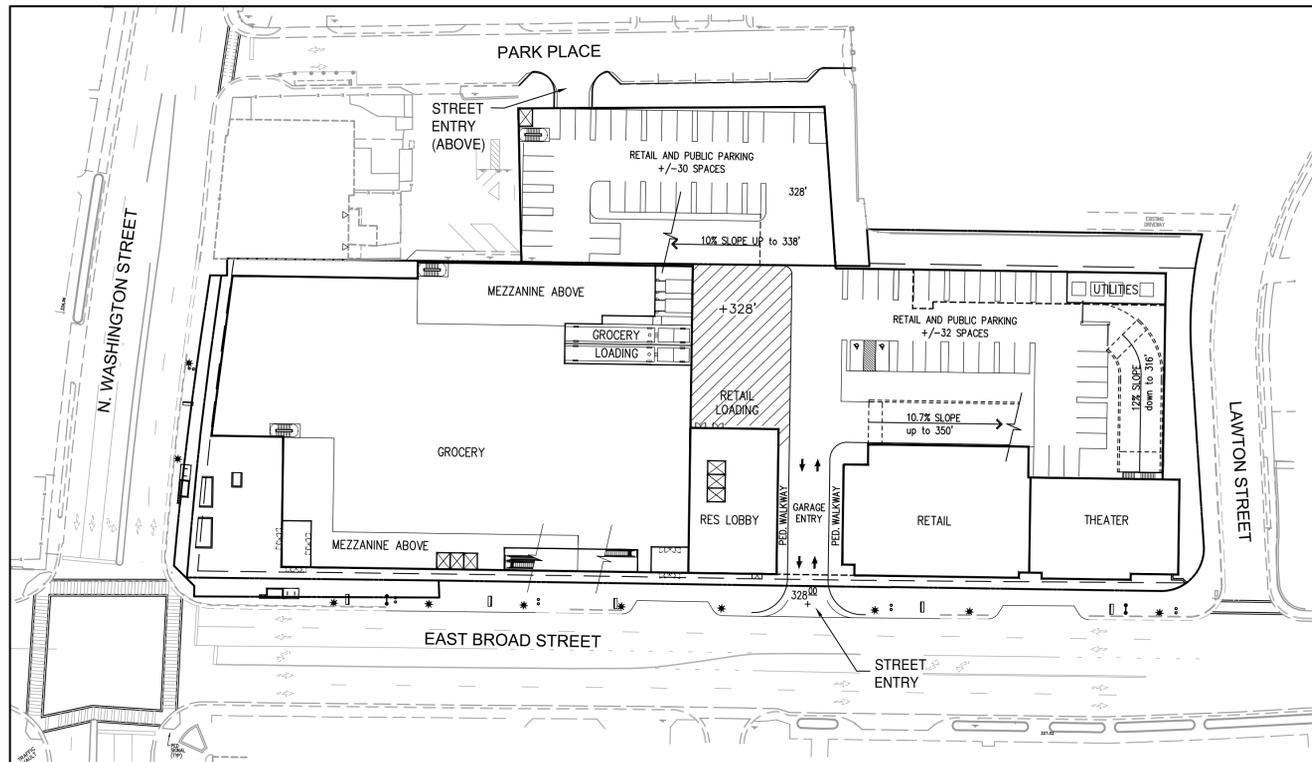
PARKING LEVEL P1 (ELEVATION 316.0)

SCALE: 1"=50'
 (TO INCLUDE RESTRICTED USE)
 RESIDENTIAL AND SHARED RETAIL/PUBLIC PARKING: ±299 SPACES
 BIKE PARKING: ±149 SPACES



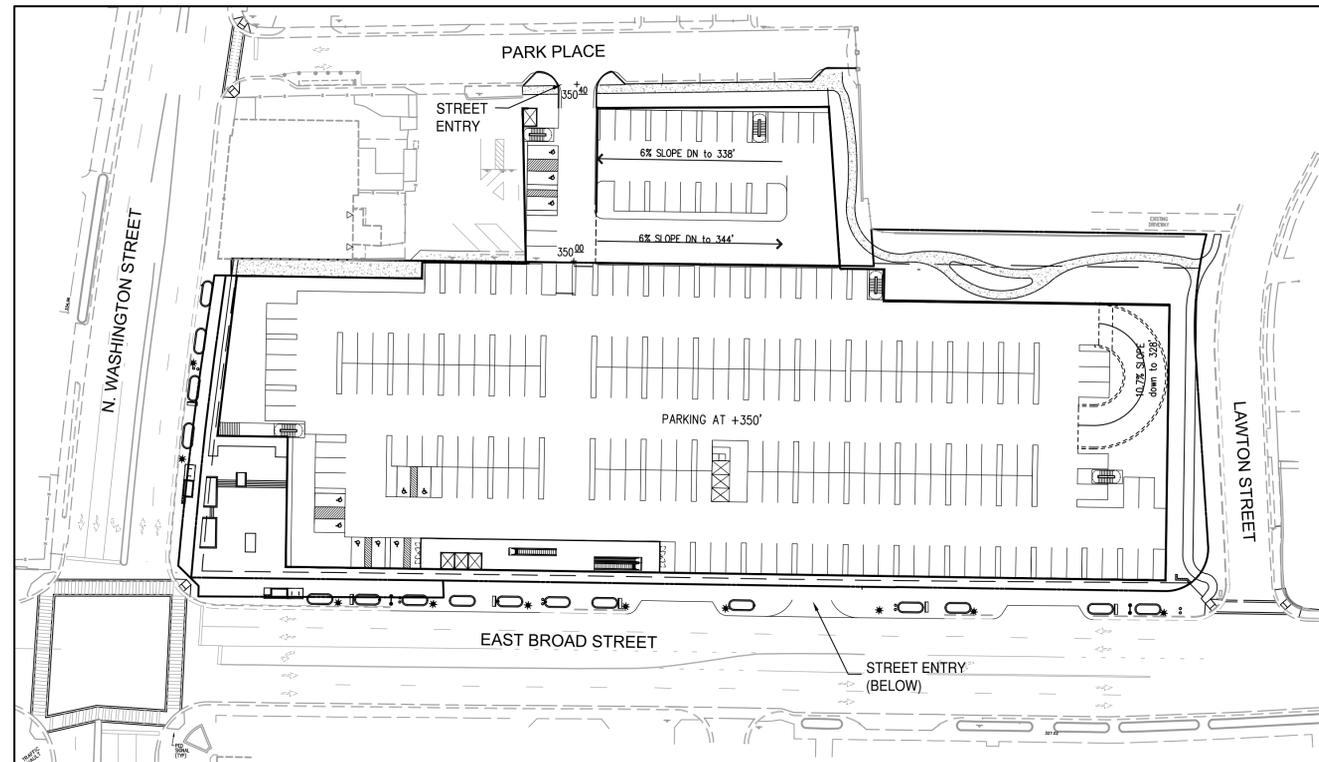
PARKING LEVEL P3 (ELEVATION 338.0)

