8/13/24, 4:45 PM Accela Citizen Access



Home ▼ Create ▼ Help

Logged in as: Anna Kaye Collections (3) ▼ My Account Logout

Click Here to Search



Record SPLN24-00004:

Click here for more information

Add to collection

Special Exception Site Plan

Record Status: Application Complete

Record Info ▼

Payments >

Plan Review

Application Location

3130 LANGSTON BLVD, ARLINGTON, VA 22201 *



Record Details

Owner:

RP LANGSTON I LLC %ROONEY PROPERTIES

P.O. BOX 1159 **DEERFIELD IL 60015**

More Details

Related Contacts

Application Information

SITE PLAN

Project Name: 3130 Langston Boulevard

What does this special exception site plan request include?: New Site Plan only

Is this Site Plan proposal part of a larger Phased

Development Site Plan (PDSP)?:

Yes

Has a Conceptual Plan Review been completed for this Site Plan project?:

Provide record ID # assigned to the Conceptual SPLC24-00006

Site Plan application:

Description of proposed project:

The Applicant proposes to redevelop the Property with a new mixed-use residential building with ground floor

Yes

Yes

No

Yes

No

No

Does this proposal request a change in zoning?: Yes

Has a rezoning request for this project been No submitted?:

Does this proposal request a change in the

General Land Use Plan (GLUP) that required a Special GLUP Study?:

Did the GLUP Amendment require a Special GLUP No Study?:

Does this proposal include or impact any County

property interests, such as real property, public easements, streets, alleys, or right of way?:

Provide description of included County property.: Public Easements

Does project meet criteria for Traffic Impact Analysis as found in Site Plan Admin 4.1

Regulations?: Does this proposal include retail uses?:

Does this proposal require the relocation of Yes residents or retail tenants?:

Does this proposal include any properties designated as a County Historic District or No identified for preservation in a County plan?:

Is the project located on a block east of the US No Route 1 Corridor in Crystal City?:

Does this proposal include any properties No identified or ranked in the Historic Resources

Inventory?:

The application is being submitted by:

Agent on behalf of the Developer Does the proposal include bonus density and/or

height that is supported by a Green Building **Program?:**

Does the proposal include bonus density and/or height supported by the Affordable Housing

Does the proposal include bonus density and/or

height supported by any other type of program?:

Application Information Table

LIST ALL CONTRIBUTING PARCELS

RPC Number: 15012041

Master RPC Number:

15012041

Owner:

RP LANGSTON I LLC %ROONEY PROPERTIES

Address:

3130 LANGSTON BLVD

Total Lot SF:

73251

Contributing SF:

73254

Current GLUP: Service Commercial Current Zoning:

C-2 Service Commercial - Community Business Districts

■ Parcel Information

Parcel Number:15012041 *

Block:970000

Lot:73251 Subdivision:CRUITT TRACT & PT PARC 4 CRUITT TRACT

72,501 SQ FT

PROPERTYNAME: Walgreens Pharmacy

RPCMSTR: 15012041 CLASS: 211-Retail strip

SHEET: 43-7

Arlington County Permitting Contact Us



t 202.344.4369 f 202.344.8300 ZGWilliams@Venable.com

Ms. Arlova Vonhm Zoning Administrator Arlington County 2100 Clarendon Boulevard, Suite 1000 Arlington, Virginia 22201

RE: AFFORDABLE HOUSING PLAN LETTER

PROPERTY: 3130 LANGSTON BOULEVARD (RPC #15-012-041)

OWNER/APPLICANT: RP LANGSTON I LLC

Dear Ms. Vonhm:

On behalf of the Applicant, please accept this Affordable Housing Plan Letter in fulfillment of the Administrative Regulation 4.1 filing requirements. The Applicant submits the following with the understanding that affordable housing plans are negotiated throughout the site plan process and not agreed upon at the time of application acceptance. By way of this letter, the Applicant agrees that it will work with Arlington County to comply with the requirements of the Arlington County Affordable Housing Ordinance.

Thank you for your consideration of this request, and please do not hesitate to contact me with any questions. As always, thank you for your attention to this matter.

Sincerely,



t 202.344.4369 f 202.344.8300 ZGWilliams@Venable.com

Ms. Arlova Vonhm Zoning Administrator Arlington County 2100 Clarendon Boulevard, Suite 1000 Arlington, Virginia 22201

RE: BY-RIGHT DEVELOPMENT TABULATIONS

PROPERTY: 3130 LANGSTON BOULEVARD (RPC #15-012-041)

OWNER/APPLICANT: RP LANGSTON I LLC

Dear Ms. Vonhm:

Please find below a tabulation in chart form of the by-right development capacity and site plan development for the above-referenced Property. The Property is presently zoned to the "C-2" Service Commercial-Community Business Zoning District. As part of this application, the Applicant proposes a rezoning to the "C-O-2.5" Mixed Use Zoning District.

Zoning Classification	Site Plan Area	Density Permitted By-Right	By-Right Development Capacity
C-2	73,254 sf 1.68 acres	1.5 FAR	109,881 sf GFA

Zoning	Site Plan Area	Density Permitted By-Right	By-Right Development
Classification			Capacity
C-O-2.5	73,254 sf	0.6 FAR	43,952.4 sf GFA
	1.68 acres		
Zoning	Site Plan Area	Density Permitted By	Special Exception Base
Classification		Special Exception	Development Capacity
C-O-2.5	73,254 sf	2.5 FAR office/commercial	183,135 sf GFA
	1.68 acres	115 units/acre residential	193 units

Thank you for your consideration of this request, and please do not hesitate to contact me with any questions. As always, thank you for your attention to this matter.

Sincerely,



t 202.344.4369 f 202.344.8300 ZGWilliams@Venable.com

Ms. Arlova Vonhm Zoning Administrator Arlington County 2100 Clarendon Boulevard, Suite 1000 Arlington, Virginia 22201

RE: COMMUNITY BENEFITS LETTER

PROPERTY: 3130 LANGSTON BOULEVARD (RPC #15-012-041)

OWNER/APPLICANT: RP LANGSTON I LLC

Dear Ms. Vonhm:

On behalf of the Applicant, please accept this Community Benefits Letter in fulfillment of the Administrative Regulation 4.1 filing requirements. As currently submitted, the application includes retail and residential uses, which consist of both base and bonus density. Any change in the amount of density in the project may impact the proposed community benefits. The Applicant submits the following as a preliminary list solely to fulfill the Administrative Regulation 4.1 filing requirements, with the understanding that the community benefits package is negotiated throughout the site plan process and not agreed upon at the time of application acceptance. The preliminary list of potential community benefits includes:

- A new mixed-use residential building featuring ground floor retail;
- Provision of public open space;
- Streetscape and sidewalk improvements;
- Utility Fund contribution;
- Utility improvements (i.e., water main, sanitary sewer);
- Provision of bicycle parking;
- Transportation Demand Management Plan;
- Parking Management Plan;
- Public Art contribution/provision of on-site Public Art attributable to new density;
- Affordable Housing contribution attributable to new base density;
- Provision of on-site Committed Affordable Units:



August 13, 2024 Page 2

- Increased real estate and sales tax revenue;
- Implementation of the Langston Boulevard Area Plan; and
- Job creation.

Thank you for your consideration of this request, and please do not hesitate to contact me with any questions. As always, thank you for your attention to this matter.

Sincerely,

Ms. Arlova Vonhm
Zoning Administrator
Arlington County
2100 Clarendon Boulevard, Suite 1000
Arlington, Virginia 22201

Re: Consent and Authorization Letter – Administrative Regulation 4.1

Site Plan Application and Concept Plan Application, Rezoning, GLUP

Amendment

Property: 3130 Langston Boulevard (RPC # 15-012-041) (the

"Property")

Dear Ms. Vonhm:

The undersigned is the title owner of the above-referenced Property. The purpose of this letter is to consent to the filing of a new Administrative Regulation 4.1 Site Plan Application and Concept Plan Application for the Property, including any related applications such as (but not strictly limited to) a Rezoning Application, GLUP Amendment, Major Site Plan Amendment Applications, Minor Site Plan Amendment Applications, Administrative Change Applications, Vacations, and Encroachments.

We hereby authorize Venable LLP to act as attorneys on our behalf in connection with the Administrative Regulation 4.1 Site Plan Application and any related application(s) described herein. Please direct all correspondence relating to the application(s) to Zachary G. Williams at Venable LLP. The boundaries of the application(s) include the undersigned's land.

[SIGNATURE PAGE FOLLOWS]

RP Langston I LLC

A Virginia limited liability company

y: Caere Con
Tame: Cassie Guy
itle: Authorized person
TATE/COMMONWEALTH OFVIRGINIA
COUNTY/CITY/DISTRICT OFARLINGTON
On this day of Avost, 2024, before me, a Notary Public in and for said dirisdiction, personally appeared CASSIE GUY, known to me (or atisfactorily proven) to be the person whose name is subscribed to the within instrument, and exhowledged that he/she executed the same for the purposes therein contained. Given under my hand and official seal, this day of Avost, 2024. CHRISTOPHER ABSHER OURSLER NOTARY PUBLIC REGISTRATION # 8033888 COMMONWEALTH OF VIRGINIA MY COMMISSION EXPIRES 2/28/27
Ty Commission Expires: 2/28/27
egistration Number: 8033888

DISCLOSURE STATEMENT

ARLINGTON COUNTY ZONING ORDINANCE §15.1.4

Department of Community Planning, Housing & Development – Zoning Division 2100 Clarendon Boulevard, Suite 1000, Arlington, Virginia 22201 building.arlingtonva.us | contactzoning@arlingtonva.us Phone (703) 228-3883 | Fax (703) 228-3896



Revised July 2019

			11011300 3017 2023
REAL PROPERTY IDE	NTIFICATION		
3130 Langston Boulevard			
ADDRESS(ES)			
15-012-041			
REAL PROPERTY CODE(S) [RPC]			
SUBDIVISION NAME		LOT(S)	BLOCK SECTION
LEGAL DESCRIPTION			
OWNERSHIP INTERE	ST(S)		
identified real estate. For propert	ies owned by general or limite ckholders, officers, and directo	ship interest of ALL persons and/or entited partnerships, limited liability companiors [for exceptions see below], and pleas cumentation as necessary.	es (LLCs), or other corporate entities,
SUBJECT PARCEL ADDRESS/RPC	NAME OF OWNER	FULL ADDRESS OF OWNER	NATURE OF OWNERSHIP INTEREST
15-012-041	RP Langston I LLC	c/o Rooney Properties, LLC 3330 Washington Blvd, Suite 220 Arlington, VA, 22201	Title owner and Applicant
Corporations with: (1) more than !	l 500 shareholders; and, (2) hav	ring stock traded on a national or local st	ock exchange are <u>not</u> required to list all
stockholders, officers, and directo	rs. Please indicate any corpora	ations listed above which meet these cri	iteria:
CEDTIEICATION			
CERTIFICATION			
I hereby certify that this is a t real property identified above	ē.		g equitable ownership interest in the
		d signature page.	
	SIGNATURE		
	ADDRESS		
STATE OF	, COUNTY OF	, TO WITNESS	
Subscribed and sworn before	me this d	ay of	, 20
		Notary	_
		My commission	n expires

Commonwealth of Virginia State Corporation Commission Office of the Clerk Entity ID: 11511723 Filing Number: 2303105609255 Filing Date/Time: 03/10/2023 12:59 PM Effective Date/Time: 03/10/2023 12:59 PM

Limited Liability Company - Articles of Organization

Entity Information

Entity Name: RP Langston I LLC Entity Type: Limited Liability Company

Business Type

Industry Code: 0 - General

Duration

Perpetual(forever)

Registered Agent Information

RA Type: Entity Locality: ARLINGTON COUNTY

RA Qualification: N/A

Name: ROONEY PROPERTIES, LLC Email Address: mrooney@rooneyholdings.com

The company's initial registered office address, including the street and number, if any, which is identical to the

business office of the initial registered agent, is:

Registered Office Address: 3330 Washington Blvd Ste 220, Arlington, VA, 22201 - 4535, USA

Contact Number: N/A

Principal Office Address

Address: Brynn Hunt, 3330 Washington Blvd Ste 220, Arlington, VA, 22201 - 4535, USA

Principal Information

Management Structure: Member-Managed

Signature Information

Date Signed: 03/10/2023

Executed in the name of the limited liability company by:

Signature Title **Printed Name** Michael Rooney Michael Rooney Organizer

COMMONWEALTH OF VIRGINIA STATE CORPORATION COMMISSION

AT RICHMOND, MARCH 10, 2023

The State Corporation Commission has found the accompanying articles of organization submitted on behalf of

RP Langston I LLC

to comply with the requirements of law, and confirms payment of all required fees. Therefore, it is ORDERED that this

CERTIFICATE OF ORGANIZATION

be issued and admitted to record with the articles of organization in the Office of the Clerk of the Commission, effective March 10, 2023.

The limited liability company is granted the authority conferred on it by law in accordance with the articles of organization, subject to the conditions and restrictions imposed by law.

STATE CORPORATION COMMISSION

ЗУ

Jehmal T. Hudson Commissioner

Rooney Properties, LLC Officers

- 1. Kathleen D. Rooney, President
- 2. Michael C. Rooney, General Counsel and Vice President
- 3. Greg Hoffman, Secretary
- 4. Brynn Hunt, Assistant Secretary and Treasurer

RP Langston I LLC

A Virginia limited liability company

y: Caere Con
Tame: Cassie Guy
itle: Authorized person
TATE/COMMONWEALTH OFVIRGINIA
COUNTY/CITY/DISTRICT OFARLINGTON
On this day of Avost, 2024, before me, a Notary Public in and for said dirisdiction, personally appeared CASSIE GUY, known to me (or atisfactorily proven) to be the person whose name is subscribed to the within instrument, and exhowledged that he/she executed the same for the purposes therein contained. Given under my hand and official seal, this day of Avost, 2024. CHRISTOPHER ABSHER OURSLER NOTARY PUBLIC REGISTRATION # 8033888 COMMONWEALTH OF VIRGINIA MY COMMISSION EXPIRES 2/28/27
Ty Commission Expires: 2/28/27
egistration Number: 8033888



t 202.344.4369 f 202.344.8300 ZGWilliams@Venable.com

Ms. Arlova Vonhm Zoning Administrator Arlington County 2100 Clarendon Boulevard, Suite 1000 Arlington, Virginia 22201

RE: PUBLIC ART LETTER

PROPERTY: 3130 LANGSTON BOULEVARD (RPC #15-012-041)

OWNER/APPLICANT: RP LANGSTON I LLC

Dear Ms. Vonhm:

On behalf of the Applicant, please accept this Public Art Letter in fulfillment of the Administrative Regulation 4.1 filing requirements. The Applicant met with Arlington County public art staff on June 28, 2024, to discuss the public art requirements. Please see the attached staff memo. The Applicant will continue to work with public art staff during the application review and final site design process.

Thank you for your consideration of this request, and please do not hesitate to contact me with any questions. As always, thank you for your attention to this matter.

Sincerely,

MEMORANDUM

TO: Rosa Achour, CPHD Zoning

FROM: Thomas Vannatter, AED DATE: June 28, 2024

Public Art 4.1 Pre-filing - June 18, 2024

SUBJECT: 3130 Langston Blvd.

Arlington staff:

- Angela A. Adams, AED, Public Art
- Thomas Vannatter, AED, Public Art
- Kris Krider, CPHD, Urban Design

Developer representatives:

- Cassie Guy Rooney Properties
- Greg Hoffman Rooney Properties
- Zach Williams Venable

Rooney Properties is working to redevelop 3130 Langston Blvd., currently the site of a Walgreens, through the creation of a mixed-use development following the <u>area plan for Langston Blvd</u>. This project would create a concrete frame, multifamily building with ground floor retail with a "pool deck" on level 3, along with townhouses and a small pocket park between Kirkwood and the bike trail at the southern edge of the site. The site is bounded by North Kirkwood Road to the south, Langston Blvd to the north, and the I-66 Custis Memorial Parkway to the west. The development is adjacent to a small shopping center and the Custis Trail and close to public transportation on Langston Blvd.

Mr. Krider was very familiar with this location and excited about the potential for this redevelopment. Mr. Krider did mention that the Spout Run stream runs directly under the site and may present a few challenges with the stormwater line. There may be an opportunity to recognize the stream in the design. It will also be important to coordinate with the open space vision as described in the Langston Boulevard Plan. Mr. Hoffman from Rooney Properties expressed that they are very familiar with the location of the stormwater box culvert that feeds Spout Run stream and suggested that there may be an opportunity for the County to remove some of the overgrowth on the east side of Kirkwood and improve property that the County lists as parkland. Mr. Krider recommended slightly relocating the townhouses on the site plan to pull them back off the street and move them southward towards the pocket park space to create a more cohesive design, and that the top right of the terrace level of the multi-family building provides an opportunity for biophilic design through a green roof in the area marked "patios."

Mr. Krider felt uncertain if there was a good location for public art on site with the new development, potentially in the mini-park area or along the southeast facade that faces Kirkwood close to pawn shop or the "white box wall" on the pool deck level that was pointed out by Mr. Hoffman. Ms. Adams suggested that the design of the building should not create a problem that needs an art "fix" if there is a way to redesign the white-box rather than use it as a canvas. Adams also suggested to lean towards tile/mosaic rather than paint for any two-dimensional enhancements due to the longevity of the materials.



contribution.

Mr. Hoffman mentioned that he was in early negotiations with Encore Stage to possibly provide a "forever home" for the cultural group as part of this development. Ms. Adams strongly suggested getting the Cultural Affairs Division Chief Michelle Isabelle-Stark involved in any negotiations with Encore with regards to providing space as a cultural amenity in order to flesh out a larger community benefits package. Mr. Krider reiterated that working with a performing arts group like Encore to provide below market rate space could be a part of a larger benefit package, outside of the standard public art

We encourage the developer to hire an art consultant should they wish to pursue an on-site public art project. To keep future options open and to avoid the need for amendments, Ms. Adams recommends retaining both the on-site and payment in lieu option (A and B of the standard public art condition language) and keeping Arlington Public Art staff looped in at each step. Arlington Public Art has recently updated their Master Plan and is happy to meet with the applicant's design team to review the Plan's overarching goals and those for this location.



t 202.344.4369 f 202.344.8300 ZGWilliams@Venable.com

Ms. Arlova Vonhm Zoning Administrator Arlington County 2100 Clarendon Boulevard, Suite 1000 Arlington, Virginia 22201

RE: RETAIL AND RESIDENTIAL RELOCATION LETTER

PROPERTY: 3130 LANGSTON BOULEVARD (RPC #15-012-041)

OWNER/APPLICANT: RP LANGSTON I LLC

Dear Ms. Vonhm:

On behalf of the Applicant, please accept this Retail and Residential Relocation Letter in fulfillment of the Administrative Regulation 4.1 filing requirements. The Property is improved with a single-story commercial building that currently operates as a Walgreens Pharmacy. The Applicant proposes to demolish the existing commercial building. As such, the retail tenant will be displaced during construction. The Applicant will coordinate with County staff to develop a Retail Tenant Relocation Plan in accordance with Administrative Regulation 4.1 and applicable County guidance. No residential tenants will be displaced by construction.

Thank you for your consideration of this request, and please do not hesitate to contact me with any questions. As always, thank you for your attention to this matter.

Sincerely,



t 202.344.4369 f 202.344.8300 ZGWilliams@Venable.com

Ms. Arlova Vonhm Zoning Administrator Arlington County 2100 Clarendon Boulevard, Suite 1000 Arlington, Virginia 22201

RE: RETAIL PROGRAM LETTER

PROPERTY: 3130 LANGSTON BOULEVARD (RPC #15-012-041)

OWNER/APPLICANT: RP LANGSTON I LLC

Dear Ms. Vonhm:

On behalf of the Applicant, please accept this Retail Program Letter in fulfillment of the Administrative Regulation 4.1 filing requirements. The following is a preliminary description of the potential new retail uses for the above-referenced Property. The Applicant submits this preliminary description solely to fulfill the Administrative Regulation 4.1 filing requirements, with the understanding that the ultimate retail program is not agreed upon at the time of application acceptance.

The 2015 Arlington County Retail Plan (the "Retail Plan") and the Langston Boulevard Area Plan (the "Plan") establish recommendations for retail uses in the Langston Boulevard corridor. With respect to the Property, the Plan designates its northern frontage (Langston Boulevard) and a portion of its eastern frontage (North Kirkwood Road) as "Gold" streets. The Retail Plan and the Plan use the "Gold" designation to indicate that a wide variety of retail sales, food establishments, entertainment, and service and repair uses (including retail equivalent uses) are appropriate for these frontages.

Consistent with the recommendations of the Plan, the Applicant will lease space to such retail uses as are permitted in the "C-O-2.5" Zoning District, including but not limited to food establishments, entertainment, retail sales, personal service, repair, and/or retail equivalent uses.

Thank you for your consideration of this request, and please do not hesitate to contact me with any questions. As always, thank you for your attention to this matter.

Sincerely,

Site Plan Submittal Checklist

To ensure a complete Site Plan Submittal, the applicant must complete and submit this form.

						Staff Notes
DATE: August 9, 2024						
APPLICANT/DEVELOPER: RP Langston I LLC						
APPLICATION BY: Zachary G. Williams, Attorney/A						
ADDRESS: Venable LLP, 600 Massachusetts Avenue	NW, Washington, DO	20001				
DAYTIME PHONE: 202.344.4369						
EMAIL ADDRESS: zgwilliams@venable.com						
CONTACT: Zachary G. Williams						
PROJECT TITLE: 3130 Langston Boulevard						
PROJECT LOCATION: 3130 Langston Boulevard (F	RPC #15-012-041)					
	Applicant		S	taff		
		1 st	2 nd	3 rd	4 th	
<u>Preliminary Site Plan Drawings</u> : 2 copies of plan at correct scale and size (24" x 36"), with additional required information and 1 digital PDF copy						
Final Site Plan Drawings: 8 copies of plan at 24" x 36" and 11" x 17", with graphic scale representation, with additional required information and digital copy	N/A					
1. Site Plan Drawings Cover Page						
2. Civil Engineering Plans:						
 A. Certified Survey Plat at Scale that is appropriate for the size of the project, ranging from 1" = 10' to 1" = 30' 						
Full Cross-Sections of adjacent streets from curb to curb, with dimensions, including full intersections						
2) Dimensions of Tracts						
Lot area by Zoning District (square feet and acres) for each tract						
4) North Arrow						
Types and dimensions of existing easements						
6) Location, dimensions, size and uses of existing structures and below- grade structures, number parking spaces, number residential and hotel units, and distance from side lot lines and centerlines of adjacent streets						
7) Topography at 2-foot intervals						
Location and height in feet of existing structures on adjacent contiguous site and across adjacent streets						
Show location of trees on site with caliper of 3 inches or greater.						
10) Historic district and/or structures on the site or adjacent sites – add a						

	note on the plot and location plan if there are not any							
	11) Resource protections areas – add a note on the plot and location plan if there are not any							
	12) Metes and Bounds Narrative Description							
В.	Current aerial photograph of full site and surrounding uses							
C.	Zoning plat including notation if from an R, RA, S-3A, S-D, C-1-R, C-1, C-1-R, C-2, C-1-O or C-O-1.0 district to any other commercial, mixed-use (C), industrial (M) or P-S district							
D.	Proposed preliminary subdivision plat showing requirements of Subdivision Ordinance, including:	N/A						
	1) Lot lines	N/A						
	Size of subdivided parcels	N/A						
E.	Plot and location plan at a 1"=25' scale. However, a different scale could be used that is appropriate for the size of the project, ranging from 1"=10' to 1"=30'. All civil sheets should use the same scale chosen for the project. Final engineering plans will need to be submitted at 1"=25' scale.							
	Lot dimensions and site area, individual parcel Dimensions and area, and area within each existing and proposed zoning district							
	2) North Arrow							
	 Public street and right-of-way dedications, with square footage, and site area before and after dedication 							
	Proposed grading at 2-foot contour intervals							
	5) Location, dimension, connection, label and description of proposed and existing underground, surface, and aerial utilities and structures within the property, on the periphery of the site and in the full street. Show relationship of underground utilities to street tree placement.							
	•	Appl	icant	Staff		Staff Notes		
				1 st 2 nd				
		Ext	Prop	Ext	Prop	Ext	Prop	
	a. Water meter vaults & water meter clear zones							
	b. Electric Transformer vaults							
	c. Storm Sewer							
	d. Gas							
	e. Sanitary Sewer							
Į.	C. Samuary Sevice							

f. Water							
g. Electric				1	 		
h. Cable TV				1			
i. Telephone							
j. Fiber optics							
-				1			
k. Other (please specify)	N/A						<u> </u>
I. METRO-related structures							Chaff Nahaa
	Applicant		ct	2 nd	aff	ath	Staff Notes
6) Location, dimension, connection, label and description of proposed and existing surface and below grade structures within the property, on the periphery of the site.			st	Ziid	3 rd	4 th	
	Applicant			St	aff		
			1	st		2 nd	
	Ext Pro	p E	xt	Prop	Ext	Prop	
 Full street sections and intersections. 							
b. Sidewalks (full sidewalk and clear width)							
c. Curb and gutter							
d. Street lights							
e. Utility poles							
f. Bus Stops / Bus Shelters, if applicable							
 g. Street trees, tree pits and/or tree planting strips 							
h. Transformer pads							
 Fire hydrants and fire department connections 							
j. Crosswalks							
k. ADA ramps and driveway entrances							
I. Traffic signal poles and cabinets							
	Applicant			St	aff		
		1	st	2 nd	3 rd	4 th	
m. Distance to all property lines and street center lines							
n. Corner vision obstruction area							
 Physical relationship and distance to adjacent lots and buildings on same block, contiguous blocks and across adjacent streets 							
p. Location of streets on adjacent sites and blocks, with garage and loading docks marked							
 q. Driveways and driveway entrances on the same block and across the street 							
r. Interior streets, sidewalks & open spaces							

s. Distance from shared property		
line or proposed subdivision line.		
t. Surface parking and loading areas		
u. Size and location of garage air intake and exhaust vents		
7) Retail		
a. Location and square footage of retail spaces. Dimension the sidewalk frontage where the finished floor elevation(s) of the retail space(s) is equal to the finished grade of the sidewalk, and label these areas as the location of potential retail entrances.		
b. Label street/pedestrian access		
8) Proposed elevations at:		
a. Ramps		
b. Patios		
c. Plazas		
d. Top/bottom of privacy walls and fences		
e. Sidewalks		
f. First floor and all entrances		
g. Garage & loading dock Entrances		
Location of trees to be saved, and limits of clearing and grading		
10) Average elevation of the site		
11) Coverage/Percent Coverage		
F. Types and dimensions of proposed vacations and/or types, dimensions and necessity for encroachments		
G. Other special plans or data – if applicable		
H. Presentation Plan at 1" = 25' scale showing proposed improvements only:		
Location, dimension, connection, label and description of all proposed surface structures within the property, on the periphery of the site, including:		
a. Buildings		
b. Sidewalks (full sidewalk clear width)		
c. Curb and Gutter		
d. Bus stops/shelters, if applicable		
e. Street tress, tree pits, and/or tree planting strips		
f. Crosswalks		
g. ADA ramps and driveway entrances		
h. Interior Streets, sidewalks, and		

open spaces			
i. Surface parking and loading			
areas			
j. Transformer Pads			
k. Fire hydrants and fire			
department connections			
I. Street lights			
m. Utility poles			
n. Traffic signal poles and cabinets			
o. Corner vision obstruction area			
p. Size and location of garage air intake and exhaust vents			
q. Distance to all property lines and street center lines			
r. Distance from shared property line or proposed subdivision line			
Location and square footage of retail			
spaces. Dimension the sidewalk frontage where the finished floor elevations of the retail space(s) is equal to the finished grade of the sidewalk, label these areas as the location of potential retail entrances.			
Proposed limits of clearing and grading.			
North arrow orientation			
5) Symbol Key/Legend			
Striping and marking plan providing			
number, direction and width of existing and proposed travel and parking lanes, crosswalks, medians, bike lanes; width of existing and proposed curb cuts, planting areas, street lights, existing traffic signals (poles, span wires and/or mast arms), label and delineate fire lanes, if applicable			
J. Existing and proposed street cross- sections:			
Building wall lines & dimensions of sidewalk			
2) Planting areas			
3) Curb and gutter			
4) Parking, bike and travel lanes			
5) Medians			
K. Fire Marshal page showing existing and proposed fire department connections, hydrant locations, and adjacent street widths.			
Architectural Plans at a scale appropriate for the project size			
A. Floor Plans of each garage level, including:			
1) Elevations	i		
Dimensions of overall structure	i		
GFA of overall structure			
J) GIA GI OVELGII SU UCLUIE	20		<u> </u>

4			
4)	Layout and number of parking spaces		
5)	Label and dimension of typical standard, compact and handicapped spaces		
6)	Widths of each aisle	i	
7)	Label and size of storage, mechanical, retail parking, bicycle parking, and other non-parking areas.		
B. Gro	und Floor Plan	i	
1)	Overall dimension, elevation and GFA		
2)	Label all separate uses and access to separate uses, including storage, loading and service areas, retail and retail access/connections to service areas, recycling and trash collection areas, and garage		
3)	Label building entrances for pedestrians and vehicles, including ground floor retail		
4)	Location and information on landscaping, plazas and other site features		
C. Noi	n-typical Floors		
5)	Overall dimensions, elevation and GFA of each floor level		
2)	Label all separate uses and access to separate uses, including storage, loading and service areas, retail and retail access/connections to service areas, recycling and trash collection areas, and garage		
D. Typ	pical Floors		
6)	Overall dimensions, elevation and GFA of each floor level		
2)	Label all separate uses and access to separate uses, including storage, loading and service areas, retail and retail access/connections to service areas, recycling and trash collection areas, and garage		
and	of plan with elevations, showing main dipenthouse roof elements and echanical units		
	vations of each building from the rth, south, east and west showing:		
1)	Height in feet of proposed building as measured from average site elevation, to the top of main roof, penthouse, and structures above the penthouse		
2)	Number of floors and elevation of each floor including main roof, penthouse roof and any structures above penthouse roof, and slab-to-		

slab heights of all retail spaces		
Height, location and general design of structures above building height limit	N/A	
Label location and access to underground parking and loading		
5) Label façade and exterior surface materials and colors		
6) Complete street frontage, lobby and or plaza level elevations showing complete design details, façade materials and colors at a scale of 1/8" = 1'		
Distance from shared property line and percentage of building wall openings		
8) General size and location of vents for garage air intake and exhaust, HVAC, and laundry		
G. Vertical cross sectional views showing:		
1) Average elevation of the site		
Height in feet of proposed structure(s) as measured from average site elevation		
3) Number of floors and elevation of each floor, including main roof, penthouse, and structures above the penthouse		
Height, location, and general design of structures proposed above the building height limit	N/A	
5) Label location and access to underground parking and loading		
Elevation of all floor grades above and below ground		
7) Buildings in relationship to surrounding uses:		
a. Distance between proposed buildings and adjacent lots		
b. Distance between proposed buildings and adjacent buildings		
c. Distance between proposed buildings and adjacent streets		
d. Heights of proposed building and adjacent buildings.		
e. Distance of building wall from the shared property line.		
8) Plazas and landscape area above structures, soil depth for all landscaping, and elevations at finished grade		
Key showing where cross-sections are taken		
H. Screening Plans for:	N/A	
Mechanical equipment		

		2) Parking areas		
		3) Loading areas		
		4) Trash areas		
		5) Penthouse areas		
4.	Co	nceptual Landscape Plan		
		Existing (to remain) and proposed building footprints and hardscape, and delineation of existing (to remain)and proposed underground structures		
	В.	Existing and proposed utilities, and topography at 2' intervals		
	C.	Streetscape		
	D.	Label, design and size of plazas and other site features; location and types of landscaping; label other landscape elements; label street trees and streetscape elements		
	E.	Label, size and elements of common open spaces, open space easements and required landscaping		
	F.	Location to be saved, and limits of clearing and grading		
	G.	Tree survey of all trees on the site with a caliper of 3 inches and greater. Provide locations, sizes, and identification/species of all existing trees to be saved, trees to be removed, proposed limits of clearing and grading, and a calculation of the number of trees to be replaced in tabular form pursuant to the tree replacement formula		
5.	Ad	ditional Drawings		
	A.	Materials of special architectural features		
	В.	Treatment of mechanical shafts and balcony railings		
	C.	Exterior treatment of loading dock doors		
	D.	Street level context of how buildings fit in neighborhood with existing conditions and known future development		
	E.	Massing context of how buildings fit in surrounding development		
	F.	Comparative drawing (sections) of height profiles within a 400-foot offset of development		
	G.	Context plan of street alignments, parking and travel lane designations, sidewalks, bike and transit facilities, and building lines within a 400-foot offset of development		
6.	Inf	formation Sheet		
	A.	Tabulation in chart form of parking and bicycle spaces required and provided, by building level and user type.		
	B.	Tabulation in chart form of the square footage of all separate uses, by floor, and the totals for all floors, including storage,		

				1	1	
	loading and service areas including height of loading docks, retail including retail slab-to-slab height, recycling and trash collection areas, and garage					
	C. Tabulation in chart form of the total number of residential units by type, number of bedrooms/dens, and by floor area, per floor and total for all floors					
	 Tabulation in chart form of total number of hotel units by floor area, per floor, and total 		N/A			
	 E. Tabulation in chart form of elevation and GFA for each floor and total GFA for all floors 					
7.	Tabulation in chart form of proposed density (GFA and/or Units per Acre) of the site plan project including all requested density bonuses and exclusions.					
8.	Additional filing information					
	A. Site Plan Application Acceptance Letter from CPHD, Director	N/A				
	B. Application form					
	C. Statement of justification letter					
	D. Disclosure statement					
	E. Consent of all property owners					
	F. Site Plan Specification form					
	G. Tabulation in chart form showing by- right development capacity					
	H. Letter stating all requested Zoning Ordinance modifications (density bonuses and/or exclusions], height, parking, etc.) and justification of each, where applicable.					
	I. Community benefits letter					
	J. Vacation and Encroachment plat and application(s) or waiver form. The plat shall show the exact locations and types of vacations and/or encroachments					
	K. Transportation Demand Management Plan					
	L. Stormwater Management and Compliance Plan (may be within site plan drawings)	See plai	ns			
	M. MEP letter documenting transformer size and location					
	N. LEED [®] version 4 (or most recent as approved by the County Manager) Scorecard					
	Tracking sheet with description of proposed credits with explanation as to why/why not being achieved					
	Energy model summary and proposed savings					
	3) LEED consultant information					
	O. Description of Retail Program					
	O. Description of Retail Program					

P.	Number and location of existing residential households and retail tenants requiring relocation, including names of retail tenants. Relocation Plan, if applicable.	
Q.	Public art letter	
R.	Rezoning Application and rezoning plat, if applicable	
S.	Traffic Impact Analysis, if applicable	
T.	Description and plats of transactions involving County property, if applicable	
U.	Affordable Housing Plan, if applicable	
V.	Historic preservation letter, if applicable	N/A
W.	Historic Resources Inventory (HRI) Informational Form, if applicable	N/A
X.	CCBP, Block development drawings at 24" x 36", if applicable	N/A
Y.	CCBP, Block Framework drawings at 11" x 17", if applicable	N/A
Z.	Urban Design Guidelines, if applicable	N/A
AA.	Staff Report on the Conceptual Site Plan Review, if applicable	
BB.	Formal response to comments (for resubmissions only)	N/A

Site Plan Specification Form

STAFF ENTRY:	
Assigned Site Plan Number	New 4.1 Site Plan TBD
PDSP Phase Number	N/A
APPLICANT ENTRY:	
Form (Re)Submission Date	August 9, 2024
Project Title	3130 Langston Boulevard
Project Location	3130 Langston Boulevard
Parcel RPC Numbers	15-012-041
DEVELOPMENT TEAM:	
Applicant	RP Langston I LLC
Address (incl. zip code)	c/o Rooney Properties, LLC 3330 Washington Boulevard, Suite 220, Arlington, VA 22201
Telephone Number	571.297.4904
Contact	Cassie Guy
E-mail Address	cguy@rooneypropertiesllc.com
Fax #	
APPLICATION MADE BY:	
Name	Venable LLP
Address (incl. zip code)	600 Massachusetts Avenue NW, Washington, DC 20001
Telephone Number	202.344.4369
Contact	Zachary G. Williams
E-mail Address	zgwilliams@venable.com
Fax Number	202.344.8300
ATTORNEY:	
Firm	Venable LLP
Address	600 Massachusetts Avenue NW, Washington, DC 20001
Telephone Number	202.344.4369
Contact	Zachary G. Williams
E-mail Address	zgwilliams@venable.com
Fax #	202.344.8300
ARCHITECT:	
Firm	DCS Design
Address	8614 Westwood Center Drive, Suite 800, Tysons, VA 22182
Telephone Number	703.556.9275
Contact	Stephen Saff
E-mail Address	ssaff@dcsdesign.com

Fax #	
ENGINEER:	
Firm	Vika Virginia, LLC
Address	8180 Greensboro Drive, Suite 200, Tysons, VA 22101
Telephone Number	703.442.7800
Contact	Robert Cochran
E-mail Address	cochran@vika.com
Fax #	
LANDSCAPE ARCHITECT:	
Firm	Land Design, Inc.
Address	200 S Peyton Street, Alexandria, VA 22310
Telephone Number	703.549.7784
Contact	Andrea Crossett
E-mail Address	acrossett@landdesign.com
Fax #	
LEED CONSULTANT:	
Firm	DCS Design
Address	8614 Westwood Center Drive, Suite 800, Tysons, VA 22182
Telephone Number	703.556.9275
Contact	Kathy Lawson
E-mail Address	klawson@dcsdesign.com
Fax #	
TRAFFIC CONSULTANT:	
Firm	Vika Virginia, LLC
Address	8180 Greensboro Drive, Suite 200, Tysons, VA 22102
Telephone Number	703.442.7800
Contact	Mike Pinkoske
E-mail Address	pinkoske@vika.com
Fax #	
ADDITIONAL CONSULTANT(S):	
Firm	
Address	
Telephone Number	
Contact	
E-mail Address	
Fax #	
ADDITIONAL CONSULTANT(S):	
Firm	
Address	

Telepho	one Number		
Contact			
E-mail /	Address		
Fax #			
		Square Feet	Acres
1.	A. Total Site Area	73,254	1.68
	B. Site Area in Existing Zoning District		
	District C-2	73,254	1.68
	C. Site Area in Proposed Zoning District		
	District C-O-2.5	73,254	1.68
2.	Site Area Allocated for Densi (Attach exhibit of site area allocation when neces		
	A. Office	N/A	N/A
	B. Commercial	2,616.78	0.06
	C. Hotel	N/A	N/A
	D. Residential	70,637.22	1.62
	E. Other	N/A	N/A
3.	Floor Area Ratio (FAR) inclusi density bonuses and exclusion (GFA divided by site area for density purposes [f site area])	ns	
	A. Office		N/A
	B. Commercial		4.69
	C. Hotel		N/A
	D. Residential		4.69
	E. Other		N/A
	Total		4.69
4.	Dwelling Units Per Acre		164.12
5.	Hotel Rooms Per Acre		N/A
		Square Feet	
6.	Total Gross Floor Area (After Exclusions)		
	A. Office Use		
	Building 1 - 3130 Langston Blvd.	N/A	
	B. Retail Use		
	Building 1 - 3130 Langston 12,612 Blvd.		
	C. Hotel Use	Square Feet	# Rooms
	Building 1 - 3130 Langston Blvd.	N/A	N/A

	D. Residential Use)	Square Feet		# Units			
	Building 1 - 3130 Blvd.	Langston	331,268		276			
	Affordable Ho	ousing Units	TBD		TBD N/A			
	E. Other		N/A					
	Total		343,880					
7.	Total # of Parking	Spaces						
		Standar	d Compact	НС	Total	% Compact		
	A. Office Use							
	Building 1 - 3130 Langston Blvd.	N/A	N/A	N/A	N/A	N/A		
	B. Retail Use							
	Building 1 - 3130 Langston Blvd.	22	0	1	22	N/A		
	C. Hotel Use							
	Building 1 - 3130 Langston Blvd.	N/A	N/A	N/A	N/A	N/A		
	D. Residential Use	2						
	Building 1 - 3130 Langston Blvd.	256	53	9	309	N/A		
	E. Other	N/A	N/A	N/A	N/A	N/A		
	Total	278	53	10	331	16.01		
8.	Type of Parking				# of spaces			
	A. Structured – A	bove grade		230	230			
	B. Structured – B	elow grade		0				
	C. Surface							
9.	Parking Ratio							
	A. # of Spaces pe	er Office GF/	A N/A					
	B. # of Spaces pe			0.004* per Sq. Ft. N/A 1.12 per one unit				
	C. # of Spaces pe							
	D. # of Spaces pe	er Residentia	al 1.12					
	E. # of Spaces pe		N/A		per one arms			
10.	Building Height							
	Average Elevation of t	ne Site in fo	et ahove sea le	vel 177.72	2'			
	Average Lievation of t		ct above sea le	VCI 277171	1//./2			

^{*} Parking is being provided for the 5,320 square feet of retail GFA at the ratio required by the Zoning Ordinance (1 space for every 250 square feet of retail GFA). Parking is not being provided for 7,292 square feet of retail equivalent amenity GFA because the amenity space is intended to serve the building's residents, for whom there is a residential parking space allocation.