SCALE: 1"=50'
 (TO INCLUDE RESTRICTED USE AND POTENTIAL PARTIAL SHARED USE AREA)
 RETAIL AND PUBLIC PARKING: ±7 SPACES



PARKING LEVEL P2--BROAD STREET ENTRANCE (ELEVATION 328.0-330.0)

SCALE: 1"=50'
 (SUBJECT TO SHARED USE AND PUBLIC ACCESS WITH POTENTIAL CONTROLS)
 RETAIL AND PUBLIC PARKING: ±62 SPACES
 BIKE PARKING: ±18 SPACES (ON-STREET)

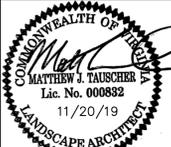
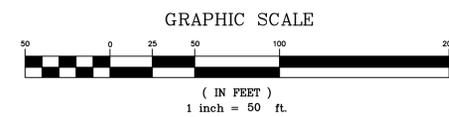


PARKING LEVEL P4--PARK PLACE ENTRANCE (ELEVATION 350.0)

SCALE: 1"=50'
 RETAIL AND PUBLIC PARKING: ±35 SPACES
 GROCERY PARKING: ±210 SPACES

NOTES:

- GARAGE DIAGRAMS, PARKING NUMBERS AND PEDESTRIAN ACCESS LOCATIONS ARE FOR INFORMATION AND ILLUSTRATION PURPOSES ONLY AND ARE SUBJECT TO CHANGE WITH FINAL DESIGN.
- AREAS WITHIN LEVELS OF SHARED USE, PUBLICLY ACCESSIBLE SPACES AND RESTRICTIONS AND/OR PARKING CONTROLS ARE SUBJECT TO FINAL AGREEMENTS WITH THE OWNER AND TENANT USERS.
- REFER TO ARCHITECTURAL PLANS WITHIN THE SPECIAL EXCEPTION PACKAGE DOCUMENTS FOR ADDITIONAL INFORMATION REGARDING PEDESTRIAN ACCESS AND OTHER SITE FEATURES.



PLAN STATUS		
DATE	DESCRIPTION	
11/20/19	1ST SUBMISSION	
MT	KF	MT
DESIGN	DRAWN	CHKD
SCALE	H: 1"=50'	V:
JOB No.	8366-01-001	
DATE :	NOVEMBER 2019	
FILE No.	8366-D-RZ-001	
SHEET	C12.0	

TREE INVENTORY TABLE

Broad Street and Washington Street, Falls Church, VA
 Date of site visit: January 20, 2015
 Certified Arborist: Greg D. Eberly MA-4616A