		Main Roof	Penthouse Roof	# Stories
A.	Office			
	Building 1 - 3130 Langston Blvd.	N/A	N/A	N/A
В.	Retail			
	Building 1 - 3130 Langston Blvd.	N/A	N/A	N/A
C.	Hotel			
	Building 1 - 3130 Langston Blvd.	N/A	N/A	N/A
D.	Residential			
	Building 1 - 3130 Langston Blvd.	121.11′	133.69′	12
E.	Other			
	ng Elevation to Main Roof and	Penthouse Roc	of (in feet above sea	level)
Banai	ng Elevation to Fiam Root and	Main Roof	Penthouse Roof	# Stories
Λ	Office	I Idili Kool	i chalouse Rool	" Stories
A.	Building 1 - 3130 Langston Blvd.	N/A	N/A	N/A
D	Retail	IN/A	IN/A	IN/A
D.	Building 1 - 3130 Langston Blvd.	N/A	N/A	N/A
	Hotel	IV/A	IV/A	IN/A
C.	Building 1 - 3130 Langston Blvd.	N/A	N/A	N/A
	Residential	IN/A	IN/A	IN/A
D.		301.11′	212.60/	12
	Building 1 - 3130 Langston Blvd. Other	301.11	313.69′	12
Slab-	co-slab heights			
		Height in Fe	et	
Α.	Office			
	Building 1 - 3130 Langston Blvd.	N/A		
В.	Retail	10.07		
	Building 1 - 3130 Langston Blvd.	10.0′ min.		
<u> </u>	Hotel	D1/A		
	Building 1 - 3130 Langston Blvd.	N/A		
υ.	Residential	0/ 0 =" :		
	Building 1 - 3130 Langston Blvd.	9' - 9.5" min		
	Other			

12.	Dimensions of Yards or Setbacks from right-of-way townhouse projects)					# F	eet			
	A. Front						N/A			
	B. Side						N/A			
	C. Side					N/A				
	D. Rear				N/A	N/A				
13.	Common Open Space (if required)				36.5	1%				
14.	Landscaped Area ("R-C", "C-O-A"	and `	`C-R")			N/A				
15.	Proximity to Metro Entrance (walking distance from main entrance to nearest station entrance) and proximity to regional and local bus service (walking distance from main entrance to bus shelter/ bus stop)				Cour Goog Lang	Approx. 0.9 mi (20 mins) from Courthouse Metro Station (per Google Maps). Approx. 0 mi fro Langston Blvd. & Spout Run Pkwy. bus stop ID 6000715.				
16.	Requested Zoning Ordinance Modheight, parking, setback, coverage			f Use Reg	ula	ations (f	or	example, density,		
	A. Bonus density									
	B. Density exclusions									
	C. Loading spaces									
	D Compact parking ratio	11. 6			_					
47	E. Other modifications as may be neede									
17.	Requested Encroachment(s) and/o and types. Refer to civil drawings	or va	catior	i(s). Inciu	iae	e piat(s)	Sn	lowing exact locations		
18.	# LEED Credits Yes – 9 (53 Targeted)						Maybe - 29			
19 .	Historic District and/or Building				Y	'es	N	o X		
	Name of Building:		N/A							
	Address of Building: N/A									



t 202.344.4369 f 202.344.8300 ZGWilliams@Venable.com

Ms. Arlova Vonhm Zoning Administrator Arlington County 2100 Clarendon Boulevard, Suite 1000 Arlington, Virginia 22201

RE: STATEMENT OF JUSTIFICATION FOR 3130 LANGSTON BOULEVARD

PROPERTY: 3130 LANGSTON BOULEVARD (RPC #15-012-041)

OWNER/APPLICANT: RP LANGSTON I LLC

Dear Ms. Vonhm:

This firm represents RP Langston I LLC (the "Applicant"), an affiliate of Rooney Properties, LLC and title owner of the property located at 3130 Langston Boulevard in Arlington, Virginia (RPC #15-012-041) (the "Property"). On behalf of the Applicant, please accept this letter as a statement of justification for an application to amend the Property's General Land Use Plan ("GLUP") designation, a rezoning, and a new Administrative Regulation 4.1 site plan (collectively, the "Application").

The Property

The Property consists of a 73,254 square feet (1.68 acres) parcel located near the intersection of Langston Boulevard and North Kirkwood Road. It is improved with a single-story commercial building constructed in 1998, which currently operates as a drive-through Walgreens Pharmacy.

The Property is designated for Service Commercial and Public uses in the GLUP and is located within the boundaries of the Langston Boulevard Area Plan (the "Plan"). Within the Plan, the Property is located in Area 5 (West). The Property is currently zoned to the "C-2" Service Commercial-Community Business Zoning District. The Property is not subject to an existing site plan.

The Proposed Project

The Applicant proposes to redevelop the Property with a new mixed-use residential building with ground floor retail. The proposed twelve-story building will have a height of up to 136 feet at its highest point. It will provide approximately 276 residential units to accommodate



August 13, 2024 Page 2

the County's growing housing demand, as well as 5,320 square feet of retail GFA to serve the community and 7,292 square feet of retail equivalent building amenities. The retail area and the main residential entry will be located along Langston Boulevard. Above the three-story podium, the Applicant proposes a courtyard and amenities for the building's residents. The building's L-shaped tower—which engages the Langston Boulevard and I-66 frontages—will overlook the courtyard, providing an attractive view for the residents.

Approximately 331 parking spaces for the proposed building will be provided onsite in a multi-level garage. The garage entrance, along with the building's service areas (such as trash and loading) will be located along the North Kirkwood Road frontage. This placement shields such areas from view and minimizes disruptions along Langston Boulevard.

The proposed development also includes significant site improvements, including but not limited to street and sidewalk improvements along Langston Boulevard and North Kirkwood Road, stormwater planters, a green roof, and a multi-use pathway fronting the site on Langston Boulevard. Further, the proposed development will include a new public space and dog run of approximately 5,000 square feet, as envisioned in the Plan.

The GLUP Amendment, Rezoning, and Site Plan

To facilitate the Property's redevelopment, the Applicant proposes to amend the Property's GLUP designation to "Medium" Office-Apartment-Hotel, rezone the Property to the "C-O-2.5" Mixed Use Zoning District, and create a new site plan for the Property. The Plan acknowledges that the Property's current GLUP designation reflects land use policies envisioned in the mid-1960s and that, to redevelop the Property in accordance with the Plan, its GLUP designation must change to "Medium" Office-Apartment-Hotel. The C-O-2.5 Zoning District implements the "Medium" Office-Apartment Hotel GLUP designation, allowing development consistent with that designation's density.

In addition to the GLUP amendment, rezoning, and new site plan, the Applicant proposes modifications for bonus density, density exclusions, loading, compact parking ratio, and other modifications as may be necessary to support the proposed development. The Applicant proposes to achieve bonus density in consideration of a community benefits package to be developed in coordination with Arlington County staff.

The Applicant's redevelopment proposal is consistent with the Plan recommendations that the Property be developed with a commercial, multi-family residential, or mixed-use building with ground floor retail along Langston Boulevard. The proposed development will help transform Langston Boulevard into a main street with taller buildings concentrated around an activity hub—the Spout Run Parkway Activity Hub—where mixed uses support a walkable



August 13, 2024 Page 3

environment. It will also contribute to the Plan's vision for a diverse mix of parks, plazas, and other natural areas that balance community needs with environmental goals such as providing overland relief and public open space.

Thank you for your attention to this request. Please do not hesitate to contact me at <u>zgwilliams@venable.com</u> or at 202-344-4369 if you require additional information related to this Application.

Sincerely,

Zachary G. Williams



August 9, 2024

t 202.344.4369 f 202.344.8300 ZGWilliams@Venable.com

Ms. Arlova Vonhm Zoning Administrator Arlington County 2100 Clarendon Boulevard, Suite 1000 Arlington, Virginia 22201

RE: VACATION & ENCROACHMENT APPLICATION

PROPERTY: 3130 LANGSTON BOULEVARD (RPC #15-012-041)

OWNER/APPLICANT: RP LANGSTON I LLC

Dear Ms. Vonhm:

This purpose of this letter is to confirm that the Applicant will submit a vacation and encroachment application, if necessary, to the Real Estate Bureau under separate cover, in fulfillment of the Administrative Regulation 4.1 filing requirements.

Thank you for your consideration of this request, and please do not hesitate to contact me with any questions. As always, thank you for your attention to this matter.

Sincerely,

Zachary G. Williams



August 9, 2024

t 202.344.4369 f 202.344.8300 ZGWilliams@Venable.com

Ms. Arlova Vonhm Zoning Administrator Arlington County 2100 Clarendon Boulevard, Suite 1000 Arlington, Virginia 22201

RE: ZONING ORDINANCE MODIFICATIONS LETTER

PROPERTY: 3130 LANGSTON BOULEVARD (RPC #15-012-041)

OWNER/APPLICANT: RP LANGSTON I LLC

Dear Ms. Vonhm:

On behalf of the Applicant, please accept this Modifications Letter in fulfillment of the Administrative Regulation 4.1 filing requirements. The Applicant requests the following modifications:

- <u>Bonus Density.</u> Consistent with Zoning Ordinance Section 15.5.9 and the Langston Boulevard Area Plan (the "Plan"), the Applicant proposes density in excess of the planned base density for the Property. The Applicant will work with County staff to develop an appropriate package of community benefits in consideration of the proposed bonus density.
- Density Exclusions. Consistent with long-standing County practice and the Zoning Administrator's "Advice: Density Exclusions for GFA – Site Plan Projects" dated April 11, 2016, the Applicant proposes to exclude rooftop mechanical space and certain other mechanical/service space from density. Please refer to the site plan drawings for additional information.
- <u>Loading Spaces</u>. The Applicant proposes a reduction in the number of required loading spaces. The Applicant has designed the project to facilitate sharing of loading spaces and optimized loading access and operational management. Further, the Applicant believes that the Ordinance-required number of loading spaces exceeds that which is necessary to adequately serve the proposed uses, given the small fraction of residential units which trigger the requirement for an additional loading space.
- <u>Compact Parking Ratio</u>. The Applicant proposes a compact parking ratio in excess of 15%. The increased compact ratio results from the provision of additional parking spaces for the building's future residents, in excess of the total required by the Zoning Ordinance. Without the additional parking spaces, the compact to standard ratio is below 15%.



August 13, 2024 Page 2

In addition to the above-referenced modifications, the Applicant proposes any other modifications that may be needed to facilitate the proposed development, as may be identified throughout the course of application review.

Thank you for your consideration of this request, and please do not hesitate to contact me with any questions. As always, thank you for your attention to this matter.

Sincerely,

Zachary G. Williams

3130 LANGSTON BOULEVARD

Multimodal Transportation Assessment Arlington, VA

August 9, 2024

Prepared by:

VIKA Virginia LLC Michael R. Pinkoske, PTP Rodolfo A. Roman (703) 442-7800

www.vikavirginia.com



TABLE OF CONTENTS

	PAGE
SECTION 1:	
INTRODUCTION	1
Study Scope	1
SECTION 2:	
Background Information	6
Existing Transportation Facilities	6
Roadway Network	
General Land Use Plan (GLUP)	7
Langston Boulevard Area Plan	7
VDOT Crash Data	
SECTION 3:	
Multimodal Transportation Facilities	13
Overview	13
Census Data Mode-Share Information	13
Existing Transit Services	13
Metrorail Service	13
Bus Service	
Pedestrian Facilities	14
Bicycle Facilities	16
SECTION 4:	
EXISTING CONDITIONS	25
Existing Traffic Counts	25
Existing Conditions Operational Analysis	
Levels of Service	
Queuing	26
SECTION 5:	
Future Conditions Without Redevelopment (2026)	
Background Conditions	
Methodology/Assumptions	
Pipeline Developments	
Regional Growth	
Planned improvements	
Future Conditions without Operational Analysis (2026)	
Levels of Service	
Queuing	33



SECTION 6:	
Proposed Site Description, Trip Generation, Distributions &	
Assignments	38
Proposed Site Redevelopment Description	38
Site Trip Generation Analysis	38
Site Trip Distribution and Assignment	
Existing Site Trips Removed	39
SECTION 7:	
Future Conditions with Development (2026) Future Traffic Forecasts with Development (2026)	43
Future Traffic Forecasts with Development (2026)	43
Operational Analysis of Future Conditions with the Proposed Development	
Levels of Service	
Queuing	43
SECTION 8:	
TRANSPORTATION MANAGEMENT PLAN	47
Participation and Funding	47
Facilities and Improvements	
Promotions, Services, Policies	
Performance Monitoring	49
SECTION 9:	
CONCLUSIONS AND RECOMMENDATIONS	50



LIST OF FIGURES

FIGURE	TITLE	PAGE
1-1	Site Location	4
1-2	Site Plan	5
2-1	Existing Lane Use and Traffic Controls	
2-2	Langston Blvd Cross Sections	10
2-3	N. Kirkwood Road Cross Sections	
2-4	GLUP	12
3-1	Bus Stops	17
3-2	Bus Routes	18
3-3	Pedestrian Facilities Graphic	
3-4	Bicycle Facilities Map	20
3-5	Arlington Master Transportation Plan Bike Map	
3-6	Transit Shed	22
3-7	Pedestrian Shed	23
3-8	Bike Shed	24
4-1	Existing Peak Hour Traffic Counts	29
4-2	Existing Peak Hour Pedestrian Counts	
4-3	Existing Peak Hour Bicycle Counts	
5-1	Regional Growth	36
5-2	Future without Development Traffic Forecasts	
6-1	Total Site Trips	
6-1	Total Site Trips	42
7-1	Total Future with Development Traffic Forecasts	44



LIST OF TABLES

TABLE	TITLE	PAGE
4-1	Existing Level of Service	27
4-2	Existing Queueing Summary	
5-1	Future Levels of Service without Development	34
5-2	Future Queues without Development	
6-1	Site Trip Generation	40
7-1	Total Future LOS	45
7-2	Total Future Queue	46



LIST OF APPENDICES

APPENDIX	TITLE
Α	Scoping Agreement
В	Multimodal Information
С	Peak Hour Vehicular & Pedestrian Counts Drop-off Queues
D	LOS Descriptions
E	Existing Conditions Synchro Worksheets
F	2026 Future Conditions without Development Synchro Worksheets
G	2026 Future Conditions with Development Synchro Worksheets



3130 LANGSTON BOULEVARD

SECTION 1 INTRODUCTION

This report presents the results of a Multimodal Transportation Assessment (MMTA) for the proposed redevelopment of 3130 Langston Boulevard in Arlington County, Virginia. This MMTA was completed in support of the proposed rezoning and 4.1 Site Plan application. As shown in Figure 1-1, the site is bounded by Langston Boulevard to the north, N. Kirkwood Road to the south, and the 3100 Langston Boulevard development to the east in Arlington County, Virginia.

The site comprises one parcel, identified as Arlington County RPC #15-012-041, and is approximately 1.68 acres. The site is improved with a single-story brick building, currently occupied by a Walgreens pharmacy with a drive-through and associated surface parking.

The site is zoned to the C-2 Service Commercial-Community Business zoning district pursuant to §§ 7.17 et seq., respectively, of the Arlington County Zoning Ordinance (the "Zoning Ordinance").

As proposed, the site would be rezoned with a General Land Use Plan (GLUP) amendment and redeveloped in accordance with the Langston Boulevard Plan. The existing building and surface parking would be razed and redeveloped with a mixed-use multifamily residential building with approximately 276 units and space for ground floor retail and/or equivalent. The site would be served by approximately 331 parking spaces and two loading spaces.

Access to the site is currently provided by one (1) driveway along Langston Boulevard, and two (2) driveways along N. Kirkwood Road. As proposed, access would be consolidated to one (1) driveway. The driveway on Langston Boulevard would be closed and the two (2) driveways on N. Kirkwood Road would be consolidated to a single access point. For reference the site plan is shown on Figure 1-2.

Study Scope

A scoping meeting was held with Arlington County staff on May 24, 2024, and identified four (4) study intersections for inclusion in the MMTA. The approved scoping document identified the parameters of the MMTA and is included in Appendix A for reference. For purposes of this study, the buildout year is assumed to be 2028.



Tasks undertaken in this study include the following:

- 1. Reviewed proposed development plans, recently completed traffic impact studies in the vicinity, the Langston Boulevard Plan, and other background data.
- 2. Completed a field reconnaissance of existing roadway and intersection geometries, traffic controls, speed limits, and adjacent on-street parking restrictions.
- 3. Conducted a comprehensive multimodal analysis of the site and the study area including transit, walkability, and bicycle facilities. The study identifies what options, other than vehicular, are available to all users of the site. The study includes bus ridership information, metro ridership information, bike-sharing facilities, and pedestrian infrastructure inventory.
- 4. Established a study scope and specific analysis parameters for the MMTA with Arlington County Department of Environmental Services (DES) staff (see Appendix A).
- 5. Collected vehicular, pedestrian, and bicycle counts at the study intersections during the weekday AM and PM peak hours.
- 6. Requested boarding and alighting information for adjacent bus stops serving the study area from WMATA and Arlington County.
- 7. Reviewed and summarized VDOT's crash data for the study area.
- 8. Conducted operational analyses of existing levels of service (LOS) and vehicle queues (average and 95th percentile) at the study intersections based on the existing peak hour traffic volumes, the existing intersection geometries and traffic controls.
- 9. Forecasted future peak hour traffic volumes for the year 2028 without the proposed development based on existing traffic volumes with the addition of regional traffic growth. No pipeline developments were identified during the scoping meeting.
- 10. Analyzed 2028 future LOS and queues without the proposed development at the study intersections based on the future forecasts without development, the future intersection geometries, and traffic controls.
- 11. Estimated the number of peak hour vehicular trips and person trips that would be generated by the buildout of the proposed development based on standard Institute of Transportation Engineers (ITE) <u>Trip Generation Manual</u>, 11th Edition rates and equations and County mode share information.



- 12. Forecasted future peak hour traffic volumes for the year 2028 with the proposed development based on background traffic volumes and traffic associated with the proposed development.
- 13. Analyzed year 2028 future peak hour LOS and vehicle queues with the proposed development at the study intersections and site driveway, based on the future traffic forecasts and future intersection geometries and traffic controls.
- 14. Identified traffic improvements / enhancements necessary to mitigate future forecasts as a result of the proposed development for 2028 conditions, if required.





Figure 1-1 Site Location







Figure 1-2 Rendered 4.1 Site Plan





SECTION 2 BACKGROUND INFORMATION

Existing Transportation Facilities

<u>Roadway Network.</u> Vehicular access to/from the existing site is provided via one (1) driveway along Langston Boulevard, and two (2) driveways along N. Kirkwood Road. Regional access to/from the site is provided via Interstate 66 to the east, Spout Run Parkway to the northwest, and Langston Boulevard to the north.

Existing lane use and traffic controls at the study intersections are shown on Figure 2-1. A description of each roadway in the vicinity of the site is provided below:

<u>Langston Boulevard (US-29)</u> is classified as a Principal Arterial with a posted speed limit of 35 mph. Langston Boulevard serves as a major east-west connection through Arlington County between Leesburg Pike (Route 7) in Falls Church and the Key Bridge in Washington D.C. Langston Boulevard in the vicinity of the site carries approximately 26,000 vehicles per day (VPD).

<u>Kirkwood Road</u> is classified as a Minor Arterial with a posted speed limit of 25 mph. Kirkwood Road serves as a minor north-south connection through Arlington County from Washington Boulevard near Virginia Square, past Lyon Village, and ending at Langston Boulevard (US-29). Kirkwood Road in the vicinity of the site carries approximately 7,000 VPD.

<u>Spout Run Parkway</u> is classified as a Minor Arterial with a posted speed limit of 40 mph. Spout run serves as a major east-west connection through Arlington County between the George Washington Memorial Parkway, past Interstate 66, and ending at Langston Boulevard (US-29) and Kirkwood Road. Spout Run Parkway in the vicinity of the site carries approximately 15,000 VPD.

Interstate 66 is classified as an Interstate with a posted speed limit of 55 mph. I-66 serves as a major east-west connection through Arlington County, ending on the Theodore Roosevelt Bridge. The off-ramp of Interstate 66 in the vicinity of the site carries approximately 7,000 VPD.

For reference, the existing and proposed cross section for the Langston Boulevard and N. Kirkwood Road are shown on Figures 2-2 and 2-3, respectively.



General Land Use Plan (GLUP)

The entire Property is planned for Service Commercial and Public uses on the General Land Use Plan ("GLUP"). The "Service Commercial" designation recommends personal and business services from one to four stories as well as a series of zoning districts, including the C-2 and C-O-1.0 zoning districts. The "Public" designation includes land used for parks (local, regional, and federal), public schools, libraries, and cultural facilities. This use includes the S-3A and S-D zoning districts.

The Property is located within the boundary of Area 5 (West) of Arlington County's Langston Boulevard Area Plan. As proposed, the site would be rezoned with a GLUP amendment and be redeveloped in accordance with the Langston Boulevard Plan.

Figure 2-2 shows the GLUP map within the vicinity of the site.

Langston Boulevard Area Plan

The site is located within Area 5 (West) of Arlington County's Langston Boulevard Area Plan, a Comprehensive Plan with the goal of improving the safety, comfort, and convenience of the Langston Boulevard Corridor. The Plan's transportation goals focus on providing access to a wider variety of multimodal transportation options with the intent of transforming Langston Boulevard into a more sustainable transportation zone and minimizing the use of cars. Through this Plan, some Arlington County General Land Use Plan policies were amended to allow for further residential development along the Langston Boulevard Corridor, including this site. The Langston Boulevard Corridor, with direct and multimodal access to Washington, D.C., presents a prime opportunity to provide residents and commuters with a safe and convenient approach to sustainable development. Transportation elements of the Plan include the simplification of intersections, the facilitation of a multimodal corridor for commuters, the reallocation of roadway space for pedestrians and bicyclists, as well as providing access to improved pedestrian facilities and greenspaces.

Due to the travel speeds of Langston Boulevard in the vicinity of the site, as well as the limited facilities for pedestrians and bicyclists on the sidewalks and the nearby Custis Trail, the Langston Boulevard Area Plan calls for a number of multimodal improvements to be added to the area. In the area of the Langston Boulevard / Spout Run / North Kirkwood intersection, a Greenway will be established to benefit pedestrians and users of the Custis Trail. According to the Plan, there is sufficient space along Langston Boulevard to provide enhanced bike lanes without the need for redevelopment with the possible conversion vehicular travel lanes, which will require coordination with VDOT. Additionally, developments in this area should include improvements such as bicycle and improved lighting facilities, as well as public art. Along the western edge of Spout Run and Kirkwood Road to the north and south of Langston Boulevard, a Greenway / overland relief area should be made available.



VDOT Crash Data

Crash data was downloaded from VDOT's Crash Data Map webpage for the past three (3) years for the study area along Langston Boulevard. This data is summarized below. Based on the available data, a total of 32 crashes occurred within the study area from January 2022 through April 2024. The detailed information is included in Appendix C for reference.

The types and number of crashes during the study period is as follows:

•	Rear End:	5 Crashes	(16%)
•	Angle:	24 Crashes	(75%)
•	Pedestrians:	0 Crashes	(0%)
•	Fixed Object:	0 Crashes	(0%)
•	Sideswipe:	1 Crashes	(3%)
•	Head-On:	2 Crashes	(6%)

The year with the highest number of crashes is 2023 with 16 crashes in the vicinity of the site. As shown above, the most common type of crash found in the study are angled crashes, accounting for 75% of the reported incidents. The least common type of crash are sideswipe collisions, accounting for only 3%. From all these crashes, no fatalities were reported; with 18 reported injuries. Most of these crashes occurred at the signalized intersections. Of the 32 crashes, six (6) occurred in the vicinity of the site driveway on Langston Boulevard, four (4) of which were angled collisions, and one (1) was a sideswipe collision. Some of these crashes were accessing the retail site to the north.



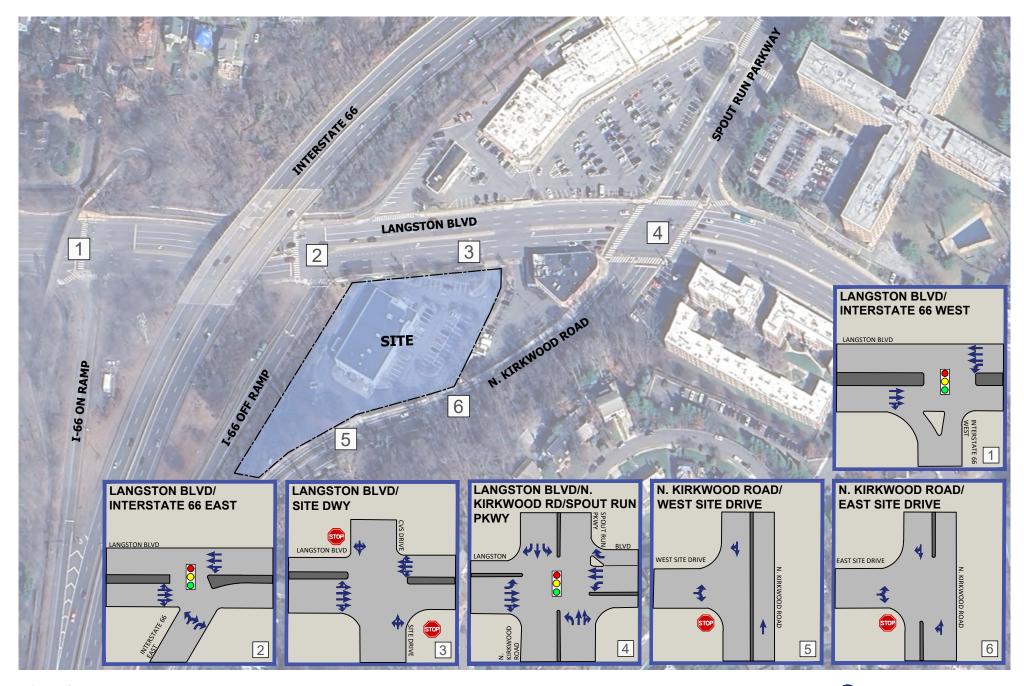


Figure 2-1 Existing Lane Use and Traffic Controls





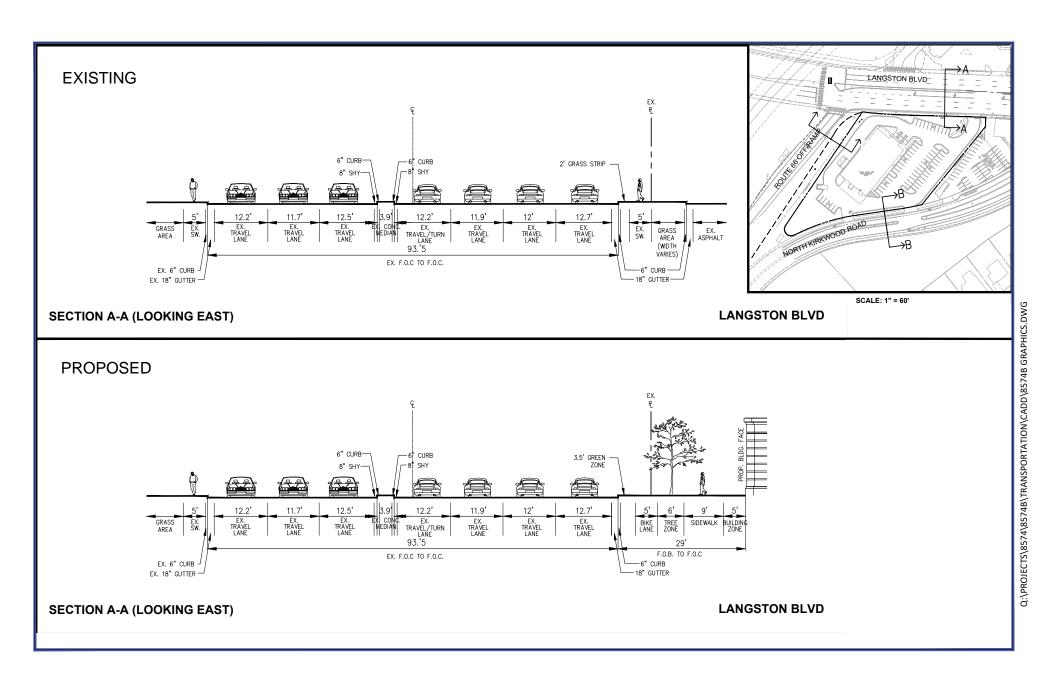


Figure 2-2 Langston Boulevard Street Section





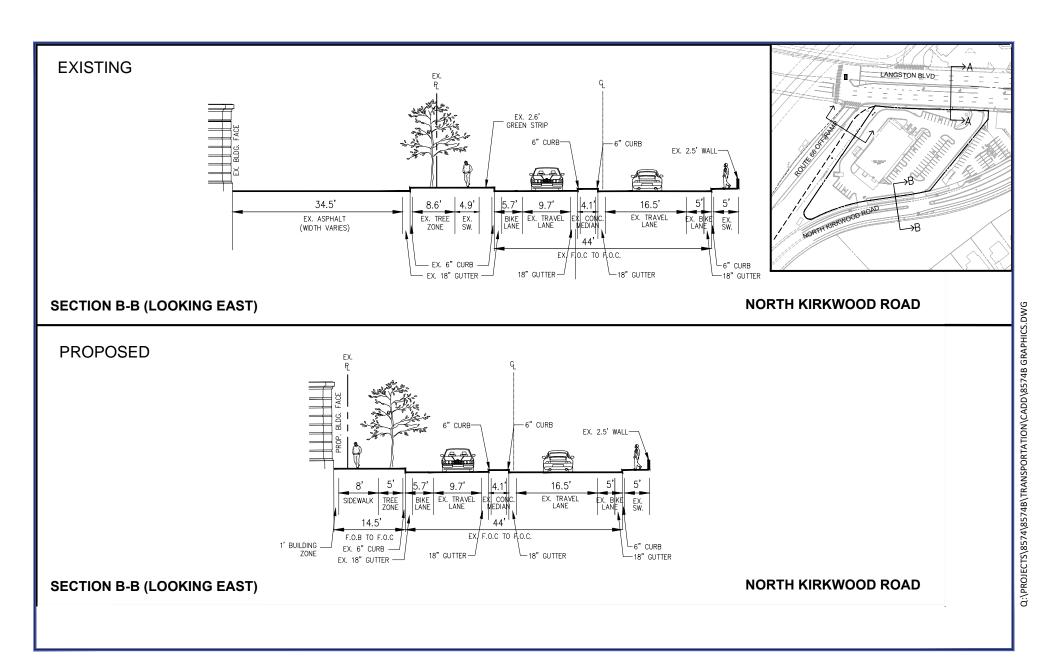


Figure 2-3 N. Kirkwood Road Street Section





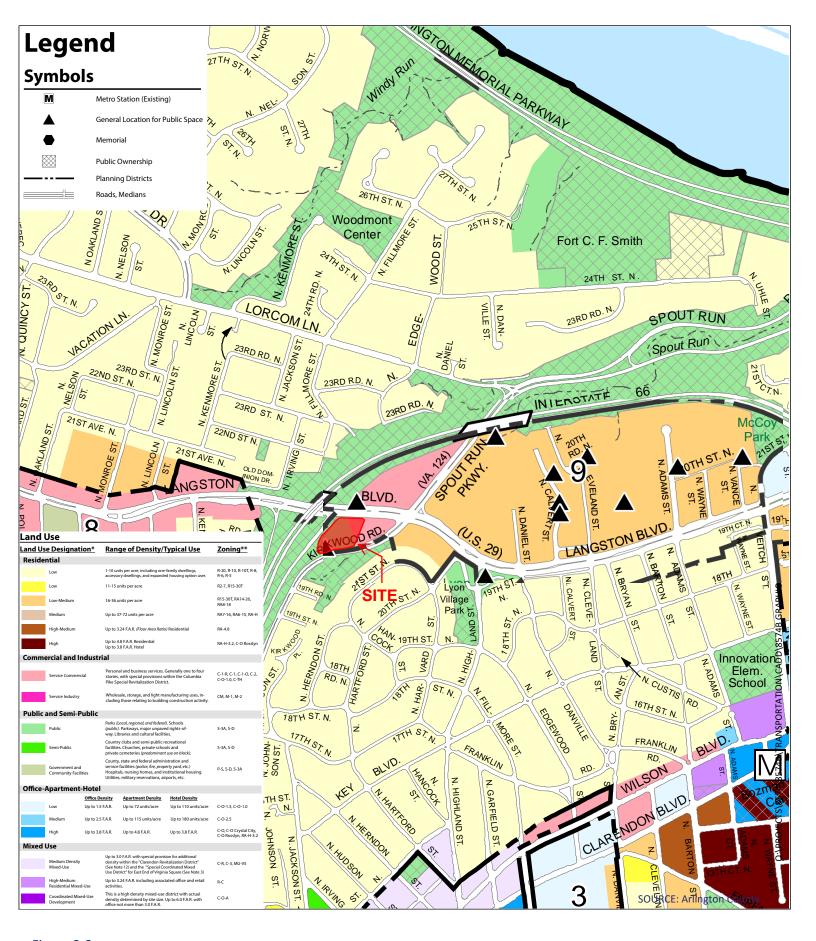


Figure 2-2 Arlington General land Use Plan





SECTION 3 MULTIMODAL TRANSPORTATION FACILITIES

Overview

The subject site is served by multiple public transportation options including regional bus service; the Washington Metropolitan Area Transit Authority (WMATA) Metrorail system; a connected network of sidewalks and pedestrian crosswalks; bike-sharing systems; and on-street and trail bicycle facilities. The site is located within the Lyon Village neighborhood, with the Cherrydale neighborhood located just to the west and the Maywood Village to the north. The neighborhoods are primarily developed with retail/service uses along the Langston Boulevard frontage and residential neighborhoods behind.

Census Data Mode-Share Information

U.S Census data for "Means of Transportation to Work by Vehicles Available" based on the 2021 and 2021 American Community Survey 5-year estimates for Census Tracts surrounding the site were analyzed to understand travel patterns exhibited by local residents. A total of six (6) census tracts were selected due to their proximity to the site. They include Census Tracts 1005, 1006, 1014.02, 1014.06, 1015, 1015.02, and 1015.03. The survey results of the selected census tracts indicate that approximately 38% of commuters travel by vehicle, 3% carpooled, 25% by public transportation, 6% walk, 4% bike/other, 24% work from home. Refer to Appendix B for a map with the identified census tracts as well as detailed census mode-share information.

Existing Transit Services

Metrorail Service. The closest Metrorail Stations, Court House and Clarendon to the south, are located approximately one (1) mile from the subject site. The Court House and Clarendon Metrorail Stations provide access to the Orange and Silver lines. The Orange Line runs between New Carrolton and Vienna. The Silver Line runs between Largo Town Center and Ashburn Metrorail Station. Riders can take any of these lines to Metro Center and L'Enfant Plaza for access to other metro lines.

Figure 3-1 analyzes the 15-minute and 30-minute transit shed centered around the vicinity of the Langston Boulevard site. As shown on the graphic, most of Arlington County, parts of Falls Church, as well as much of Downtown D.C. are accessible via transit options within 30 minutes of the site. Some areas of interest within the highlighted zones include a variety of retail and residential areas, and Metro stations served by all Metro lines.



The WMATA Metrorail system operates seven (7) days a week from 5:00 AM to 11:30 PM Monday through Thursday, 5:00 AM to 1:00 AM on Fridays, 7:00 AM to 1:00 AM on Saturdays and 8 AM to 11:00 PM on Sundays. The train headways at the Ballston-MU and Pentagon City Metrorail Station range from eight (8) minutes during peak periods to 12-20 minutes during off-peak periods and weekends.

<u>Bus Service.</u> The site and nearby area is served by two (2) bus routes operated by Arlington Rapid Transit (ART) and WMATA. Below are summaries of the routes that operate near the site.

<u>WMATA Metro Bus 3Y (Langston Boulevard – McPherson Square Line)</u>. This route runs across Arlington, starting from the East Falls Church Metro Station on S. Sycamore Street, and down Langston Boulevard (US-29), ending across the Theodore Roosevelt Bridge in D.C. near the Metro Center Metro Station. The bus line operates on weekdays with approximately 8-minute headways during peak periods.

<u>ART Bus 55 (East Falls Church – Langston Blvd – Rosslyn).</u> This route runs across Arlington, starting from the East Falls Church Metro Station on S. Sycamore Street, and down Langston Boulevard (US-29), ending near the Rosslyn Metro Station on N. Moore Street. The bus line operates on weekdays, Saturdays, and Sundays with 7-minute headways during peak periods.

Refer to Figure 3-2 for the locations of bus stops near the site and Figure 3-3 for bus routes. Specific information for the above-listed routes is in Appendix B. Average weekday boarding and alighting data was requested from Arlington County and WMATA for the nearby bus stops. However, no data was provided.

<u>Pedestrian Facilities.</u> A majority of the streets in the vicinity area provide sidewalks on both sides of the street and marked crosswalks at signalized intersections. Two (2) of the site frontages include sidewalks, the frontage facing Langston Boulevard (US-29) to the north, and the frontage facing N. Kirkwood Drive to the east and southeast. Below provides a summary of the pedestrian infrastructure in place at each of the study signalized intersections.

- <u>1. Langston Boulevard / I-66 WB On-Ramp:</u> The signalized intersection of Langston Boulevard and the I-66 WB On-Ramp has marked crosswalks, pedestrian countdown heads, and ramps serving two (2) legs of the intersection.
- <u>2. Langston Boulevard / I-66 EB Off-Ramp:</u> The signalized intersection of Langston Boulevard and the I-66 EB Off-Ramp has marked crosswalks, pedestrian countdown heads, and ramps serving two (2) legs of the intersection.



- <u>3. Langston Boulevard / N. Site Drive / CVS Drive:</u> The un-signalized intersection of Langston Boulevard / N. Site Drive / CVS Drive has no marked crosswalks, pedestrian countdown heads, or ramps serving any legs of the intersection.
- <u>4. Langston Boulevard / N. Kirkwood Road:</u> The signalized intersection of Langston Boulevard and N. Kirkwood Road has marked crosswalks, pedestrian countdown heads, and ramps serving four (4) legs of the intersection.
- <u>5. N. Kirkwood Road / E. Site Drive:</u> The unsignalized intersection of N. Kirkwood Road and the E. Site Drive has no marked crosswalks, pedestrian countdown heads, or ramps serving any leg of the intersection.
- <u>6. N. Kirkwood Road / S. East Site Drive:</u> The unsignalized intersection of N. Kirkwood Road and the S. East Site Drive has no marked crosswalks, pedestrian countdown heads, or ramps serving any leg of the intersection.

Figure 3-4 shows the pedestrian facilities within the vicinity of the site.

In order to provide an assessment of the site's access to pedestrian facilities and nearby amenities, the Walk Score was calculated for the site is included in Appendix B. The Walk Score is an analysis provided by the website and provides scores from 0 (worst) to 100 (best) for walkability. Based on its location, the subject site received a score of 82 which is classified as "Very Walkable – Most errands can be accomplished on foot." Further, walk score provides a transit score of 56 which is classified as "Good Transit – Many nearby public transportation options" and a bike score of 65 implying that the site is "bikeable". It is to be noted that Langston Boulevard has no dedicated bike lanes in the vicinity of the site, and the latest 2022 Arlington County Bike Map categorizes Langston Boulevard as a "Challenging" bike route. However, other bike trails and bike routes exist in the vicinity of the site.

The combination of sidewalks marked crosswalks at the intersections around the site, installation of ramps to serve the crosswalks, and planting buffers enhance the pedestrian experience around the site and encourage alternative modes of transportation. The site's proximity to the Clarendon and Court House Metrorail station provides multiple transit options for future residents.

Figure 3-5 shows the 10-minute, 20-minute, and 30-minute pedestrian travel shed for the proposed development. Within a 10-minute walk, a commuter could access neighboring roads, multiple Capital Bikeshare locations, pay-as-you-go electric scooters and bicycles, and Thrifton Hills Park. Within a 20-minute walk, commuters could access a wide range of retail and residential areas, and three Metro stations served by the Silver and Orange lines. Within a 30-minute walk, commuters will have access to more retail, residential, and recreational amenities, an additional Metro station served by the Orange and Silver lines, and more Capital Bikeshare locations.



Bicycle Facilities. Marked bike lanes exist on both the northbound and southbound lanes of Kirkwood Road. According to the 2022 Arlington County Bike Map, this bike route is classified with a medium "perception of comfort". To the west and the east on Langston Boulevard are dedicated bike lanes, categorized as "Challenging" by the Arlington County Bike Map. Across Langston Boulevard, north of the site, runs the Martha Custis Trail. The Custis Trail is a 4.5-mile-long shared use path in Arlington County. This path is a part of the Arlington Loop Trail. Figure 3-6 shows the bike routes from the Arlington County Bicycle Facilities Map. As shown, the combination of on-street routes, nearby Bikeshare, and proximity to the Arlington Loop trail create a bicycle friendly environment and encourage use as a non-auto mode. Additionally, Figure 3-7 highlights the bicycle facilities existing and planned as part of the Master Transportation Plan (MTP). With the proposed developed a new 5-foot bike lane will be provided along the site's frontage as recommended in the MTP.

Figure 3-8 demonstrates the 10-minute, 20-minute, and 30-minute bicycle travel shed for the proposed development. Within a 10-minute bike ride, commuters will have access to much of Arlington, several bicycle paths, retail and residential options, and multiple Metro stations served by the Silver and Orange lines. Within a 20-minute bike ride, commuters would have access to all of Arlington, parts of Falls Church, McLean, and much of Washington D.C., and access to Metro stations served by all Metro lines. Within a 30-minute bike ride, commuters will have access to the areas of McLean and Annandale. Alexandria, access to parts of Bethesda, and most of Washington D.C.

Capital Bikeshare is an automated bicycle rental or bicycle sharing program that provides over 5,000 bicycles at 700+ stations across Washington, DC, Maryland, and Virginia. Membership, which is required to use Capital Bikeshare, includes different options for joining; from single trip (\$1), 24 hours (\$8), 30 days (\$20), one year (\$95), or one year with monthly installments (\$95, \$7.92/month for 12 months). The first 45 minutes of use are free; users then are charged a usage fee (\$0.05) for each additional minute. Bicycles can be returned to any station with an available dock.

Within a ½ mile radius of the site there are four (4) Capital Bikeshare stations, as shown on Figure 3-4, with the closet is located just east of the site at the intersection of Langston Boulevard and N. Kirkwood Road. A total of 15 docks are available at this location.

In addition to bikeshare, electric-assist scooter sharing, and dock-less bicycles have become readily available throughout Langston Boulevard. Users must have an account with the scooter service provider and can then board a scooter wherever available. Fees per ride vary with each service provider, but typically charge a small startup fee and rate per minute. When the user is done with their trip, the scooter is left for the next rider.



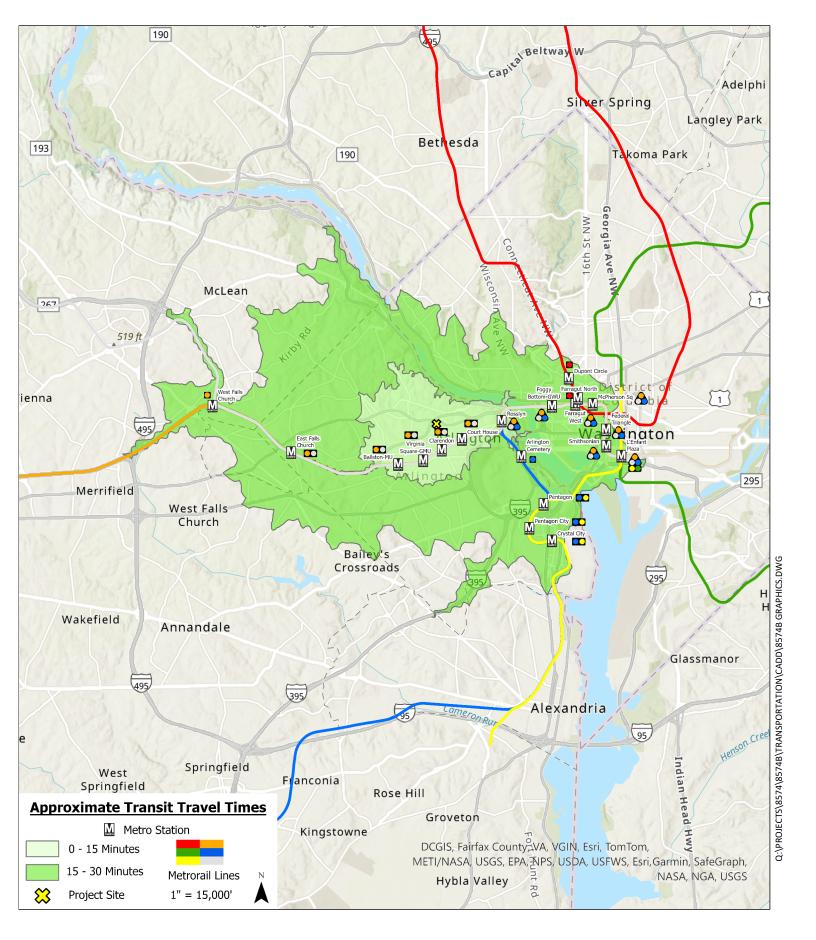


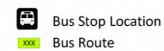
Figure 3-1 Transit Shed







Figure 3-2 Bus Stop Locations







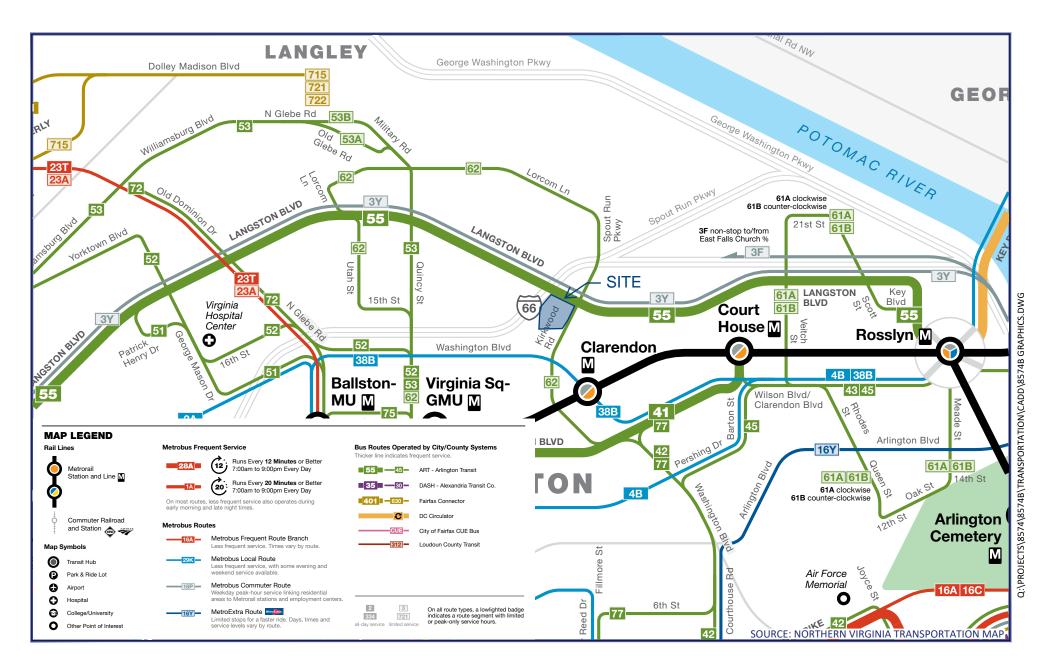


Figure 3-3 Bus Map





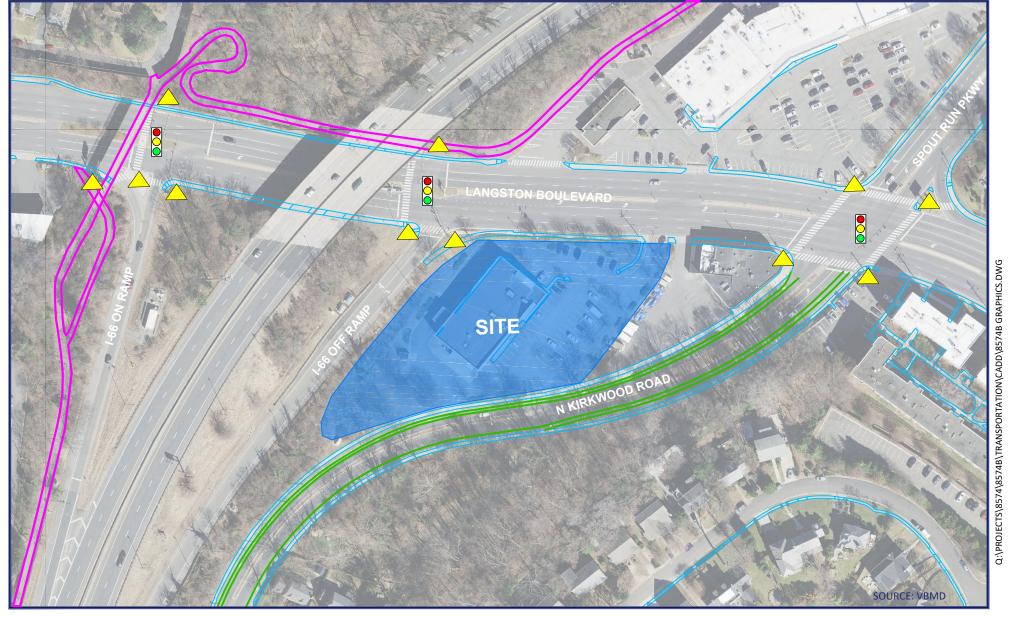
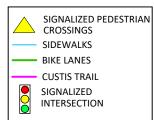


Figure 3-4 Pedestrian Facilities Map







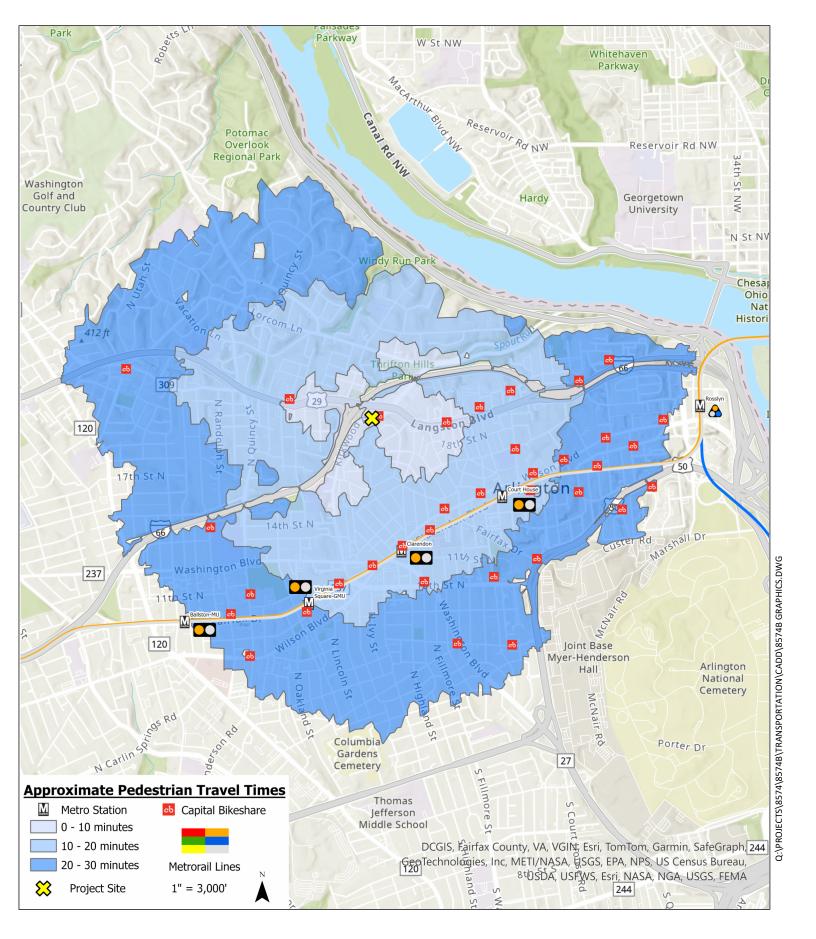


Figure 3-5 Pedestrian Shed





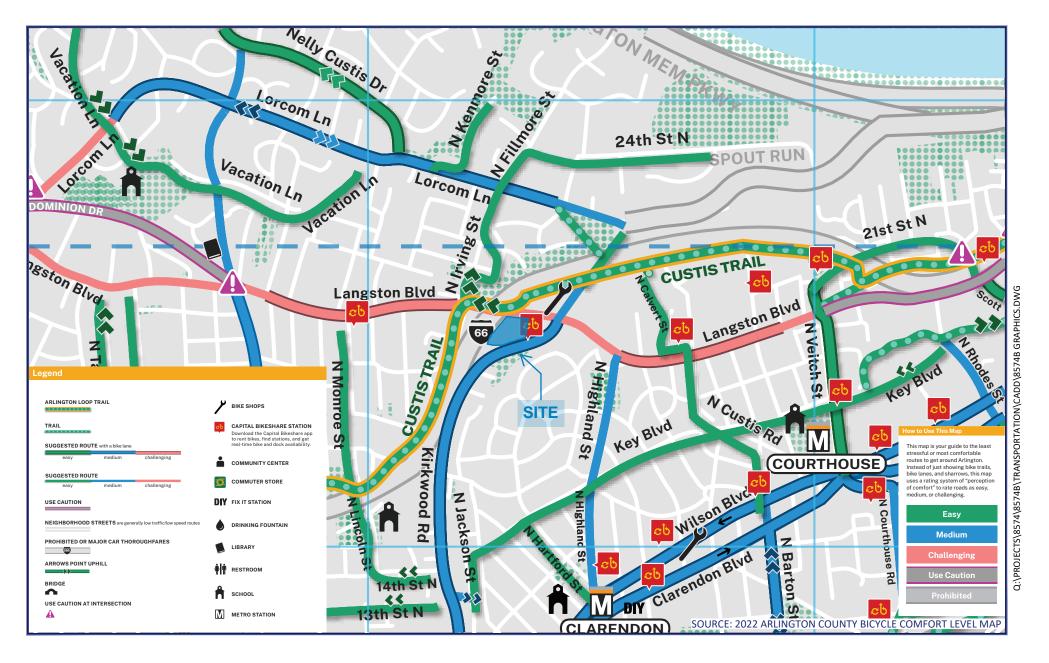


Figure 3-6 Bike Map





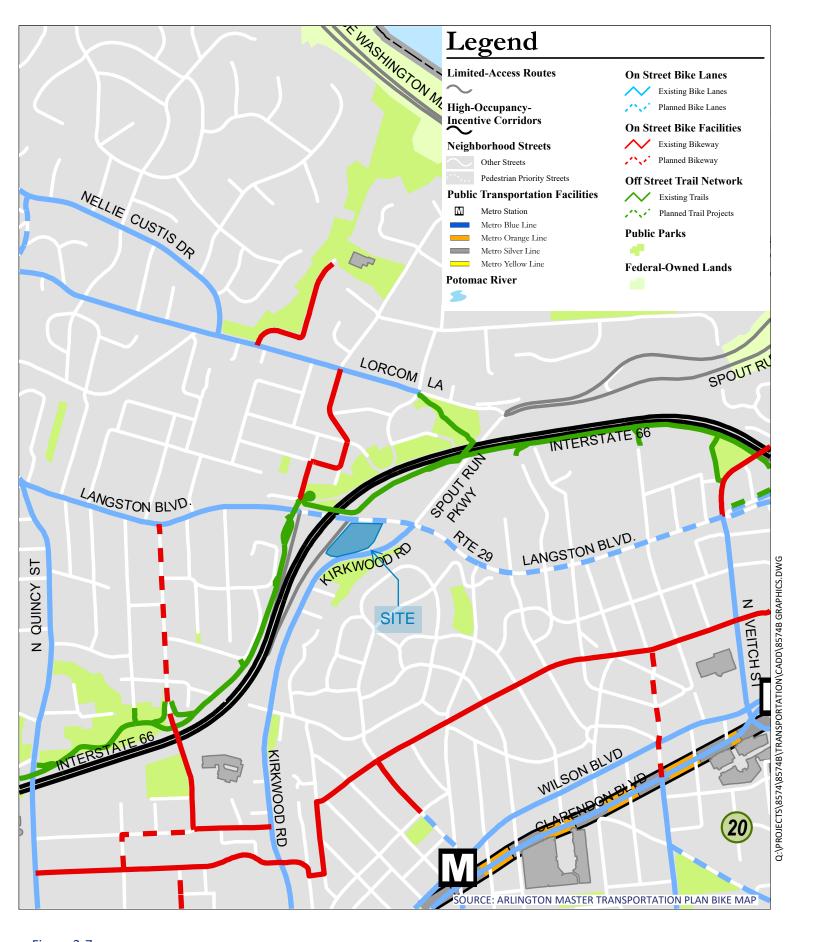


Figure 3-7 Arlington Master Transportation Plan Bike Map





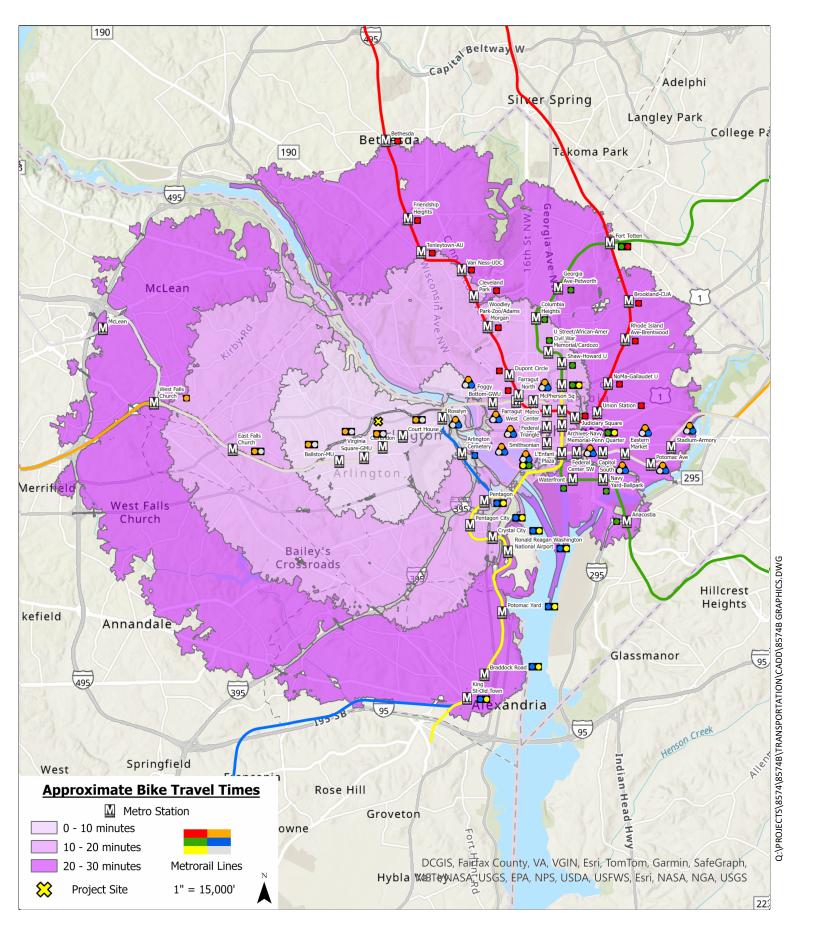


Figure 3-8 Bicycle Shed





SECTION 4 EXISTING CONDITIONS

Existing Traffic Counts

Existing vehicular, pedestrian, and bicycle traffic counts were conducted by National Data & Surveying Services (NDS) on Thursday, May 30, 2024, from 7:00 to 10:00 AM and 4:00 to 7:00 PM at the following study intersections:

- 1. Langston Boulevard and I-66 WB On-ramp
- 2. Langston Boulevard and I-66 EB Off-ramp
- 3. Langston Boulevard and N. Site Drive and CVS Drive
- 4. Langston Boulevard and N. Kirkwood Road
- 5. N. Kirkwood Road and East Site Drive
- 6. N. Kirkwood Road and Southeast Site Drive

The weekday AM and PM peak hour vehicular, pedestrian, and bicycle traffic counts are summarized on Figures 4-1 through 4-3, respectively. Detailed sheets containing the count data are included in Appendix C.

A review of the peak hour vehicular count data indicates that the link of Langston Boulevard, adjacent to the site, currently carries approximately 2,960 AM peak hour trips and 2,836 PM peak hour trips. The northern driveway on Langston Boulevard currently carries approximately 1 AM peak hour trips, and 7 PM peak hour trips. The western site driveway on Kirkwood Road currently carries approximately 2 AM peak hour trips and 4 PM peak hour trips while the eastern site driveway currently carries approximately 16 AM peak hour trips, and 42 PM peak hour trips.

Existing Conditions Operational Analysis

The existing peak hour LOS and queues were estimated at the study intersections based on; the existing lane use and traffic controls shown on Figure 2-1; existing traffic signal phasing/timings obtained from Arlington County; the existing vehicular, pedestrian, and bicycle traffic counts shown on Figures 4-1 through 4-3; and the <u>Highway Capacity</u> Manual (HCM) 2000 methodologies, using Synchro Software, version 11.

Descriptions of LOS "A" through "F" for signalized and unsignalized intersections are included in Appendix D. The results of the existing conditions analysis are presented in Appendix E and summarized in Tables 4-1 and 4-2. In addition to the peak hour vehicular, pedestrian and bike volumes the following inputs were coded into Synchro: calculated peak hour factors by approach, lane widths, speed limits, adjacent parking lane, number parking maneuvers, and bus blockages.



<u>Levels of Service.</u> As shown in Table 4-1 the three (3) signalized study intersections currently operate at overall acceptable LOS "C" or better during the AM and PM peak hours, with most operating at LOS "B" or "C". All lane groups operate at LOS "E" of better with the exception of the eastbound-left movement during the PM peak hour period at the intersection of Langston Boulevard / N. Kirkwood and Spout Run Parkway.

At the stop-controlled intersections, all lane groups currently operate at LOS "C" or better during the AM and PM peak hours.

Queuing. Existing peak hour queues for study intersection were determined using the 50th and 95th percentile queues estimated by Synchro Software, version 11. The 50th and 95th percentile queues of existing conditions are used to establish a datum against which to compare future conditions. The 50th percentile (or average) queue is defined as the maximum back of queue associated with a typical signal cycle. The 95th percentile queue is defined as the maximum back of queue with 95th percentile traffic volumes. The 95th percentile queue is not necessarily ever observed, it is simply based on statistical calculations¹. The results of the queueing analysis are presented in Appendix E and summarized in Table 4-2.

As shown on Table 4-2 and observed in the field, peak hour queuing and the calculated average queues can be accommodated within a majority of available turn lane storage provided at study intersections. Vehicular queueing (95th percentile) exceeds the available storage for the southbound left (AM and PM) and eastbound left turns (PM) at the Langston Boulevard / N. Kirkwood and Spout Run Parkway intersection and the westbound left at the Langston Boulevard / I-66 (PM) on ramp as shown on Table 4-2.



¹ Synchro Studio II, Traffic Signal Software – User Guide

Table 4-1
3130 Langston Boulevard
Existing Conditions with Development Intersection Level of Service Summary ¹

Approach/ Lane		Existing Cond	litions (2024)	
Group	AM Pe	eak Hour	PM Pe	eak Hour
	LOS	Delay (s)	LOS	Delay (s)
1. Langston Bouleva	rd / I-66 On Ra	mp - Signalized		
EBTR	В	11.5	А	4
WBL	D	35.8	Α	1.8
WBT	<u>A</u>	<u>0.1</u>	<u>A</u>	<u>4.4</u>
Overall	В	11.1	Α	4.0
2. Langston Bouleva	rd / I-66 Off Ra	amp - Signalized		
EBT	Α	3.6	Α	3.6
WBT	Α	6.6	Α	3.0
NBL	С	23.8	D	44.6
NBR	<u>A</u>	<u>4</u>	<u>A</u>	<u>4.1</u>
Overall	Α	5.6	Α	3.7
3. Langston Bouleva	rd / Site Dwy /	CVS Dwy - Unsig	nalized	
EBL	В	10.6	В	11.2
EBTR	Α	0.0	Α	0.0
WBLTR	Α	0.0	Α	0.0
NBLTR	Α	8.9	В	10.1
SBLTR	В	10.2	В	13.5
4. N Kirkwood Rd / S	pout Run Pkw			
EBL	D	43.2	F	184.7
EBTR	В	12.4	Α	7.1
WBL	С	34.5	С	27.7
WBT	С	25.9	С	23.2
\A/DD				
WBR	С	22.9	В	19.5
NBL	C D	22.9 35.7	B C	19.5 34.3
NBL NBTR		35.7 36.4		34.3 33.4
NBL	D	35.7	С	34.3
NBL NBTR	D D	35.7 36.4	C C	34.3 33.4
NBL NBTR SBL	D D E C	35.7 36.4 69.3	C C D	34.3 33.4 54.3
NBL NBTR SBL SBT SBR Overall	D D E C <u>C</u>	35.7 36.4 69.3 34.4 <u>34.5</u> 27.8	C C D C	34.3 33.4 54.3 34.7
NBL NBTR SBL SBT SBR Overall 5. N Kirkwood Rd / N	D D E C <u>C</u>	35.7 36.4 69.3 34.4 <u>34.5</u> 27.8	С С С С	34.3 33.4 54.3 34.7 <u>34.5</u>
NBL NBTR SBL SBT SBR Overall 5. N Kirkwood Rd / N EBLT	D D E C <u>C</u>	35.7 36.4 69.3 34.4 <u>34.5</u> 27.8	С С С С	34.3 33.4 54.3 34.7 <u>34.5</u>
NBL NBTR SBL SBT SBR Overall 5. N Kirkwood Rd / N EBLT WBLTR	D D E C C West Site Dwy	35.7 36.4 69.3 34.4 <u>34.5</u> 27.8 - Unsignalized 0.0 0.0	C C D C C D	34.3 33.4 54.3 34.7 <u>34.5</u> 44.7
NBL NBTR SBL SBT SBR Overall 5. N Kirkwood Rd / N EBLT WBLTR SBLR	D D E C C C West Site Dwy A A A	35.7 36.4 69.3 34.4 <u>34.5</u> 27.8 - Unsignalized 0.0 0.0 9.3	C C D C <u>C</u> D	34.3 33.4 54.3 34.7 <u>34.5</u> 44.7
NBL NBTR SBL SBT SBR Overall 5. N Kirkwood Rd / N EBLT WBLTR SBLR 6. N Kirkwood Rd / E	D D E C C C West Site Dwy A A A	35.7 36.4 69.3 34.4 <u>34.5</u> 27.8 - Unsignalized 0.0 0.0 9.3	C C D C <u>C</u> D	34.3 33.4 54.3 34.7 <u>34.5</u> 44.7 0.0 0.0
NBL NBTR SBL SBT SBR Overall 5. N Kirkwood Rd / N EBLT WBLTR SBLR	D D E C C C West Site Dwy A A A	35.7 36.4 69.3 34.4 <u>34.5</u> 27.8 - Unsignalized 0.0 0.0 9.3	C C D C <u>C</u> D	34.3 33.4 54.3 34.7 <u>34.5</u> 44.7 0.0 0.0
NBL NBTR SBL SBT SBR Overall 5. N Kirkwood Rd / N EBLT WBLTR SBLR 6. N Kirkwood Rd / E	D D E C C C West Site Dwy A A A A	35.7 36.4 69.3 34.4 <u>34.5</u> 27.8 - Unsignalized 0.0 0.0 9.3	C C D C <u>C</u> D A A B	34.3 33.4 54.3 34.7 <u>34.5</u> 44.7 0.0 0.0 10.2



^{1.} Capacity analysis based on Highway Capacity Manual methodology, using Synchro 11.

Table 4-2 3130 Langston Boulevard Existing Conditions with Intersection Queuing Summary ^{1, 2, 3}

Existing Conditions			cisting Conc		:3)
Approach /	Storage	AM Pea	ak Hour	PM Pea	ak Hour
Lane Group	Length (ft)	50th	95th	50th	95th
	(11)	Pecentile	Pecentile	Pecentile	Pecentile
	11.00			recentine	recentine
1. Langston Boulev	ard / I-66				10=
EBT	-	139	186	54	105
WBL	185	82	#240	74	141
WBT	-	0	0	0	0
NBR	-	0	0	0	0
SBLTR	-	0	0	0	0
2. Langston Boulev	ard / I-66				
EBT	-	100	351	46	161
WBT	-	265	246	48	167
NBL	-	13	27	18	33
NBR	-	0	30	0	45
3. Langston Boulev	ard / N Si	te Dwy / C\	/S Dwy - Ur	nsignalized	
EBL	-	-	7	-	5
EBTR	-	-	0	-	0
WBLTR	-	-	0	-	0
NBLTR	-	-	0	-	0
SBLTR	-	-	7	-	12
4. N Kirkwood Rd /	Spout Ru	n Pkwy / La	angston Bo	ulevard - Si	gnalized
EBL	500	217	#399	~314	#529
EBTR	-	170	198	88	54
WBL	250	28	#91	42	0
WBT	-	132	195	165	#117
WBR	165	0	52	0	246
NBL	100	62	100	51	85
NBTR	-	114	140	90	111
SBL	135	106	170	108	165
SBTR	-	76	115	125	170
SBR	-	0	73	42	132
5. N Kirkwood Rd /	West Site				
EBLT	-	-	0	-	0
WBLTR	_	_	0	_	0
SBLR	_	_	0	_	0
6. N Kirkwood Rd /	Fast Site	Dwy - Unsi			0
EBLT			0	_	1
WBTR			0		0
SBLR	_	_		_	5
SBLK	-	-	1	_	Э

- 1. $^{\sim}$ Volume exceeds capacity, queue is theoretically infinite.
- 2. # 95th percentile volume exceeds capacity, queue may be longer.
- 3. Volume for 95th percentile queue is metered by upstream signal.



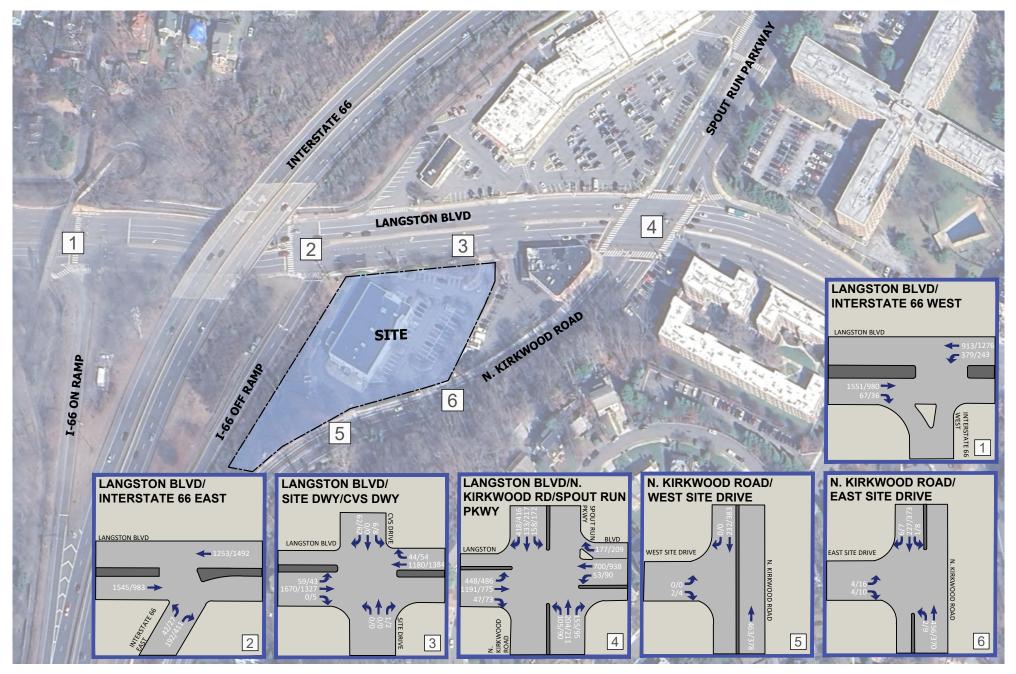


Figure 4-1 Existing Peak Hour Traffic Volumes







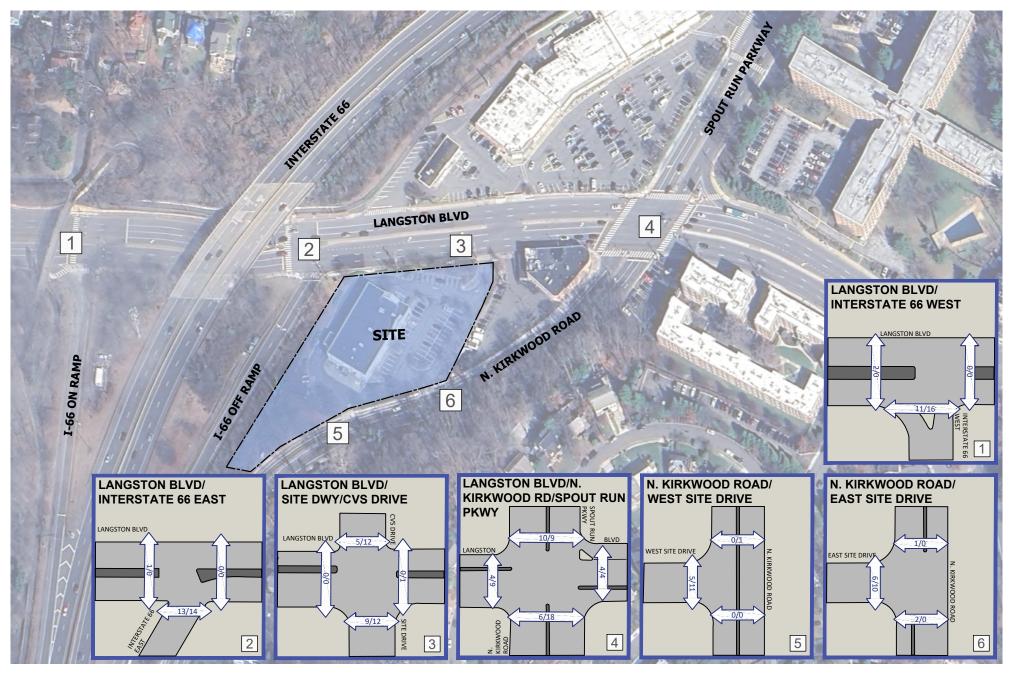


Figure 4-2 Existing Peak Hour Pedestrian Volumes







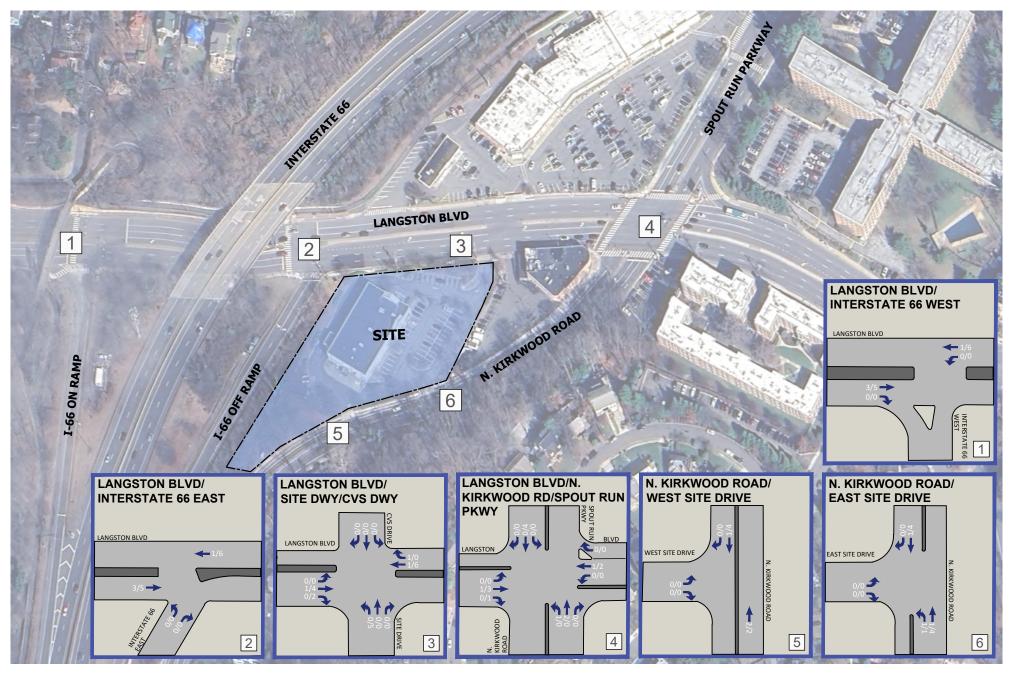


Figure 4-3 Existing Peak Hour Bike Volumes







SECTION 5 FUTURE CONDITIONS WITHOUT DEVELOPMENT (2028)

Background Conditions

This section presents an analysis of the future transportation conditions including projections of 2028 future traffic forecasts without the proposed development, as well as capacity and queuing analyses under this condition.

Methodology/Assumptions. It was assumed that the proposed redevelopment would be constructed and fully occupied by 2028, as specified in the traffic scoping document. The 2028 future traffic forecasts without site redevelopment were developed based on a composite of existing baseline 2024 traffic volumes and regional traffic growth.

<u>Pipeline Developments.</u> As outlined in the scoping document, there are currently no pipeline developments identified near the site.

Regional Growth. An increase in traffic associated with regional growth from 2024 to 2028 was estimated at 0.5 percent per year, compounded annually, for all turning movements as agreed to with DES staff during scoping. This growth rate was applied to all turning movements, except for the movements in/out of the site driveways. This growth accounts for increases in traffic resulting from potential development and influences outside of the immediate study area. The regional growth at each of the study intersections is shown on Figure 5-1.

The resulting 2028 future traffic forecasts without development are shown on Figure 5-2.

<u>Planned Improvements.</u> There are currently no funded transportation improvements within the study area. It is noted new traffic signal infrastructure in planned at the Langston Boulevard / N. Kirkwood Road / Spout Run Parkway intersection. No changes to traffic signal timings or phasing are planned with the improvements.

Future Conditions without Development Operational Analysis (2028)

Future peak hour LOS and 50th and 95th percentile queues without the redevelopment of the Walgreens site in year 2028 were estimated at the study intersections based on the existing conditions, lane use and traffic controls shown on Figure 2-1; existing traffic signal phasing/timings obtained from Arlington County; the future peak hour traffic forecasts without redevelopment are shown on Figure 5-2; and the HCM 2000 methodologies using Synchro Software, version 11. The LOS and queue results are presented in Appendix F and summarized in Tables 5-1 and 5-2.



<u>Levels of Service.</u> As shown in Table 5-1, with increases in traffic due to regional growth, all signalized study intersections would continue to operate at overall LOS "C" or better during the AM and PM peak hours.

Additionally, all individual lane groups/movements would operate LOS "E" exception of the eastbound left movement at the intersection of N Kirkwood Road / Spout Run Parkway / Langston Boulevard during the PM peak hour, consistent with existing conditions.

The results indicate that slight increases in delay would occur throughout the network as a result of increased traffic due to regional growth vehicle trips.

All of the stop-controlled study intersections would continue to operate similar to existing conditions, with all movements operating at acceptable levels of service.

<u>Queuing.</u> As shown on Table 5-2, the results of the queueing analysis are similar to those described in under existing conditions. Some movements would experience greater queueing as a result of increased traffic from regional growth and pipeline developments. Storage bays noted under existing conditions would continue to exceed available capacity.



Table 5-1 3130 Langston Boulevard Future Conditions without Development Intersection Level of Service Summary ¹

Approach/ Lane		Existing Cond	ditions (2024)		Future (Conditions wi (202		velopment
Group	AM Pe	ak Hour	PM P	eak Hour	AM P	eak Hour	PM P	eak Hour
	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
1. Langston Boulevar	rd / I-66 On Ra	mp - Signalized						
EBTR	В	11.5	Α	4	В	11.8	Α	4.1
WBL	D	35.8	Α	1.8	D	37.2	Α	1.9
WBT	<u>A</u>	<u>0.1</u>	<u>A</u>	<u>4.4</u>	Α	0.1	Α	4.5
Overall	В	11.1	Α	4.0	В	12.7	Α	4.1
2. Langston Boulevar	rd / I-66 Off Ra	mp - Signalized						
EBT	Α	3.6	Α	3.6	Α	4.7	Α	3.6
WBT	Α	6.6	Α	3.0	Α	6.6	Α	3.1
NBL	С	23.8	D	44.6	С	23.9	D	44.6
NBR	<u>A</u>	<u>4</u>	<u>A</u>	<u>4.1</u>	Α	4	Α	4.1
Overall	Α	5.6	Α	3.7	Α	5.7	Α	3.8
3. Langston Boulevar	rd / Site Dwy /	CVS Dwy - Unsig	nalized					
EBL	В	10.6	В	11.2	В	10.7	В	11.3
EBTR	Α	0.0	Α	0.0	Α	0.0	Α	0.0
WBLTR	Α	0.0	Α	0.0	Α	0.0	Α	0.0
NBLTR	Α	8.9	В	10.1	Α	9.0	В	10.1
SBLTR	В	10.2	В	13.5	В	10.2	В	13.6
4. N Kirkwood Rd / S	pout Run Pkw	y / Langston Bou	llevard - Signa	lized				
EBL	D	43.2	F	184.7	D	51.5	F	208.3
EBTR	В	12.4	Α	7.1	В	12.8	Α	7.2
WBL	С	34.5	С	27.7	D	36.4	С	28.7
WBT	С	25.9	С	23.2	С	26.4	С	23.6
WBR	С	22.9	В	19.5	С	23.3	В	19.7
NBL	D	35.7	С	34.3	D	35.3	С	34.2
NBTR	D	36.4	С	33.4	D	36.1	С	33.2
SBL	E	69.3	D	54.3	Е	71.1	Ε	55.8
SBT	С	34.4	С	34.7	С	34.1	С	34.5
SBR	<u>C</u>	<u>34.5</u>	<u>C</u>	<u>34.5</u>	С	34.2	С	34.7
Overall	С	27.8	D	44.7	С	29.1	D	48.0
5. N Kirkwood Rd / V	Vest Site Dwy	- Unsignalized						
EBLT	Α	0.0	Α	0.0	Α	0.0	0	0.0
WBLTR	Α	0.0	Α	0.0	Α	0.0	Α	0.0
SBLR	А	9.3	В	10.2	Α	9.4	В	10.3
6. N Kirkwood Rd / E	ast Site Dwy -	Unsignalized						
EBLT	А	0.0	Α	0.3	Α	0.0	Α	0.3
WBTR	Α	0.0	Α	0.0	Α	0.0	Α	0.0
SBLR	В	11.6	В	13.4	В	11.7	В	13.6



^{1.} Capacity analysis based on Highway Capacity Manual methodology, using Synchro 11.

Table 5-2 3130 Langston Boulevard Future Conditions without Development Intersection Queuing Summary ^{1, 2, 3}

					Future Co			elopment
	AM Pea	ak Hour	PM Pea	ak Hour	AM Pea	ak Hour	PM Pea	ık Hour
(ft)	50th Pecentile	95th Pecentile	50th Pecentile	95th Pecentile	50th Pecentile	95th Pecentile	50th Pecentile	95th Pecentile
ard / I-66	On Ramp -	Signalized						
-	139	186	54	105	143	192	57	110
185	82	#240	74	141	94	#242	3	5
-	0	0	0	0	0	0	79	147
-	0	0	0	0	-	-	-	-
-	0	0	0	0	-	-	-	-
ard / I-66	Off Ramp -	Signalized						
-	100	351	46	161	0	104	47	165
-	265	246	48	167	5	271	49	175
-	13	27	18	33	13	28	18	34
-	0	30	0	45	0	31	0	45
ard / N Sif	te Dwy / C\	/S Dwy - Ur	nsignalized					
-	-	7	-	5	-	7	-	5
-	-	0	-	0	-	0	-	0
-	-	0	-	0	-	0	-	0
-	-	0	-	0	-	0	-	0
-	-	7	-	12	-	7	-	12
Spout Ru	n Pkwy / La	angston Bo	ulevard - Si	gnalized				
500	217	#399	~314	#529	228	~340	~340	#552
-	170	198	88	54	174	92	92	55
250	28	#91	42	0	29	44	44	#123
-	132	195	165	#117	137	171	171	252
165	0	52	0	246	0	0	0	53
100	62	100	51	85	62	52	52	87
-	114	140	90	111	115	92	92	113
135	106	170	108	165	108	110	110	170
-	76	115	125	170	78	127	127	173
-	0	73	42	132	0	46	46	140
West Site								
_	-	0	-	0	-	0	-	0
_	-	-	-		-		-	0
_	-	0	-	0	-	0	-	0
East Site	Dwy - Unsi	, i		,		, ,		,
-	-	0	-	1	-	0	-	1
_	_	0	_	0	_	0	_	0
	Storage Length (ft) ard / I-66 - 185 ard / I-66 Spout Ru 500 - 250 - 165 100 - 135 West Site	Storage Length (ft) 50th Pecentile	Storage Length (ft) S0th Pecentile Pecentile	Storage Length (ft)	Storage Length (ft) Soth Pecentile Pecentile	Storage Length (ft) Soth Pecentile Pecentile	Storage Length (ft)	Storage Length (ft)

- 1. $^{\sim}$ Volume exceeds capacity, queue is theoretically infinite.
- 2. # 95th percentile volume exceeds capacity, queue may be longer.
- 3. Volume for 95th percentile queue is metered by upstream signal.



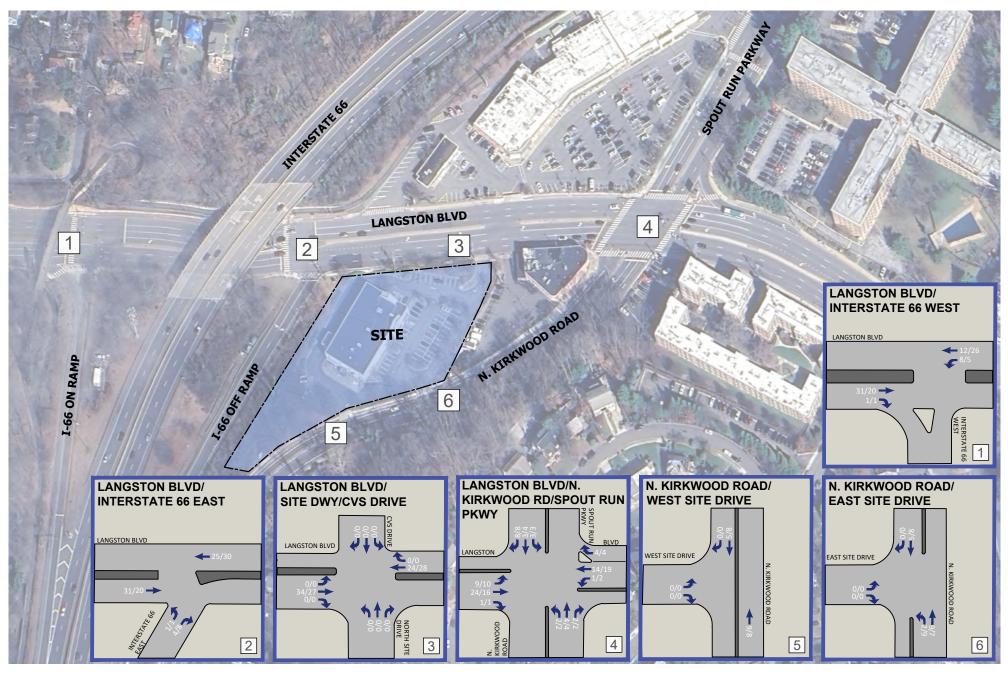


Figure 5-1 Regional Growth (2024-2028)







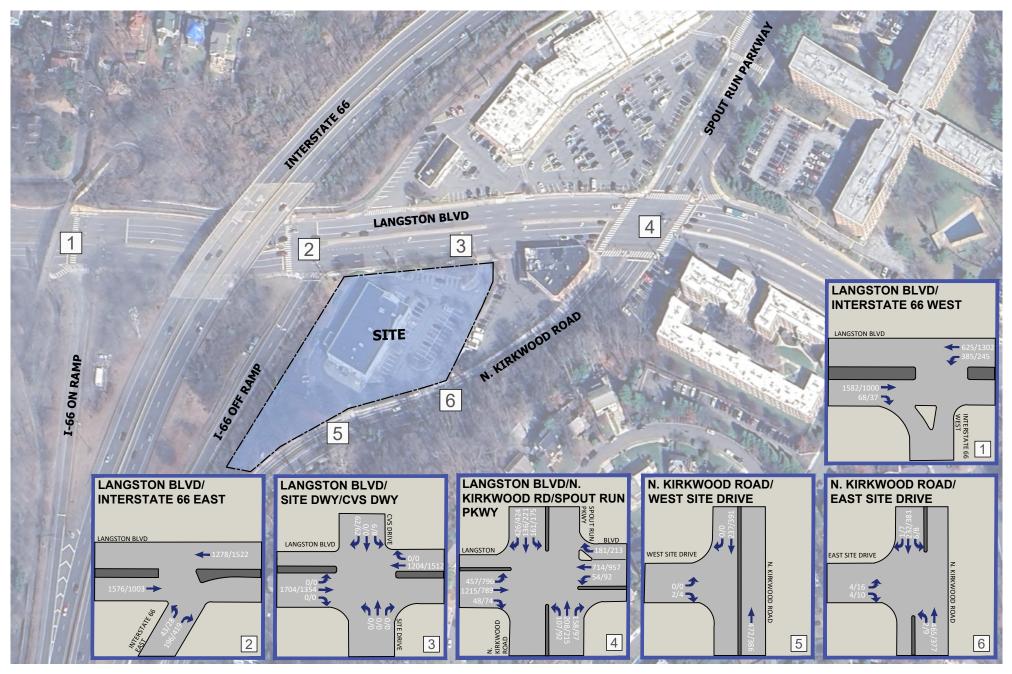


Figure 5-2 Future Peak Hour Traffic Forecasts without Development







SECTION 6 PROPOSED SITE DESCRIPTION, TRIP GENERATION, DISTRIBUTIONS & ASSIGNMENTS

Proposed Site Redevelopment Description

The Applicant has filed a 4.1 Site Plan and rezoning application to redevelop the site with mixed-used development in accordance with the Langston Boulevard Plan. This redevelopment would include up to 276 multi-family residential dwelling units and space for ground floor retail and/or equivalent. The site will be served by a parking structure with a total of approximately 331 parking spaces.