Plan Label	Botanic Name	Common Name	Caliper (DBH)	Condition Rating	Species Rating	Preserv/Remove	Tree Location
1	Betula nigra	River Birch	1.2	60	70	Remove	-
2	Betula nigra	River Birch	1.4	80	70	Remove	-
3	Betula nigra	River Birch	1.2	80	70	Remove	-
4	Prunus serrulata 'Kwanzan'	Kwanzan Cherry	1.0	70	50	Remove	-
5	Prunus serrulata 'Kwanzan'	Kwanzan Cherry	1.4	70	50	Remove	-
6	Quercus phellos	Willow Oak	1.4	80	70	Preserve	-
7	Quercus phellos	Willow Oak	1.1	80	70	Preserve	-
8	Tilia cordata	Littleleaf Linden	8	80	70	Remove	-
9	Acer saccharum	Sugar Maple	7	80	70	Remove	-
10	Tilia cordata	Littleleaf Linden	1.2	80	70	Remove	-
11	Tilia cordata	Littleleaf Linden	8	80	70	Remove	-
12	Tilia cordata	Littleleaf Linden	7	80	70	Remove	-
13	Tilia cordata	Littleleaf Linden	8	80	70	Remove	-
14	Tilia cordata	Littleleaf Linden	9	80	70	Remove	-
15	Gymnocladus dioica	Kentucky Coffee Tree	19	40	70	Remove	-
16	Pyrus calleryana	Bradford Pear	1.0	30	30	Remove	-
17	Lonicera japonica	Japanese Honeyuckle	28 (Multi)	40	20	Remove	-
18	Lonicera japonica	Japanese Honeyuckle	14 (Multi)	40	20	Remove	-
19	Lonicera japonica	Japanese Honeyuckle	18 (Multi)	40	20	Remove	-
20	Ilex opaca	American Holly	30 (Multi)	80	70	Remove	-
21	Ilex attenuata 'Foster'	Foster's Holly	7 (Multi)	60	70	Remove	-
22	Ilex attenuata 'Foster'	Foster's Holly	4 (Multi)	70	70	Remove	-
23	Ilex attenuata 'Foster'	Foster's Holly	7 (Multi)	70	70	Remove	-
24	Ilex attenuata 'Foster'	Foster's Holly	4 (Multi)	70	70	Remove	-
25	Ilex attenuata 'Foster'	Foster's Holly	8 (Multi)	70	70	Remove	-
26	Ilex attenuata 'Foster'	Foster's Holly	7 (Multi)	60	70	Remove	-
27	Ilex attenuata 'Foster'	Foster's Holly	12 (Multi)	70	70	Remove	-
28	Ilex attenuata 'Foster'	Foster's Holly	9 (Multi)	60	70	Remove	-
29	Ilex attenuata 'Foster'	Foster's Holly	9 (Multi)	60	70	Remove	-
30	Ilex attenuata 'Foster'	Foster's Holly	18 (Multi)	60	70	Remove	-
31	Ilex attenuata 'Foster'	Foster's Holly	15 (Multi)	60	70	Remove	-
32	Ilex attenuata 'Foster'	Foster's Holly	18 (Multi)	60	70	Remove	-
33	Ilex attenuata 'Foster'	Foster's Holly	24 (Multi)	70	70	Remove	-
34	Ilex attenuata 'Foster'	Foster's Holly	12 (Multi)	50	70	Remove	-
35	Ilex cornuta 'Burfordii'	Burford Holly	19 (Multi)	80	70	Remove	-
36	Gleditsia triacanthos	Honey Locust	1.2	70	60	Remove	-
37	Gleditsia triacanthos	Honey Locust	1.0	70	60	Remove	-
38	Gleditsia triacanthos	Honey Locust	1.1	70	60	Remove	-
39	Gleditsia triacanthos	Honey Locust	1.6	70	60	Remove	-
40	Acer platanoides	Norway Maple	1.8	50	40	Remove	-
41	Liquidambar styraciflua	Sweetgum	1.2	70	60	Preserve	Public ROW
42	Liquidambar styraciflua	Sweetgum	1.4	70	60	Preserve	Public ROW
43	Liquidambar styraciflua	Sweetgum	1.2	70	60	Preserve	Public ROW
44	Acer rubrum	Red Maple	3.6	70	70	Preserve	Public ROW
45	Liquidambar styraciflua	Sweetgum	1.2	70	60	Preserve	Public ROW
46	Morus alba	White Mulberry	1.2	50	40	Remove	-
47	Quercus phellos	Willow Oak	1.4	80	70	Remove	-
48	Quercus phellos	Willow Oak	2.0	80	70	Remove	-
49	Quercus phellos	Willow Oak	1.8	60	70	Remove	-
50	Quercus palustris	Pin Oak	2.0	40	70	Remove	-
51	Quercus phellos	Willow Oak	2.4	80	70	Remove	-
52	Quercus phellos	Willow Oak	2.2	80	70	Remove	-
53	Quercus rubra	Red Oak	2.2	80	70	Remove	Public ROW
54	Quercus phellos	Willow Oak	1.6	80	70	Remove	Public ROW
55	Quercus phellos	Willow Oak	1.6	80	70	Remove	Public ROW
56	Quercus phellos	Willow Oak	2.0	80	70	Remove	Public ROW
57	Quercus phellos	Willow Oak	2.2	80	70	Remove	Public ROW
58	Quercus phellos	Willow Oak	2.8	80	70	Remove	Public ROW
59	Quercus phellos	Willow Oak	1.6	80	70	Remove	Public ROW
60	Quercus phellos	Willow Oak	1.4			Off-Site	
61	Quercus phellos	Willow Oak	1.2			Off-Site	
62	Quercus phellos	Willow Oak	1.4			Off-Site	
63	Quercus phellos	Willow Oak	1.4			Off-Site	
64	Quercus phellos	Willow Oak	8			Off-Site	
65	Quercus phellos	Willow Oak	1.3			Off-Site	
66	Quercus phellos	Willow Oak	5			Off-Site	
67	Quercus phellos	Willow Oak	1.9			Off-Site	
68	Quercus phellos	Willow Oak	2.4	80	70	Remove	-
69	Quercus phellos	Willow Oak	2.8			Off-Site	
70	Quercus phellos	Willow Oak	2.1			Off-Site	
71	Quercus phellos	Willow Oak	2.3			Off-Site	
72	Quercus phellos	Willow Oak	2.0	80	70	Remove	-
73	Juglans nigra	Black Walnut	1.8	50	70	Remove	-
74	Juglans nigra	Black Walnut	1.3	60	70	Remove	-
75	Ilex opaca	American Holly	4	70	70	Remove	-
76	Ilex cornuta 'Burfordii'	Burford Holly	8	60	70	Preserve	-
77	Ilex attenuata 'Foster'	Foster's Holly	4	60	70	Preserve	-
78	Ilex attenuata 'Foster'	Foster's Holly	3	70	70	Preserve	-
79	Ilex attenuata 'Foster'	Foster's Holly	4	80	70	Preserve	-
80	Ilex attenuata 'Foster'	Foster's Holly	5 (Multi)	80	70	Preserve	-
81	Ilex attenuata 'Foster'	Foster's Holly	4	80	70	Preserve	-
82	Ilex attenuata 'Foster'	Foster's Holly	6 (Multi)	80	70	Preserve	-
83	Ilex attenuata 'Foster'	Foster's Holly	7 (Multi)	80	70	Preserve	-
84	Ilex attenuata 'Foster'	Foster's Holly	3	80	70	Preserve	-
85	Ilex attenuata 'Foster'	Foster's Holly	5 (Multi)	80	70	Preserve	-
86	Ilex attenuata 'Foster'	Foster's Holly	4	80	70	Preserve	-
87	Ilex attenuata 'Foster'	Foster's Holly	4	80	70	Preserve	-
88	Ilex attenuata 'Foster'	Foster's Holly	4	80	70	Preserve	-
89	Morus alba	White Mulberry	4	50	40	Remove	-
90	Morus alba	White Mulberry	4	60	40	Remove	-
91	Amelanchier arborea	Downey Serviceberry	2	80	80	Remove	-
92	Amelanchier arborea	Downey Serviceberry	3			Remove	Off-Site
93	Amelanchier arborea	Downey Serviceberry	3			Remove	Off-Site
94	Amelanchier arborea	Downey Serviceberry	3			Remove	Off-Site
95	Amelanchier arborea	Downey Serviceberry	3			Remove	Off-Site
96	Tilia cordata	Littleleaf Linden	1.5			Remove	Off-Site
97	Amelanchier arborea	Downey Serviceberry	3			Remove	Off-Site
98	Amelanchier arborea	Downey Serviceberry	3			Remove	Off-Site
99	Quercus rubra	Red Oak	2.0	80	70	Remove	-
100	Pinus strobus	White Pine	1.6	60	50	Remove	-
101	Cercis canadensis	Redbud	4	80	70	Remove	-
102	Ilex opaca	American Holly	4	80	70	Remove	-
103	Cercis canadensis	Redbud	1.1	60	70	Remove	-
104	Cercis canadensis	Redbud	9	60	70	Remove	-
105	Cercis canadensis	Redbud	8	70	70	Remove	-
106	Thuja occidentalis	Arborvitae	6	80	60	Remove	-
107	Thuja occidentalis	Arborvitae	6	80	60	Remove	-
108	Thuja occidentalis	Arborvitae	4	80	60	Remove	-
109	Thuja occidentalis	Arborvitae	4	80	60	Remove	-
110	Thuja occidentalis	Arborvitae	4	80	60	Remove	-
111	Quercus phellos	Willow Oak	1.0	70	70	Preserve	Public ROW
112	Quercus phellos	Willow Oak	1.0	70	70	Preserve	Public ROW