Access to the site would be consolidated from two (2) to one (1) driveway along N. Kirkwood Road and provide access to the parking structure.

Site Trip Generation Analysis

The number of site generated vehicular and person trips anticipated to be generated by the redevelopment was estimated for proposed conditions based on ITE's <u>Trip Generation Manual</u>, 11th Edition Land Use Code (LUC) 222 (Multifamily Residential). General Urban / Suburban rates were utilized along with the Arlington County mode share assumptions that would suggest a 48% non-auto reduction for the residential use. No internal reduction was assumed for the residential use.

As shown on Table 6-1, the proposed development program (276 residential units) is anticipated to generate 42 AM peak hour trips (11 in and 31 out), and 49 PM peak hour trips (30 in and 19 out). Accordingly, comparing the existing and proposed programs, the proposed uses would generate 4 additional AM peak hour trips, and 55 fewer PM peak hour trips.

The number of person trips expected to be generated by the site also were estimated. As shown in Table 6-1, the site is expected to generate 87 AM peak hour person trips and 102 PM peak hour person trips. This includes 33 AM and 39 PM transit trips and 6 AM and 7 PM active trips.



Site Trip Distribution and Assignment

The total vehicular trips generated by the proposed development were assigned to the roadway network using the trip distributions developed from the traffic count data, existing observed intersection splits and directions of approaches, and engineering judgement.

The trips were assigned to the proposed site driveway on N. Kirkwood Road. These distributions were reaffirmed with County staff through the scoping process.

The directional distribution for new site generated trips is as follows:

To/From the East on Langston Boulevard:	20%
To/From the West on Langston Boulevard:	15%
To/From the North on Spout Run Parkway:	25%
To/From the South on N. Kirkwood Road:	20%
To/From the West on Interstate 66:	<u>20%</u>
Total:	100%

Refer to Figure 6-1 for the site trips assignments.

Existing Site Trips Removed

The existing site trips summarized previously in the MMTA were removed from the network based on existing traffic patterns and are shown in Figure 6-2.



Table 6-1 3130 Langston Boulvard Multimodal Site Trip Generation Analysis ^{1, 2, 3}

					VEHICULAR TRIPS					PERSON TRIPS												
				Weekda	Weekday AM Peak Hour		Weekda	Weekday PM Peak Hour			Weekday AM Peak Hour		our	Weekday PM Peak Hour			our		Da	ily		
Land Use	Land Use Code	Size	Unit	In	Out	Total	In	Out	Total	Daily	Vehicle	Transit	Active	Total Person Trips	Vehicle	Transit	Active	Total Person Trips	Vehicle	Transit	Active	Total Person Trips
Existing Pharmacy w/Drive Through N			SF 13% icle Trips son Trips		21 (3) 18	44 <i>(6)</i> 38	60 <u>(8)</u> 52	60 <u>(8)</u> 52	120 <i>(16)</i> 104	1,258 (164) 1,094	48	4	2	54	130	11	5	146	1,368	113	50	1,531
<u>Proposed</u> Multifamily Residential <i>N</i>	222 on-Auto M		DU 48% icle Trips son Trips		59 <u>(28)</u> 31	80 (38) 42	59 <u>(29)</u> 30	36 <u>(17)</u> 19	95 <u>(46)</u> 49	1,415 (679) 736	48	33	6	87	56	39	7	102	846	580	99	1,525
		crease Vehi ncrease Pers			13	4	(22)	(33)	(55)	(358)	-	29	4	33	(74)	28	2	(44)	(522)	467	49	(6)

Notes:

- 1. Trip Generation obtained from ITE's Trip Generation Manual, 11th Edition (General Urban/Suburban).
- 2. Mode split assumptions based on the I-66 Corridor.

 Production Attractions
 Vehicle 52.0%
 Transit 41.0%
 Active 7.0%

 9.0%
 9.0%
 4.0%

3. Average vehicle occupancy based on the ITE Trip Generation Handbook, FHWA, NHTS and engineering judgement.

Residential 1.15 Retail 1.25



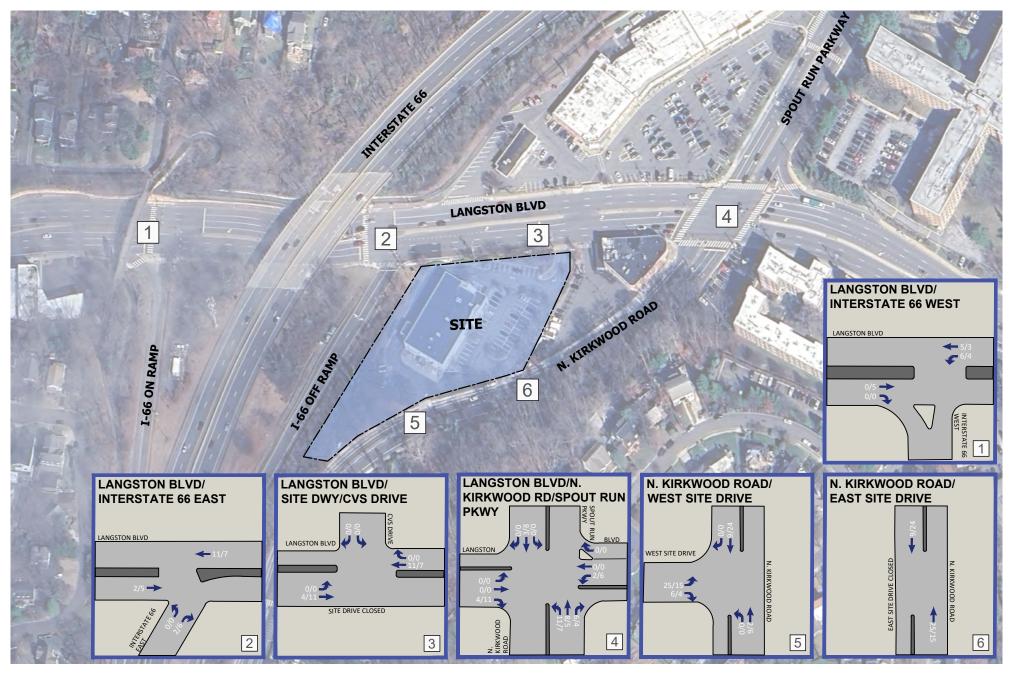


Figure 6-1 Site Peak Hour Traffic Forecasts







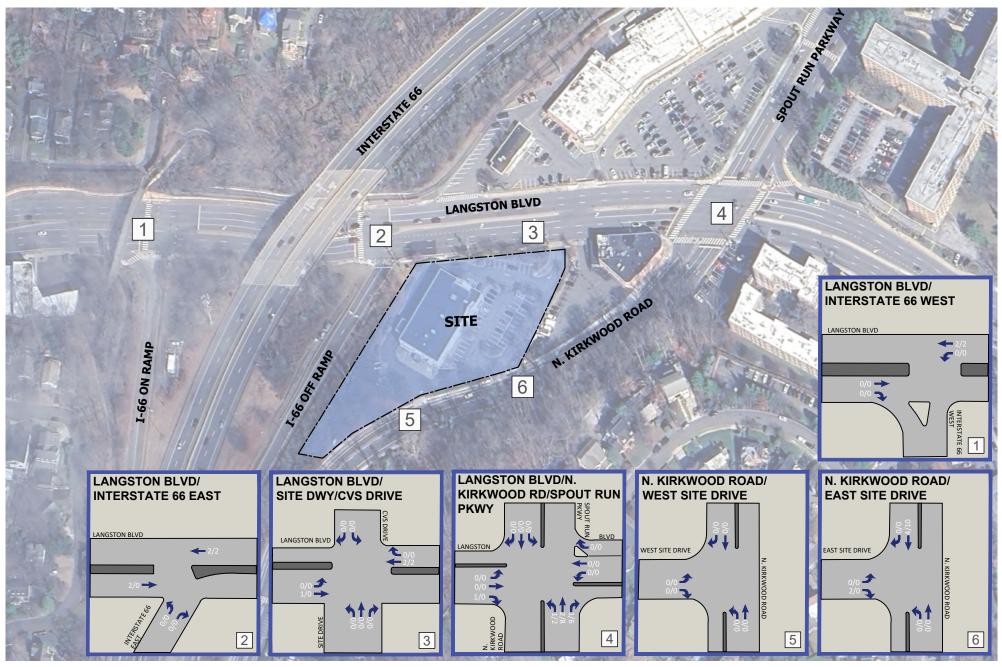


Figure 6-2 Site Trips Removed







SECTION 7 FUTURE CONDITIONS WITH DEVELOPMENT (2028)

This section presents an analysis of the future conditions including projections of 2028 future traffic forecasts with the proposed development, as well as capacity and queuing analyses.

Future Traffic Forecasts with Development (2028)

Future traffic forecasts with the site development were derived by adding the future traffic forecasts without development, shown on Figure 5-2, the site generated trips shown on Figure 6-1, and the existing site trips removed shown on Figure 6-2 to arrive at the future traffic forecasts with development shown on Figure 7-1.

Operational Analysis of Future Conditions with the Proposed Development

Future peak hour LOS and 50th and 95th percentile queues with the proposed development were estimated at the study intersections based on the future peak hour traffic forecasts with redevelopment shown on Figure 7-1; the existing traffic signal phasing/timings obtained from Arlington County; and the HCM 2000 methodologies using Synchro Software, Version 11. The results are presented in Appendix H and summarized in Table 7-1 and Table 7-2.

Levels of Service. The results with the proposed redevelopment indicate that all of the signalized study intersections would continue to operate at an overall LOS "C" or better during the AM and PM. These results are based on the current traffic signal timings provided by Arlington County DES. Additionally, all lane groups and turning movements will operate at similar levels of service to the future conditions without development. Based on a review of the traffic signal timings provided by DES staff indicated that adjustments to phasing could improve operations for certain lane groups operating at or near capacity.

Queuing. As shown on Table 7-2, the results of the queueing analysis are similar to those described in under existing conditions and future conditions without development. Increases in the estimated average and 95th percentile queues when compared to future conditions would not significantly affect the overall performance of the study intersections.



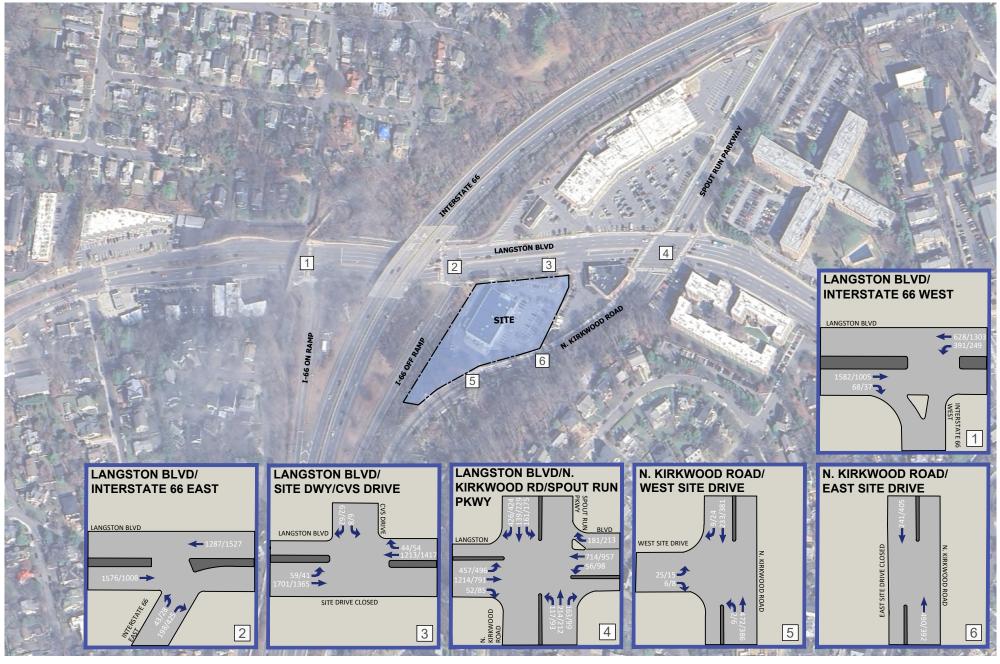


Figure 7-1 Future Peak Hour Traffic Forecasts with Development





3130 Langston Boulevard Arlington, Virginia



Table 7-1 3130 Langston Boulevard Future Conditions with Development Intersection Level of Service Summary ¹

Approach/ Lane		Existing Cond	itions (2024)		Future C	Conditions wi		velopment	Future Conditions with Development (2028)			
Group	AM P	eak Hour	PM P	eak Hour	AM P	eak Hour	PM P	eak Hour	AM P	eak Hour	PM P	eak Hour
	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s
1. Langston Boulevar	d / I-66 On Ra	amp - Signalized										
EBTR	В	11.5	Α	4	В	11.8	Α	4.1	В	12	Α	4.2
WBL	D	35.8	Α	1.8	D	37.2	Α	1.9	D	37.0	Α	2.0
WBT	<u>A</u>	<u>0.1</u>	<u>A</u>	<u>4.4</u>	Α	0.1	Α	4.5	Α	0.1	Α	4.6
Overall	В	11.1	Α	4.0	В	12.7	Α	4.1	В	12.9	Α	4.2
2. Langston Boulevar	d / I-66 Off R	amp - Signalized										
EBT	Α	3.6	Α	3.6	Α	4.7	Α	3.6	Α	4.7	Α	3.6
WBT	Α	6.6	Α	3.0	Α	6.6	Α	3.1	Α	6.6	Α	3.1
NBL	С	23.8	D	44.6	С	23.9	D	44.6	С	23.9	D	44.6
NBR	<u>A</u>	<u>4</u>	<u>A</u>	<u>4.1</u>	Α	4	Α	4.1	Α	4	Α	4.1
Overall	Α	5.6	Α	3.7	Α	5.7	Α	3.8	Α	5.7	Α	3.8
3. Langston Boulevar	d / Site Dwy	/ CVS Dwy - Unsig	nalized									
EBL	В	10.6	В	11.2	В	10.7	В	11.3	В	10.7	В	10.7
EBTR	Α	0.0	Α	0.0	Α	0.0	Α	0.0	Α	0.0	Α	0.0
WBLTR	Α	0.0	Α	0.0	Α	0.0	Α	0.0	Α	0.0	Α	0.0
NBLTR	Α	8.9	В	10.1	Α	9.0	В	10.1	DWY	CLOSED	DWY	CLOSED
SBLTR	В	10.2	В	13.5	В	10.2	В	13.6	В	10	В	12.6
4. N Kirkwood Rd / S	pout Run Pkw	y / Langston Bou	levard - Signa	lized								
EBL	D	43.2	F	184.7	D	51.5	F	208.3	D	52.6	F	208.4
EBTR	В	12.4	Α	7.1	В	12.8	Α	7.2	В	25.8	Α	7.3
WBL	С	34.5	С	27.7	D	36.4	С	28.7	D	37.7	С	30.1
WBT	С	25.9	С	23.2	С	26.4	С	23.6	С	26.6	С	23.6
WBR	С	22.9	В	19.5	С	23.3	В	19.7	С	23.5	В	19.7
NBL	D	35.7	С	34.3	D	35.3	С	34.2	D	35.6	С	34.2
NBTR	D	36.4	С	33.4	D	36.1	С	33.2	D	36.0	С	32.8
SBL	Е	69.3	D	54.3	Е	71.1	Ε	55.8	Ε	73.2	Ε	55.4
SBT	С	34.4	С	34.7	С	34.1	С	34.5	С	33.9	С	34.9
SBR	<u>C</u>	34.5	<u>C</u>	<u>34.5</u>	С	34.2	С	34.7	С	34.0	С	34.7
Overall	c	27.8	D	44.7	С	29.1	D	48.0	С	29.4	D	47.8
5. N Kirkwood Rd / V	Vest Site Dwy	- Unsignalized										
EBLT	Α	0.0	А	0.0	Α	0.0	0	0.0				
WBLTR	Α	0.0	Α	0.0	Α	0.0	Α	0.0	DWY	CLOSED	DWY	CLOSED
SBLR	Α	9.3	В	10.2	Α	9.4	В	10.3				
6. N Kirkwood Rd / E	ast Site Dwy -	Unsignalized				•		<u> </u>				
EBLT	A	0.0	А	0.3	Α	0.0	Α	0.3	Α	0.0	Α	0.2
WBTR	Α	0.0	Α	0.0	Α	0.0	Α	0.0	Α	0.0	Α	0.0
SBLR	В	11.6	В	13.4	В	11.7	В	13.6	В	13.7	В	13.9



^{1.} Capacity analysis based on Highway Capacity Manual methodology, using Synchro 11.

Table 7-2 3130 Langston Boulevard Future Conditions with Development Intersection Queuing Summary 1,2,3

Future Conditions	With Deve		isting Cond			Future Co		ithout Dev	elopment	Future		with Devel	opment
Annua ask /	Storage	AAA D-	-l. 11	DA4 D	di Marin	484 D-	(20		d. Herri	ANA Day		26)	de Marcia
Approach /	Length	AIVI Pe	ak Hour	PM Peak Hour		AM Peak Hour		PM Peak Hour		AIVI Pea	ak Hour	PM Pea	ik Hour
Lane Group	(ft)	50th Pecentile	95th Pecentile										
1. Langston Boulev	/ard / I-66	On Ramp	- Signalized										
EBT		139	186	54	105	143	192	57	110	143	192	59	112
WBL	185	82	#240	74	141	94	#242	3	5	101	#249	3	5
WBT	-	0	0	0	0	0	0	79	147	0	0	81	150
NBR	-	0	0	0	0	-	-	-	-	-	-	-	-
SBLTR	-	0	0	0	0	-	-	-	-	-	-	-	-
2. Langston Boulev	ard / I-66	Off Ramp	- Signalized										
EBT	-	100	351	46	161	0	104	47	165	0	104	47	165
WBT	-	265	246	48	167	5	271	49	175	5	271	49	176
NBL	-	13	27	18	33	13	28	18	34	13	28	18	34
NBR	-	0	30	0	45	0	31	0	45	0	31	0	46
3. Langston Boulev	ard / N S	ite Dwy / C	VS Dwy - U	nsignalized									
EBL	-	-	7	-	5	-	7	-	5	-	7	-	5
EBTR	-	-	0	-	0	-	0	-	0	-	0	-	0
WBLTR	-	-	0	-	0	-	0	-	0	-	0	-	0
NBLTR	-	-	0	-	0	-	0	-	0	DWY C	LOSED	DWY C	LOSED
SBLTR	-	-	7	-	12	-	7	-	12	-	7	-	11
4. N Kirkwood Rd	/ Spout Ru	un Pkwy / L	angston Bo	oulevard - S	ignalized								
EBL	500	217	#399	~314	#529	228	~340	~340	#552	229	~339	~339	#553
EBTR	-	170	198	88	54	174	92	92	55	174	93	93	55
WBL	250	28	#91	42	0	29	44	44	#123	30	47	47	#136
WBT	-	132	195	165	#117	137	171	171	252	138	171	171	252
WBR	165	0	52	0	246	0	0	0	53	0	0	0	53
NBL	100	62	100	51	85	62	52	52	87	69	52	52	89
NBTR	-	114	140	90	111	115	92	92	113	118	91	91	113
SBL	135	106	170	108	165	108	110	110	170	108	110	110	170
SBTR	-	76	115	125	170	78	127	127	173	79	132	132	180
SBR	-	0	73	42	132	0	46	46	140	0	46	46	140
5. N Kirkwood Rd /	/ West Sit	e Dwy - Un	signalized										
EBLT	-	-	0	-	0	-	0	-	0				
WBLTR	-	-	0	-	0	-	0	-	0	DWY C	LOSED	DWY C	LOSED
SBLR	-	-	0	-	0	-	0	-	0				
6. N Kirkwood Rd	/ East Site	Dwy - Uns	ignalized										
EBLT	-	-	0	-	1	-	0	-	1	-	0	-	0
WBTR	-	-	0	-	0	-	0	-	0	-	0	-	0
SBLR	-	-	1	-	5	-	1	-	5	-	6	-	4
Note(s):	•												

- 1. $^{\sim}$ Volume exceeds capacity, queue is theoretically infinite.
- 2. # 95th percentile volume exceeds capacity, queue may be longer.
- 3. Volume for 95th percentile queue is metered by upstream signal.



SECTION 8 TRANSPORTATION MANAGEMENT PLAN

A Transportation Management Plan (TMP) will be required to ensure users of the site are familiar with and use the multimodal transportation options available to them. The project site's location makes it a prime location for multimodal commuting given its excellent transit, pedestrian, and bicycle facilities discussed herein.

The elements of the TMP as described herein will be customized to meet the needs of this site given its location and surrounding multimodal environment. The goal of the TMP is to ultimately reduce the reliance on single occupancy vehicle trips and encourage alternative modes of transportation. The TMP will be developed and implemented to meet the needs of the proposed development and support the objectives of the Arlington County TDM program. The implementation of a TMP will influence the travel behavior of residents, visitors, employees, and users of the site by reducing peak hour vehicle-trips, parking demand, promote use of alternative transportation modes and maximize the use of the multimodal transportation facilities available.

At the time of Final Site Plan for the site, the Developer agrees to obtain the approval of the County Manager or his designee for such plan prior to the issuance of the First Certificate of Occupancy (CO) for the building. Upon approval of the TMP by the County Manager, the Developer agrees to implement all elements of the plan with assistance, when appropriate, by agencies of the County. The Developer agrees that all individual elements of the TMP will be operational prior to issuance of the First Partial Certificate of Occupancy for Tenant Occupancy. All dollar denominated rate will be adjusted for inflation by the U.S. Department of Labor, Bureau of Labor Statistics Consumer Price Index (CPI) Inflation Calculator from the date of site plan approval by the County Board.

The TMP will include a schedule and details of implementation, and continued operation of the elements in the plan. The location of the site and its proximity to public transportation allow for a TMP that may include, but not be limited to, the following strategies.

Participation and Funding

- 1. Establish and maintain an active, ongoing relationship with Arlington Transportation Partners (ATP), or successor entity, at no cost to the developer, on behalf of the property owner.
- 2. Designate and keep current a member of building management as Property Transportation Coordinator (PTC) to be primary point of contact with the County and undertake the responsibility for coordinating and completing all Transportation Management Plan (TMP) obligations, as directed by applicable adopted Site Plan Conditions. The PTC shall be trained, to the satisfaction of Arlington County Commuter Services (ACCS), to provide transit, bicycle, walk, rideshare and other



- information provided by Arlington County intended to assist with transportation to and from the site.
- 3. Contribute annually to ACCS, or successor, to sustain direct and indirect on-site and off-site services in support of TMP activities. Payment on this commitment shall begin as a condition of issuance of the First Partial Certificate of Occupancy for Tenant Occupancy for each respective building or phase of construction, or as directed by applicable adopted Site Plan Conditions. Subsequent payments shall be made annually.

Facilities and Improvements

- Provide in the lobby or lobbies, a transportation information display(s), the number, content, design, and location of will be approved by ACCS. The developer agrees that the required transportation information displays will meet the Arlington County Neighborhood Transportation Information Display Standards in effect on the date of the site plan approval, or equivalent as approved by the County Manager.
- 2. Comply with requirements of Site Plan conditions to provide bicycle parking/storage facilities, a Parking Management Plan (PMP), and a Bicycle Facilities Management Plan, if required.
- 3. Bus stops, shelters, and/or bikeshare stations on the sidewalk within 50 feet of the site will be maintained free of snow, ice, trash, and debris. A minimum six (6) foot wide path, clear of snow and ice, to the main entrance of the building will be maintained for bus stops and bikeshare stations.

Promotions, Services, Policies

- 1. Prepare, reproduce and distribute, in digital or hard copy, materials provided by Arlington County, which includes site-specific transit, bicycle, walk, and rideshare related information, to each new office, retail, property management, or maintenance employee, from initial occupancy through the life of the site plan. These materials shall be distributed as a part of prospective tenant marketing materials, as well as communications associated with lease signing, on-boarding, or similar activities.
- 2. Provide one time, per person, to each new office, retail, property management, or maintenance employee, whether employed part-time or full-time, directly employed or contracted, who begins employment in the building throughout initial occupancy, the choice of one of the following:
 - Metro fare on a SmarTrip card or successor fare medium
 - A one-year bikeshare membership
 - A one-year carshare membership



- 3. The County Manager may approve additions to, or substitution of one or more of these choices with a comparable transportation program incentive, as technology and service options change, if he/she finds that an incentive shall be designed to provide the individual with an option other than driving alone in a personal vehicle, either by removing a barrier to program entry, such as a membership cost, or by providing a similar level of subsidized access to a public or shared transportation system, program or service.
- 4. Provide, administer, or cause the provision of a sustainable commute benefit program for each on-site property management, maintenance and hotel employee. This commute benefit program shall offer, at a minimum, a monthly pre-tax transit benefit or a monthly subsidized/direct transit benefit.
- 5. Provide, under a "transportation information" heading on the Developer and property manager's websites regarding this development:
 - Links to the most appropriate Arlington County Commuter Services and/or external transportation-related web page(s). Confirmation of most appropriate link will be obtained from ACCS.
 - A description of key transportation benefits and services provided at the building, pursuant to the TMP.

Performance and Monitoring

- 1. During the first year of start-up of the TMP and on an annual basis thereafter, the Developer shall submit an annual report, which may be of an online, or e-mail variety, to the County Manager, describing completely and correctly, the TDM related activities of the site and changes in commercial tenants during each year.
- 2. The Developer agrees to conduct and/or participate in, a transportation and parking performance monitoring study at two (2) years, five (5) years, and each subsequent five (5) years (at the County's option), after issuance of the First Partial Certificate of Occupancy for Tenant Occupancy. The County may conduct the study or ask the owner to conduct the study (in the latter case, no reimbursement payment shall be required). As part of the study, a report shall be produced as specified by the County. The study may include, building occupancy rates, average vehicle occupancy, average garage occupancy for various days of the week and times of day, parking availability by time of day, average duration of stay for short term parkers for various days of the week and times of day, pedestrian traffic, a seven-day count of sitegenerated vehicles traffic, and/or a voluntary mode-split survey.

The building owner and/or operator shall notify, assist, and encourage building occupants and visitors on site to participate in mode-split surveys which may be of an on-line or email variety.



SECTION 9 CONCLUSIONS AND RECOMMENDATIONS

The conclusions and recommendations of this study are as follows:

- 1. The site is well-served by a multimodal transportation system that includes interstate, arterial, collector, and local streets; a connected network of sidewalks with ramps and pedestrian countdown heads; bicycle facilities; and numerous bus lines providing easy access to the nearby Metrorail stations, and other points of interests.
- 2. The three (3) signalized study intersections currently operate at overall acceptable LOS "C" or better during the AM and PM peak hours. Some individual movements or approaches operate at or near capacity.
- 3. In the future without and with redevelopment, the three (3) signalized study intersections would experience minor increases in delay as a result of nearby development and regional growth but would continue to operate generally consistent to existing conditions.
- 4. Upon completion, the proposed development is expected to generate 42 AM peak hour trips (11 in and 31 out), and 49 PM peak hour trips (30 in and 19 out). It would generate 4 more AM peak hour trips and 55 fewer PM peak hour trips when compared to the existing office and retail uses. The site is expected to generate 87 AM peak hour person trips and 102 PM peak hour person trips. This includes 33 AM and 39 PM transit trips and 6 AM and 7 PM active trips.
- 5. The proposal will be redeveloped in accordance with the Langston Boulevard Plan and will include multimodal improvements to both Langston Boulevard and N. Kirkwood Road. These improvements will include a new separated bike lane along Langston Boulevard as recommended in the Master Transportation Plan and Langston Boulevard Plan.
- 6. The proposal will consolidate site access to a single driveway on N. Kirkwood Road and will include the closure of Langston Boulevard driveway which will allow for an improved multimodal environment along the site's frontage.
- 7. The proposal will meet the bicycle and vehicular parking requirements.
- 8. The implementation of a Transportation Management Plan (TMP) will encourage the use of other non-auto modes of transportation including walking, bicycling and public transit as alternative to single occupancy vehicles and minimize the project's vehicular traffic impacts.

Q:\Projects\8574\8574B\TRANSPORTATION\MMTA\3130 Langston Blvd - MMTA (8.9.2024).docx



3130 LANGSTON BOULEVARD

Multimodal Transportation Assessment Technical Appendix

August 9, 2024



Appendix A Scoping Agreement



SCOPE OF WORK MEETING FORM 3130 Langston Boulevard Multimodal Transportation Assessment Base Assumptions

Contact Information	
Consultant Name:	Mike Pinkoske, PTP
Tele:	703.761.2790
E-mail:	pinkoske@vika.com
Developer/Owner	Rooney Properties, LLC
Name:	Cassie Guy
Tele:	571.297.4904
E-mail:	CGuy@RooneyPropertiesLLC.com

Project Information	
Project Name:	3130 Langston Boulevard
Project Location: The site location is shown on Attachment 1 .	The Property is located in the southeast quadrant of the Langston Boulevard / Interstate 66 Eastbound off ramp and just west of the Langston Boulevard / N. Kirkwood Road intersection. Currently, the site is improved with a singlestory brick Walgreen pharmacy with drive-through and associated surface parking. Access to the site is provided via one curb cut on Langston Boulevard and two curb cuts on N. Kirkwood Road. The Property consists of approximately 73,251 square feet or 1.68 acres of land area. The Property is identified as Arlington County RPC No. 15-012-041 and is currently located within an existing C-2 Zoning District.
Project Description: See Attachment 2 for a copy of the concept plan.	As proposed, the site would be rezoned with a General Land Use Plan (GLUP) amendment and redeveloped in accordance with the Langston Boulevard Plan. The existing building and surface parking would be razed and redeveloped with a mixed-use multifamily residential building with approximately 276 units and space for ground floor retail and/or equivalent (2,256 SF). To minimize traffic impacts along Langston Boulevard the existing driveway would be closed and the two driveways on N. Kirkwood Road would be consolidated. The site would be served by two loading/trash berths and approximately 340 parking spaces. Streetscape improvements consistent with the Langston Boulevard Plan and Master Transportation Plan would be constructed along Langston Boulevard and N. Kirkwood Road. Modifications to the existing median on N. Kirkwood

SCOPE OF WORK MEETING FORM 3130 Langston Boulevard

Multimodal Transportation Assessment Base Assumptions

	• •	Road are proposed to facilitate turning movements into and out of the parking garage and the closure of the northern site driveway and existing median.									
Proposed Use / Trip Generation	Existing Pharmacy/Drugstore wit 11,661 SF	h Drive-Throւ	ugh –		pposed ITE La Iltifamily - 22	_					
See Table 1 for the Multimodal Trip Generation	Proposed Multifamily – 276 units Ground floor amenity / retail equivalent (10,571 SF + 2,256 SF)										
	The proposal <u>does not m</u>	<u>eet</u> VDOT Ch	apter 870.								
Traffic Impact Analysis As	sumptions										
Study Period	Existing Year: 2024	Build-out Ye	ear: <u>2028</u>		Design Year:	<u>N/A</u>					
Study Area Boundaries (Attach map)	North: Spout Run Parkwa	у	South: N. k	(irkw	ood Road						
See Attachment 1	East: Langston Boulevard		West: Lang	gston Boulevard							
Consistency With Comprehensive Plan	The Property is guided by the Langston Boulevard coordination with these p	Plan (2023)	. The propo	-							
Available Traffic Data (Historical, forecasts)	New weekday AM and PN bikes) will be collected as Estimated VDOT 2022 Ave Langston Boulevard – 26,6 Spout Run Parkway – 15,0 N. Kirkwood Street – 7,20	part of the Nerage Daily To	IMTA.	(veh	icular, pedes	trian and					
Trin Distribution	Road Name: Langston Boulevard	No	rth: Sou	uth:	East: 20%	West: 15%					
Trip Distribution See Attachment 1	Road Name: Spout Run Parkway		rth: Sou	uth:	East:	West:					
*Final site distributions will be confirmed based	Road Name: N. Kirkwood Street	North:		ıth:)%	East:	West:					
on existing traffic data.	Road Name: Interstate 66	No	rth: Sou	ıth:	East:	West: 20%					

SCOPE OF WORK MEETING FORM 3130 Langston Boulevard

Annual Vehicle Trip Growth Rate:	To account for planned development outside the immediate study area a growth rate of 0.5 percent will be used, compounded annually.	Peak Period for Study	Weekday AM & PM							
Study Intersections	1. Langston Blvd / I-66 WB On-ramp 4. Existing site driveways (3) & one (1) future site driveway									
,	2. Langston Blvd / I-66 EB Off-ramp 5.									
See Attachment 1	3. Langston Blvd / N. Kirkwood Rd / Spout Run Pkwy									
Trip Adjustment Factors	Internal Reduction: ☐ Yes X No Reduction: ☐ Yes X No Reduction: ☐ Yes X No									
Software Methodology	Synchro version 11.1 software will be used for intersection analysis.									
Improvement(s) Assumed	Site frontage improvements described above (Project Description).									
Background Traffic Studies Considered	Langston Boulevard Study Arlington County needs assessment of the Custis Trail (ongoing).									
Plan Submission	<u>X</u> 4.1 Site Plan Submission ☐ Form Based Code Use Permit ☐ Preliminary/Sketch Plan									
Additional Issues to be Addressed	 X Queuing analysis ☐ Actuation/Coordination ☐ Weaving analysis ☐ Merge analysis X Bike/Ped Accommodations X Intersection(LOS) X TDM Measures X See Arlington County MMTA Matrix for additional details. 									
Site Forecast Assumptions	As noted above final site distributions will be confirmed based on existing traffic data.									

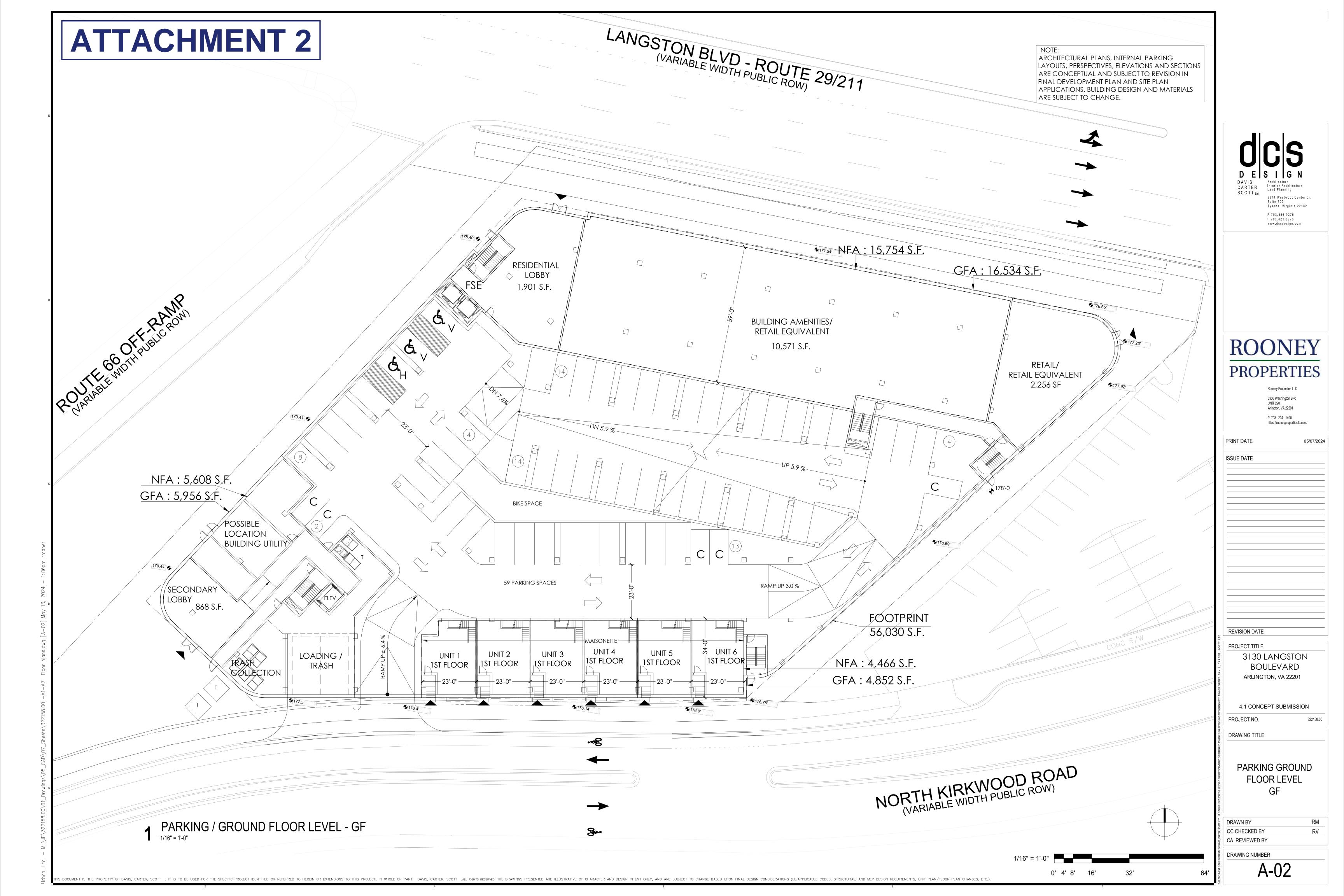
SCOPE OF WORK MEETING FORM 3130 Langston Boulevard Multimodal Transportation Assessment Base Assumptions

ADDITIONAL NOTES:

- See Arlington County MMTA Scoping Addendum (attached) for <u>Compact MMTAs</u> that includes additional multimodal requirements/details to be included in the MMTA that are not specifically outlined herein.
- This 4.1.2 Site Plan proposal does not trigger VDOT 870 trip thresholds of 5,000 total daily trips.
- The study will include a discussion regarding the directions of approach for the site trips.
- Weekday peak hour counts will be conducted from 7am to 10am and from 4pm to 7pm.
- Field measured PHF's will be used if between 0.85 and higher, if lower, a 0.85 PHF will be used. For future conditions a PHF of 0.92 or higher will be used.
- Level of service calculations for existing and future conditions without and with development shall be in accordance with the Highway Capacity Manual (HCM) 2010 methodologies, as computed by Synchro 11 software. Typical Synchro parameters to be utilized in this analysis will be consistent with VDOT's TOSAM and Arlington County standards.
- Study will include a comprehensive discussion of the multimodal transportation options available in the vicinity
 of the site including Metrorail, bus, capital bikeshare, bikes, and pedestrians consistent with the Arlington
 County MMTA Scoping Addendum (attached) for Compact MMTAs.
- Study will include a comprehensive discussion of the safety analysis of the site, including crash data and summary tables consistent with the Arlington County MMTA Scoping Addendum (attached) for compact MMTAs.
- Include discussion and calculation of person trips generated by the proposal broken out into the various mode shares based on census data.

SIGNED:	Kiell Pull	DATE:	6/28/2024				
	Applicant or Consultant						
PRINT NAME:	Michael Pinkoske, PTP Applicant or Consultant						
SIGNED:		DATE: _					
	Local Government Representative						
PRINT NAME: _							
	Local Government Representative						





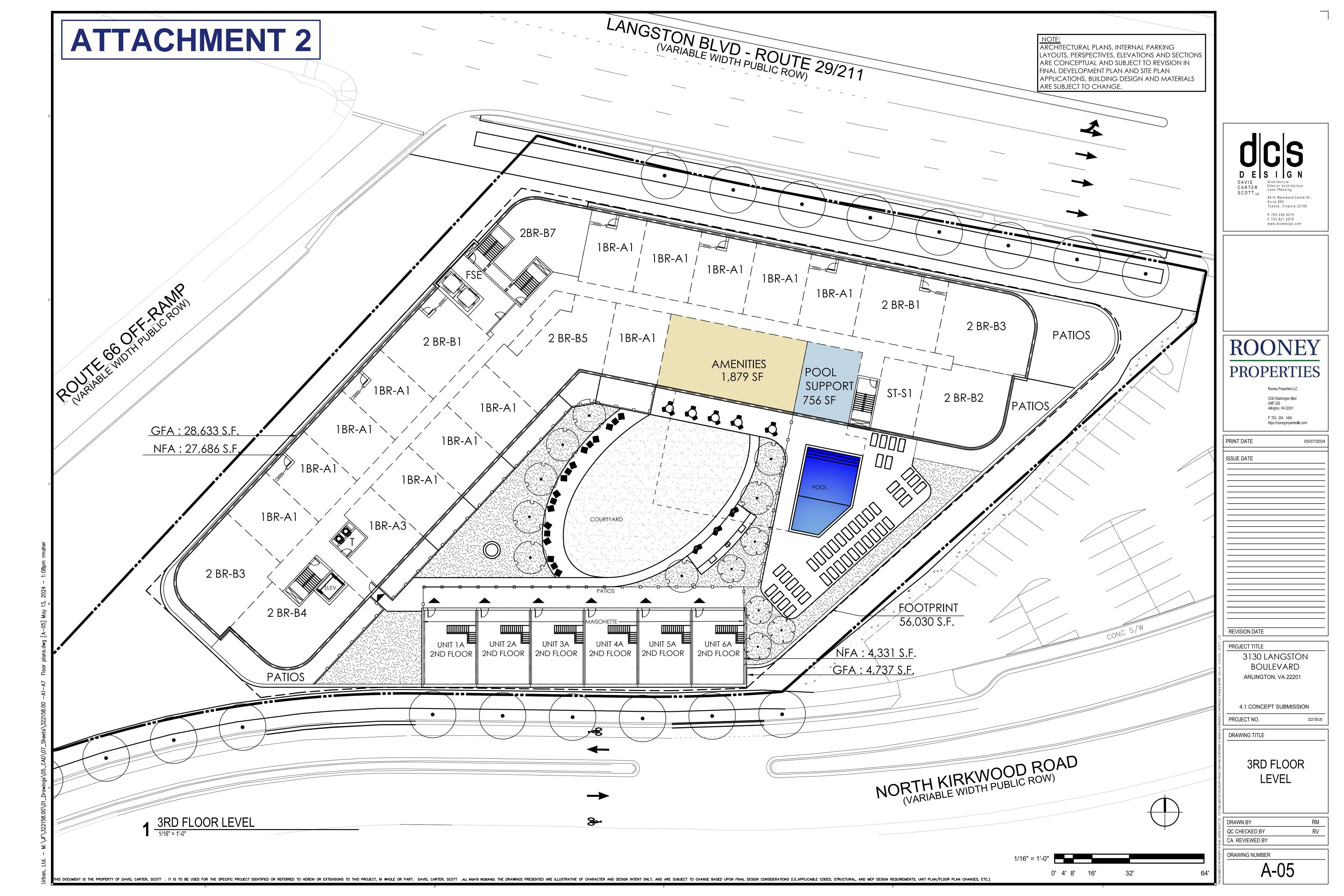


Table 1 3130 Langston Boulvard

Multimodal Site Trip Generation Analysis 1, 2, 3

				VEHICULAR TRIPS						PERSON TRIPS												
				Weekday AM Peak Hour			Weekday PM Peak Hour			Weekday AM Peak Hour		our	Weekday PM Peak Hour			Daily						
Land Use	Land Use Code	Size	Unit	In	Out	Total	In	Out	Total	Daily	Vehicle	Transit	Active	Total Person Trips	Vehicle	Transit	Active	Total Person Trips	Vehicle	Transit	Active	Total Person Trips
Existing Pharmacy w/Drive Through	881 Non-Auto N		SF 13% icle Trips son Trips	23 (3) 20	21 (3) 18	44 (6) 38	60 (8) 52	60 <u>(8)</u> 52	120 (16) 104	1,258 	48	4	2	54	130	11	5	146	1,368	113	50	1,531
<u>Proposed</u> Multifamily Residential	222 Non-Auto N		DU 48% icle Trips son Trips	21 (10) 11	59 <i>(28)</i> 31	80 (38) 42	59 <u>(29)</u> 30	36 <i>(17)</i> 19	95 (46) 49	1,415 (679) 736	48	33	6	87	56	39	7	102	846	580	99	1,525
		ncrease Veh			13	4	(22)	(33)	(55)	(358)	-	29	4	33	(74)	28	2	(44)	(522)	467	49	(6)

Notes

1. Trip Generation obtained from ITE's Trip Generation Manual, 11th Edition (General Urban/Suburban).

2. Mode split assumptions based on the I-66 Corridor.

 Vehicle
 Transit
 Active

 Production
 52.0%
 41.0%
 7.0%

 Attractions
 87.0%
 9.0%
 4.0%

3. Average vehicle occupancy based on the ITE Trip Generation Handbook, FHWA, NHTS and engineering judgement.

Residential 1.15 Retail 1.25





PRE-SCOPE OF WORK FORM ADDENDUM Multimodal Transportation Assessment (MMTA) Assumptions

To Accompany VDOT Pre-Scope Form 7.08

The applicant is responsible for entering the relevant information and submitting this Addendum plus a completed VDOT Pre-Scope Form 7.08 to Arlington County and VDOT as required by Arlington County's Administrative Regulations 4.1/4.2 and Virginia State Code. The completed form shall be submitted to appropriate County and VDOT staff at least 3 days in advance of the scoping meeting to finalize study details and requirements.

CONTACT INFORMATION										
Consultant Name:	Michael Pinkoske									
Tele:	703.761.2790	703.761.2790								
Email:	pinkoske@vika.com									
Developer/Owner Name:	Cassie Guy									
Tele:	571.297.4904									
Email:	CGuy@RooneyPropert	iesLLC.com								
PROJECT INFORMATION										
Project Name:	3130 Langston Boulevard Site Plan/SPLN #: N/A									
Project Location:	Arlington, County									
ESTIMATED TRIP GENERATION FOR PROPOSED DEVELOPMENT — PM PEAK HOUR (Project may excluded up to 10,000 square feet of ground floor locally serving retail in trip generation estimates for scoping)										
Mode		PM Peak Hour		Daily						
	In	Out	Total	Total						
Total Person Trips	<u>63</u> ppl/hr	<u>39</u> ppl/hr	<u>102</u> ppl/hr	<u>1,525</u> ppl						
- Auto Trips	<u>30</u> veh/hr	<u>19</u> veh/hr	<u>49</u> veh/hr	<u>1415</u> veh						
- Transit Trips	<u>24</u> ppl/hr	<u>15</u> ppl/hr	<u>39</u> ppl/hr	<u>580</u> ppl						
- Bike Trips	2 ppl/hr	<u>33</u> ppl								
- Walk Trips	<u>2</u> ppl/hr <u>4</u> ppl/hr <u>66</u> ppl									
MULTIMODAL TRANSPORTATION ASSESSMENT (MMTA) REQUIRED STUDY SCOPE										
(Specific scoping requirements identified i	n later sections below, scoping ra Overview		exact scope to be agreed upon co	nclusion of scoping meeting) Comprehensive						
MMTA Study Level	Overview	Compact	Standard	Comprehensive						
•	0 - 15 veh/hr	∠\ 16 - 50 veh/hr	 51 - 175 veh/hr	□ □ 176+ veh/hr						
Vehicle Trip Range (PM) Peak Hour	0 13 (01)111	10 30 VCH/III	31 1/3 VC11/111	1/01 (01)/11						

	Overview	Compact	Standard	Comprehensive
MMTA Study Level		\boxtimes		
	0 - 15 veh/hr	16 - 50 veh/hr	51 - 175 veh/hr	176+ veh/hr
BACKGROUND			_	
Existing transportation facilities (general)		\boxtimes		
Existing Walk, Bike and Transit Scores		\boxtimes		
Historical Transportation Census Data for the site				
MULTIMODAL TRANSPORTATION FACILITIES	ASSESSMENT	•		
Transit Studies and Maps to Include				
Service Map	☐ ¼ mile	∑ ¼ mile	☐ ½ mile	
Locations accessible by transit in 15min and 30min of travel time		\boxtimes		
Bus stop inventory and amenity review				
Transit ridership history (Metrorail)				
Pedestrian Studies and Maps to Include				
Existing pedestrian facilities		\boxtimes		
	Site frontage ¹	2 block radius	¼ mile	½ mile
Master Transportation Plan and sector plan sidewalk recommendation review		\boxtimes		
	Site frontage ¹	2 block radius	¼ mile	½ mile
Locations accessible by 10, 20, 30 min walk		Ш	Ш	Ш
Pedestrian routes to key neighborhood destinations within ¼ mile				
Bicycle Network Studies and Maps to Include				
Existing and future bicycle facilities maps within ½ mile		\boxtimes		
Master Transportation Plan recommendations within ½ mile		\boxtimes		
Locations accessible by 10, 20, 30 min bike ride				
Bicycle Level of Traffic Stress within ½ mile		\boxtimes		
Existing and proposed bike parking (On street visitor spaces and secure bike parking with development.)				
· · · · · · · · · · · · · · · · · · ·		Site frontage ¹	Site frontage ¹	2 Block radius
Shared Mobility Maps and summary tables for bike share, car share, scooters, others		\boxtimes		П
SAFETY				
Crash history review and analysis				
Summary of the most recent 3 years of data along				
Langston Boulevard, Spout Run Parkway & N. Kirkwood				
Street				
OTHER				
Street Cross Sections (Existing and Proposed)		\boxtimes		
Transportation Demand Management (TDM) proposal/recommendations.		\boxtimes		
		\boxtimes		
Curb space inventory/On-street parking review		Site Frontage ¹	2 Block radius	¼ mile

¹ Site frontage including opposite side of street. Arlington County MMTA Scoping Addendum

ADDITIONAL TRANSPO	RTATION STUDY/SUBMISSIONS	
Additional Transportation Studies	 □ VDOT Chapter 870 Traffic Study. (See completed VDOT Form 7.08 attached.) □ Multimodal Micro Simulation of Transportation Network Identify study limits and attachment with study scoping details 	⊠ N/A
DATA COLLECTION		
Pedestrian and Bike Count Locations	At Traffic Impact Study intersections. (See completed VDOT Form 7.08 attached.) Additional pedestrian or bicycle counts required: Enter additional count locations and/or periods here.	⊠ N/A
NOTES AND ASSUMPTI	ONS	
Planned Multimodal Network Changes ² • Roadway • Transit • Pedestrian • Bicycle Not associated with proposed	Streetscape and roadway improvements envisioned in the Plan Langst Modification to Upton Street.	on Boulevard Plan.
Additional Notes or Assumptions		
SIGNED: Applicant or Consulta PRINT NAME: Michael Pinkosk	re, PTP	
Applicant or SIGNED: Arlington County Re	Click or tap to DATE: presentative	enter a date. —
PRINT NAME: Printed Name He Arlington County R		

² Planned improvements not associated with proposed development. Arlington County MMTA Scoping Addendum 3130 Langston Boulevard – May 15, 2024

Appendix B

Multimodal Information

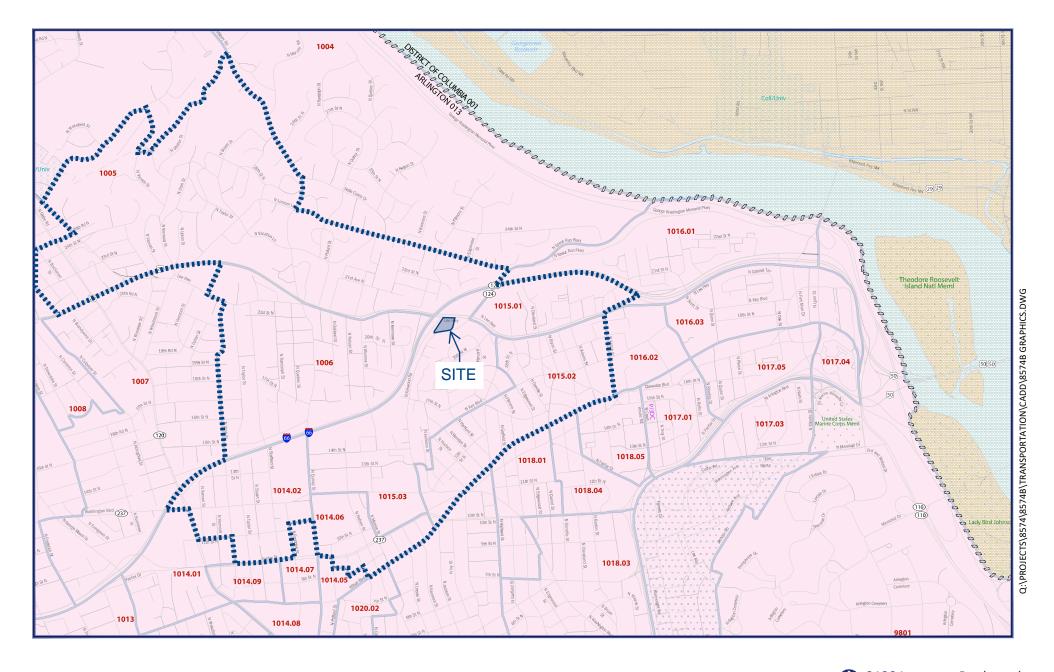


Means of Transportation to Work by Vehicles Available



1

	have been modified by user selections. Some information may be missing.
vote. The table shown may i	nave been mounted by user selections. Some information may be missing.
DATA NOTES	
TABLE ID:	B08141
SURVEY/PROGRAM:	
	American Community Survey
VINTAGE:	2022
DATASET:	ACSDT5Y2022
PRODUCT:	ACS 5-Year Estimates Detailed Tables
UNIVERSE:	Workers 16 years and over in households
MLA:	U.S. Census Bureau. "Means of Transportation to Work by Vehicles Available." American Community Survey, ACS 5-Year
	Estimates Detailed Tables, Table B08141, 2022,
	https://data.census.gov/table/ACSDT5Y2022.B08141?text=B08141&t=Transportation&g=1400000US51013100500,51013
	00600,51013101402,51013101406,51013101500,51013101502,51013101503&y=2022. Accessed on June 20, 2024.
FTP URL:	None
API URL:	https://api.census.gov/data/2022/acs/acs5
USER SELECTIONS	
TOPICS	Transportation
GEOS	Census Tract 1015.03; Arlington County; Virginia; Census Tract 1015.02; Arlington County; Virginia; Census Tract 1015,
	Arlington County, Virginia; Census Tract 1005; Arlington County; Virginia; Census Tract 1006; Arlington County; Virginia; Census Tract 1014.06; Arlington County; Virginia; Census Tract 1014.02; Arlington County; Virginia
VINTAGES	2022
EXCLUDED COLUMNS	None
EXCLUDED COLUMNS	Note
APPLIED FILTERS	None
APPLIED SORTS	None
DIVOT & GROUPING	Т
PIVOT & GROUPING	<u> </u>
PIVOT COLUMNS	None
PIVOT MODE	Off
ROW GROUPS	None
VALUE COLUMNS	None
WEB ADDRESS	https://data.census.gov/table/ACSDT5Y2022.808141?text=808141&t=Transportation&g=1400000US51013100500,51013 00600,51013101402,51013101406,51013101500,51013101502,51013101503&y=2022
TABLE NOTES	T
	Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, the decennial census is the official source of population totals for April 1st of each decennial year. In between censuses, the Census Bureau's Population Estimates Program produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.
	Information about the American Community Survey (ACS) can be found on the ACS website. Supporting documentation including code lists, subject definitions, data accuracy, and statistical testing, and a full list of ACS tables and table shells (without estimates) can be found on the Technical Documentation section of the ACS website. Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the
	American Community Survey website in the Methodology section.
	Source: U.S. Census Bureau, 2018-2022 American Community Survey 5-Year Estimates
	Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising fron sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see ACS Technical Documentation). The effect of nonsampling error is not represented in these tables.
	Workers include members of the Armed Forces and civilians who were at work last week.
	Several means of transportation to work categories were updated in 2019. For more information, see: Change to Means of Transportation. The 2018-2022 American Community Survey (ACS) data generally reflect the March 2020 Office of Management and Budget (OMB) delineations of metropolitan and micropolitan statistical areas. In certain instances, the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB delineation lists due to differences in the
	effective dates of the geographic entities. Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on 2020 Census data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.
	Explanation of Symbols:- The estimate could not be computed because there were an insufficient number of sample observations. For a ratio of medians estimate, one or both of the median estimates falls in the lowest interval or highest interval of an open-ended distribution. For a 5-year median estimate, the margin of error associated with a median was larger than the median itself. N The estimate or margin of error cannot be displayed because there were an insufficient number of sample cases in the selected geographic area. (X) The estimate or margin of error is not applicable or not available median- The median falls in the lowest interval of an open-ended distribution (for example "2,500-").** The margin of error could not be computed because there were an insufficient number of sample observations.**** The margin of error could not be computed because the median falls in the lowest interval or highest interval of an open-ended distribution.*****
	margin of error is not appropriate because the corresponding estimate is controlled to an independent population or housing estimate. Effectively, the corresponding estimate has no sampling error and the margin of error may be treated a zero.



Census Tracts





	Census Tract 1005; Ar	rlington County; Virginia	Census Tract 1006; A	rlington County; Virginia	Census Tract 1014.02 Virginia	; Arlington County;	Census Tract 1014.06 Virginia	5; Arlington County;	Census Tract 1015.02 Virginia	2; Arlington County;	Census Tract 1015.03 Virginia	; Arlington County;	Census Tract 1015, A	rlington County, Virginia	Tot	tal
Label	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Percentage
otal:	2,373	±265	1,720	±231	1,706	±242	2,357	±295	2,046	±321	1,216	±340	5,336	±382	16754	
No vehicle available	49	±46	6	±10	57	±46	673	±221	154	±94	0	±13	447	±179		
1 vehicle available	359	±131	623	±195	799	±148	1,092	±256	819	±222	413	±186	2,454	±396		
2 vehicles available	1,471	±233	817	±239	625	±159	530	±218	838	±307	455	±148	1,794	±408		
3 or more vehicles available	494	±177	274	±114	225	±181	62	±89	235	±186	348	±296	641	±221		
Car, truck, or van - drove alone:	1,189	±249	923	±183	566	±144	504	±178	620	±193	420	±149	2,091	±319	6313	37.609
No vehicle available	31	±30	0	±13	0	±13	0	±13	0	±13	0	±13	21	±32		
1 vehicle available	138	±69	283	±156	208	±75	260	±121	230	±151	78	±63	912	±229		
2 vehicles available	754	±201	457	±161	305	±119	213	±125	274	±134	193	±70	812	±238		
3 or more vehicles available	266	±151	183	±82	53	±47	31	±44	116	±122	149	±128	346	±169		
Car, truck, or van - carpooled:	159	±87	78	±55	20	±24	68	±108	81	±81	31	±32	133	±74	570	3.409
No vehicle available	0	±13	0	±13	0	±13	0	±13	0	±13	0	±13	0	±17		
1 vehicle available	39	±46	47	±45	20	±24	0	±13	0	±13	14	±24	32	±36		
2 vehicles available	120	±69	31	±38	0	±13	68	±108	64	±78	0	±13	52	±44		
3 or more vehicles available	0	±13	0	±13	0	±13	0	±13	17	±30	17	±21	49	±42		
Public transportation (excluding taxicab):	134	±66	205	±99	352	±98	581	±171	507	±180	301	±191	2,082	±336	4162	24.809
No vehicle available	18	±24	0	±13	6	±9	189	±116	100	±75	0	±13	384	±162		
1 vehicle available	35	±41	70	±56	156	±60	303	±135	234	±119	137	±158	1,034	±273		
2 vehicles available	61	±48	98	±60	140	±69	89	±81	173	±131	99	±66	556	±245		
3 or more vehicles available	20	±23	37	±54	50	±44	0	±13	0	±13	65	±77	108	±72		
Walked:	16	±17	96	±65	168	±104	266	±107	101	±66	47	±48	308	±113	1002	5.989
No vehicle available	0	±13	0	±13	0	±13	154	±72	0	±13	0	±13	42	±41		
1 vehicle available	7	±11	32	±38	88	±51	53	±63	35	±36	0	±13	116	±73		
2 vehicles available	9	±13	49	±45	14	±16	59	±54	40	±37	36	±46	115	±69		
3 or more vehicles available	0	±13	15	±18	66	±92	0	±13	26	±40	11	±18	35	±42		
Taxicab, motorcycle, bicycle, or other means:	134	±65	96	±59	36	±23	16	±26	86	±58	17	±23	298	±155	683	4,089
No vehicle available	0	±13	0	±13	14	±15	0	±13	0	±13	0	±13	0	±17		
1 vehicle available	45	±36	46	±46	0	±13	16	±26	34	±37	17	±23	220	±139		
2 vehicles available	79	±61	31	±25	22	±19	0	±13	52	±49	0	±13	78	±69		
3 or more vehicles available	10	±16	19	±21	0	±13	0	±13	0	±13	0	±13	0	±17		
Worked from home:	741	±149	322	±144	564	±153	922	±210	651	±190	400	±150	424	±157	4024	24.029
No vehicle available	0	±13	6	±10	37	±41	330	±193	54	±60	0	±13	0	±17		
1 vehicle available	95	±63	145	±68	327	±127	460	±167	286	±131	167	±83	140	±77		
2 vehicles available	448	±128	151	±109	144	±70	101	±71	235	±103	127	±84	181	±123		
3 or more vehicles available	198	±79	20	+25	56	+49	31	±45	76	±75	106	±112	103	±78		

1

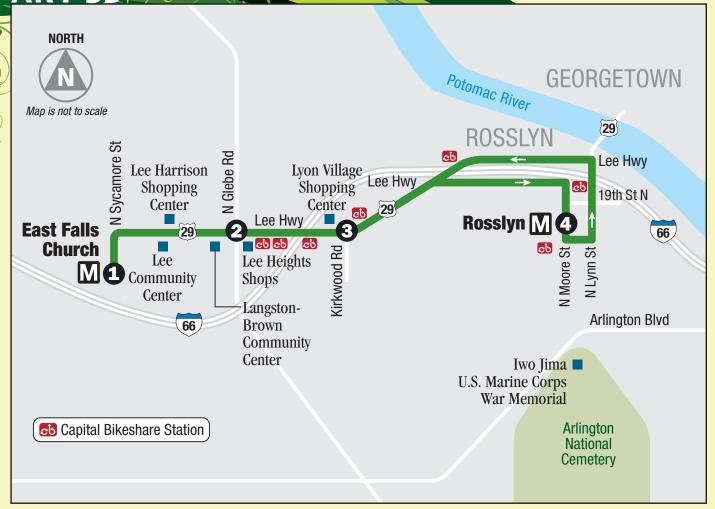
data.census.gov | Measuring America's People, Places, and Economy



DEPARTMENT OF ENVIRONMENTAL SERVICES



Effective August, 2020



			Transfers Using SmarTrip Card*				
ART 55 FARES	Cash Fare	Fare w/ SmarTrip Card	ART to Metrorail or Metrorail to ART	ART to ART or ART to/from Metrobus			
Adults	\$2.00	\$2.00	50¢ discount	Free			
Senior Citizens (ages 65+)	\$1.00	\$1.00	50¢ discount	Free			
People w/ Disabilities (w/WMATA ID or Medicare card)	\$1.00	\$1.00	50¢ discount	Free			
K-12 Students (w/school ID)	\$1.00	K-12 students receive the \$1.00 student fare only when paying with cash, a green iRide token or a Student iRide SmarTrip card. Transfer costs between ART and other transit systems may vary for using the Student iRide SmarTrip card.					

*TRANSFERS MUST BE MADE WITHIN 2 HOURS.

Regular Fares can also be paid with a 7 Day Regional Bus Pass (loaded on SmarTrip), a gold ART token, or a green iRide token. You can buy tokens or purchase SmarTrip cards and add value or a 7 day pass to them at any Commuter Store or Mobile Commuter Store, or online at commuterdirect.com.

			Transbordos usando tarjeta SmarTrip				
TARIFAS ART 55	Tarifa Regular	Tarifa con SmarTrip	ART a Metrorail o Metrorail a ART	ART a ART o ART a/desde Metrobus			
Adultos	\$2.00	\$2.00	50¢ de descuento	gratis			
Adultos mayores (65 años a más)	\$1.00	\$1.00	50¢ de descuento	gratis			
Personas con discapacidad (con identificación WMATA o tarjeta Medicare)	\$1.00	\$1.00	50¢ de descuento	gratis			
Estudiantes jardín a 12 grado (con ID estudiante)	\$1.00	Estudiantes desde jardín infante hasta 12 grado pagan tarifa de estudiante de \$1 en ART cuando pagan en efectivo, con tarjeta iRide SmarTrip color verde o iRide token color verde. Costo de transbordos entre ART y otros servicios de transporte pueden variar con tarjeta iRide SmarTrip.					

*TRANSBORDOS DEBEN HACERSE DENTRO DE DOS HORAS.

Las tarifas regulares también se pueden pagar con un Pase de Bus Regional de 7 Días (cargado en SmarTrip), un token dorado ART o un token verde iRide. Puede comprar pases o tarjetas SmarTrip y cargarles dinero o un pase de 7 días en cualquier tienda Commuter Store o Mobile Commuter Store, o en Internet en commuterdirect.com (en inglés).

ART 55				
Mondoy Frido		.9	\$ 15 MOON 111 807 80 1	
Monday – Friday Eastbound			200	Possyn (2)
Eastboullu	10 35	Ce Highway	100	W.
Lunes-Viernes	\$\$ 50°	99	100 Kin	Po
Dirección Este	0-	-0-	-3 -	-4
Direccion Este	5:00	5:09	5:15	5:30
	5:15	5:24	5:30	5:45
_	5:30 5:45	5:39 5:54	5:45 6:00	6:00 6:15
	5:57	6:06	6:12	6:27
_	6:12	6:21	6:27	6:42
	6:24 6:36	6:33 6:45	6:39 6:51	6:54 7:06
_	6:48	6:57	7:03	7:18
	7:00 7:12	7:09 7:21	7:15 7:27	7:30 7:42
_	7:24	7:33	7:39	7:54
	7:36 7:48	7:45 7:57	7:51 8:03	8:06 8:18
_	8:00	8:09	8:15	8:30
	8:12 8:24	8:21 8:33	8:27 8:39	8:42 8:54
	8:24 8:36	8:33 8:45	8:39 8:51	9:06_
_	8:48	8:57	9:03	9:18
	9:00 9:15	9:09 9:24	9:15 9:30	9:30 9:37
_	9:30	9:39	9:45	9:52
	9:45 10:00	9:54 10:09	10:00 10:15	10:07 10:22
_	10:15	10:24	10:30	10:37
	10:30	10:39	10:45	10:52
_	10:45 11:00	10:54 11:09	11:00 11:15	11:07 11:22
	11:15	11:24	11:30	11:37
_	11:30 11:45	11:39 11:54	11:45 12:00	11:52 12:07
	12:00	12:09	12:15	12:22
-	12:15 12:30	12:24 12:39	12:30 12:45	12:37 12:52
	12:45	12:54	1:00	1:07
-	1:00 1:15	1:09 1:24	1:15 1:30	1:22 1:37
	1:30	1:39	1:45	1:52
-	1:45 2:00	1:54 2:09	2:00 2:15	2:07 2:22
	2:15	2:24	2:30	2:37
_	2:30 2:45	2:39 2:54	2:45 3:00	2:52 3:07
	2:45	3:06	3:12	3:21
	3:09	3:18	3:24	3:33
	3:21 3:33	3:30 3:42	3:36 3:48	3:45 3:57
	3:45	3:54	4:00	4:09
	3:57 4:09	4:06 4:18	4:12 4:24	4:21 4:33
	4:21	4:30	4:36	4:45
	4:33 4:45	4:42 4:54	4:48 5:00	4:57 5:09
	4:57	5:06	5:12	5:21
	5:09 5:21	5:18 5:30	5:24 5:36	5:33 5:45
	5:33	5:42	5:48	5:57
	5:45 5:57	5:54 6:06	6:00 6:12	6:09 6:21
	6:09	6:18	6:24	6:33
	6:21	6:30	6:36	6:45
	6:36 6:51	6:45 7:00	6:51 7:06	7:00 7:15
	7:06	7:15	7:21	7:28
	7:21 7:36	7:30 7:45	7:36 7:51	7:43 7:58
	8:06	8:15	8:21	8:28
Bold Shaded	8:36 9:06	8:45 9:15	8:51 9:21	8:58 9:28
numerals are	9:36	9:45	9:51	9:58
PM Times	10:06 10:36	10:15 10:45	10:21 10:51	10:28 10:58
Números	11:06	11:15	11:21	11:28
sombreados en negrita son	11:36	11:45	11:51	11:58
horas PM	12:06 12:48	12:15 12:57	12:21 1:03	12:28 1:10
		•		-

ART 55				
Monday – Frid	av	*\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	, p	
Westbound	ay		Les Hishury &	—
	1880	H oo Q		\$\$ 50 M
Lunes-Viernes	e Q -	-3 -	_ 	-0
Dirección Oest	e 5:35	5:43	5:50	5:59
	5:50	5:58	6:05	6:14
	6:05	6:13	6:20	6:29
	6:20	6:28	6:35	6:44
	6:32	6:40	6:47	6:56
	6:44	6:52	6:59	7:08
	6:56	7:04	7:11	7:20
	7:08	7:16	7:23	7:32
	7:20	7:28	7:35	7:44
	7:32	7:40	7:47	7:56
	7:44	7:52	7:59	8:08
	7:56	8:04	8:11	8:20
	8:08	8:16	8:23	8:32
	8:20	8:28	8:35	8:44
	8:32	8:40	8:47	8:56
	8:44	8:52	8:59	9:08
	8:56 9:11	9:04	9:11 9:26	9:20
	9:26	9:19 9:34	9:41	9:35 9:50
	9:41	9:49	9:56	10:05
	9:56	10:04	10:11	10:20
	10:11	10:19	10:26	10:35
	10:26	10:34	10:41	10:50
	10:41	10:49	10:56	11:05
	10:56	11:04	11:11	11:20
	11:11	11:19	11:26	11:35
	11:26	11:34	11:41	11:50
	11:41	11:49	11:56	12:05
	11:56	12:04	12:11	12:20
	12:11	12:19	12:26	12:35
	12:26	12:34	12:41	12:50
	12:41	12:49	12:56	1:05
	12:56	1:04	1:11	1:20
	1:11	1:19	1:26	1:35
	1:26	1:34	1:41	1:50
	1:41	1:49	1:56	2:05
	1:56	2:04	2:11	2:20
	2:11	2:19	2:26	2:35
	2:26	2:34	2:41	2:50
	2:41	2:49	2:56	3:05
	2:56	3:04	3:11	3:20
	3:11	3:19	3:26	3:35
	3:26	3:34	3:42	3:51
	3:38	3:46	3:54	4:03
	3:50	3:58	4:06	4: <u>15</u>
	4:02	4:10	4:18	4:27
	4:14	4:22	4:30	4:39
	4:26	4:34	4:42	4:51
	4:38	4:46	4:54	5:03
	4:50	4:58	5:06	5:15
	5:02	5:10	5:18	5:27
	5:14	5:22	5:30	5:39
	5:26	5:34	5:42	5:51
	5:38	5:46 5:58	5:54	6:03
	5:50 6:02	6:10	6:06 6: 1 8	6:15 6:27
	6:14	6:22	6:30	6:39
	6:26	6:34	6:42	6:51
	6:38	6:46	6:54	7:03
	6:50	6:58	7:06	7:15
	7:05	7:13	7:21	7:30
	7:20	7:28	7:35	7:44
	7:35	7:43	7:50	7:59
	7:50	7:58	8:05	8:14
	8:05	8:13	8:20	8:29
	8:35	8:43	8:50	8:59
Bold Shaded	9:05	9:13	9:20	9:29
	9:35	9:43	9:50	9:59
numerals are PM Times	10:05	10:13	10:20	10:29
	10:35	10:43	10:50	10:59
	11:05	11:13	11:20	11:29
Números	11:35	11:43	11:50	11:59 12:29
sombreados	12:05	12:13	12:20	
en negrita son	12:35	12:43	12:50	12:59
horas PM	1:15	1:23	1:30	1:39
	1.10	1.20	1.50	1.00

ART 55				
Saturday		(Aem (18 99)5 (18 18 97) (18 18 18 18 18 18 18 18 18 18 18 18 18 1	Semisity A	₽° ₽°
Eastbound	East Falls			HOSSYM (
		98	Silver Williams	Sos
Sábado				_
Dirección Este	U	9	•	
	5:45	5:54	6:01	6:08
	6:05 6:25	6:14 6:34	6:21 6:41	6:28 6:48
	6:45	6:54	7:01	7:08
	7:05	7:14	7:21	7:28
	7:25	7:34	7:41	7:48
	7:45 8:05	7:54 8:14	8:01 8:21	8:08 8:28
	8:25	8:34	8:41	8:48
	8:45	8:54	9:01	9:08
	9:05	9:14	9:21	9:28
	9:25	9:34	9:41	9:48
	9:45 10:05	9:54 10:14	10:01 10:21	10:08 10:28
	10:05	10:14	10:21	10:28
	10:45	10:54	11:01	11:08
	11:05	11:14	11:21	11:28
	11:25	11:34	11:41	11:48
	11:45 12:05	11:54 12:14	12:01 12:21	12:08 12:28
	12:05	12:14	12:21	12:28
	12:45	12:54	1:01	1:08
	1:05	1:14	1:21	1:28
	1:25 1:45	1:34 1:54	1:41 2:01	1:48 2:08
	2:05	2:14	2:21	2:28
	2:25	2:34	2:41	2:48
	2:45	2:54	3:01	3:08
	3:05	3:14	3:21	3:28
	3:25 3:45	3:34 3:54	3:41 4:01	3:48 4:08
	4:05	4:14	4:21	4:28
	4:25	4:34	4:41	4:48
	4:45	4:54	5:01	5:08
	5:05 5:25	5:14 5:34	5:21 5:41	5:28
	5:45	5:54	6:01	5:48 6:08
	6:05	6:14	6:21	6:28
	6:25	6:34	6:41	6:48
	6:45	6:54	7:01	7:08
	7:05 7:25	7:14 7:34	7:21 7:41	7:28 7:48
	7:45	7:54	8:01	8:08
	8:15	8:24	8:31	8:38
Bold Shaded	8:45	8:54	9:01	9:08
numerals are PM Times	9:15	9:24	9:31	9:38
FIVI TILLES	9:45 10:15	9:54 10:24	10:01 10:31	10:08 10:38
Números	10:45	10:54	11:01	11:08
sombreados	11:15	11:24	11:31	11:38
en negrita son horas PM	11:45	11:54	12:01	12:08
110103 1 171	12:15	12:24	12:31	12:38

ART 55				
		2 (20 High 100 oct 10 10 10 10 10 10 10 10 10 10 10 10 10	SO HISTWOY &	
Saturday	Possyn a	, jo	(A) (B)	East Falls Church
Westbound	N. W.		(ee Highway) Glebe Roway	S/16 CV
	, SS	4 0 V	7,0	25.00
Sábado	Ø	300	98	400
Dirección Oeste	4-	-3 -	-2 -	-0
Direction ocsic	6:15	6:24	6:32	6:42
	6:35	6:44	6:52	7:02
	6:55	7:04	7:12	7:22
	7:15	7:24	7:32	7:42
	7:35 7:55	7:44	7:52 8:12	8:02 8:22
	8:15	8:04 8:24	8:32	8:42
	8:35	8:44	8:52	9:02
	8:55	9:04	9:12	9:22
	9:15	9:24	9:32	9:42
	9:35	9:44	9:52	10:02
	9:55 10:15	10:04 10:24	10:12 10:32	10:22 10:42
	10.15	10.24	10.52	11:02
	10:55	11:04	11:12	11:22
	11:15	11:24	11:32	11:42
	11:35	11:44	11:52	12:02
	11:55	12:04	12:12	12:22
	12:15 12:35	12:24 12:44	12:32 12:52	12:42 1:02
	12:55	1:04	1:12	1:02
	1:15	1:24	1:32	1:42
	1:35	1:44	1:52	2:02
	1:55	2:04	2:12	2:22
	2:15	2:24	2:32	2:42
	2:35 2:55	2:44 3:04	2:52 3:12	3:02 3:22
	3:15	3:24	3:32	3:42
	3:35	3:44	3:52	4:02
	3:55	4:04	4:12	4:22
	4:15	4:24	4:32	4:42
	4:35 4:55	4:44 5:04	4:52 5:12	5:02 5:22
	5:15	5:24	5:32	5:42
	5:35	5:44	5:52	6:02
	5:55	6:04	6:12	6:22
	6:15	6:24	6:32	6:42
	6:35	6:44	6:52	7:02
	6:55 7:15	7:04 7:24	7:12 7:32	7:22 7:42
	7:35	7:44	7:52	8:02
	7:55	8:04	8:12	8:22
	8:15	8:24	8:32	8:42
Dold Chaded	8:45	8:54	9:02	9:12
Bold Shaded numerals are	9:15 9:45	9:24 9:54	9:32	9:42 10:12
PM Times	9:45 10:15	9:54 10:24	10:02	10:12
	10:45	10:54	11:02	11:12
Números	11:15	11:24	11:32	11:42
sombreados en negrita son	11:45	11:54	12:02	12:12
horas PM	12:15	12:24	12:32	12:42
	12:45	12:54	1:02	1:12

ART 55				
Sunday Eastbound	East [31]8	105 Mg/W/W/W/W/W/W/W/W/W/W/W/W/W/W/W/W/W/W/W	Co High	Ssyn
Domingo	40,00	200	2 7	o, o
Dirección Este	1	-2 -	-3 -	-4
Birocolon Esto	6:20	6:29	6:36	6:43
	6:50	6:59	7:06	7:13
	7:20	7:29	7:36	7:43
	7:50	7:59	8:06	8:13
	8:20	8:29	8:36	8:43
	8:50	8:59	9:06	9:13
	9:20	9:29	9:36	9:43
	9:50	9:59	10:06	10:13
	10:20	10:29	10:36	10:43
	10:50	10:59	11:06	11:13
	11:20	11:29	11:36	11:43
	11:50	11:59	12:06	12:13
	12:20	12:29	12:36	12:43
	12:50	12:59	1:06	1:13
	1:20	1:29	1:36	1:43
	1:50	1:59	2:06	2:13
	2:20	2:29	2:36	2:43
	2:50	2:59	3:06	3:13
	3:20	3:29	3:36	3:43
	3:50	3:59	4:06	4:13
	4:20	4:29	4:36	4:43
	4:50	4:59	5:06	5:13
	5:20 5:50	5:29 5:59	5:36 6:06	5:43 6:13
	6:20	6:29	6:36	6:43
	6:50	6:59	7:06	7:13
	7:20	7:29	7:36	7:43
Bold Shaded	7:50	7:59	8:06	8:13
numerals are	8:20	8:29	8:36	8:43
PM Times	8:50	8:59	9:06	9:13
	9:20	9:29	9:36	9:43
Números	9:50	9:59	10:06	10:13
sombreados	10:20	10:29	10:36	10:43
en negrita son	10:50	10:59	11:06	11:13
horas PM	11:20	11:29	11:36	11:43

ART 55				
Sunday Westbound	Possyn @	Spout Allemay	CO HISTORY &	Sest 73/18 Church (2)
Domingo Dirección Oeste	0 -	- 3-		_ O
	6:50	7:00	7:08	7:17
	7:20	7:30	7:38	7:47
	7:50	8:00	8:08	8:17
	8:20	8:30	8:38	8:47
	8:50	9:00	9:08	9:17
	9:20	9:30	9:38	9:47
	9:50	10:00	10:08	10:17
	10:20	10:30	10:38	10:47
	10:50	11:00	11:08	11:17
	11:20	11:30	11:38	11:47
	11:50	12:00	12:08	12:17
	12:20 12:50 1:20	12:30 1:00 1:30	12:38 1:08 1:38	12:17 12:47 1:17 1:47
	1:50	2:00	2:08	2:17
	2:20	2:30	2:38	2:47
	2:50	3:00	3:08	3:17
	3:20	3:30	3:38	3:47
	3:50	4:00	4:08	4:17
	4:20	4:30	4:38	4:47
	4:50	5:00	5:08	5:17
	5:20	5:30	5:38	5:47
	5:50	6:00	6:08	6:17
	6:20	6:30	6:38	6:47
	6:50	7:00	7:08	7:17
Bold Shaded	7:20	7:30	7:38	7:47
	7:50	8:00	8:08	8:17
	8:20	8:30	8:38	8:47
numerals are PM Times	8:50	9:00	9:08	9:17
	9:20	9:30	9:38	9:47
	9:50	10:00	10:08	10:17
Números	10:20	10:30	10:38	10:47
sombreados	10:50	11:00	11:08	11:17
en negrita son	11:20	11:30	11:38	11:47
horas PM	11:50	12:00	12:08	12:17
	TT.30	12.00	12.00	12.11

How to use this timetable

- ➤ Use the map to find the stops closest to where you will get on and off the bus.
- ➤ Select the schedule (Weekday, Saturday, Sunday) for when you will travel. Along the top of the schedule, find the stop at or nearest the point where you will get on the bus. Follow that column down to the time you want to leave.
- ➤ Use the same method to find the times the bus is scheduled to arrive at the stop where you will get off the bus.
- ➤ If the bus stop is not listed, use the time shown for the bus stop before it as the time to wait at the stop.
- ➤ The end-of-the-line or last stop is listed in ALL CAPS on the schedule.

Cómo Usar este Horario

- Use este mapa para localizar las paradas más cercanas a donde se subirá y bajará del autobús.
- ➤ Seleccione el horario (Entre semana, sábado, domingo) de cuando viajará. A lo largo de la parte superior del horario, localice la parada o el punto más cercano a la parada en la que se subirá al autobús. Siga esa columna hacia abajo hasta la hora en la que desee salir.
- Utilice el mismo método para localizar las horas en que el autobús está programado para llegar a la parada en donde desea bajarse del autobús.
- Si la parada del autobús no está listada use la hora que se muestra en la parada anterior como la hora de espera en la parada.
- ➤ El final de la ruta o la última parada del autobús aparece en letras MAYÚSCULAS en el horario.

English-Español

Effective 12-17-23

3F,Y

Langston Boulevard - McPherson Square Line

metrobus



Serves these locations-Brinda servicio a estas ubicaciones

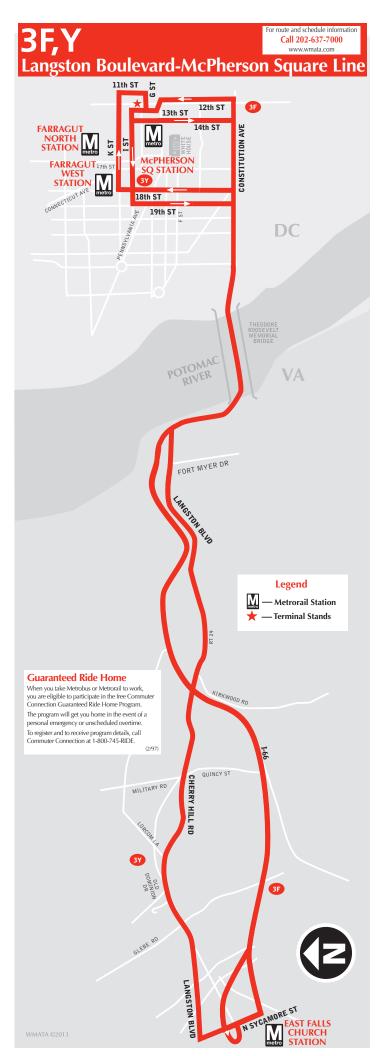
- East Falls Church station
- Lee Heights (3Y)
- Waverly Hills (3Y)
- Cherrydale (3Y)
- Rosslyn (3Y)
- Farragut West station (3Y)
- Farragut North station (3Y)
- McPherson Sq station



www.wmata.com Information Anytime 202-637-7000 TTY 202-962-2033



Washington Metropolitan Area Transit Authority





Eastbound To McPherson Square station

Monday thru Friday — De Lunes a viernes

Route Number	East Falls Church	Langston Blvd. & Glebe Rd.	Langston Blvd. & Kirkwood Rd.	Langston Blvd. & Fort Myer Dr. (Rosslyn)	18 th St. & Pennsylvania Ave. NW	K & 17 th Sts. NW (Farragut North & Farragut West)	13th & G Sts. NW
		AN	/I Service — S	ervicio matutir	10		
3Y	5:45	5:54	6:02	6:09	6:17	6:22	6:32
3Y	6:10	6:19	6:27	6:34	6:42	6:47	6:57
3Y	6:35	6:44	6:52	6:59	7:07	7:12	7:22
3Y	7:00	7:11	7:21	7:29	7:40	7:45	7:55
3Y	7:25	7:36	7:46	7:54	8:05	8:10	8:20
3Y	7:50	8:01	8:12	8:21	8:33	8:39	8:49
3Y	8:20	8:31	8:42	8:51	9:03	9:09	9:19
		PN	1 Service — S	ervicio vesertin	10		
3F	4:57	-	-	-	-	-	5:27
3F	5:27	-	-	-	-	-	5:57
3F	5:57	-	-	-	-	-	6:27

On five Federal holidays, Juneteenth, Columbus Day, Veterans' Day, Martin Luther King, Jr. Day, and Presidents' Day, this route will have no service. Esta ruta no prestará servicio durante los cinco días festivos de Juneteenth, Columbus Day, Veterans Day, Martin Luther King Jr. Day, y Presidents' Day.