Notes:
 1. Condition Rating based on formula provided by the [Guide for Plant Appraisal](#) published by the ISA.
 Condition Rating: 90-100 Excellent, 70-89 Good, 50-69 Fair, 25-49 Poor, 05-24 Very Poor
 2. Species Rating based on formula provided by the [Guide for Plant Appraisal](#) published by the ISA.
 3. Off site trees included in this inventory had critical root zones located in or on subject property.
 4. All trees with a minimum 2" D.B.H. were rated.
 5. * The locations of trees 100-110 are approximate based on adjacent surveyed tree locations and have not been surveyed.

PLANTING TABULATIONS

BUFFER YARD (PER Z.O. SECTION 48-1183)

BUFFER YARD 'A' TO R-1A ZONING DISTRICT

LINEAR FEET OF BUFFER YARD: 198'
 TYPE OF BUFFER YARD REQUIRED: TYPE 'D' OR TYPE 'E'
 BUFFER YARD PROVIDED: TYPE E - 15' WIDTH
 CANOPY TREES REQUIRED: 8 TREES (4 PER 100 L.F.)
 CANOPY TREES PROVIDED: 9 TREES (2 EXISTING / 7 PROPOSED)
 LARGE SHRUBS REQUIRED: 50 SHRUBS (25 PER 100 L.F.)
 LARGE SHRUBS PROVIDED: 50 SHRUBS (12 EXISTING / 38 PROPOSED)
 SCREENING ELEMENT REQUIRED: 6 FOOT HIGH SOLID WOOD FENCE
 SCREENING ELEMENT PROVIDED: EXISTING 6 FOOT HIGH BRICK SCREEN WALL AND SOLID WOOD FENCE

BUFFER YARD 'B' TO R-1A ZONING DISTRICT

LINEAR FEET OF BUFFER YARD: 82'
 TYPE OF BUFFER YARD REQUIRED: TYPE 'D' OR TYPE 'E'
 BUFFER YARD PROVIDED: TYPE E - 15' WIDTH
 CANOPY TREES REQUIRED: 4 TREES (4 PER 100 L.F.)
 CANOPY TREES PROVIDED: 4 TREES
 LARGE SHRUBS REQUIRED: 21 SHRUBS (25 PER 100 L.F.)
 LARGE SHRUBS PROVIDED: 21 SHRUBS
 SCREENING ELEMENT REQUIRED: 6 FOOT HIGH SOLID WOOD FENCE
 SCREENING ELEMENT PROVIDED: EXISTING 6 FOOT HIGH STONE WALL AND SOLID WOOD FENCE

SUGGESTED STREETScape PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	HEIGHT/SIZE	CALIPER	CONDITION/REMARKS
LARGE DECIDUOUS TREES					
QP	QUERCUS PHELLOS	WILLOW OAK		2.5" CAL. MIN.	B&B
SHRUBS					
IG	ILEX GLABRA	INKBERRY HOLLY	30" MIN.		CONT.
JH	JUNIPERUS HORIZONTALIS	CREeping JUNIPER	6"-12" MIN.		CONT.
PL	PRUNUS LAUROCERASUS 'SCHIPKAENSIS'	CHERRY LAUREL	30" MIN.		CONT.
GROUND COVER					
HC	HYPERICUM CALYGINUM	ST. JOHN'S WORT	1 GAL.		CONT.
LM	LIRIOPE MUSCARI 'BIG BLUE'	LILYTURF	1 GAL.		CONT.

SUGGESTED BUFFER YARD PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	HEIGHT	CALIPER	CONDITION/REMARKS
LARGE DECIDUOUS TREES					
AR	ACER RUBRUM	RED MAPLE		2" CAL. MIN.	B&B
GT	GLEDITSIA TRIACANTHOS	THORNLESS HONEY LOCUST		2" CAL. MIN.	B&B
PA	PLANTANUS X ACERIFOLIA	LONDON PLANETREE		2" CAL. MIN.	B&B
QP	QUERCUS PALUSTRIS	PIN OAK		2" CAL. MIN.	B&B
EVERGREEN TREES					
IO	ILEX OPACA	AMERICAN HOLLY	6' MIN.		B&B
JV	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	6' MIN.		B&B
SHRUBS					
CA	CLETHRA ALNIFOLIA	SWEET PEPPERBUSH	24"-30"		CONT.
IG	ILEX GLABRA	INKBERRY HOLLY	24"-30"		CONT.
IT	ITEA VIRGINICA	VIRGINIA SWEETSPIRE	24"-30"		CONT.
IV	ILEX VERTICILLATA	WINTERBERRY	24"-30"		CONT.
JS	JUNIPERUS CHINENSIS 'PFITZERIANA'	PFITZER JUNIPER	24"-30"		CONT.
KL	KALMIA LATIFOLIA	MOUNTAIN LAUREL	24"-30"		CONT.
MP	MYRICA PENNSYLVANICA	NORTHERN BAYBERRY	24"-30"		CONT.
PL	PRUNUS LAUROCERASUS 'SCHIPKAENSIS'	CHERRY LAUREL	24"-30"		CONT.
RR	ROSA 'RADRAZZ'	KNOCKOUT ROSE	24"-30"		CONT.
VP	VIBURNUM X PRAGENSE	PRAGUE VIBURNUM	24"-30"		CONT.

GENERAL LANDSCAPE NOTES

MATERIALS

- THE TREES AND SHRUBS THAT ARE PLANTED SHALL BE OF THE SPECIES AND SIZE SPECIFIED ON THE APPROVED PLANS UNLESS SUBSTITUTIONS ARE APPROVED BY THE CITY.
- ALL TREE AND SHRUB SIZES SHALL MEET THE STANDARDS SPECIFIED IN THE LATEST EDITION OF THE AMERICAN ASSOCIATION OF NURSERYMEN'S AMERICAN STANDARD FOR NURSERY STOCK, (ANSI Z60.1).

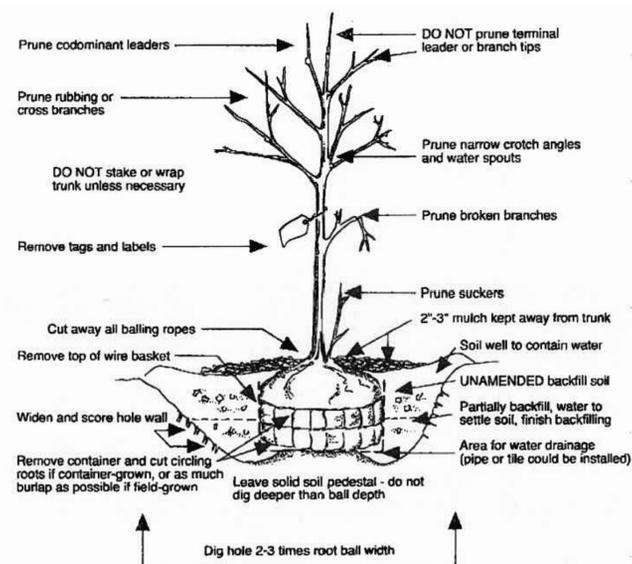
DELIVERY AND TEMPORARY STORAGE

- PLANTS SHALL BE PROTECTED DURING DELIVERY TO PREVENT DESICCATION OF LEAVES.
- TREES AND SHRUBS SHOULD BE PLANTED ON DAY OF DELIVERY. IF THIS IS NOT POSSIBLE, THE CONTRACTOR SHALL PROTECT UNPLANTED PLANTS BY KEEPING THEM IN SHADE, WATERED AND PROTECTED WITH SOIL, MULCH OR OTHER ACCEPTABLE MATERIAL.
- TREES AND SHRUBS SHALL NOT REMAIN UNPLANTED FOR MORE THAN TWO WEEKS.

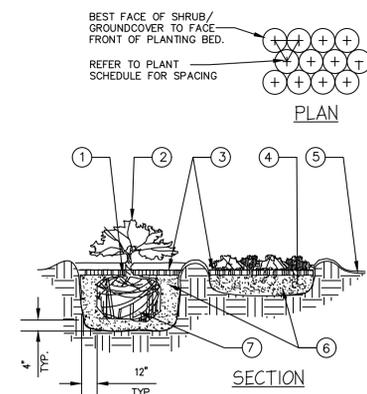
PLANTING OF NURSERY STOCK

- ALL TREES AND SHRUBS SHALL BE PLANTED AS SPECIFIED IN THE LATEST EDITION OF THE "TREE AND SHRUB PLANTING GUIDELINES" PREPARED BY THE VIRGINIA COOPERATIVE EXTENSION, VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY.
- IF PLANTING IN AREAS THAT HAVE BEEN PREVIOUSLY COMPACTED, THE SOIL SHALL BE PROPERLY PREPARED (TILLED AND AMENDED AS NEEDED BASED ON SOIL SAMPLES) TO A DEPTH OF 1 FOOT (0.3 METERS), PRIOR TO INSTALLATION OF LANDSCAPE MATERIAL. SOIL WITHIN INDIVIDUAL PLANTING HOLES SHALL NOT BE AMENDED.
- THE STAKING AND GUYING OF TREES IS NOT REQUIRED EXCEPT WHERE SITE CONDITIONS WARRANT THEIR USE. EXAMPLES OF CONDITIONS WHERE THESE METHODS MAY BE NECESSARY INCLUDE: PLANTING IN WINDY LOCATIONS, ON STEEP SLOPES, OR WHERE VANDALISM MAY BE A CONCERN. ALL STAKES AND GUYS MUST BE REMOVED WITHIN ONE YEAR OF PLANT INSTALLATION.
- ALL TREES AND SHRUBS SHALL BE MULCHED AFTER PLANTING, TO A MINIMUM DEPTH OF 2 INCHES (5.1 CENTIMETERS), BUT NO MORE THAN 3 INCHES (7.6 CENTIMETERS), WITH AN APPROPRIATE MULCH MATERIAL SUCH AS PINE BARK, PINE NEEDLES, WOOD CHIPS OR SHREDED BARK. MULCH SHALL COVER THE ENTIRE ROOT AREA AND SAUCER; HOWEVER, MULCH SHALL NOT BE PLACED WITHIN 6 INCHES (15.3 CENTIMETERS) OF THE TRUNK.

TREE PLANTING

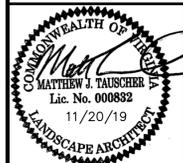


SHRUB/GROUND COVER PLANTING



- TOP OF SHRUB ROOTBALLS TO BE PLANTED 1" - 2" HIGH WITH SOIL MOUNDING UP TO THE TOP OF ROOTBALL.
- WHEN USED IN MASSES- PRUNE ALL SHRUBS TO ACHIEVE A UNIFORM MASS/HEIGHT.
- 4" MINIMUM OF HARDWOOD BARK MULCH COMPACTED OR AS SPECIFIED.
- EXCAVATE ENTIRE BED SPECIFIED FOR GROUND COVER BED.
- 4" MINIMUM OF TOPSOIL TO BRING TO FINISHED GRADE (SEE GRADING PLAN).
- PREPARED PLANTING SOIL AS SPECIFIED. NOTE: WHEN GROUND-COVERS AND SHRUBS USED IN MASSES ENTIRE BED TO BE AMENDED WITH PLANTING SOIL MIX AS SPECIFIED.
- SCARIFY ROOTBALL SIDES AND BOTTOM.