Westbound To East Falls Church station

	Mond	ay thru	Friday –	- De Lunes	a viernes	
Route Number	13th & H Sts. NW	19th & F Sts. NW	Langston Blvd. & Fort Myer Dr. (Rosslyn)	Langston Blvd. & Spout Run Pkwy.	Langston Blvd. & Glebe Rd.	EAST FALLS CHURCH
		AM Se	rvice — Servicio r	natutino		
3F	6:35	-	-	-	-	6:55
3F	6:59	-	-	-	-	7:19
3F	7:24	-	-	-	-	7:44
3F	7:57	-	-	-	-	8:17
		PM Sei	rvice — Servicio v	esertino		
3Y	4:15	4:24	4:30	4:37	4:46	4:52
3Y	4:45	4:54	5:00	5:07	5:16	5:22
3Y	5:15	5:24	5:30	5:37	5:46	5:52
3Y	5:45	5:55	6:02	6:10	6:13	6:18
3Y	6:15	6:22	6:29	6:38	6:48	6:53
3Y	6:45	6:52	6:59	7:08	7:18	7:23

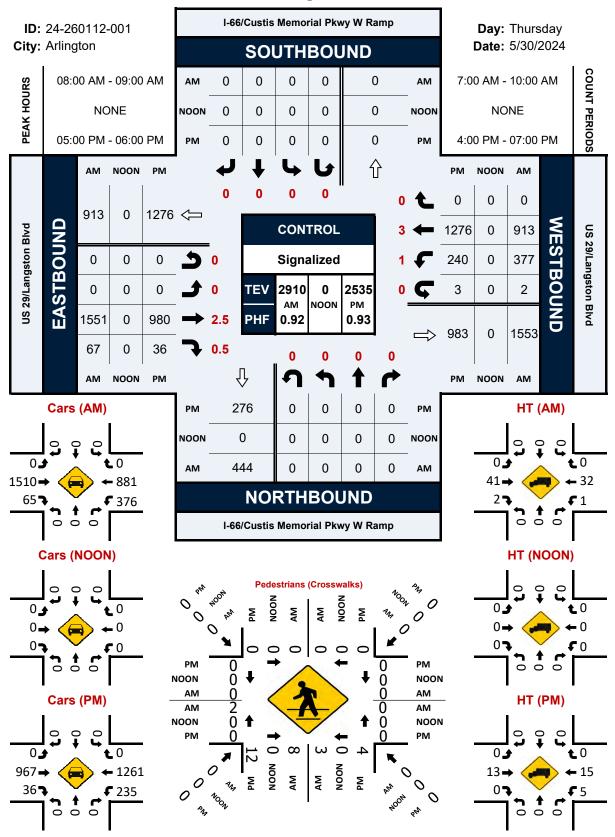
On five Federal holidays, Juneteenth, Columbus Day, Veterans' Day, Martin Luther King, Jr. Day, and Presidents' Day, this route will have no service. Esta ruta no prestará servicio durante los cinco días festivos de Juneteenth, Columbus Day, Veterans Day, Martin Luther King Jr. Day, y Presidents' Day.

Appendix C

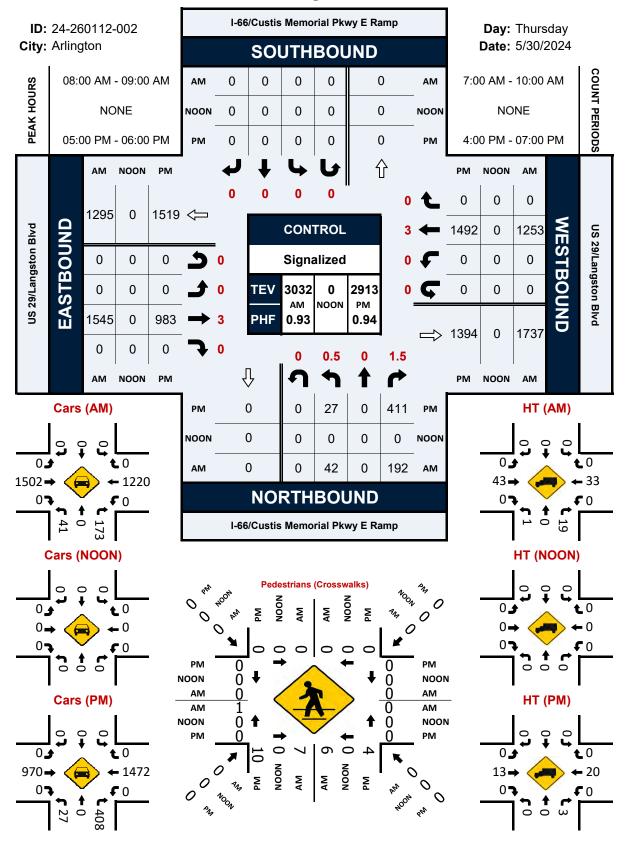
Peak Hour Vehicular & Pedestrian Counts Drop-off Queues



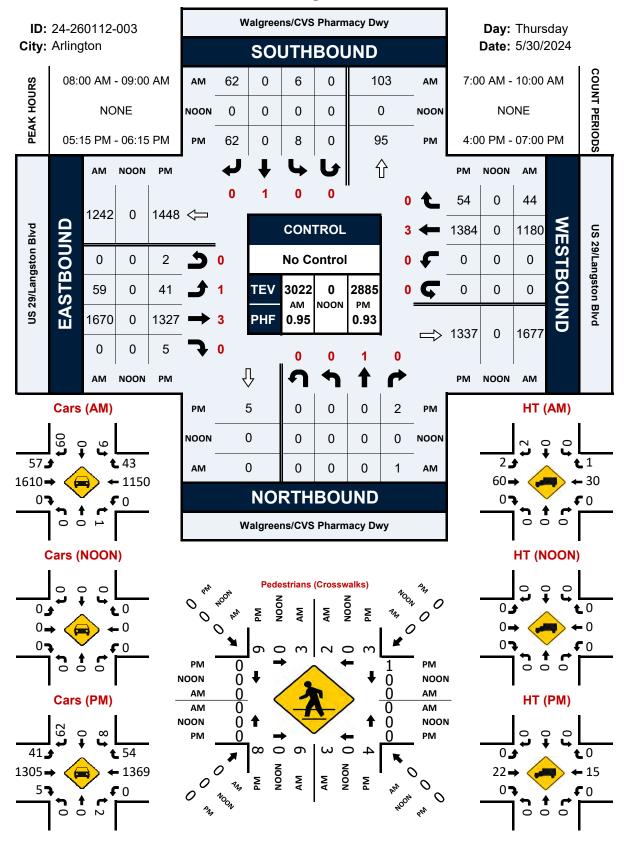
I-66/Custis Memorial Pkwy W Ramp & US 29/Langston Blvd



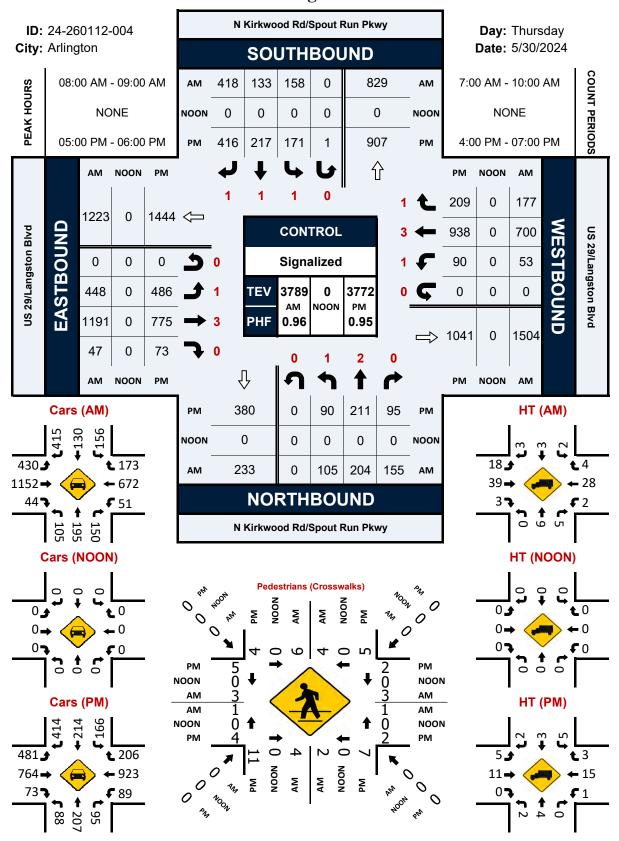
I-66/Custis Memorial Pkwy E Ramp & US 29/Langston Blvd



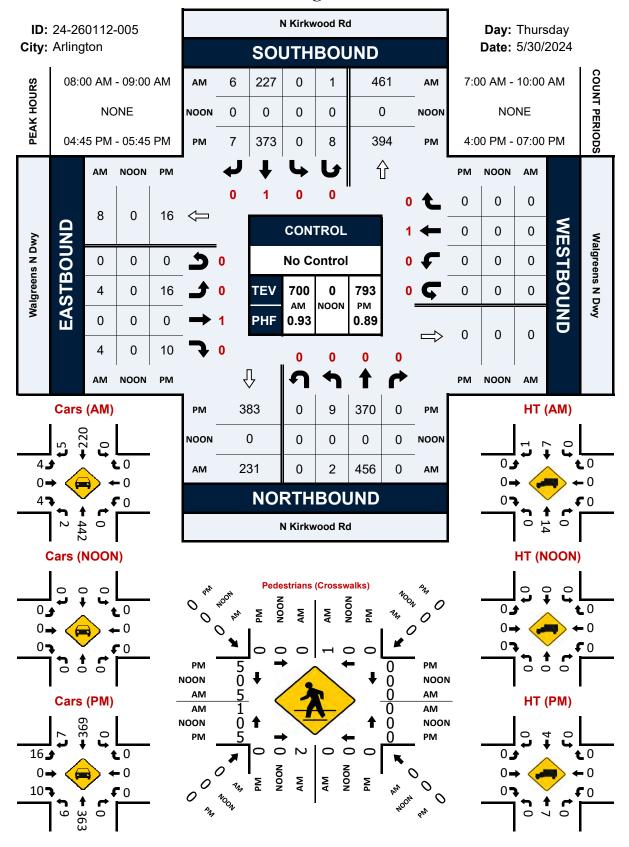
Walgreens/CVS Pharmacy Dwy & US 29/Langston Blvd



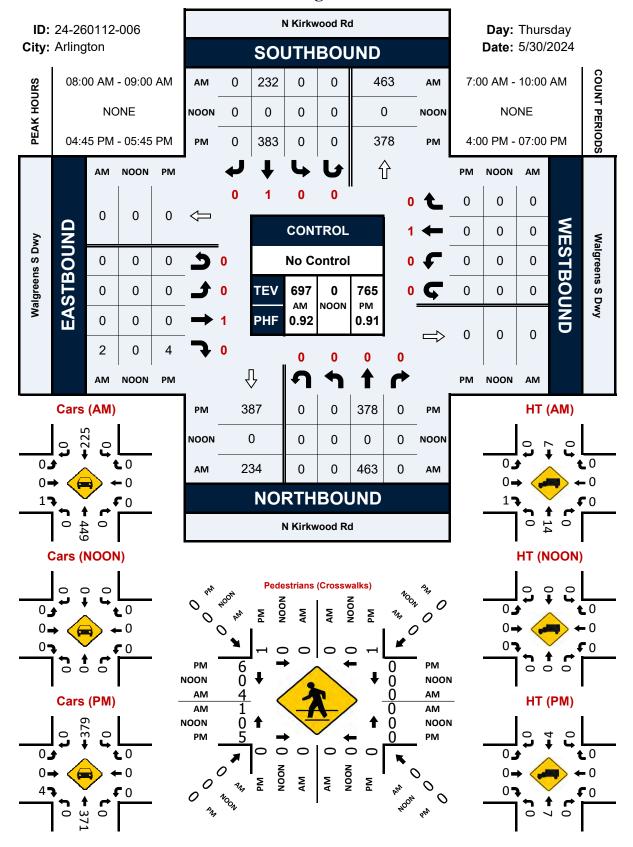
N Kirkwood Rd/Spout Run Pkwy & US 29/Langston Blvd



N Kirkwood Rd & Walgreens N Dwy

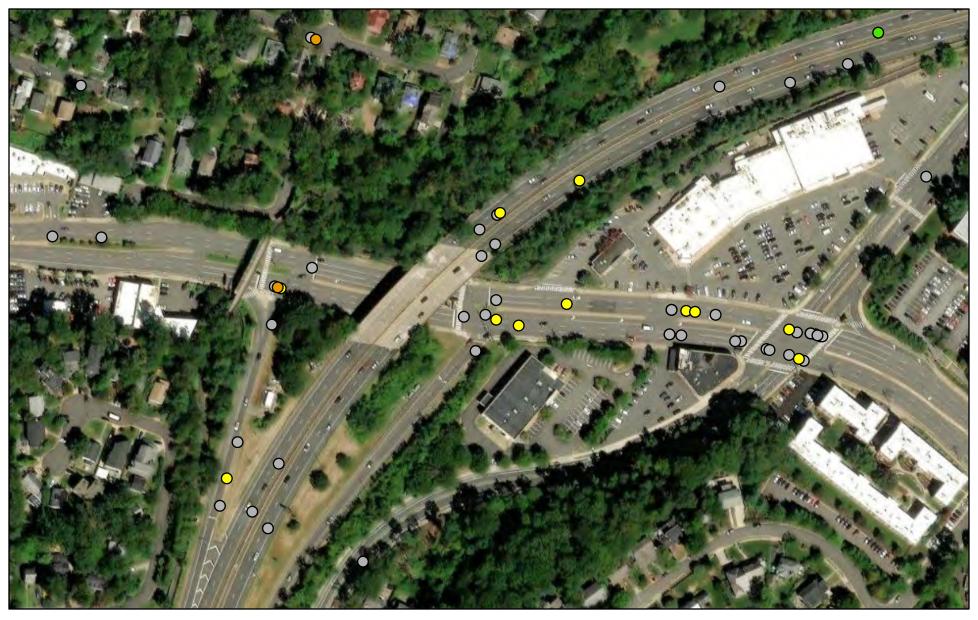


N Kirkwood Rd & Walgreens S Dwy



			, ,																	
Longitude	Latitude	Object ID	Document Number	Crash Year	Crash Date	Crash Time	Crash Severity	Persons Injured	Pedestrians Killed	Pedestrians Injured	Vehicle Count	Collision Type	Relation to Roadway	Work Zone Related	First Harmful Event	First Harmfil Event Location	Intersection Analysis	VDOT District	Physical Jurisdiction	FAC
-77.09983285	38.89615425	767543	223455058	2022	2022/12/10 05:00:00+00	20:25	PDO. Property Damage Only	0	0	0	2	2. Angle	9. Within Intersection	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.0998111	38.89614969	942807	231105378	2023	2023/04/20 04:00:00+00	13:05	A. Severe Injury	2	0	0	2	2. Angle	9. Within Intersection	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.09978936	38.89614513	763701	220115048	2022	2022/01/10 05:00:00+00	21:05	B. Visible Injury	2	0	0	2	2. Angle	9. Within Intersection	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.09957729	38.89625712	776058	220655122	2022	2022/03/06 05:00:00+00	11:39	PDO. Property Damage Only	0	0	0	2	1. Rear End	1. Main-Line Roadway	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.09853398	38.89599596	853523	222635352	2022	2022/09/20 04:00:00+00	18:48	PDO. Property Damage Only	0	0	0	2	2. Angle	9. Within Intersection	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.09838254	38.89600619	984590	233575123	2023	2023/12/23 05:00:00+00	9:52	PDO. Property Damage Only	0	0	0	2	2. Angle	9. Within Intersection	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.09831204	38.89608047	851543	221275063	2022	2022/05/07 04:00:00+00	1:10	PDO. Property Damage Only	0	0	0	2	2. Angle	8. Non-Intersection	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.09830902	38.89597802	945879	231965080	2023	2023/07/15 04:00:00+00	8:05	B. Visible Injury	2	0	0	2	2. Angle	1. Main-Line Roadway	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.09815683	38.89594633	847495	222145269	2022	2022/08/01 04:00:00+00	15:16	B. Visible Injury	2	0	0	2	2. Angle	ntersection Related - Within 150	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.0984504	38.89581235	953344	232765433	2023	2023/10/03 04:00:00+00	17:19	PDO. Property Damage Only	0	0	0	2	1. Rear End	ntersection Related - Within 150	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	1-One-Way Undivided
-77.09782133	38.89606097	865070	230025345	2023	2023/01/02 05:00:00+00	20:24	B. Visible Injury	2	0	0	2	2. Angle	ntersection Related - Within 150	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.09710537	38.89602857	929955	232645394	2023	2023/09/21 04:00:00+00	17:11	PDO. Property Damage Only	0	0	0	2	3. Head On	1. Main-Line Roadway	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.0971156	38.89589768	1011073	240135006	2024	2024/01/12 05:00:00+00	17:00	PDO. Property Damage Only	0	0	0	2	2. Angle	ntersection Related - Outside 150	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.09700314	38.89602314	792892	220185198	2022	2022/01/18 05:00:00+00	8:00	B. Visible Injury	2	0	0	2	2. Angle	ntersection Related - Within 150	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.097036	38.89589385	880446	230765219	2023	2023/03/17 04:00:00+00	S	PDO. Property Damage Only	0	0	0	2	1. Rear End	3. Driveway, Alley-Access - Relate	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.0969419	38.89601833	803016	222345389	2022	2022/08/22 04:00:00+00	14:35	B. Visible Injury	2	0	0	2	2. Angle	1. Main-Line Roadway	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.09679914	38.89600554	901028	231585138	2023	2023/06/07 04:00:00+00	10:25	PDO. Property Damage Only	0	0	0	2	4. Sideswipe - Same Direction	8. Non-Intersection	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.09666332	38.89586438	984059	230815147	2023	2023/03/22 04:00:00+00	9:04	PDO. Property Damage Only	0	0	0	3	1. Rear End	9. Within Intersection	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.09662424	38.89585966	761237	223635391	2022	2022/12/29 05:00:00+00	16:51	PDO. Property Damage Only	0	0	0	2	1. Rear End	9. Within Intersection	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.09645133	38.89582117	762449	220885240	2022	2022/03/29 04:00:00+00	15:14	PDO. Property Damage Only	0	0	0	2	2. Angle	9. Within Intersection	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.09643213	38.89581683	927858	232075371	2023	2023/07/26 04:00:00+00	16:35	PDO. Property Damage Only	0	0	0	2	2. Angle	9. Within Intersection	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.09629772	38.89578644	988795	232575174	2023	2023/09/14 04:00:00+00	9:47	PDO. Property Damage Only	0	0	0	2	2. Angle	9. Within Intersection	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.09619374	38.89575517	753046	220995108	2022	2022/04/03 04:00:00+00	12:12	PDO. Property Damage Only	0	0	0	2	2. Angle	9. Within Intersection	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.09629343	38.89592714	901107	232365327	2023	2023/08/24 04:00:00+00	14:27	B. Visible Injury	1	0	0	2	2. Angle	1. Main-Line Roadway	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.09623847	38.89590696	890668	230855341	2023	2023/03/26 04:00:00+00	19:48	PDO. Property Damage Only	0	0	0	2	3. Head On	1. Main-Line Roadway	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.09614716	38.89590321	833956	220805204	2022	2022/03/17 04:00:00+00	16:44	B. Visible Injury	1	0	0	2	2. Angle	9. Within Intersection	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.09614716	38.89590321	929949	233205235	2023	2023/11/16 05:00:00+00	11:55	PDO. Property Damage Only	0	0	0	2	2. Angle	9. Within Intersection	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.09611301	38.89589689	891322	233465473	2023	2023/12/11 05:00:00+00	12:34	B. Visible Injury	2	0	0	2	2. Angle	9. Within Intersection	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.09611301	38.89589689	998225	240435043	2024	2024/02/11 05:00:00+00	23:25	PDO. Property Damage Only	0	0	0	2	2. Angle	9. Within Intersection	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.09609593	38.89589372	1010362	240885313	2024	2024/03/28 04:00:00+00	16:48	PDO. Property Damage Only	0	0	0	2	2. Angle	9. Within Intersection	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.09607895	38.89589027	775362	223505435	2022	2022/12/16 05:00:00+00	15:30	PDO. Property Damage Only	0	0	0	2	2. Angle	9. Within Intersection	2. No	20. Motor Vehicle In Transport	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided
-77.09606197	38.89588681	933863	231405102	2023	2023/05/20 04:00:00+00	10:19	PDO. Property Damage Only	0	0	0	2	2. Angle	9. Within Intersection	2. No	22. Bicycle	1. On Roadway	VDOT Intersection	9. Northern Virginia	000. Arlington County	4-Two-Way Divided

3130 Langston Boulevard Crash Data - VDOT



8/8/2024

Crash Data - CrashData Basic

A. Severe Injury

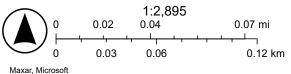
B. Visible Injury

C. Nonvisible Injury

PDO. Property Damage Only World Imagery

Low Resolution 15m Imagery High Resolution 60cm Imagery High Resolution 30cm Imagery Citations

60cm Resolution Metadata



Appendix D LOS Descriptions



Level of Service for Signalized Intersections

Level of service for signalized intersections is defined in terms of delay, which is a measure of driver discomfort and frustration, fuel consumption, and lost travel time. Specifically, level-of-service (LOS) criteria are stated in terms of the average stopped delay per vehicle for a 15-min analysis period. The criteria are given in Exhibit 16-2. Delay may be measured in the field or estimated using procedures presented later in this chapter. Delay is a complex measure and is dependent on a number of variables, including the quality of progression, the cycle length, the green ratio, and the *v/c* ratio for the lane group in question.

LOS A describes operations with very low delay, up to 10 sec per vehicle. This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

LOS B describes operations with delay greater than 10 and up to 20 sec per vehicle. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of average delay.

Exhibit 16-2. Level-of-Service Criteria for Signalized Intersections

LEVEL OF SERVICE	STOPPED DELAY PER VEHICLE (SEC)
А	<u>≤</u> 10.0
В	> 10.0 and <u><</u> 20.0
С	> 20.0 and ≤ 35.0
D	> 35.0 and ≤ 55.0
E	> 55.0 and <u><</u> 80.0
F	>80.0

LOS C describes operations with delay greater than 20 and up to 35 sec per vehicle. These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

LOS D describes operations with delay greater than 35 and up to 55 sec per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high *v/c* ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

LOS E describes operations with delay greater than 55 and up to 80 sec per vehicle. This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.

LOS F describes operations with delay in excess of 80 sec per vehicle. This level, considered to be unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. It may also occur at high *v/c* ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Source: Highway Capacity Manual, 2000. Transportation Research Board, National Research Council

Level of Service Criteria for Stop Sign Controlled Intersections

The level of service criteria are given in Table 17-2. As used here, control delay is defined as the total elapsed time from the time a vehicle stops at the end of the queue until the vehicle departs from the stop line; this time includes the time required for the vehicle to travel from the last-in-queue position to the first-in-queue position, including deceleration of vehicles from free-flow speed to the speed of vehicles in queue.

The average total delay for any particular minor movement is a function of the service rate or capacity of the approach and the degree of saturation. . . .

Table 17-2. Level of Service Criteria for TWSC Intersections

LEVEL OF SERVICE	AVERAGE CONTROL DELAY (sec/veh)
А	<u>≤</u> 10
В	> 10 and ≤ 15
С	> 15 and <u><</u> 25
D	> 25 and <u><</u> 35
E	> 35 and ≤ 50
F	> 50

Average total delay less than 10 sec/veh is defined as Level of Service (LOS) A. Follow-up times of less than 5 sec have been measured when there is no conflicting traffic for a minor street movement, so control delays of less than 10 sec/veh are appropriate for low flow conditions. To remain consistent with the AWSC intersection analysis procedure described later in this chapter, a total delay of 50 sec/veh is assumed as the break point between LOS E and F.

The proposed level of service criteria for TWSC intersections are somewhat different from the criteria used in Chapter 16 for signalized intersections. The primary reason for this difference is that drivers expect different levels of performance from different kinds of transportation facilities. The expectation is that a signalized intersection is designed to carry higher traffic volumes than an unsignalized intersection. Additionally, several driver behavior considerations combine to make delays at signalized intersections less onerous than at unsignalized intersections. For example, drivers at signalized intersections are able to relax during the red interval, where drivers on the minor approaches to unsignalized intersections must remain attentive to the task of identifying acceptable gaps and vehicle conflicts. Also, there is often much more variability in the amount of delay experienced by individual drivers at unsignalized than signalized intersections. For these reasons, it is considered that the total delay threshold for any given level of service is less for an unsignalized intersection than for a signalized intersection. . . .

LOS F exists when there are insufficient gaps of suitable size to allow a side street demand to cross safely through a major street traffic stream. This level of service is generally evident from extremely long total delays experienced by side street traffic and by queueing on the minor approaches. The method, however, is based on a constant critical gap size - that is, the critical gap remains constant, no matter how long the side street motorist waits. LOS F may also appear in the form of side street vehicles' selecting smaller-than-usual gaps. In such cases, safety may be a problem and some disruption to the major traffic stream may result. It is important to note that LOS F may not always result in long queues but may result in adjustments to normal gap acceptance behavior. The latter is more difficult to observe on the field than queueing, which is more obvious.

Source: Highway Capacity Manual, 2000. Transportation Research Board, National Research Council

Appendix E

Existing Conditions Synchro Worksheet



	-	•	•
Lane Group	EBT	WBL	WBT
Lane Group Flow (vph)	1618	379	913
v/c Ratio	0.67	0.86	0.20
Control Delay	12.1	37.3	0.1
Queue Delay	0.0	0.0	0.0
Total Delay	12.1	37.3	0.1
Queue Length 50th (ft)	139	82	0
Queue Length 95th (ft)	186	#240	0
Internal Link Dist (ft)	451		351
Turn Bay Length (ft)		185	
Base Capacity (vph)	2411	481	4679
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.67	0.79	0.20
Intersection Summary			

^{# 95}th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

	-	\rightarrow	•	•	•	<i>></i>		
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	1 17		ሻ	^	. 106			
Traffic Volume (vph)	1551	67	379	913	0	0		
Future Volume (vph)	1551	67	379	913	0	0		
Ideal Flow (vphpl)	1750	1750	1650	1775	1900	1900		
Grade (%)	-3%	1100	1000	3%	0%	1000		
Total Lost time (s)	7.5		7.5	7.5	0 70			
Lane Util. Factor	0.91		1.00	0.91				
Frpb, ped/bikes	1.00		1.00	1.00				
Flpb, ped/bikes	1.00		1.00	1.00				
Frt	0.99		1.00	1.00				
Flt Protected	1.00		0.95	1.00				
Satd. Flow (prot)	4706		1513	4679				
Flt Permitted	1.00		0.11	1.00				
Satd. Flow (perm)	4706		179	4679				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00		
Adj. Flow (vph)	1551	67	379	913	0	0		
RTOR Reduction (vph)	8	0	0	913	0	0		
Lane Group Flow (vph)	1610	0	379	913	0	0		
Confl. Peds. (#/hr)	1010	64	64	913	2	U		
Confl. Bikes (#/hr)		2	04					
Turn Type	NA		nmınt	NA				
Protected Phases	2		pm+pt 1	6				
Permitted Phases	2		6	U				
Actuated Green, G (s)	28.1		47.5	55.0				
Effective Green, g (s)	28.1		47.5	55.0				
Actuated g/C Ratio	0.51		0.86	1.00				
Clearance Time (s)	7.5		7.5	7.5				
Vehicle Extension (s)	0.2		2.0	0.2				
				4679				
Lane Grp Cap (vph)	2404		443					
v/s Ratio Prot	0.34		c0.18	0.20				
v/s Ratio Perm	0.67		c0.55	0.20				
v/c Ratio	10.0		0.86 13.3	0.20				
Uniform Delay, d1	1.00		1.65	1.00				
Progression Factor	1.00		13.9	0.1				
Incremental Delay, d2	1.5		35.8	0.1				
Delay (s) Level of Service								
	11.5		D	A 10.6	0.0			
Approach LOS	11.5							
Approach LOS	В			В	Α			
Intersection Summary								
HCM 2000 Control Delay			11.1	Н	CM 2000	Level of Servic	e	В
HCM 2000 Volume to Capa	acity ratio		0.92					
Actuated Cycle Length (s)			55.0	Sı	um of lost	time (s)		15.0
Intersection Capacity Utiliza	ation		71.0%		U Level o			С
Analysis Period (min)			15					
c Critical Lane Group								

	-	←	4	/
Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	1545	1253	42	192
v/c Ratio	0.40	0.33	0.18	0.16
Control Delay	4.6	6.5	20.0	2.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.6	6.5	20.0	2.1
Queue Length 50th (ft)	0	4	13	0
Queue Length 95th (ft)	100	265	27	30
Internal Link Dist (ft)	351	246	341	
Turn Bay Length (ft)			275	
Base Capacity (vph)	3841	3818	513	1217
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.40	0.33	0.08	0.16
Intersection Summary				

	-	•	•	←	•	/		
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	^	LDIT	1152	^	*/*	7		
Traffic Volume (vph)	1545	0	0	1253	42	192		
Future Volume (vph)	1545	0	0	1253	42	192		
Ideal Flow (vphpl)	1775	1775	1775	1775	1700	1700		
Lane Width	12	12	12	12	12	14		
Grade (%)	-3%	12	12	0%	-4%			
Total Lost time (s)	6.0			5.0	8.5	6.0		
Lane Util. Factor	0.91			0.91	1.00	0.95		
Frpb, ped/bikes	1.00			1.00	1.00	1.00		
Flpb, ped/bikes	1.00			1.00	1.00	1.00		
Frt	1.00			1.00	1.00	0.85		
Flt Protected	1.00			1.00	0.95	1.00		
Satd. Flow (prot)	4764			4694	1615	1464		
Flt Permitted	1.00			1.00	0.95	1.00		
Satd. Flow (perm)	4764			4694	1615	1464		
	1.00	1.00	1.00	1.00		1.00		
Peak-hour factor, PHF			1.00		1.00			
Adj. Flow (vph)	1545	0	0	1253	42	192 68		
RTOR Reduction (vph)	0	0	0	1053	0			
Lane Group Flow (vph)	1545	0 56	0 56	1253	42 2	124		
Confl. Peds. (#/hr)	20/			20/		20/		
Heavy Vehicles (%)	2%	3%	2%	2%	2%	2%		
Bus Blockages (#/hr)	9	0	9	9	0	0		
Turn Type	NA			NA	Prot	Perm		
Protected Phases	2			6	4			
Permitted Phases	25.0			20.0	4.0	2		
Actuated Green, G (s)	35.6			36.6	4.9	35.6		
Effective Green, g (s)	35.6			36.6	4.9	35.6		
Actuated g/C Ratio	0.65			0.67	0.09	0.65		
Clearance Time (s)	6.0			5.0	8.5	6.0		
Vehicle Extension (s)	2.0			2.0	2.0	2.0		
Lane Grp Cap (vph)	3083			3123	143	947		
v/s Ratio Prot	c0.32			0.27	c0.03			
v/s Ratio Perm						0.08		
v/c Ratio	0.50			0.40	0.29	0.13		
Uniform Delay, d1	5.1			4.2	23.4	3.7		
Progression Factor	0.80			1.48	1.00	1.00		
Incremental Delay, d2	0.4			0.4	0.4	0.3		
Delay (s)	4.5			6.6	23.8	4.0		
Level of Service	Α			Α	С	Α		
Approach Delay (s)	4.5			6.6	7.6			
Approach LOS	А			Α	Α			
Intersection Summary								
HCM 2000 Control Delay			5.6	Н	CM 2000	Level of Service)	
HCM 2000 Volume to Cap	acity ratio		0.48					
Actuated Cycle Length (s)			55.0	Sı	um of lost	time (s)		
Intersection Capacity Utiliz			71.0%			of Service		
Analysis Period (min)			15					
c Critical Lane Group								
- Ccar Lario Group								

	٠	→	•	•	←	4	1	†	~	/	+	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	, j	ተተ _ጉ			ብ ተ ቡ			4			4	
Traffic Volume (veh/h)	59	1670	0	0	1180	44	0	0	1	6	0	62
Future Volume (Veh/h)	59	1670	0	0	1180	44	0	0	1	6	0	62
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	59	1670	0	0	1180	44	0	0	1	6	0	62
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		326			265							
pX, platoon unblocked	0.90			0.84			0.90	0.90	0.84	0.90	0.90	0.90
vC, conflicting volume	1224			1670			2243	3012	557	1878	2990	415
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	850			1150			1209	2067	0	801	2043	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	92			100			100	100	100	97	100	94
cM capacity (veh/h)	704			510			109	44	916	231	46	973
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1			
Volume Total	59	668	668	334	295	590	339	1	68			
Volume Left	59	0	0	0	0	0	0	0	6			
Volume Right	0	0	0	0	0	0	44	1	62			
cSH	704	1700	1700	1700	510	1700	1700	916	758			
Volume to Capacity	0.08	0.39	0.39	0.20	0.00	0.35	0.20	0.00	0.09			
Queue Length 95th (ft)	7	0	0	0	0	0	0	0	7			
Control Delay (s)	10.6	0.0	0.0	0.0	0.0	0.0	0.0	8.9	10.2			
Lane LOS	В							Α	В			
Approach Delay (s)	0.4				0.0			8.9	10.2			
Approach LOS								Α	В			
Intersection Summary												
Average Delay			0.4									
Intersection Capacity Utiliza	ition		65.3%	IC	CU Level	of Service			С			
Analysis Period (min)			15									

4: N Kirkwood Rd/Spout Run Pkwy & Lee Hwy.

	۶	→	•	←	•	•	†	\	ļ	4	
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	
Lane Group Flow (vph)	448	1238	53	700	177	105	359	158	133	418	
v/c Ratio	0.91	0.43	0.41	0.40	0.27	0.40	0.51	0.86	0.33	0.66	
Control Delay	47.9	13.8	42.5	27.7	5.7	36.8	37.1	75.2	33.8	8.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	47.9	13.8	42.5	27.7	5.7	36.8	37.1	75.2	33.8	8.1	
Queue Length 50th (ft)	217	170	28	132	0	62	114	106	76	0	
Queue Length 95th (ft)	#399	198	#91	195	52	100	140	170	115	73	
Internal Link Dist (ft)		185		533			445		1180		
Turn Bay Length (ft)	500		250		165	100		135			
Base Capacity (vph)	490	2902	130	1748	650	367	981	259	572	727	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.91	0.43	0.41	0.40	0.27	0.29	0.37	0.61	0.23	0.57	

Intersection Summary

^{# 95}th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

	۶	→	•	•	+	•	4	†	~	/	+	-√
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ች	^		ሻ	^ ^	7	ሻ	† 1>		*		7
Traffic Volume (vph)	448	1191	47	53	700	177	105	204	155	158	133	418
Future Volume (vph)	448	1191	47	53	700	177	105	204	155	158	133	418
Ideal Flow (vphpl)	1650	1700	1750	1650	1700	1750	1650	1750	1750	1650	1750	1700
Lane Width	12	13	12	13	12	13	12	12	13	11	11	11
Grade (%)		0%			-4%			0%			0%	
Total Lost time (s)	7.0	6.5		6.5	6.5	6.5	7.0	7.0		7.0	7.0	7.0
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.95	1.00	0.99		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		0.98	1.00	1.00	0.98	1.00		0.99	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1533	4594		1539	4641	1433	1502	2841		1476	1658	1313
Flt Permitted	0.28	1.00		0.21	1.00	1.00	0.67	1.00		0.48	1.00	1.00
Satd. Flow (perm)	455	4594		347	4641	1433	1063	2841		751	1658	1313
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	448	1191	47	53	700	177	105	204	155	158	133	418
RTOR Reduction (vph)	0	3	0	0	0	110	0	0	0	0	0	315
Lane Group Flow (vph)	448	1235	0	53	700	67	105	359	0	158	133	103
Confl. Peds. (#/hr)	32		73	73		32	31		12	12		31
Confl. Bikes (#/hr)			1			1						3
Heavy Vehicles (%)	2%	2%	2%	5%	2%	4%	2%	3%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	9	9	0	0	0	0	2	0	0	0	0
Parking (#/hr)								0	0			
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)	69.4	69.4		41.4	41.4	41.4	27.1	27.1		27.1	27.1	27.1
Effective Green, g (s)	69.4	69.4		41.4	41.4	41.4	27.1	27.1		27.1	27.1	27.1
Actuated g/C Ratio	0.63	0.63		0.38	0.38	0.38	0.25	0.25		0.25	0.25	0.25
Clearance Time (s)	7.0	6.5		6.5	6.5	6.5	7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	3.0	0.2		0.2	0.2	0.2	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	492	2898		130	1746	539	261	699		185	408	323
v/s Ratio Prot	c0.17	0.27			0.15			0.13			0.08	
v/s Ratio Perm	c0.40			0.15		0.05	0.10			c0.21		0.08
v/c Ratio	0.91	0.43		0.41	0.40	0.12	0.40	0.51		0.85	0.33	0.32
Uniform Delay, d1	13.1	10.2		25.3	25.2	22.4	34.7	35.8		39.6	34.0	33.9
Progression Factor	1.77	1.17		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	20.1	0.4		9.2	0.7	0.5	1.0	0.6		29.8	0.5	0.6
Delay (s)	43.2	12.4		34.5	25.9	22.9	35.7	36.4		69.3	34.4	34.5
Level of Service	D	В		С	С	С	D	D		Е	С	С
Approach Delay (s)		20.6			25.8			36.2			42.2	
Approach LOS		С			С			D			D	
Intersection Summary												
HCM 2000 Control Delay			27.8 0.93	H	CM 2000	Level of S	Service		С			
HCM 2000 Volume to Capacity	HCM 2000 Volume to Capacity ratio											
Actuated Cycle Length (s)					um of lost				20.5			
Intersection Capacity Utilizatio	n		104.2%	IC	U Level o	of Service			G			

Analysis Period (min) c Critical Lane Group

15

	•	→	+	4	\	4	
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		र्स	f _a		**		
Traffic Volume (veh/h)	0	463	232	0	0	2	
Future Volume (Veh/h)	0	463	232	0	0	2	
Sign Control		Free	Free		Stop		
Grade		0%	0%		0%		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	0	463	232	0	0	2	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type		None	None				
Median storage veh)							
Upstream signal (ft)			671				
pX, platoon unblocked	0.96				0.96	0.96	
vC, conflicting volume	232				695	232	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	172				657	172	
tC, single (s)	4.1				6.4	6.2	
tC, 2 stage (s)							
tF (s)	2.2				3.5	3.3	
p0 queue free %	100				100	100	
cM capacity (veh/h)	1341				410	832	
Direction, Lane #	EB 1	WB 1	SB 1				
Volume Total	463	232	2				
Volume Left	0	0	0				
Volume Right	0	0	2				
cSH	1341	1700	832				
Volume to Capacity	0.00	0.14	0.00				
Queue Length 95th (ft)	0	0	0				
Control Delay (s)	0.0	0.0	9.3				
Lane LOS		2.0	Α				
Approach Delay (s)	0.0	0.0	9.3				
Approach LOS			Α				
Intersection Summary							
Average Delay			0.0				
Intersection Capacity Utiliza	ation		34.4%	IC	U Level c	f Service	
Analysis Period (min)			15				

	•	_		—	•	<u> </u>	1
				14/5-		05:	-
Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations		4		- 40→		N/	
Traffic Volume (veh/h)	2	456	1	227	6	4	4
Future Volume (Veh/h)	2	456	1	227	6	4	4
Sign Control		Free		Free		Stop	
Grade		0%		0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	2	456	0	227	6	4	4
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type		None		None			
Median storage veh)							
Upstream signal (ft)				525			
pX, platoon unblocked	0.95		0.00			0.95	0.95
vC, conflicting volume	233		0			690	230
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	162		0			645	159
tC, single (s)	4.1		0.0			6.4	6.2
tC, 2 stage (s)							
tF (s)	2.2		0.0			3.5	3.3
p0 queue free %	100		0			99	100
cM capacity (veh/h)	1342		0			413	839
		MD 4					
Direction, Lane #	EB 1	WB 1	SB 1				
Volume Total	458	233	8				
Volume Left	2	0	4				
Volume Right	0	6	4				
cSH	1342	1700	554				
Volume to Capacity	0.00	0.14	0.01				
Queue Length 95th (ft)	0	0	1				
Control Delay (s)	0.0	0.0	11.6				
Lane LOS	Α		В				
Approach Delay (s)	0.0	0.0	11.6				
Approach LOS			В				
Intersection Summary							
Average Delay			0.2				
Intersection Capacity Utiliza	tion		35.4%	IC	CU Level o	f Service	
Analysis Period (min)			15				

Lane Group Lane Group Flow (vph) v/c Ratio Control Delay Queue Delay Total Delay Queue Length 50th (ft) Queue Length 95th (ft) Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) Starvation Cap Reductn	EBT 1016 0.29 4.4 0.0 4.4 54	WBL 243 0.53 5.9 0.0 5.9	WBT 1276 0.36 4.9 0.3 5.1
Lane Group Flow (vph) v/c Ratio Control Delay Queue Delay Total Delay Queue Length 50th (ft) Queue Length 95th (ft) Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) Starvation Cap Reductn	1016 0.29 4.4 0.0 4.4	243 0.53 5.9 0.0 5.9	1276 0.36 4.9 0.3
v/c Ratio Control Delay Queue Delay Total Delay Queue Length 50th (ft) Queue Length 95th (ft) Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) Starvation Cap Reductn	0.29 4.4 0.0 4.4	0.53 5.9 0.0 5.9	0.36 4.9 0.3
Control Delay Queue Delay Total Delay Queue Length 50th (ft) Queue Length 95th (ft) Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) Starvation Cap Reductn	4.4 0.0 4.4	5.9 0.0 5.9	4.9 0.3
Queue Delay Total Delay Queue Length 50th (ft) Queue Length 95th (ft) Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) Starvation Cap Reductn	0.0 4.4	0.0 5.9	0.3
Total Delay Queue Length 50th (ft) Queue Length 95th (ft) Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) Starvation Cap Reductn	4.4	5.9	
Total Delay Queue Length 50th (ft) Queue Length 95th (ft) Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) Starvation Cap Reductn			5.1
Queue Length 50th (ft) Queue Length 95th (ft) Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) Starvation Cap Reductn	5.1	3	
Queue Length 95th (ft) Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) Starvation Cap Reductn	34	J	74
Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) Starvation Cap Reductn	105	5	141
Turn Bay Length (ft) Base Capacity (vph) Starvation Cap Reductn	451		351
Base Capacity (vph) Starvation Cap Reductn		185	
Starvation Cap Reductn	3558	753	3537
	0	0	1393
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	•		•
Reduced V/c Ratio	0.29	0.32	0.60
Intersection Summary			