LANDSCAPE SCHEDULE, NOTES, DETAILS AND EXISTING TREE INVENTORY
BROAD & WASHINGTON
 CITY OF FALLS CHURCH, VIRGINIA



PLAN STATUS		
DATE	DESCRIPTION	
11/20/19	1ST SUBMISSION	
MT	DESIGN	MT
KF	DRAWN	CHKD
SCALE: H: 1" = 20' V:		
JOB No. 8366-01-001		
DATE : NOVEMBER 2019		
FILE No. 8366-D-RZ-001		



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VIRGINIA RUNOFF REDUCTION METHOD:

DEQ Virginia Runoff Reduction Method Re-Development Compliance Spreadsheet - Version 3.0

BMP Design Specifications List: 2011 Standards & Specs

Site Summary

Total Rainfall (in)	43
Total Disturbed Acreage	3.57

Site Land Cover Summary

Pre-Development Land Cover (acres)	A Soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.00	0.00	0.63	0.63	18
Impervious Cover (acres)	0.00	0.00	0.00	2.95	2.95	82
					3.57	100

Post-Development Land Cover (acres)

Post-Development Land Cover (acres)	A Soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.00	0.00	0.24	0.24	7
Impervious Cover (acres)	0.00	0.00	0.00	3.33	3.33	93
					3.57	100

Site Tn and Land Cover Nutrient Loads

	Final Post-Development (Post-Development & New Impervious)	Post-Development (New Impervious)	Post-Development (New Impervious)	Adjusted Pre-Development
Site Tn	0.90	0.90	0.95	0.90
Treatment Volume (ft ³)	11,708	10,376	1,332	10,376
TP Load (lb/yr)	7.36	6.52	0.84	6.52

Pre-Development TP Load per acre (lb/acre/yr)	Final Post-Development TP Load per acre (lb/acre/yr)	Post-Development TP Load per acre (lb/acre/yr)
2.05	2.06	2.05

Total TP Load Reduction Required (lb/yr)	1.98	1.30	0.68
--	------	------	------

	Final Post-Development Load (Post-Development & New Impervious)	Pre-Development
TN Load (lb/yr)	52.62	48.21

Site Compliance Summary

Maximum % Reduction Required Below Pre-Development Load	20%
---	-----

	Total
Total Runoff Volume Reduction (ft ³)	515
Total TP Load Reduction Achieved (lb/yr)	1.99
Total TN Load Reduction Achieved (lb/yr)	2.41
Remaining Post-Development TP Load (lb/yr)	5.36
Remaining TP Load Reduction (lb/yr) Required	0.00

** TARGET TP REDUCTION EXCEEDED BY 0.01 LB/YR **

Drainage Area Summary

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0.00
Managed Turf (acres)	0.02	0.22	0.00	0.00	0.00	0.24
Impervious Cover (acres)	0.40	2.94	0.00	0.00	0.00	3.33
Total Area (acres)	0.42	3.15	0.00	0.00	0.00	3.57

Drainage Area Compliance Summary

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
TP Load Reduced (lb/yr)	0.02	1.97	0.00	0.00	0.00	1.99
TN Load Reduced (lb/yr)	0.14	2.27	0.00	0.00	0.00	2.41

Drainage Area A Summary

	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.00	0.00	0.02	0.02	6
Impervious Cover (acres)	0.00	0.00	0.00	0.40	0.40	94
					0.42	

BMP Selections

Practice	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	BMP Treatment Volume (ft ³)	TP Load from Upstream Practices (lbs)	Untreated TP Load to Practice (lbs)	TP Removed (lb/yr)	TP Remaining (lb/yr)	Downstream Treatment to be Employed
1.b. Vegetated Roof #2 (Spec #5)		0.01489899	51.38		0.03	0.02	0.01	

Total Impervious Cover Treated (acres)	0.01
Total Turf Area Treated (acres)	0.00
Total TP Load Reduction Achieved in D.A. (lb/yr)	0.02
Total TN Load Reduction Achieved in D.A. (lb/yr)	0.14

Drainage Area B Summary

	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.00	0.00	0.22	0.22	7
Impervious Cover (acres)	0.00	0.00	0.00	2.94	2.94	93
					3.15	

BMP Selections

Practice	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	BMP Treatment Volume (ft ³)	TP Load from Upstream Practices (lbs)	Untreated TP Load to Practice (lbs)	TP Removed (lb/yr)	TP Remaining (lb/yr)	Downstream Treatment to be Employed
1.b. Vegetated Roof #2 (Spec #5)		0.20176777	695.40		0.44	0.26	0.17	
3.a. Permeable Pavement #1 (Spec #7)		0.043296602	149.31	0.00	0.09	0.06	0.04	
14.b. Manufactured Treatment Device-Filtration		1.53	5,276.21	0.00	3.31	1.66	1.66	

Total Impervious Cover Treated (acres)	1.78
Total Turf Area Treated (acres)	0.00
Total TP Load Reduction Achieved in D.A. (lb/yr)	1.97
Total TN Load Reduction Achieved in D.A. (lb/yr)	2.27

Runoff Volume and CN Calculations

Target Rainfall Event (in)	1-year storm	2-year storm	10-year storm
	2.62	3.17	4.87

Drainage Areas	RV & CN	Drainage Area A	Drainage Area B	Drainage Area C	Drainage Area D	Drainage Area E
CN	97	97	0	0	0	0
RV (ft ³)	31	485	0	0	0	0
RV w RR (w-in)	2.28	2.28	0.00	0.00	0.00	0.00
RV w RR (w-in)	2.26	2.24	0.00	0.00	0.00	0.00
CN adjusted	97	96	0	0	0	0
RV w RR (w-in)	2.28	2.28	0.00	0.00	0.00	0.00
RV w RR (w-in)	2.21	2.76	0.00	0.00	0.00	0.00
CN adjusted	97	97	0	0	0	0
RV w RR (w-in)	4.52	4.52	0.00	0.00	0.00	0.00
RV w RR (w-in)	4.50	4.48	0.00	0.00	0.00	0.00
CN adjusted	97	97	0	0	0	0

EXAMPLE-MANUFACTURED TREATMENT DEVICE (MTD):

PLAN VIEW
(TOP SLAB NOT SHOWN FOR CLARITY)

ELEVATION VIEW

JELLYFISH DESIGN NOTES

JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE LENGTH AND THE NUMBER OF CARTRIDGES. THE STANDARD PEAK DIVERSION STYLE WITH PRECAST TOP SLAB IS SHOWN. ALTERNATE OFFLINE VAULT AND/OR SHALLOW ORIENTATIONS ARE AVAILABLE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD.