	-	\rightarrow	•	•	4	<i>></i>		
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	ተተጉ	LDIT	*	^	1102	NDI (
Traffic Volume (vph)	980	36	243	1276	0	0		
Future Volume (vph)	980	36	243	1276	0	0		
Ideal Flow (vphpl)	1750	1750	1650	1775	1900	1900		
Grade (%)	-3%	1100	1000	3%	0%	1000		
Total Lost time (s)	7.5		7.5	7.5	0,0			
Lane Util, Factor	0.91		1.00	0.91				
Frpb, ped/bikes	0.99		1.00	1.00				
Flpb, ped/bikes	1.00		0.99	1.00				
Frt	0.99		1.00	1.00				
Flt Protected	1.00		0.95	1.00				
Satd. Flow (prot)	4702		1502	4679				
Flt Permitted	1.00		0.27	1.00				
Satd. Flow (perm)	4702		427	4679				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00		
Adj. Flow (vph)	980	36	243	1276	0	0		
RTOR Reduction (vph)	2	0	0	0	0	0		
Lane Group Flow (vph)	1014	0	243	1276	0	0		
Confl. Peds. (#/hr)		64	64		2			
Confl. Bikes (#/hr)		2						
Turn Type	NA		pm+pt	NA				
Protected Phases	2		1	6				
Permitted Phases			6					
Actuated Green, G (s)	75.6		85.0	75.6				
Effective Green, g (s)	75.6		85.0	75.6				
Actuated g/C Ratio	0.76		0.85	0.76				
Clearance Time (s)	7.5		7.5	7.5				
Vehicle Extension (s)	0.2		2.0	0.2				
Lane Grp Cap (vph)	3554		464	3537				
v/s Ratio Prot	0.22		c0.05	0.27				
v/s Ratio Perm			c0.40					
v/c Ratio	0.29		0.52	0.36				
Uniform Delay, d1	3.8		1.3	4.1				
Progression Factor	1.00		1.00	1.00				
Incremental Delay, d2	0.2		0.5	0.3				
Delay (s)	4.0		1.8	4.4				
Level of Service	Α		Α	Α				
Approach Delay (s)	4.0			4.0	0.0			
Approach LOS	Α			Α	Α			
Intersection Summary								
HCM 2000 Control Delay			4.0	H	CM 2000	Level of Service)	Α
HCM 2000 Volume to Capa	city ratio		0.52					
Actuated Cycle Length (s)			100.0		ım of lost			15.0
Intersection Capacity Utiliza	ation		53.2%	IC	U Level o	f Service		Α
Analysis Period (min)			15					
c Critical Lane Group								

	-	←	•	/
Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	983	1492	27	411
v/c Ratio	0.25	0.38	0.16	0.32
Control Delay	4.9	4.0	39.4	1.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.9	4.0	39.4	1.7
Queue Length 50th (ft)	46	48	18	0
Queue Length 95th (ft)	161	167	33	45
Internal Link Dist (ft)	351	246	341	
Turn Bay Length (ft)			275	
Base Capacity (vph)	3948	3917	546	1283
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.25	0.38	0.05	0.32
Intersection Summary				

	-	•	•	←	•	<i>></i>		
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	^	LDIT	,,,,,	^	W	7		
Traffic Volume (vph)	983	0	0	1492	27	411		
Future Volume (vph)	983	0	0	1492	27	411		
Ideal Flow (vphpl)	1775	1775	1775	1775	1700	1700		
Lane Width	12	12	12	12	12	14		
Grade (%)	-3%	12	12	0%	-4%	<u> </u>		
Total Lost time (s)	6.0			5.0	8.5	6.0		
Lane Util. Factor	0.91			0.91	1.00	0.95		
Frpb, ped/bikes	1.00			1.00	1.00	1.00		
Flpb, ped/bikes	1.00			1.00	1.00	1.00		
Frt	1.00			1.00	1.00	0.85		
Fit Protected	1.00			1.00	0.95	1.00		
Satd. Flow (prot)	4764			4694	1615	1464		
Flt Permitted	1.00			1.00	0.95	1.00		
Satd. Flow (perm)	4764			4694	1615	1464		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00		
Adj. Flow (vph)	983	0	0.00	1492	27	411		
RTOR Reduction (vph)	903	0	0	0	0	93		
Lane Group Flow (vph)	983	0	0	1492	27	318		
Confl. Peds. (#/hr)	903	56	56	1432	2	310		
Heavy Vehicles (%)	2%	3%	2%	2%	2%	2%		
Bus Blockages (#/hr)	9	0	9	9	0	0		
	NA	U	3	NA	Prot	Perm		
Turn Type Protected Phases	2			NA 6	4	Pellii		
Permitted Phases	2			0	4	2		
	81.2			82.2	9.3	81.2		
Actuated Green, G (s)	81.2			82.2	9.3	81.2		
Effective Green, g (s)	0.77			0.78	0.09	0.77		
Actuated g/C Ratio	6.0			5.0		6.0		
Clearance Time (s) Vehicle Extension (s)	2.0			2.0	8.5 2.0	2.0		
Lane Grp Cap (vph)	3684			3674	143	1132		
v/s Ratio Prot	0.21			c0.32	c0.02	0.00		
v/s Ratio Perm	0.07			0.44	0.40	0.22		
v/c Ratio	0.27			0.41	0.19	0.28		
Uniform Delay, d1	3.4			3.6	44.4	3.4		
Progression Factor	1.00			0.73	1.00	1.00		
Incremental Delay, d2	0.2			0.3	0.2	0.6 4.1		
Delay (s) Level of Service	3.6			3.0	44.6			
Approach Delay (s)	A 3.6			A 3.0	D 6.6	A		
Approach LOS	3.6 A				0.0 A			
	A			Α	A			
Intersection Summary								
HCM 2000 Control Delay			3.7	H	CM 2000	Level of Service	9	Α
HCM 2000 Volume to Capa	city ratio		0.39					
Actuated Cycle Length (s)			105.0		um of lost			14.5
Intersection Capacity Utiliza	ition		53.2%	IC	U Level c	of Service		Α
Analysis Period (min)			15					
c Critical Lane Group								

	•	→	`\	_	—	•	•	†	<i>></i>	\	1	√
Movement	EBL	EBT	EBR	₩BL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ኘ	11	LDIN	VVDL		WDIX	NDL		NUIN	ODL		ODIN
Traffic Volume (veh/h)	41	1327	5	0	₹↑	54	0	↔ 0	2	8	↔ 0	62
Future Volume (Veh/h)	41	1327	5	0	1384	54	0	0	2	8	0	62
, ,	41	Free	ິນ	U	Free	34	U	Stop		0		02
Sign Control		0%									Stop	
Grade Peak Hour Factor	1.00		1.00	1.00	0%	1.00	1.00	0%	1.00	1.00	0%	1.00
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	41	1327	5	0	1384	54	0	0	2	8	0	62
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		326			265							
pX, platoon unblocked	0.86			0.95			0.88	0.88	0.95	0.88	0.88	0.86
vC, conflicting volume	1438			1332			1935	2850	445	1937	2825	488
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	945			1183			1254	2289	254	1257	2261	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	93			100			100	100	100	93	100	93
cM capacity (veh/h)	622			560			101	32	712	107	33	934
Direction, Lane #	EB 1	EB 2	EB3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1			
Volume Total	41	531	531	270	346	692	400	2	70			
Volume Left	41	0	0	0	0	0	0	0	8			
Volume Right	0	0	0	5	0	0	54	2	62			
cSH	622	1700	1700	1700	560	1700	1700	712	496			
Volume to Capacity	0.07	0.31	0.31	0.16	0.00	0.41	0.24	0.00	0.14			
Queue Length 95th (ft)	5	0	0	0	0	0	0	0	12			
Control Delay (s)	11.2	0.0	0.0	0.0	0.0	0.0	0.0	10.1	13.5			
Lane LOS	В							В	В			
Approach Delay (s)	0.3				0.0			10.1	13.5			
Approach LOS								В	В			
Intersection Summary												
Average Delay			0.5									
Intersection Capacity Utiliza	ation		51.7%	IC	CU Level	of Service			Α			
Analysis Period (min)			15									

	۶	→	•	←	•	4	†	>	ļ	4	
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	
Lane Group Flow (vph)	486	848	90	938	209	90	306	172	217	416	
v/c Ratio	1.34	0.30	0.42	0.48	0.29	0.42	0.42	0.79	0.52	0.71	
Control Delay	189.1	7.8	33.6	25.1	4.8	36.3	33.2	59.8	36.3	13.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	189.1	7.8	33.6	25.1	4.8	36.3	33.2	59.8	36.3	13.7	
Queue Length 50th (ft)	~314	88	42	165	0	51	90	108	125	42	
Queue Length 95th (ft)	#529	54	#117	246	52	85	111	165	170	132	
Internal Link Dist (ft)		185		533			445		1180		
Turn Bay Length (ft)	500		250		165	100		135			
Base Capacity (vph)	364	2804	213	1935	720	307	1047	309	600	691	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	1.34	0.30	0.42	0.48	0.29	0.29	0.29	0.56	0.36	0.60	

Intersection Summary

Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

	۶	→	•	•	+	•	1	†	/	/	↓	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	ተ ተኈ		ች	ተተተ	7	ሻ	↑ ↑		ሻ	†	7
Traffic Volume (vph)	486	775	73	90	938	209	90	211	95	172	217	416
Future Volume (vph)	486	775	73	90	938	209	90	211	95	172	217	416
Ideal Flow (vphpl)	1650	1700	1750	1650	1700	1750	1650	1750	1750	1650	1750	1700
Lane Width	12	13	12	13	12	13	12	12	13	11	11	11
Grade (%)		0%			-4%			0%			0%	
Total Lost time (s)	7.0	6.5		6.5	6.5	6.5	7.0	7.0		7.0	7.0	7.0
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.95	1.00	0.99		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		0.96	1.00	1.00	0.98	1.00		0.99	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1535	4532		1517	4641	1435	1509	2895		1476	1658	1315
Flt Permitted	0.21	1.00		0.32	1.00	1.00	0.54	1.00		0.55	1.00	1.00
Satd. Flow (perm)	334	4532		513	4641	1435	850	2895		856	1658	1315
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	486	775	73	90	938	209	90	211	95	172	217	416
RTOR Reduction (vph)	0	8	0	0	0	122	0	0	0	0	0	251
Lane Group Flow (vph)	486	840	0	90	938	87	90	306	0	172	217	165
Confl. Peds. (#/hr)	32		73	73		32	31		12	12		31
Confl. Bikes (#/hr)			1			1						3
Heavy Vehicles (%)	2%	2%	2%	5%	2%	4%	2%	3%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	9	9	0	0	0	0	3	0	0	0	0
Parking (#/hr)								0	0			
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)	64.8	64.8		43.8	43.8	43.8	26.7	26.7		26.7	26.7	26.7
Effective Green, g (s)	64.8	64.8		43.8	43.8	43.8	26.7	26.7		26.7	26.7	26.7
Actuated g/C Ratio	0.62	0.62		0.42	0.42	0.42	0.25	0.25		0.25	0.25	0.25
Clearance Time (s)	7.0	6.5		6.5	6.5	6.5	7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	3.0	0.2		0.2	0.2	0.2	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	366	2796		213	1935	598	216	736		217	421	334
v/s Ratio Prot	c0.18	0.19			0.20			0.11			0.13	
v/s Ratio Perm	c0.64			0.18		0.06	0.11			c0.20		0.13
v/c Ratio	1.33	0.30		0.42	0.48	0.15	0.42	0.42		0.79	0.52	0.49
Uniform Delay, d1	16.8	9.4		21.7	22.4	19.0	32.7	32.6		36.6	33.6	33.4
Progression Factor	1.18	0.72		1.00	1.00	1.00	1.01	1.01		1.00	1.00	1.00
Incremental Delay, d2	165.0	0.3		6.0	0.9	0.5	1.3	0.4		17.7	1.1	1.1
Delay (s)	184.7	7.1		27.7	23.2	19.5	34.3	33.4		54.3	34.7	34.5
Level of Service	F	Α		С	С	В	С	С		D	С	С
Approach Delay (s)		71.8			22.9			33.6			38.8	
Approach LOS		Е			С			С			D	
Intersection Summary												
HCM 2000 Control Delay			44.7	Н	CM 2000	Level of S	Service		D			
HCM 2000 Volume to Capac	ity ratio		1.21									
Actuated Cycle Length (s)			105.0		um of lost	. ,			20.5			
Intersection Capacity Utilizati	ion		107.5%	IC	CU Level of	of Service			G			

Analysis Period (min) c Critical Lane Group

15

	•	→	+	4	\	4
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		र्स	f _a		W	
Traffic Volume (veh/h)	0	378	383	0	0	4
Future Volume (Veh/h)	0	378	383	0	0	4
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	378	383	0	0	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			671			
pX, platoon unblocked	0.91		Ų, i		0.91	0.91
vC, conflicting volume	383				761	383
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	275				690	275
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					V	<u> </u>
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	99
cM capacity (veh/h)	1174				375	696
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	378	383	4			
Volume Left	0	0	0			
Volume Right	0	1700	4			
cSH	1174	1700	696			
Volume to Capacity	0.00	0.23	0.01			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	10.2			
Lane LOS	0.0	0.0	В			
Approach Delay (s)	0.0	0.0	10.2			
Approach LOS			В			
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utili	ization		30.2%	IC	U Level o	of Service
Analysis Period (min)			15			

	•	_		—	•	<u> </u>	1	
	-			MAC	14/55	051	000	
Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR	
Lane Configurations		ર્ન		4		*Y*		
Traffic Volume (veh/h)	9	370	8	373	7	16	10	
Future Volume (Veh/h)	9	370	8	373	7	16	10	
Sign Control		Free		Free		Stop		
Grade		0%		0%		0%		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	9	370	0	373	7	16	10	
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type		None		None				
Median storage veh)		,		,				
Upstream signal (ft)				525				
pX, platoon unblocked	0.90		0.00	J _		0.90	0.90	
vC, conflicting volume	380		0			764	376	
vC1, stage 1 conf vol			•					
vC2, stage 2 conf vol								
vCu, unblocked vol	257		0			684	254	
tC, single (s)	4.1		0.0			6.4	6.2	
tC, 2 stage (s)	7.1		0.0			0.4	0.2	
tF (s)	2.2		0.0			3.5	3.3	
p0 queue free %	99		0.0			96	99	
cM capacity (veh/h)	1178		0			371	708	
						3/ 1	700	
Direction, Lane #	EB 1	WB 1	SB 1					
Volume Total	379	380	26					
Volume Left	9	0	16					
Volume Right	0	7	10					
cSH	1178	1700	454					
Volume to Capacity	0.01	0.22	0.06					
Queue Length 95th (ft)	1	0	5					
Control Delay (s)	0.3	0.0	13.4					
Lane LOS	Α		В					
Approach Delay (s)	0.3	0.0	13.4					
Approach LOS			В					
Intersection Summary								
Average Delay			0.6					
Intersection Capacity Utiliz	ration		34.0%	IC	CU Level o	f Service		
Analysis Period (min)	.auon		15	IC	O LEVELO	1 OCIVICE		
Analysis Feliou (IIIIII)			10					

Appendix F

2028 Future Conditions without Development Synchro Worksheet



	→	•	←
Lane Group	EBT	WBL	WBT
Lane Group Flow (vph)	1650	385	625
v/c Ratio	0.69	0.86	0.13
Control Delay	12.4	37.9	0.1
Queue Delay	0.0	0.0	0.0
Total Delay	12.4	37.9	0.1
Queue Length 50th (ft)	143	94	0
Queue Length 95th (ft)	192	#242	0
Internal Link Dist (ft)	451		351
Turn Bay Length (ft)		185	
Base Capacity (vph)	2400	482	4679
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.69	0.80	0.13
Intersection Summary			

^{# 95}th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

	-	•	•	←	•	~	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	ተተኈ	LDIX	K	^	INDL	NDIX	
Traffic Volume (vph)	1582	68	385	625	0	0	
Future Volume (vph)	1582	68	385	625	0	0	
Ideal Flow (vphpl)	1750	1750	1650	1775	1900	1900	
Grade (%)	-3%	1750	1000	3%	0%	1300	
Total Lost time (s)	7.5		7.5	7.5	0 70		
Lane Util. Factor	0.91		1.00	0.91			
Frpb, ped/bikes	1.00		1.00	1.00			
Flpb, ped/bikes	1.00		1.00	1.00			
Frt	0.99		1.00	1.00			
Flt Protected	1.00		0.95	1.00			
Satd. Flow (prot)	4706		1513	4679			
Flt Permitted	1.00		0.11	1.00			
Satd. Flow (perm)	4706		179	4679			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	
Adj. Flow (vph)	1582	68	385	625	0	0	
RTOR Reduction (vph)	8	0	0	0	0	0	
Lane Group Flow (vph)	1642	0	385	625	0	0	
Confl. Peds. (#/hr)	1042	64	64	020	2	U	
Confl. Bikes (#/hr)		2	04				
Turn Type	NA		pm+pt	NA			
Protected Phases	2		1	6			
Permitted Phases	2		6	U			
Actuated Green, G (s)	28.0		47.5	55.0			
Effective Green, g (s)	28.0		47.5	55.0			
Actuated g/C Ratio	0.51		0.86	1.00			
Clearance Time (s)	7.5		7.5	7.5			
Vehicle Extension (s)	0.2		2.0	0.2			
Lane Grp Cap (vph)	2395		445	4679			
v/s Ratio Prot	0.35		c0.19	0.13			
v/s Ratio Perm	0.55		c0.15	0.10			
v/c Ratio	0.69		0.87	0.13			
Uniform Delay, d1	10.2		13.4	0.13			
Progression Factor	1.00		1.65	1.00			
Incremental Delay, d2	1.6		15.0	0.1			
Delay (s)	11.8		37.2	0.1			
Level of Service	11.0 B		57.2 D	Α			
Approach Delay (s)	11.8		U	14.2	0.0		
Approach LOS	11.0 B			14.2 B	Α		
				D			
Intersection Summary							
HCM 2000 Control Delay			12.7	H	CM 2000	Level of Service	9
HCM 2000 Volume to Capac	ity ratio		0.93				
Actuated Cycle Length (s)			55.0		ım of lost		
Intersection Capacity Utilizati	ion		72.1%	IC	U Level o	f Service	
Analysis Period (min)			15				
c Critical Lane Group							

	→	←	4	/
Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	1576	1278	43	196
v/c Ratio	0.41	0.33	0.18	0.16
Control Delay	4.8	6.5	20.0	2.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.8	6.5	20.0	2.1
Queue Length 50th (ft)	0	5	13	0
Queue Length 95th (ft)	104	271	28	31
Internal Link Dist (ft)	351	246	341	
Turn Bay Length (ft)			275	
Base Capacity (vph)	3841	3818	513	1218
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.41	0.33	0.08	0.16
Intersection Summary				

	-	•	•	←	4	<i>></i>			
Movement	EBT	EBR	WBL	WBT	NBL	NBR			
Lane Configurations	↑ ↑↑	LDIT	1100	^	¥	7			
Traffic Volume (vph)	1576	0	0	1278	43	196			
Future Volume (vph)	1576	0	0	1278	43	196			
Ideal Flow (vphpl)	1775	1775	1775	1775	1700	1700			
Lane Width	12	12	1773	12	12	14			
Grade (%)	-3%	12	12	0%	-4%	17			
Total Lost time (s)	6.0			5.0	8.5	6.0			
Lane Util. Factor	0.91			0.91	1.00	0.95			
Frpb, ped/bikes	1.00			1.00	1.00	1.00			
	1.00			1.00	1.00	1.00			
Flpb, ped/bikes									
Frt Elt Drotostad	1.00			1.00	1.00	0.85			
Flt Protected	1.00			1.00	0.95	1.00			
Satd. Flow (prot)	4764			4694	1615	1464			
Flt Permitted	1.00			1.00	0.95	1.00			
Satd. Flow (perm)	4764			4694	1615	1464			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00			
Adj. Flow (vph)	1576	0	0	1278	43	196			
RTOR Reduction (vph)	0	0	0	0	0	69			
Lane Group Flow (vph)	1576	0	0	1278	43	127			
Confl. Peds. (#/hr)		56	56		2				
Heavy Vehicles (%)	2%	3%	2%	2%	2%	2%			
Bus Blockages (#/hr)	9	0	9	9	0	0			
Turn Type	NA			NA	Prot	Perm			
Protected Phases	2			6	4				
Permitted Phases						2			
Actuated Green, G (s)	35.6			36.6	4.9	35.6			
Effective Green, g (s)	35.6			36.6	4.9	35.6			
Actuated g/C Ratio	0.65			0.67	0.09	0.65			
Clearance Time (s)	6.0			5.0	8.5	6.0			
Vehicle Extension (s)	2.0			2.0	2.0	2.0			
Lane Grp Cap (vph)	3083			3123	143	947			
v/s Ratio Prot	c0.33			0.27	c0.03	V 11			
v/s Ratio Perm	30.00			J.L1	00.00	0.09			
v/c Ratio	0.51			0.41	0.30	0.03			
Uniform Delay, d1	5.1			4.2	23.4	3.7			
Progression Factor	0.83			1.48	1.00	1.00			
Incremental Delay, d2	0.63			0.4	0.4	0.3			
Delay (s)	4.7			6.6	23.9	4.0			
Level of Service	4.7 A			0.0 A	23.9 C	4.0 A			
Approach Delay (s)	4.7			6.6	7.6	^			
Approach LOS	4.7 A			0.0 A	7.0 A				
	A			A	A				
Intersection Summary									
HCM 2000 Control Delay			5.7	H	CM 2000	Level of Service	9	Α	
HCM 2000 Volume to Capac	city ratio		0.49						
Actuated Cycle Length (s)			55.0	Sı	um of lost	time (s)		14.5	
Intersection Capacity Utilizat	ion		72.1%			of Service		С	
intersection Capacity Offizat									
Analysis Period (min)			15						

	٠	→	•	•	←	•	•	†	<i>></i>	\	ļ	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	"	↑ ↑₽			4†₽			↔			↔	
Traffic Volume (veh/h)	59	1704	0	0	1204	44	0	0	1	6	0	62
Future Volume (Veh/h)	59	1704	0	0	1204	44	0	0	1	6	0	62
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	59	1704	0	0	1204	44	0	0	1	6	0	62
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		326			265							
pX, platoon unblocked	0.89			0.84			0.89	0.89	0.84	0.89	0.89	0.89
vC, conflicting volume	1248			1704			2285	3070	568	1913	3048	423
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	862			1169			1216	2095	0	799	2071	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	91			100			100	100	100	97	100	94
cM capacity (veh/h)	693			498			107	42	910	230	44	969
Direction, Lane#	EB 1	EB 2	EB3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1			
Volume Total	59	682	682	341	301	602	345	1	68			
Volume Left	59	0	0	0	0	0	0	0	6			
Volume Right	0	0	0	0	0	0	44	1	62			
cSH	693	1700	1700	1700	498	1700	1700	910	756			
Volume to Capacity	0.09	0.40	0.40	0.20	0.00	0.35	0.20	0.00	0.09			
Queue Length 95th (ft)	7	0	0	0	0	0	0	0	7			
Control Delay (s)	10.7	0.0	0.0	0.0	0.0	0.0	0.0	9.0	10.2			
Lane LOS	В							Α	В			
Approach Delay (s)	0.4				0.0			9.0	10.2			
Approach LOS								А	В			
Intersection Summary												
Average Delay			0.4									
Intersection Capacity Utiliza	ation		65.3%	IC	CU Level	of Service			С			
Analysis Period (min)			15									

	۶	→	•	•	•	•	†	\	↓	4	
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	
Lane Group Flow (vph)	457	1263	54	714	181	107	366	161	136	426	
v/c Ratio	0.95	0.44	0.43	0.41	0.28	0.40	0.51	0.87	0.33	0.66	
Control Delay	54.7	14.2	44.8	28.3	5.7	36.4	36.7	76.0	33.5	8.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	54.7	14.2	44.8	28.3	5.7	36.4	36.7	76.0	33.5	8.0	
Queue Length 50th (ft)	228	174	29	137	0	62	115	108	78	0	
Queue Length 95th (ft)	#421	202	#95	200	53	102	143	175	117	74	
Internal Link Dist (ft)		185		533			445		1180		
Turn Bay Length (ft)	500		250		165	100		135			
Base Capacity (vph)	482	2878	125	1723	646	366	981	256	572	732	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.95	0.44	0.43	0.41	0.28	0.29	0.37	0.63	0.24	0.58	

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

	۶	→	•	•	+	•	•	†	~	/	+	-√
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	ተተኈ		ሻ	ተተተ	7	ሻ	∱ }		ሻ	†	7
Traffic Volume (vph)	457	1215	48	54	714	181	107	208	158	161	136	426
Future Volume (vph)	457	1215	48	54	714	181	107	208	158	161	136	426
Ideal Flow (vphpl)	1650	1700	1750	1650	1700	1750	1650	1750	1750	1650	1750	1700
Lane Width	12	13	12	13	12	13	12	12	13	11	11	11
Grade (%)		0%			-4%			0%			0%	
Total Lost time (s)	7.0	6.5		6.5	6.5	6.5	7.0	7.0		7.0	7.0	7.0
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.95	1.00	0.99		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		0.98	1.00	1.00	0.98	1.00		0.99	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1533	4594		1540	4641	1433	1503	2841		1477	1658	1313
Flt Permitted	0.27	1.00		0.21	1.00	1.00	0.67	1.00		0.48	1.00	1.00
Satd. Flow (perm)	443	4594		338	4641	1433	1060	2841		743	1658	1313
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	457	1215	48	54	714	181	107	208	158	161	136	426
RTOR Reduction (vph)	0	3	0	0	0	114	0	0	0	0	0	319
Lane Group Flow (vph)	457	1260	0	54	714	67	107	366	0	161	136	107
Confl. Peds. (#/hr)	32		73	73		32	31		12	12		31
Confl. Bikes (#/hr)			1			1						3
Heavy Vehicles (%)	2%	2%	2%	5%	2%	4%	2%	3%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	9	9	0	0	0	0	2	0	0	0	0
Parking (#/hr)								0	0			
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)	68.9	68.9		40.9	40.9	40.9	27.6	27.6		27.6	27.6	27.6
Effective Green, g (s)	68.9	68.9		40.9	40.9	40.9	27.6	27.6		27.6	27.6	27.6
Actuated g/C Ratio	0.63	0.63		0.37	0.37	0.37	0.25	0.25		0.25	0.25	0.25
Clearance Time (s)	7.0	6.5		6.5	6.5	6.5	7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	3.0	0.2		0.2	0.2	0.2	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	485	2877		125	1725	532	265	712		186	416	329
v/s Ratio Prot	c0.18	0.27			0.15			0.13			0.08	
v/s Ratio Perm	c0.41			0.16		0.05	0.10			c0.22		0.08
v/c Ratio	0.94	0.44		0.43	0.41	0.13	0.40	0.51		0.87	0.33	0.32
Uniform Delay, d1	14.6	10.6		25.9	25.7	22.8	34.3	35.4		39.4	33.6	33.6
Progression Factor	1.75	1.16		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	25.9	0.5		10.5	0.7	0.5	1.0	0.6		31.7	0.5	0.6
Delay (s)	51.5	12.8		36.4	26.4	23.3	35.3	36.1		71.1	34.1	34.2
Level of Service	D	В		D	С	С	D	D		E	С	С
Approach Delay (s)		23.0			26.4			35.9			42.4	
Approach LOS		С			С			D			D	
Intersection Summary												
HCM 2000 Control Delay			29.1	Н	CM 2000	Level of S	Service		С			
HCM 2000 Volume to Capaci	ty ratio		0.96									
Actuated Cycle Length (s)			110.0		um of lost	. ,			20.5			
Intersection Capacity Utilization	on		105.0%	IC	CU Level of	of Service			G			

Analysis Period (min) c Critical Lane Group

15

	۶	→	—	4	\	4	
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		ર્ન	ĵ»		W		
Traffic Volume (veh/h)	0	472	237	0	0	2	
Future Volume (Veh/h)	0	472	237	0	0	2	
Sign Control		Free	Free		Stop		
Grade		0%	0%		0%		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	0	472	237	0	0	2	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type		None	None				
Median storage veh)							
Upstream signal (ft)			671				
pX, platoon unblocked	0.95				0.95	0.95	
vC, conflicting volume	237				709	237	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	176				670	176	
tC, single (s)	4.1				6.4	6.2	
tC, 2 stage (s)							
tF (s)	2.2				3.5	3.3	
p0 queue free %	100				100	100	
cM capacity (veh/h)	1336				402	827	
Direction, Lane #	EB 1	WB 1	SB 1				
Volume Total	472	237	2				
Volume Left	0	0	0				
Volume Right	0	0	2				
cSH	1336	1700	827				
Volume to Capacity	0.00	0.14	0.00				
Queue Length 95th (ft)	0	0	0				
Control Delay (s)	0.0	0.0	9.4				
Lane LOS			Α				
Approach Delay (s)	0.0	0.0	9.4				
Approach LOS			Α				
Intersection Summary							
Average Delay			0.0				
Intersection Capacity Utiliza	ition		34.8%	IC	U Level c	of Service	Α
Analysis Period (min)			15				
J = = = = = (·····)							

O. IN ININWOOD IN				_	_	τ.	,
	•	-	F	-	_	-	*
Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations		ર્ન		4		N/	
Traffic Volume (veh/h)	2	465	1	232	6	4	4
Future Volume (Veh/h)	2	465	1	232	6	4	4
Sign Control		Free		Free		Stop	
Grade		0%		0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	2	465	0	232	6	4	4
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type		None		None			
Median storage veh)							
Upstream signal (ft)				525			
pX, platoon unblocked	0.95		0.00	320		0.95	0.95
vC, conflicting volume	238		0.00			704	235
vC1, stage 1 conf vol	200						200
vC2, stage 2 conf vol							
vCu, unblocked vol	165		0			658	162
tC, single (s)	4.1		0.0			6.4	6.2
tC, 2 stage (s)			0.0			0.1	0.2
tF (s)	2.2		0.0			3.5	3.3
p0 queue free %	100		0.0			99	100
cM capacity (veh/h)	1336		0			405	835
		11/5 4				100	
Direction, Lane #	EB 1	WB 1	SB 1				
Volume Total	467	238	8				
Volume Left	2	0	4				
Volume Right	0	6	4				
cSH	1336	1700	545				
Volume to Capacity	0.00	0.14	0.01				
Queue Length 95th (ft)	0	0	1				
Control Delay (s)	0.0	0.0	11.7				
Lane LOS	Α		В				
Approach Delay (s)	0.0	0.0	11.7				
Approach LOS			В				
Intersection Summary							
Average Delay			0.2				
Intersection Capacity Utiliz	ation		35.9%	IC	CU Level o	f Service	
Analysis Period (min)			15			3330	
			.,				

	_		•
	-	•	
Lane Group	EBT	WBL	WBT
Lane Group Flow (vph)	1037	245	1302
v/c Ratio	0.29	0.54	0.37
Control Delay	4.6	6.2	5.1
Queue Delay	0.0	0.0	0.3
Total Delay	4.6	6.2	5.4
Queue Length 50th (ft)	57	3	79
Queue Length 95th (ft)	110	5	147
Internal Link Dist (ft)	451		351
Turn Bay Length (ft)		185	
Base Capacity (vph)	3542	747	3521
Starvation Cap Reductn	0	0	1363
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.29	0.33	0.60
Intersection Summary			
intersection Summary			

	→	•	•	•	4	~		
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	ተተጉ	LDIX	ሻ	^	1102	NDI (
Traffic Volume (vph)	1000	37	245	1302	0	0		
Future Volume (vph)	1000	37	245	1302	0	0		
Ideal Flow (vphpl)	1750	1750	1650	1775	1900	1900		
Grade (%)	-3%	1700	1000	3%	0%	1300		
Total Lost time (s)	7.5		7.5	7.5	0 70			
Lane Util. Factor	0.91		1.00	0.91				
Frpb, ped/bikes	0.99		1.00	1.00				
Flpb, ped/bikes	1.00		0.99	1.00				
Frt	0.99		1.00	1.00				
Flt Protected	1.00		0.95	1.00				
Satd. Flow (prot)	4702		1502	4679				
Flt Permitted	1.00		0.26	1.00				
Satd. Flow (perm)	4702		417	4679				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00		
	1000	37	245	1302	0	0		
Adj. Flow (vph) RTOR Reduction (vph)	2							
\ 1 /	1035	0	0 245	0 1302	0	0		
Lane Group Flow (vph)	1035	64	64	1302	2	U		
Confl. Peds. (#/hr)		2	04					
Confl. Bikes (#/hr)	A L A		1	NIA.				
Turn Type	NA		pm+pt	NA				
Protected Phases	2		1	6				
Permitted Phases	75.0		6	75.0				
Actuated Green, G (s)	75.3		85.0	75.3				
Effective Green, g (s)	75.3		85.0	75.3				
Actuated g/C Ratio	0.75		0.85	0.75				
Clearance Time (s)	7.5		7.5	7.5				
Vehicle Extension (s)	0.2		2.0	0.2				
Lane Grp Cap (vph)	3540		459	3523				
v/s Ratio Prot	0.22		c0.05	0.28				
v/s Ratio Perm			c0.40					
v/c Ratio	0.29		0.53	0.37				
Uniform Delay, d1	3.9		1.3	4.2				
Progression Factor	1.00		1.00	1.00				
Incremental Delay, d2	0.2		0.6	0.3				
Delay (s)	4.1		1.9	4.5				
Level of Service	Α		Α	Α				
Approach Delay (s)	4.1			4.1	0.0			
Approach LOS	Α			Α	Α			
Intersection Summary								
HCM 2000 Control Delay			4.1	H	CM 2000	Level of Service	<u> </u>	
HCM 2000 Volume to Cap	acity ratio		0.53	111	JIVI 2000	LCVCI OI OCIVICO	•	
Actuated Cycle Length (s)			100.0	Sı.	um of lost	time (s)		
Intersection Capacity Utiliz			54.1%		U Level o			
Analysis Period (min)	-udon		15	10	O LOVE! U	7 OCI VIOC		
c Critical Lane Group			10					
o Ontion Lane Oroup								

	-	←	•	~
Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	1003	1522	28	419
v/c Ratio	0.25	0.39	0.16	0.33
Control Delay	4.9	4.2	39.5	1.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.9	4.2	39.5	1.7
Queue Length 50th (ft)	47	49	18	0
Queue Length 95th (ft)	165	175	34	45
Internal Link Dist (ft)	351	246	341	
Turn Bay Length (ft)			275	
Base Capacity (vph)	3947	3916	546	1285
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.25	0.39	0.05	0.33
Intersection Summary				

	-	\rightarrow	•	←	\blacktriangleleft	<i>></i>		
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑ ↑↑			^	W	7		
Traffic Volume (vph)	1003	0	0	1522	28	419		
Future Volume (vph)	1003	0	0	1522	28	419		
Ideal Flow (vphpl)	1775	1775	1775	1775	1700	1700		
Lane Width	12	12	12	12	12	14		
Grade (%)	-3%	12	12	0%	-4%	17		
Total Lost time (s)	6.0			5.0	8.5	6.0		
Lane Util. Factor	0.91			0.91	1.00	0.95		
Frpb, ped/bikes	1.00			1.00	1.00	1.00		
Flpb, ped/bikes	1.00			1.00	1.00	1.00		
Frt	1.00			1.00	1.00	0.85		
Flt Protected	1.00			1.00	0.95	1.00		
Satd. Flow (prot)	4764			4694	1615	1464		
Flt Permitted	1.00			1.00	0.95	1.00		
Satd. Flow (perm)	4764			4694	1615	1464		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00		
Adj. Flow (vph)	1003	0	0.00	1522	28	419		
RTOR Reduction (vph)	0	0	0	0	0	95		
Lane Group Flow (vph)	1003	0	0	1522	28	324		
Confl. Peds. (#/hr)	1000	56	56	1022	20	02 4		
Heavy Vehicles (%)	2%	3%	2%	2%	2%	2%		
Bus Blockages (#/hr)	9	0	9	9	0	0		
Turn Type	NA			NA	Prot	Perm		
Protected Phases	2			6	4	i Giili		
Permitted Phases	L			0	7	2		
Actuated Green, G (s)	81.2			82.2	9.3	81.2		
Effective Green, g (s)	81.2			82.2	9.3	81.2		
Actuated g/C Ratio	0.77			0.78	0.09	0.77		
Clearance Time (s)	6.0			5.0	8.5	6.0		
Vehicle Extension (s)	2.0			2.0	2.0	2.0		
Lane Grp Cap (vph)	3684			3674	143	1132		
v/s Ratio Prot	0.21			c0.32	c0.02	1102		
v/s Ratio Perm	U.Z I			00.0Z	00.02	0.22		
v/c Ratio	0.27			0.41	0.20	0.29		
Uniform Delay, d1	3.4			3.7	44.4	3.5		
Progression Factor	1.00			0.75	1.00	1.00		
Incremental Delay, d2	0.2			0.73	0.2	0.6		
Delay (s)	3.6			3.1	44.6	4.1		
Level of Service	A			Α	77.0 D	Α		
Approach Delay (s)	3.6			3.1	6.6	, , , , , , , , , , , , , , , , , , ,		
Approach LOS	Α			A	Α			
	, ,			,,	, ,			
Intersection Summary								
HCM 2000 Control Delay			3.8	Н	CM 2000	Level of Service)	Α
HCM 2000 Volume to Capa	acity ratio		0.40					
Actuated Cycle Length (s)			105.0		um of lost			14.5
Intersection Capacity Utiliza	ation		54.1%	IC	U Level o	of Service		Α
Analysis Period (min)			15					
c Critical Lane Group								

	•	→	``	•	—	•	•	†	<u></u>	<u> </u>	1	√
Movement	EBL	EBT	EBR	₩BL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ኘ		LDIN	VVDL	414	WOIN	NDL		NUIX	ODL	- 4	ODIN
Traffic Volume (veh/h)	41	↑↑↑ 1354	5	0	1412	54	0	↔ 0	2	8	0	62
Future Volume (Veh/h)	41	1354	5	0	1412	54 54	0	0	2	8	0	62
, ,	41	Free	5	U	Free	34	U	Stop		0		02
Sign Control		0%									Stop	
Grade Peak Hour Factor	1.00		1.00	1.00	0%	1.00	1.00	0%	1.00	1.00	0%	1.00
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	41	1354	5	0	1412	54	0	0	2	8	0	62
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		326			265							0.00
pX, platoon unblocked	0.86			0.95			0.88	0.88	0.95	0.88	0.88	0.86
vC, conflicting volume	1466			1359			1971	2904	454	1974	2880	498
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	959			1205			1268	2329	255	1272	2301	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	93			100			100	100	100	92	100	93
cM capacity (veh/h)	611			548			98	30	709	104	31	929
Direction, Lane #	EB 1	EB 2	EB3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1			
Volume Total	41	542	542	276	353	706	407	2	70			
Volume Left	41	0	0	0	0	0	0	0	8			
Volume Right	0	0	0	5	0	0	54	2	62			
cSH	611	1700	1700	1700	548	1700	1700	709	487			
Volume to Capacity	0.07	0.32	0.32	0.16	0.00	0.42	0.24	0.00	0.14			
Queue Length 95th (ft)	5	0	0	0	0	0	0	0	12			
Control Delay (s)	11.3	0.0	0.0	0.0	0.0	0.0	0.0	10.1	13.6			
Lane LOS	В							В	В			
Approach Delay (s)	0.3				0.0			10.1	13.6			
Approach LOS								В	В			
Intersection Summary												
Average Delay			0.5									
Intersection Capacity Utiliza	ation		51.7%	IC	CU Level	of Service			Α			
Analysis Period (min)			15									

	•	-	•	←	•	4	†	\	ļ	4	
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	
Lane Group Flow (vph)	496	865	92	957	213	92	312	175	221	424	
v/c Ratio	1.39	0.31	0.44	0.50	0.30	0.43	0.42	0.80	0.52	0.72	
Control Delay	211.6	8.0	34.8	25.5	4.8	36.4	33.0	61.2	36.1	14.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	211.6	8.0	34.8	25.5	4.8	36.4	33.0	61.2	36.1	14.4	
Queue Length 50th (ft)	~340	92	44	171	0	52	92	110	127	46	
Queue Length 95th (ft)	#552	55	#123	252	53	87	113	170	173	140	
Internal Link Dist (ft)		185		533			445		1180		
Turn Bay Length (ft)	500		250		165	100		135			
Base Capacity (vph)	357	2790	209	1921	718	304	1047	306	600	691	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	1.39	0.31	0.44	0.50	0.30	0.30	0.30	0.57	0.37	0.61	

Intersection Summary

Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

	٠	→	•	•	+	•	•	†	~	\		√
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	ተ ተጉ		ች	^ ^	7	*	^			†	7
Traffic Volume (vph)	496	791	74	92	957	213	92	215	97	175	221	424
Future Volume (vph)	496	791	74	92	957	213	92	215	97	175	221	424
Ideal Flow (vphpl)	1650	1700	1750	1650	1700	1750	1650	1750	1750	1650	1750	1700
Lane Width	12	13	12	13	12	13	12	12	13	11	11	11
Grade (%)		0%			-4%			0%			0%	
Total Lost time (s)	7.0	6.5		6.5	6.5	6.5	7.0	7.0		7.0	7.0	7.0
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.95	1.00	0.99		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		0.97	1.00	1.00	0.98	1.00		0.99	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1535	4533		1519	4641	1435	1509	2895		1476	1658	1315
Flt Permitted	0.20	1.00		0.32	1.00	1.00	0.53	1.00		0.54	1.00	1.00
Satd. Flow (perm)	322	4533		504	4641	1435	842	2895		847	1658	1315
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	496	791	74	92	957	213	92	215	97	175	221	424
RTOR Reduction (vph)	0	8	0	0	0	125	0	0	0	0	0	250
Lane Group Flow (vph)	496	857	0	92	957	88	92	312	0	175	221	174
Confl. Peds. (#/hr)	32		73	73		32	31		12	12		31
Confl. Bikes (#/hr)			1			1						3
Heavy Vehicles (%)	2%	2%	2%	5%	2%	4%	2%	3%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	9	9	0	0	0	0	3	0	0	0	0
Parking (#/hr)								0	0			
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)	64.5	64.5		43.5	43.5	43.5	27.0	27.0		27.0	27.0	27.0
Effective Green, g (s)	64.5	64.5		43.5	43.5	43.5	27.0	27.0		27.0	27.0	27.0
Actuated g/C Ratio	0.61	0.61		0.41	0.41	0.41	0.26	0.26		0.26	0.26	0.26
Clearance Time (s)	7.0	6.5		6.5	6.5	6.5	7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	3.0	0.2		0.2	0.2	0.2	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	359	2784		208	1922	594	216	744		217	426	338
v/s Ratio Prot	c0.18	0.19			0.21			0.11			0.13	
v/s Ratio Perm	c0.66			0.18		0.06	0.11			c0.21		0.13
v/c Ratio	1.38	0.31		0.44	0.50	0.15	0.43	0.42		0.81	0.52	0.51
Uniform Delay, d1	17.4	9.6		22.1	22.7	19.2	32.5	32.5		36.6	33.4	33.4
Progression Factor	1.18	0.72		1.00	1.00	1.00	1.01	1.01		1.00	1.00	1.00
Incremental Delay, d2	187.9	0.3		6.7	0.9	0.5	1.4	0.4		19.2	1.1	1.3
Delay (s)	208.3	7.2		28.7	23.6	19.7	34.2	33.2		55.8	34.5	34.7
Level of Service	F	A		С	С	В	С	С		E	С	С
Approach Delay (s)		80.5			23.3			33.4			39.2	
Approach LOS		F			С			С			D	
Intersection Summary												
HCM 2000 Control Delay			48.0	Н	CM 2000	Level of	Service		D			
HCM 2000 Volume to Capa	city ratio		1.25									
Actuated Cycle Length (s)			105.0		um of los	. ,			20.5			
Intersection Capacity Utiliza	ition		108.2%	IC	CU Level	of Service			G			