CARTRIDGE SELECTION	54"	40"	27"	16"
CARTRIDGE LENGTH	54"	40"	27"	16"
OUTLET INVERT TO STRUCTURE INVERT (A)	6'-6"	5'-4"	4'-3"	3'-3"
FLOW RATE HI-FLO / DRAINDOWN (CFS) (PER CART)	0.178 / 0.089	0.133 / 0.067	0.089 / 0.045	0.049 / 0.025
MAX. TREATMENT (CFS)	2.94	2.21	1.47	0.81
DECK TO INSIDE TOP (MIN) (B)	5.00	4.00	4.00	4.00

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	*
WATER QUALITY FLOW RATE (cfs)	*
PEAK FLOW RATE (cfs)	*
RETURN PERIOD OF PEAK FLOW (yrs)	*
# OF CARTRIDGES REQUIRED (HF / DD)	*
CARTRIDGE LENGTH	*

PIPE DATA:	I.E.	MAT'L	DIA	SLOPE %	HGL
INLET #1	*	*	*	*	*
INLET #2	*	*	*	*	*
OUTLET	*	*	*	*	*

RIM ELEVATION: *

ANTI-FLOTATION BALLAST	WIDTH	HEIGHT

NOTES/SPECIAL REQUIREMENTS:
* PER ENGINEER OF RECORD

GENERAL NOTES:

- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.ContechES.com
- JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
- STRUCTURE SHALL MEET AASHTO HS-20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH COVER OF 0' - 10' AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATINGS AND BE CAST WITH THE CONTECH LOGO.
- STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-857, ASTM C-918, AND AASHTO LOAD FACTOR DESIGN METHOD.
- OUTLET PIPE INVERT IS EQUAL TO THE CARTRIDGE DECK ELEVATION.
- THE OUTLET PIPE DIAMETER FOR NEW INSTALLATIONS IS RECOMMENDED TO BE ONE PIPE SIZE LARGER THAN THE INLET PIPE AT EQUAL OR GREATER SLOPE.
- NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

INSTALLATION NOTES

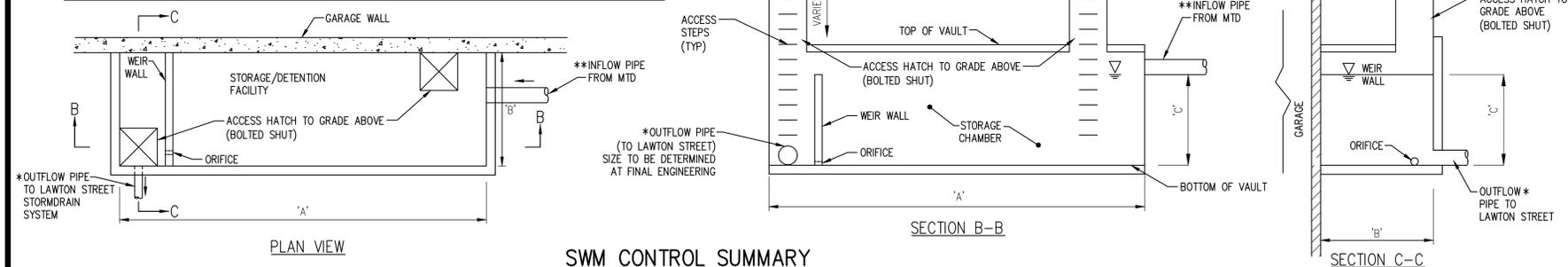
- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE.
- CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERTIGHT OR FLEXIBLE BOOT).
- CARTRIDGE INSTALLATION BY CONTECH SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION.

FRAME AND COVER (DIAMETER VARIES) N.T.S.

24" TRENCH COVER (LENGTH VARIES) N.T.S.

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45399
900-338-1122 513-645-7000 513-645-7993 FAX

EXAMPLE-UNDERGROUND DETENTION VAULT:



- NOTES:**
- FINAL NUMBER, SHAPE, SIZE, LOCATION, AND DESIGN OF SWM VAULTS ARE SUBJECT TO CHANGE AT THE TIME OF FINAL ENGINEERING.
 - STRUCTURAL DESIGN AND REINFORCING FOR VAULTS IS TO BE DEMONSTRATED ON STRUCTURAL ENGINEERING PLANS.
 - PUMPS (IF NECESSARY) SHALL BE INTEGRATED INTO VAULTS AT THE TIME OF FINAL ENGINEERING ON A CASE BY CASE BASIS.
 - APPLICANT RESERVES THE RIGHT, AT FINAL SITE PLAN, TO UTILIZE MULTIPLE FACILITIES PER SITE IF NEEDED.

SWM CONTROL SUMMARY

VAULT ID	REQUIRED VOLUME (CF)	LENGTH (FT)	WIDTH (FT)	STORAGE DEPTH (FT)	VOLUME PROVIDED (CF)
FACILITY 'A'	10,932	73	10	15	10,950

NOTE:

- THIS PLAN IS INTENDED FOR INFORMATION ONLY TO DEMONSTRATE POTENTIAL METHODS OF RAINWATER COLLECTION FOR STORM WATER MANAGEMENT. FINAL METHODS, MEANS, LOCATIONS, SIZES AND SPECIFIC FACILITIES WILL VARY WITH FINAL ENGINEERING DESIGN, AS ALLOWED BY THE REQUIREMENTS OF THE CITY OF FALLS CHURCH.

Bowman CONSULTING

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CONCEPTUAL SWM & BMP COMPUTATIONS AND DETAILS (1 OF 2)

BROAD & WASHINGTON

CITY OF FALLS CHURCH, VIRGINIA

COMMONWEALTH OF VIRGINIA
LANDSCAPE ARCHITECT
MATTHEW J. TAUSCHER
Lic. No. 000892
11/20/19

PLAN STATUS

DATE	DESCRIPTION
11/20/19	1ST SUBMISSION

SH	KF	BG
DESIGN	DRAWN	CHKD

SCALE: H: N/A
V: V

JOB No. 8366-01-001
DATE: NOVEMBER 2019
FILE No. 8366-D-RZ-001

Tyson's Corner Comprehensive Plan Stormwater Conformance Spreadsheet - Beta Version 4-18-2012

Site Name: **Broad & Washington**
 Description: **Nov-19**

Post-Development Land Cover data input cells highlighted in yellow

Drainage Area A

Land Cover Type	HSG A soils	HSG B Soils	HSG C Soils	HSG D Soils	Totals
Forest / Preserved Open Space - Undisturbed, protected forest and open					0.00
Managed Turf (acres)				0.24	0.24
Impervious Cover (acres)				3.33	3.33
Total					3.57

Drainage Area B

Land Cover Type	HSG A soils	HSG B Soils	HSG C Soils	HSG D Soils	Totals
Forest / Preserved Open Space - Undisturbed, protected forest and open					0.00
Managed Turf (acres)					0.00
Impervious Cover (acres)					0.00
Total					0.00

Drainage Area C

Land Cover Type	HSG A soils	HSG B Soils	HSG C Soils	HSG D Soils	Totals
Forest / Preserved Open Space - Undisturbed, protected forest and open					0.00
Managed Turf (acres)					0.00
Impervious Cover (acres)					0.00
Total					0.00

Drainage Area D

Land Cover Type	HSG A soils	HSG B Soils	HSG C Soils	HSG D Soils	Totals
Forest / Preserved Open Space - Undisturbed, protected forest and open					0.00
Managed Turf (acres)					0.00
Impervious Cover (acres)					0.00
Total					0.00

Drainage Area E

Land Cover Type	HSG A soils	HSG B Soils	HSG C Soils	HSG D Soils	Totals
Forest / Preserved Open Space - Undisturbed, protected forest and open					0.00
Managed Turf (acres)					0.00
Impervious Cover (acres)					0.00
Total					0.00

Rv Coefficients

Land Cover Type *	HSG A soils	HSG B Soils	HSG C Soils	HSG D Soils
Forest / Preserved Open Space - Undisturbed, protected forest and open space or reforested land	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

* See the instructions tab for a definition of each land cover type.

Land Cover Summary

Forest / Preserved Open Space (ac)	0.00
Weighted Rv (forest)	0.00
% Forest	0%
Managed Turf (acres)	0.24
Weighted Rv (turf)	0.25
% Managed Turf	7%
Impervious Cover (acres)	3.33
Rv (impervious)	0.95
% Impervious	93%
Total Site Area (acres)	3.57
Site Rv	0.90

Rainfall / Runoff Summary

Target Rainfall to Retain Onsite (inches)	1.0
1-inch Rainfall Volume for entire site (cf)	12,966
Volume Not Converted to Runoff (cf)	1,258
1-inch Runoff Volume for entire site (cf)	11,708

Runoff Reduction Summary

Target Runoff Reduction Volume (cf)	11,708
Runoff Reduction Volume Achieved (cf)	832
Total Runoff Volume Retained (cf)	2,090
Total Area of Site Captured in a BMP (acres)	1.79

Conformance with Comprehensive Plan Goal

Total Site Area Captured by a BMP (%) **50%**

Rainfall Depth Retained Onsite (inch) **0.16**

Drainage Area A Post-Development Land Cover

	HSG A soils	HSG B Soils	HSG C Soils	HSG D Soils	Totals
Forest / Preserved Open Space	0.00	0.00	0.00	0.00	0.00
Managed Turf	0.00	0.00	0.00	0.24	0.24
Impervious Cover	0.00	0.00	0.00	3.33	3.33
D.A. Total (acres)					3.57

Rv (turf) 0.25
Rv (impervious) 0.95

Runoff from 1" Rainfall (cf) = 11,708

Estimate RWHR % Credit data input cells highlighted

Apply Runoff Reduction Practices	Description of Area	Roof Area Contributing to RWHR (ac)	Design Rainfall for RWHR (in)	Max Volume Captured by Practice (cf)	RWHR Credit	Input % RR from Model	Est'd % Credit	Volume Received from Upstream Practices (cf)	Total Volume Received by Practice (cf)	Avg Daily Drawdown (gallons)	Available Cistern Volume (gallons)	Runoff Reduction Vol (cf)	Remaining Volume (cf)	Downstream Practice
Apply Runoff Reduction Practices	Description of Area	Impervious Cover in Contributing D.A. (ac)	Managed Turf in Contributing D.A. (ac)	Max Volume Received by Practice (ft ³)	Description of Credit	% Credit	% Credit	Volume Received from Upstream Practices (ft ³)	Total Volume Received by Practice (ft ³)	Surface Area of Practice (ft ²)	Storage Vol Provided by Practice (ft ³)	Runoff Reduction Vol (ft ³)	Remaining Volume (ft ³)	Downstream Practice
Infiltration Practice				0	Subtract 100% of provided storage vol.	100%	0	0	0	N/A		0	0	
Vegetated Roof	Roof/Structure	0.22	N/A	747	Subtract 100% of provided storage vol.	100%	N/A	747	747	N/A	747	747	0	Proprietary / Other practice
Permeable Pavement - DCR Level 2 Design Spec			N/A	0	Subtract 100% of provided storage vol.	100%	N/A	0	0	N/A		0	0	
Permeable Pavement - DCR Level 1 Design Spec	Onsite Sidewalk	0.04	N/A	149	Reduce vol. through permeable pavement by 0.045 cf/sf of permeable pavement.	N/A	N/A	149	1,886	N/A		85	64	Proprietary / Other practice
Proprietary / Other practice not listed above	Remaining roof area	1.53		5,276	Subtract % Credit of provided storage vol.	0%	64	5,341	N/A	11,520		0	5,341	
Totals:		1.79		0.00										

Total Drainage Area Treated (acres): **1.79**

Runoff Reduction Volume Achieved for Drainage Area A (cubic feet): **832**

See Site Data and Summary Tab for Site Results



PLAN STATUS

11/20/19	1ST SUBMISSION	
DATE	DESCRIPTION	
SH	KF	BG
DESIGN	DRAWN	CHKD
SCALE	H: N/A	V:
JOB No.	8366-01-001	
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