Analysis Period (min) c Critical Lane Group

15

	۶	→	+	•	\	1	
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		4	ĵ»		N/		
Traffic Volume (veh/h)	0	386	391	0	0	4	
Future Volume (Veh/h)	0	386	391	0	0	4	
Sign Control		Free	Free		Stop		
Grade		0%	0%		0%		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	0	386	391	0	0	4	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type		None	None				
Median storage veh)							
Upstream signal (ft)			671				
pX, platoon unblocked	0.91				0.91	0.91	
vC, conflicting volume	391				777	391	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	281				705	281	
tC, single (s)	4.1				6.4	6.2	
tC, 2 stage (s)							
tF (s)	2.2				3.5	3.3	
p0 queue free %	100				100	99	
cM capacity (veh/h)	1166				366	689	
Direction, Lane #	EB 1	WB 1	SB 1				
Volume Total	386	391	4				
Volume Left	0	0	0				
Volume Right	0	0	4				
cSH	1166	1700	689				
Volume to Capacity	0.00	0.23	0.01				
Queue Length 95th (ft)	0	0	0				
Control Delay (s)	0.0	0.0	10.3				
Lane LOS			В				
Approach Delay (s)	0.0	0.0	10.3				
Approach LOS			В				
Intersection Summary							
Average Delay			0.1				
Intersection Capacity Utilization	on		30.6%	IC	U Level c	f Service	
Analysis Period (min)			15				

	•	_		—	•	<u> </u>	1
					-	-	
Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations		र्स		₩		W	
Traffic Volume (veh/h)	9	377	8	381	7	16	10
Future Volume (Veh/h)	9	377	8	381	7	16	10
Sign Control		Free		Free		Stop	
Grade		0%		0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	9	377	0	381	7	16	10
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type		None		None			
Median storage veh)							
Upstream signal (ft)				525			
pX, platoon unblocked	0.90		0.00			0.90	0.90
vC, conflicting volume	388		0			780	384
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	263		0			699	260
tC, single (s)	4.1		0.0			6.4	6.2
tC, 2 stage (s)							
tF (s)	2.2		0.0			3.5	3.3
p0 queue free %	99		0			96	99
cM capacity (veh/h)	1170		0			362	701
Direction, Lane #	EB 1	WB 1	SB 1				
Volume Total			26				
Volume Left	386	388	26 16				
	9	0 7	10				
Volume Right cSH							
	1170	1700	445				
Volume to Capacity	0.01	0.23	0.06				
Queue Length 95th (ft)	1	0	5				
Control Delay (s)	0.3	0.0	13.6				
Lane LOS	A	0.0	B				
Approach Delay (s)	0.3	0.0	13.6				
Approach LOS			В				
Intersection Summary							
Average Delay			0.6				
Intersection Capacity Utiliza	tion		34.4%	IC	CU Level o	f Service	
Analysis Period (min)			15				

Appendix G

2028 Future Conditions with Development Synchro Worksheet



	-	•	•
Lane Group	EBT	WBL	WBT
Lane Group Flow (vph)	1650	391	628
v/c Ratio	0.69	0.87	0.13
Control Delay	12.5	38.6	0.1
Queue Delay	0.0	0.0	0.0
Total Delay	12.5	38.6	0.1
Queue Length 50th (ft)	143	101	0
Queue Length 95th (ft)	192	#249	0
Internal Link Dist (ft)	451		351
Turn Bay Length (ft)		185	
Base Capacity (vph)	2388	482	4679
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.69	0.81	0.13
Intersection Summary			

intersection Summary

^{# 95}th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

	-	\rightarrow	•	←	4	/		
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	ተተኈ		ች	^				
Traffic Volume (vph)	1582	68	391	628	0	0		
Future Volume (vph)	1582	68	391	628	0	0		
Ideal Flow (vphpl)	1750	1750	1650	1775	1900	1900		
Grade (%)	-3%	1700	1000	3%	0%	1000		
Total Lost time (s)	7.5		7.5	7.5	070			
Lane Util. Factor	0.91		1.00	0.91				
Frpb, ped/bikes	1.00		1.00	1.00				
Flpb, ped/bikes	1.00		1.00	1.00				
Frt	0.99		1.00	1.00				
Flt Protected	1.00		0.95	1.00				
Satd. Flow (prot)	4706		1513	4679				
Flt Permitted	1.00		0.11	1.00				
Satd. Flow (perm)	4706		180	4679				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00		
Adj. Flow (vph)	1582	1.00	391	628	1.00	0		
RTOR Reduction (vph)	1302	0	0	020	0	0		
Lane Group Flow (vph)	1642	0	391	628	0	0		
Confl. Peds. (#/hr)	1042	64	64	020	2	U		
,		2	04		Z			
Confl. Bikes (#/hr)	NΙΛ			NIA.				
Turn Type	NA		pm+pt	NA				
Protected Phases	2		1	6				
Permitted Phases	07.0		6	FF 0				
Actuated Green, G (s)	27.8		47.5	55.0				
Effective Green, g (s)	27.8		47.5	55.0				
Actuated g/C Ratio	0.51		0.86	1.00				
Clearance Time (s)	7.5		7.5	7.5				
Vehicle Extension (s)	0.2		2.0	0.2				
Lane Grp Cap (vph)	2378		451	4679				
v/s Ratio Prot	0.35		c0.19	0.13				
v/s Ratio Perm	0.00		c0.55	0.10				
v/c Ratio	0.69		0.87	0.13				
Uniform Delay, d1	10.3		13.5	0.0				
Progression Factor	1.00		1.64	1.00				
Incremental Delay, d2	1.7		15.0	0.1				
Delay (s)	12.0		37.0	0.1				
Level of Service	В		D	A				
Approach Delay (s)	12.0			14.2	0.0			
Approach LOS	В			В	Α			
Intersection Summary								
HCM 2000 Control Delay			12.9	Н	CM 2000	Level of Service	В	
HCM 2000 Volume to Capaci	ity ratio		0.93					
TICIVI 2000 VOIUITIE 10 Capac				_	6 1 4	time (a)	150	
Actuated Cycle Length (s)			55.0		um of lost		15.0	
	on		55.0 72.5%			of Service	C C	
Actuated Cycle Length (s)	on							

	-	←	•	/
Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	1576	1287	43	198
v/c Ratio	0.41	0.34	0.18	0.16
Control Delay	4.8	6.5	20.0	2.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.8	6.5	20.0	2.1
Queue Length 50th (ft)	0	5	13	0
Queue Length 95th (ft)	104	271	28	31
Internal Link Dist (ft)	351	246	341	
Turn Bay Length (ft)			275	
Base Capacity (vph)	3841	3818	513	1218
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.41	0.34	0.08	0.16
Intersection Summary				

	→	\rightarrow	•	←	4	/			
Movement	EBT	EBR	WBL	WBT	NBL	NBR			
Lane Configurations	ተተተ			^ ^	W	7			
Traffic Volume (vph)	1576	0	0	1287	43	198			
Future Volume (vph)	1576	0	0	1287	43	198			
Ideal Flow (vphpl)	1775	1775	1775	1775	1700	1700			
Lane Width	12	12	12	12	12	14			
Grade (%)	-3%	12	12	0%	-4%	17			
Total Lost time (s)	6.0			5.0	8.5	6.0			
Lane Util. Factor	0.91			0.91	1.00	0.95			
Frpb, ped/bikes	1.00			1.00	1.00	1.00			
Flpb, ped/bikes	1.00			1.00	1.00	1.00			
Frt	1.00			1.00	1.00	0.85			
Flt Protected	1.00			1.00	0.95	1.00			
Satd. Flow (prot)	4764			4694	1615	1464			
Flt Permitted	1.00			1.00	0.95	1.00			
Satd. Flow (perm)	4764			4694	1615	1464			
		4.00	1.00						
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00			
Adj. Flow (vph)	1576	0	0	1287	43	198			
RTOR Reduction (vph)	0	0	0	0	0	70			
Lane Group Flow (vph)	1576	0	0	1287	43	128			
Confl. Peds. (#/hr)	201	56	56	604	2	00/			
Heavy Vehicles (%)	2%	3%	2%	2%	2%	2%			
Bus Blockages (#/hr)	9	0	9	9	0	0			
Turn Type	NA			NA	Prot	Perm			
Protected Phases	2			6	4				
Permitted Phases						2			
Actuated Green, G (s)	35.6			36.6	4.9	35.6			
Effective Green, g (s)	35.6			36.6	4.9	35.6			
Actuated g/C Ratio	0.65			0.67	0.09	0.65			
Clearance Time (s)	6.0			5.0	8.5	6.0			
Vehicle Extension (s)	2.0			2.0	2.0	2.0			
Lane Grp Cap (vph)	3083			3123	143	947			
v/s Ratio Prot	c0.33			0.27	c0.03				
v/s Ratio Perm						0.09			
v/c Ratio	0.51			0.41	0.30	0.14			
Uniform Delay, d1	5.1			4.2	23.4	3.7			
Progression Factor	0.83			1.46	1.00	1.00			
Incremental Delay, d2	0.4			0.4	0.4	0.3			
Delay (s)	4.7			6.6	23.9	4.0			
Level of Service	Α			Α	С	Α			
Approach Delay (s)	4.7			6.6	7.6				
Approach LOS	Α			Α	A				
Intersection Summary					014.0000				
HCM 2000 Control Delay			5.7	H	CM 2000	Level of Servic	9	Α	
HCM 2000 Volume to Capa	city ratio		0.49						
Actuated Cycle Length (s)			55.0		um of lost			14.5	
Intersection Capacity Utiliza	ition		72.5%	IC	U Level o	of Service		С	
Analysis Period (min)			15						
c Critical Lane Group									

	٠	→	—	•	<u> </u>	4				
Movement	EBL	EBT	WBT	WBR	SBL	SBR				
	T T			WDIX	ÿ.	SDIX				
Lane Configurations		↑↑↑	††	11		co				
Traffic Volume (veh/h)	59	1707	1213	44	6	62				
Future Volume (Veh/h)	59	1707	1213	44	6	62				
Sign Control		Free	Free		Stop					
Grade	4.00	0%	0%	4.00	0%	4.00				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				
Hourly flow rate (vph)	59	1707	1213	44	6	62				
Pedestrians										
Lane Width (ft)										
Walking Speed (ft/s)										
Percent Blockage										
Right turn flare (veh)										
Median type		None	None							
Median storage veh)										
Upstream signal (ft)		326	265							
pX, platoon unblocked	0.89				0.89	0.89				
vC, conflicting volume	1257				1922	426				
vC1, stage 1 conf vol										
vC2, stage 2 conf vol										
vCu, unblocked vol	870				806	0				
tC, single (s)	4.1				6.8	6.9				
tC, 2 stage (s)										
tF (s)	2.2				3.5	3.3				
p0 queue free %	91				98	94				
cM capacity (veh/h)	688				261	969				
Direction, Lane #	EB 1	EB 2	EB3	EB 4	WB 1	WB 2	WB 3	SB 1		
Volume Total	59	569	569	569	485	485	287	68		
Volume Left	59	0	0	0	0	0	0	6		
Volume Right	0	0	0	0	0	0	44	62		
cSH	688	1700	1700	1700	1700	1700	1700	782		
Volume to Capacity	0.09	0.33	0.33	0.33	0.29	0.29	0.17	0.09		
Queue Length 95th (ft)	7	0	0	0	0	0	0	7		
Control Delay (s)	10.7	0.0	0.0	0.0	0.0	0.0	0.0	10.0		
Lane LOS	В							В		
Approach Delay (s)	0.4				0.0			10.0		
Approach LOS								В		
Intersection Summary										
Average Delay			0.4							
Intersection Capacity Utilizat	tion		43.8%	IC	CU Level of	of Service			Α	
Analysis Period (min)			15							

4: N Kirkwood Rd/Spout Run Pkwy & Lee Hwy.

۶	→	•	←	•	4	†	-	ļ	4	
EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	
457	1266	56	714	181	117	377	161	139	426	
0.95	0.44	0.45	0.42	0.28	0.44	0.52	0.88	0.33	0.65	
55.7	14.4	46.1	28.5	5.7	37.3	36.7	77.9	33.4	7.9	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
55.7	14.4	46.1	28.5	5.7	37.3	36.7	77.9	33.4	7.9	
229	174	30	138	0	69	118	108	79	0	
#421	202	#98	200	53	111	147	#178	119	74	
	185		533			588		1180		
500		250		165	100		135			
480	2865	124	1712	642	365	981	251	572	732	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
0.95	0.44	0.45	0.42	0.28	0.32	0.38	0.64	0.24	0.58	
	457 0.95 55.7 0.0 55.7 229 #421 500 480 0	457 1266 0.95 0.44 55.7 14.4 0.0 0.0 55.7 14.4 229 174 #421 202 185 500 480 2865 0 0 0 0 0 0	457 1266 56 0.95 0.44 0.45 55.7 14.4 46.1 0.0 0.0 0.0 55.7 14.4 46.1 229 174 30 #421 202 #98 185 500 250 480 2865 124 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	457 1266 56 714 0.95 0.44 0.45 0.42 55.7 14.4 46.1 28.5 0.0 0.0 0.0 0.0 55.7 14.4 46.1 28.5 229 174 30 138 #421 202 #98 200 185 533 500 250 480 2865 124 1712 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	457 1266 56 714 181 0.95 0.44 0.45 0.42 0.28 55.7 14.4 46.1 28.5 5.7 0.0 0.0 0.0 0.0 0.0 55.7 14.4 46.1 28.5 5.7 229 174 30 138 0 #421 202 #98 200 53 185 533 503 165 480 2865 124 1712 642 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	457 1266 56 714 181 117 0.95 0.44 0.45 0.42 0.28 0.44 55.7 14.4 46.1 28.5 5.7 37.3 0.0 0.0 0.0 0.0 0.0 55.7 14.4 46.1 28.5 5.7 37.3 229 174 30 138 0 69 #421 202 #98 200 53 111 185 533 500 250 165 100 480 2865 124 1712 642 365 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	457 1266 56 714 181 117 377 0.95 0.44 0.45 0.42 0.28 0.44 0.52 55.7 14.4 46.1 28.5 5.7 37.3 36.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 55.7 14.4 46.1 28.5 5.7 37.3 36.7 229 174 30 138 0 69 118 #421 202 #98 200 53 111 147 185 533 588 500 250 165 100 480 2865 124 1712 642 365 981 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	457 1266 56 714 181 117 377 161 0.95 0.44 0.45 0.42 0.28 0.44 0.52 0.88 55.7 14.4 46.1 28.5 5.7 37.3 36.7 77.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 55.7 14.4 46.1 28.5 5.7 37.3 36.7 77.9 229 174 30 138 0 69 118 108 #421 202 #98 200 53 111 147 #178 185 533 588 500 250 165 100 135 480 2865 124 1712 642 365 981 251 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 <t< td=""><td>457 1266 56 714 181 117 377 161 139 0.95 0.44 0.45 0.42 0.28 0.44 0.52 0.88 0.33 55.7 14.4 46.1 28.5 5.7 37.3 36.7 77.9 33.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 55.7 14.4 46.1 28.5 5.7 37.3 36.7 77.9 33.4 229 174 30 138 0 69 118 108 79 #421 202 #98 200 53 111 147 #178 119 185 533 588 1180 500 250 165 100 135 480 2865 124 1712 642 365 981 251 572 0 0 0 0 0 0</td><td>457 1266 56 714 181 117 377 161 139 426 0.95 0.44 0.45 0.42 0.28 0.44 0.52 0.88 0.33 0.65 55.7 14.4 46.1 28.5 5.7 37.3 36.7 77.9 33.4 7.9 0.0</td></t<>	457 1266 56 714 181 117 377 161 139 0.95 0.44 0.45 0.42 0.28 0.44 0.52 0.88 0.33 55.7 14.4 46.1 28.5 5.7 37.3 36.7 77.9 33.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 55.7 14.4 46.1 28.5 5.7 37.3 36.7 77.9 33.4 229 174 30 138 0 69 118 108 79 #421 202 #98 200 53 111 147 #178 119 185 533 588 1180 500 250 165 100 135 480 2865 124 1712 642 365 981 251 572 0 0 0 0 0 0	457 1266 56 714 181 117 377 161 139 426 0.95 0.44 0.45 0.42 0.28 0.44 0.52 0.88 0.33 0.65 55.7 14.4 46.1 28.5 5.7 37.3 36.7 77.9 33.4 7.9 0.0

Intersection Summary

^{# 95}th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

	٠	→	•	•	—	4	1	†	/	/	↓	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	ተ ተኈ		ች	ተተተ	7	*	↑ ↑		ሻ	†	7
Traffic Volume (vph)	457	1214	52	56	714	181	117	214	163	161	139	426
Future Volume (vph)	457	1214	52	56	714	181	117	214	163	161	139	426
Ideal Flow (vphpl)	1650	1700	1750	1650	1700	1750	1650	1750	1750	1650	1750	1700
Lane Width	12	13	12	13	12	13	12	12	13	11	11	11
Grade (%)		0%			-4%			0%			0%	
Total Lost time (s)	7.0	6.5		6.5	6.5	6.5	7.0	7.0		7.0	7.0	7.0
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.95	1.00	0.99		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		0.98	1.00	1.00	0.98	1.00		0.99	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1533	4590		1540	4641	1433	1503	2841		1477	1658	1313
FIt Permitted	0.27	1.00		0.21	1.00	1.00	0.67	1.00		0.47	1.00	1.00
Satd. Flow (perm)	441	4590		337	4641	1433	1057	2841		727	1658	1313
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	457	1214	52	56	714	181	117	214	163	161	139	426
RTOR Reduction (vph)	0	3	0	0	0	114	0	0	0	0	0	318
Lane Group Flow (vph)	457	1263	0	56	714	67	117	377	0	161	139	108
Confl. Peds. (#/hr)	32		73	73		32	31		12	12		31
Confl. Bikes (#/hr)			1			1						3
Heavy Vehicles (%)	2%	2%	2%	5%	2%	4%	2%	3%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	9	9	0	0	0	0	2	0	0	0	0
Parking (#/hr)								0	0			
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)	68.6	68.6		40.6	40.6	40.6	27.9	27.9		27.9	27.9	27.9
Effective Green, g (s)	68.6	68.6		40.6	40.6	40.6	27.9	27.9		27.9	27.9	27.9
Actuated g/C Ratio	0.62	0.62		0.37	0.37	0.37	0.25	0.25		0.25	0.25	0.25
Clearance Time (s)	7.0	6.5		6.5	6.5	6.5	7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	3.0	0.2		0.2	0.2	0.2	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	483	2862		124	1712	528	268	720		184	420	333
v/s Ratio Prot	c0.18	0.28			0.15			0.13			0.08	
v/s Ratio Perm	c0.41			0.17		0.05	0.11			c0.22		0.08
v/c Ratio	0.95	0.44		0.45	0.42	0.13	0.44	0.52		0.88	0.33	0.32
Uniform Delay, d1	14.9	10.7		26.3	25.9	23.0	34.5	35.3		39.4	33.4	33.4
Progression Factor	1.74	1.16		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	26.6	0.5		11.4	0.8	0.5	1.1	0.7		33.9	0.5	0.6
Delay (s)	52.6	12.9		37.7	26.6	23.5	35.6	36.0		73.2	33.9	34.0
Level of Service	D	В		D	С	С	D	D		E	С	С
Approach Delay (s)		23.4			26.7			35.9			42.7	
Approach LOS		С			С			D			D	
Intersection Summary												
HCM 2000 Control Delay			29.4	Н	CM 2000	Level of	Service		С			
HCM 2000 Volume to Capa	city ratio		0.96									
Actuated Cycle Length (s)			110.0		um of lost	. ,			20.5			
Intersection Capacity Utiliza	ition		105.7%	IC	CU Level of	of Service			G			

3130 Langston Boulevard 4: N Kirkwood Rd/Spout Run Pkwy & Lee Hwy.

Analysis Period (min) c Critical Lane Group

15

			_	_	Ι.	,	_
		→	-	_	*	*	
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		ર્ન	£		, A		
Traffic Volume (veh/h)	2	472	233	9	25	6	
Future Volume (Veh/h)	2	472	233	9	25	6	
Sign Control		Free	Free		Stop		
Grade		0%	0%		0%		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	2	472	233	9	25	6	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type		None	None				
Median storage veh)							
Upstream signal (ft)			668				
pX, platoon unblocked	0.95				0.95	0.95	
vC, conflicting volume	242				714	238	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	177				673	173	
tC, single (s)	4.1				6.4	6.2	
tC, 2 stage (s)							
tF (s)	2.2				3.5	3.3	
p0 queue free %	100				94	99	
cM capacity (veh/h)	1330				399	828	
Direction, Lane #	EB 1	WB 1	SB 1				
Volume Total							
	474	242	31				
Volume Left	2	0	25				
Volume Right	0	9	6				
cSH	1330	1700	444				
Volume to Capacity	0.00	0.14	0.07				
Queue Length 95th (ft)	0	0	6				
Control Delay (s)	0.0	0.0	13.7				
Lane LOS	A	2.0	В				
Approach Delay (s)	0.0	0.0	13.7				
Approach LOS			В				
Intersection Summary							
Average Delay			0.6				
Intersection Capacity Utiliza	ation		36.4%	IC	U Level c	f Service	
Analysis Period (min)			15				

	→	•	←
	EDT	WDI	WDT
Lane Group	EBT	WBL	WBT
Lane Group Flow (vph)	1042	249	1303
v/c Ratio	0.30	0.55	0.37
Control Delay	4.7	6.4	5.2
Queue Delay	0.0	0.0	0.3
Total Delay	4.7	6.4	5.5
Queue Length 50th (ft)	59	3	81
Queue Length 95th (ft)	112	5	150
Internal Link Dist (ft)	451		351
Turn Bay Length (ft)		185	
Base Capacity (vph)	3529	747	3508
Starvation Cap Reductn	0	0	1349
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.30	0.33	0.60
	0.00	7.00	7.00
Intersection Summary			

New Configurations
Configurations ### Artific Volume (vph)
affic Volume (vph) 1005 37 249 1303 0 0 ature Volume (vph) 1005 37 249 1303 0 0 all Flow (vphpl) 1750 1750 1650 1775 1900 1900 ade (%) -3% 3% 0% atal Lost time (s) 7.5 7.5 7.5 ne Util. Factor 0.91 1.00 0.91 ab, ped/bikes 0.99 1.00 1.00 b, ped/bikes 1.00 0.99 1.00 Protected 1.00 0.95 1.00 td. Flow (prot) 4702 1503 4679
ture Volume (vph) 1005 37 249 1303 0 0 all Flow (vphpl) 1750 1650 1775 1900 1900 ade (%) -3% 3% 0% tal Lost time (s) 7.5 7.5 ne Util. Factor 0.91 1.00 0.91 ab, ped/bikes 0.99 1.00 1.00 b, ped/bikes 1.00 0.99 1.00 Protected 1.00 0.95 1.00 td. Flow (prot) 4702 1503 4679
Ital Flow (vphpl) 1750 1750 1650 1775 1900 1900 Ital Lost time (s) 7.5 7.5 7.5 Ine Util. Factor 0.91 1.00 0.91 Ine Util. Factor 0.99 1.00 1.00 Ine Util. Factor 0.99 1.00 1.00
ade (%) -3% 3% 0% tal Lost time (s) 7.5 7.5 7.5 ne Util. Factor 0.91 1.00 0.91 ab, ped/bikes 0.99 1.00 1.00 b, ped/bikes 1.00 0.99 1.00 b, ped/bikes 1.00 0.99 1.00 Protected 1.00 0.95 1.00 td. Flow (prot) 4702 1503 4679
tal Lost time (s) 7.5 7.5 7.5 ne Util. Factor 0.91 1.00 0.91 bb, ped/bikes 0.99 1.00 1.00 bb, ped/bikes 1.00 0.99 1.00 0.99 1.00 1.00 Protected 1.00 0.95 1.00 td. Flow (prot) 4702 1503 4679
ne Util. Factor 0.91 1.00 0.91 bb, ped/bikes 0.99 1.00 1.00 b, ped/bikes 1.00 0.99 1.00 0.99 1.00 1.00 Protected 1.00 0.95 1.00 td. Flow (prot) 4702 1503 4679
bb, ped/bikes 0.99 1.00 1.00 bb, ped/bikes 1.00 0.99 1.00 0.99 1.00 1.00 Protected 1.00 0.95 1.00 td. Flow (prot) 4702 1503 4679
b, ped/bikes 1.00 0.99 1.00 0.99 1.00 1.00 Protected 1.00 0.95 1.00 td. Flow (prot) 4702 1503 4679
0.99 1.00 1.00 Protected 1.00 0.95 1.00 td. Flow (prot) 4702 1503 4679
Protected 1.00 0.95 1.00 td. Flow (prot) 4702 1503 4679
td. Flow (prot) 4702 1503 4679
0
remilled 1.00 0.20 1.00
td Flour (norm) 4700 445 4670
td. Flow (perm) 4702 415 4679
ak-hour factor, PHF 1.00 1.00 1.00 1.00 1.00
i. Flow (vph) 1005 37 249 1303 0 0
OR Reduction (vph) 2 0 0 0 0 0
ne Group Flow (vph) 1040 0 249 1303 0 0
nfl. Peds. (#/hr) 64 64 2
nfl. Bikes (#/hr) 2
rn Type NA pm+pt NA
otected Phases 2 1 6
rmitted Phases 6
tuated Green, G (s) 75.0 85.0 75.0
ective Green, g (s) 75.0 85.0 75.0
tuated g/C Ratio 0.75 0.85 0.75
earance Time (s) 7.5 7.5 7.5
hicle Extension (s) 0.2 2.0 0.2
ne Grp Cap (vph) 3526 461 3509
Ratio Prot 0.22 c0.05 0.28
Ratio Perm c0.40
Ratio 0.29 0.54 0.37
iform Delay, d1 4.0 1.3 4.3
ogression Factor 1.00 1.00 1.00
remental Delay, d2 0.2 0.7 0.3
lay (s) 4.2 2.0 4.6
vel of Service A A A
proach Delay (s) 4.2 4.2 0.0
proach LOS A A A
ersection Summary
M 2000 Control Delay 4.2 HCM 2000 Level of Service A
M 2000 Control Delay 4.2 HCM 2000 Level of Service A M 2000 Volume to Capacity ratio 0.54
M 2000 Control Delay 4.2 HCM 2000 Level of Service A
M 2000 Control Delay 4.2 HCM 2000 Level of Service A M 2000 Volume to Capacity ratio 0.54
M 2000 Control Delay 4.2 HCM 2000 Level of Service A M 2000 Volume to Capacity ratio 0.54 tuated Cycle Length (s) 100.0 Sum of lost time (s) 15.0

	→	•	4	~
Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	1008	1527	28	425
v/c Ratio	0.26	0.39	0.16	0.33
Control Delay	4.9	4.2	39.5	1.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.9	4.2	39.5	1.7
Queue Length 50th (ft)	47	49	18	0
Queue Length 95th (ft)	165	176	34	46
Internal Link Dist (ft)	351	246	341	
Turn Bay Length (ft)			275	
Base Capacity (vph)	3947	3916	546	1286
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.26	0.39	0.05	0.33
Intersection Summary				

	→	\rightarrow	•	←	4	<i>></i>		
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	^			^	W	7		
Traffic Volume (vph)	1008	0	0	1527	28	425		
Future Volume (vph)	1008	0	0	1527	28	425		
Ideal Flow (vphpl)	1775	1775	1775	1775	1700	1700		
Lane Width	12	12	12	12	12	14		
Grade (%)	-3%			0%	-4%			
Total Lost time (s)	6.0			5.0	8.5	6.0		
Lane Util. Factor	0.91			0.91	1.00	0.95		
Frpb, ped/bikes	1.00			1.00	1.00	1.00		
Flpb, ped/bikes	1.00			1.00	1.00	1.00		
Frt	1.00			1.00	1.00	0.85		
Flt Protected	1.00			1.00	0.95	1.00		
Satd. Flow (prot)	4764			4694	1615	1464		
Flt Permitted	1.00			1.00	0.95	1.00		
Satd. Flow (perm)	4764			4694	1615	1464		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00		
Adj. Flow (vph)	1008	0	0	1527	28	425		
RTOR Reduction (vph)	0	0	0	0	0	96		
Lane Group Flow (vph)	1008	0	0	1527	28	329		
Confl. Peds. (#/hr)		56	56		2	3 _0		
Heavy Vehicles (%)	2%	3%	2%	2%	2%	2%		
Bus Blockages (#/hr)	9	0	9	9	0	0		
Turn Type	NA			NA	Prot	Perm		
Protected Phases	2			6	4			
Permitted Phases	-				•	2		
Actuated Green, G (s)	81.2			82.2	9.3	81.2		
Effective Green, g (s)	81.2			82.2	9.3	81.2		
Actuated g/C Ratio	0.77			0.78	0.09	0.77		
Clearance Time (s)	6.0			5.0	8.5	6.0		
Vehicle Extension (s)	2.0			2.0	2.0	2.0		
Lane Grp Cap (vph)	3684			3674	143	1132		
v/s Ratio Prot	0.21			c0.33	c0.02	1102		
v/s Ratio Perm	V.Z I			55.50	03.0L	0.22		
v/c Ratio	0.27			0.42	0.20	0.29		
Uniform Delay, d1	3.4			3.7	44.4	3.5		
Progression Factor	1.00			0.76	1.00	1.00		
Incremental Delay, d2	0.2			0.3	0.2	0.6		
Delay (s)	3.6			3.1	44.6	4.1		
Level of Service	Α			A	T-1.0	A		
Approach Delay (s)	3.6			3.1	6.6	7.		
Approach LOS	Α			A	A			
				• •	· ·			
Intersection Summary			2.0	1 1.	CM 2000	Lovel of Carris		
HCM 2000 Control Delay HCM 2000 Volume to Capa	noity rotio		3.8	H	CIVI ZUUU	Level of Service	e e	
·	acity ratio		0.40	C.	ım of loc	time (a)		1.
Actuated Cycle Length (s)	ation		105.0		um of lost			14
Intersection Capacity Utiliza	auon		54.3%	IC	U Level C	of Service		
Analysis Period (min)			15					
c Critical Lane Group								

	٠	→	—	•	\	4				
Movement	EBL	EBT	WBT	WBR	SBL	SBR				
Lane Configurations	ሻ	^	† †	WDIC	¥	OBIT				
Traffic Volume (veh/h)	41	1365	1417	54	8	62				
Future Volume (Veh/h)	41	1365	1417	54	8	62				
Sign Control	41	Free	Free	54	Stop	02				
Grade		0%	0%		0%					
	1.00			1.00		1.00				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				
Hourly flow rate (vph)	41	1365	1417	54	8	62				
Pedestrians										
Lane Width (ft)										
Walking Speed (ft/s)										
Percent Blockage										
Right turn flare (veh)										
Median type		None	None							
Median storage veh)										
Upstream signal (ft)		326	265							
pX, platoon unblocked	0.86				0.88	0.86				
vC, conflicting volume	1471				1981	499				
vC1, stage 1 conf vol										
vC2, stage 2 conf vol										
vCu, unblocked vol	964				1278	0				
tC, single (s)	4.1				6.8	6.9				
tC, 2 stage (s)										
tF (s)	2.2				3.5	3.3				
p0 queue free %	93				94	93				
cM capacity (veh/h)	608				130	929				
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	SB 1		
Volume Total	41	455	455	455	567	567	337	70		
Volume Left	41	0	0	0	0	0	0	8		
Volume Right	0	0	0	0	0	0	54	62		
cSH	608	1700	1700	1700	1700	1700	1700	545		
Volume to Capacity	0.07	0.27	0.27	0.27	0.33	0.33	0.20	0.13		
								11		
Queue Length 95th (ft)	5	0	0	0	0	0	0			
Control Delay (s)	11.3	0.0	0.0	0.0	0.0	0.0	0.0	12.6		
Lane LOS	В				0.0			B		
Approach Delay (s)	0.3				0.0			12.6		
Approach LOS								В		
Intersection Summary										
Average Delay			0.5							
Intersection Capacity Utiliza	tion		45.0%	IC	CU Level of	of Service			Α	
Analysis Period (min)			15							

4: N Kirkwood Rd/Spout Run Pkwy & Lee Hwy.

	•	→	•	•	•	•	†	\	ļ	4	
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	
Lane Group Flow (vph)	496	876	98	957	213	93	311	175	229	424	
v/c Ratio	1.39	0.31	0.48	0.50	0.30	0.44	0.42	0.80	0.54	0.72	
Control Delay	211.6	8.0	36.4	25.5	4.8	36.8	32.7	61.0	36.7	14.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	211.6	8.0	36.4	25.5	4.8	36.8	32.7	61.0	36.7	14.4	
Queue Length 50th (ft)	~339	93	47	171	0	52	91	110	132	46	
Queue Length 95th (ft)	#553	55	#136	252	53	89	113	170	180	140	
Internal Link Dist (ft)		185		533			588		1180		
Turn Bay Length (ft)	500		250		165	100		135			
Base Capacity (vph)	357	2782	206	1921	718	296	1046	306	600	691	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	1.39	0.31	0.48	0.50	0.30	0.31	0.30	0.57	0.38	0.61	

Intersection Summary

Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

^{# 95}th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

	۶	→	•	•	—	4	1	†	/	/	↓	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	ተ ተኈ		*	ተተተ	7	*	↑ ↑		ሻ		7
Traffic Volume (vph)	496	791	85	98	957	213	93	212	99	175	229	424
Future Volume (vph)	496	791	85	98	957	213	93	212	99	175	229	424
Ideal Flow (vphpl)	1650	1700	1750	1650	1700	1750	1650	1750	1750	1650	1750	1700
Lane Width	12	13	12	13	12	13	12	12	13	11	11	11
Grade (%)		0%			-4%			0%			0%	
Total Lost time (s)	7.0	6.5		6.5	6.5	6.5	7.0	7.0		7.0	7.0	7.0
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.95	1.00	0.99		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		0.97	1.00	1.00	0.98	1.00		0.99	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1535	4518		1519	4641	1435	1510	2892		1476	1658	1315
Flt Permitted	0.20	1.00		0.31	1.00	1.00	0.52	1.00		0.55	1.00	1.00
Satd. Flow (perm)	322	4518		499	4641	1435	820	2892		848	1658	1315
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	496	791	85	98	957	213	93	212	99	175	229	424
RTOR Reduction (vph)	0	10	0	0	0	125	0	0	0	0	0	250
Lane Group Flow (vph)	496	866	0	98	957	88	93	311	0	175	229	174
Confl. Peds. (#/hr)	32		73	73		32	31		12	12		31
Confl. Bikes (#/hr)			1			1						3
Heavy Vehicles (%)	2%	2%	2%	5%	2%	4%	2%	3%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	9	9	0	0	0	0	3	0	0	0	0
Parking (#/hr)								0	0			
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)	64.5	64.5		43.5	43.5	43.5	27.0	27.0		27.0	27.0	27.0
Effective Green, g (s)	64.5	64.5		43.5	43.5	43.5	27.0	27.0		27.0	27.0	27.0
Actuated g/C Ratio	0.61	0.61		0.41	0.41	0.41	0.26	0.26		0.26	0.26	0.26
Clearance Time (s)	7.0	6.5		6.5	6.5	6.5	7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	3.0	0.2		0.2	0.2	0.2	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	359	2775		206	1922	594	210	743		218	426	338
v/s Ratio Prot	c0.18	0.19			0.21			0.11			0.14	
v/s Ratio Perm	c0.66			0.20		0.06	0.11			c0.21		0.13
v/c Ratio	1.38	0.31		0.48	0.50	0.15	0.44	0.42		0.80	0.54	0.51
Uniform Delay, d1	17.4	9.7		22.4	22.7	19.2	32.7	32.5		36.5	33.6	33.4
Progression Factor	1.18	0.72		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	187.9	0.3		7.7	0.9	0.5	1.5	0.4		18.8	1.3	1.3
Delay (s)	208.4	7.3		30.1	23.6	19.7	34.2	32.8		55.4	34.9	34.7
Level of Service	F	Α		С	С	В	С	С		E	С	С
Approach Delay (s)		80.0			23.5			33.2			39.1	
Approach LOS		E			С			С			D	
Intersection Summary												
HCM 2000 Control Delay			47.8	Н	CM 2000	Level of	Service		D			
HCM 2000 Volume to Capac	city ratio		1.25									
Actuated Cycle Length (s)			105.0	S	um of lost	t time (s)			20.5			
Intersection Capacity Utilizat	tion		108.5%	IC	CU Level of	of Service			G			

3130 Langston Boulevard 4: N Kirkwood Rd/Spout Run Pkwy & Lee Hwy.

Analysis Period (min) c Critical Lane Group

15

	٠	→	+	4	\	4	
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		र्स	₽		W		
Traffic Volume (veh/h)	6	386	381	24	15	8	
Future Volume (Veh/h)	6	386	381	24	15	8	
Sign Control		Free	Free		Stop		
Grade		0%	0%		0%		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	6	386	381	24	15	8	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type		None	None				
Median storage veh)							
Upstream signal (ft)			668				
pX, platoon unblocked	0.90				0.90	0.90	
vC, conflicting volume	405				791	393	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	285				714	272	
tC, single (s)	4.1				6.4	6.2	
tC, 2 stage (s)							
tF (s)	2.2				3.5	3.3	
p0 queue free %	99				96	99	
cM capacity (veh/h)	1151				357	691	
Direction, Lane #	EB 1	WB 1	SB 1				
Volume Total	392	405	23				
Volume Left	6	0	15				
Volume Right	0	24	8				
cSH	1151	1700	429				
Volume to Capacity	0.01	0.24	0.05				
Queue Length 95th (ft)	0	0	4				
Control Delay (s)	0.2	0.0	13.9				
Lane LOS	Α		В				
Approach Delay (s)	0.2	0.0	13.9				
Approach LOS			В				
Intersection Summary							
Average Delay			0.5				
Intersection Capacity Utiliz	zation		35.1%	IC	U Level c	f Service	
Analysis Period (min)			15				



2100 Clarendon Boulevard, Arlington, VA 22201

7/24/2024

CONCEPTUAL SITE PLAN

The information discussed in this report is reflective of staff comments only and should not be considered the official position of the County Manager, Arlington County Board, and/or of any Arlington County commission or committee. Staff comments are not intended to reflect the sum total of all policy issues, and staff reserves the right to provide additional comments as the subject special exception application completes the public review process. All special exception applications are subject to the standards set forth in the Arlington County Zoning Ordinance and relevant guidance from sector plans, area plans, and other adopted policy documents, and require approval by the County Board. Please contact the Planning Division Project Manager for clarification of the comments.

Project ID: SPLC24-00006 Alternate ID: SPLC24-00006

Project Name: 3130 Langston Boulevard

KEY PROJECT COMMENTS

For Site Plan Application:

- Please ensure that 3D renderings for adjacent sites are consistent with the images shown in the Langston Boulevard Area Plan (LBAP), and also clearly and accurately depict what is labelled.
- Please provide a density analysis with an eventual site plan application that breaks down the density based on use and enumerates the amount of proposed additional density.
- Please begin the conversation with the Planning and Housing Divisions on the contribution for on-site affordable housing units in exchange for the proposed GLUP amendment.
- Please provide an analysis of the buildable area for the site plan so staff can adequately evaluate against the LBAP guidance.
- This site is in an area with significant stormwater-related challenges. Please review whether an overland relief area is needed with DES staff. Please also provide Resource Protection Area (RPA) information with the site plan application.
- Please provide information with the site plan application that speaks to how the project will meet LBAP biophilic design guidelines.

Preliminary Policy Implications:

- The LBAP recommends a 5,000-sf public space on site, and it appears from the information provided that what is proposed is somewhat less than that amount. Please be prepared to show a public space as recommended by the plan, with sufficient details including size, or be prepared to provide a justification for this plan deviation for further review.
- The LBAP recommends a 10-ft stepback above the building base along the Langston Boulevard frontage. Please adjust plans to provide this stepback in full or provide justification for this plan deviation.



2100 Clarendon Boulevard, Arlington, VA 22201

- As proposed, the applicant will need to request a modification of Zoning standards for the proposed number of loading spaces. In addition, standard site plan conditions require a minimum of one 40 ft-deep loading space to accommodate larger vehicles.
- Please work with staff to meet recommended tree canopy coverage guidelines on the subject site.

Project and Document Comments

Department	Comment ID	Sheet	Reviewer	Comment	Comment Response
CIP - DPR -	DPR-Plan-1	L-01 LA	WGONZAL	Plan Langston Blvd - Pg. 117 - Area	The plans now show the addition of a
Planner		CONCEPT	EZ	5 (West) Public Space Network Map	dog run that will be connected to and
Reviewer					expand the area of the public park space.
				calls for a minimum 5,000 sq. ft.	The total square footage of the land area
				<u> </u>	of this public park will meet the 5,000 s.f.
				- Plaza / Park Hybrid [combination	requirement.
				of plaza and park experiences + amenities]	
				The proposed parklet size based on the	
				provided scale does not meet the min.	
				5,000 sq. ft. and measures roughly at	
				2,400 sq. ft.	
				The surrounding green space buffer	
				shown including greenways and	
				storm water greenways do not count	
				towards the proposed public space	
				minimum sq. ft.	
				Please show a contiguous public	
				space with the minimum 5,000 sq. ft.	
				size requirement in future	
				submissions.	



		1			
CPHD	CPHD-	3130 Langston	NALFONSO	Staff does not recommend showing	The plans no longer include the massing
Comprehensive	COMP1	Concept Plan	-AHMED	the massing of potential surrounding	of potential surrounding development.
Planning		Set 5-20-24 lr		development in the 3D diagrams for	
				the Site Plan submittal. The building	
				forms depicted in the Conceptual	
				Plan's 3D diagrams are not in line	
				with the 3D illustrations in the	
				Langston Boulevard Area Plan and	
				can cause confusion in the	
				community about what is appropriate	
				and/or may be expected in the future.	
				Another option is to insert the	
				massing from the 3D model that was	
				created for Langston	
				Boulevard for consistency.	
CPHD	CPHD-	A10	NALFONSO	LB: Please show dimension from	Dimension shown on sheet C-08.
Comprehensive	COMP2		-AHMED	build to line to center line of	
Planning				roadway.	
CPHD	CPHD-	A10	NALFONSO	Kirkwood: Please show dimension	Dimension shown on sheet C-08.
Comprehensive	COMP3		-AHMED	from build to line to centerline of	
Planning				roadway.	
CPHD	CPHD-	A10	NALFONSO	Page 161 of LB Plan:	The Applicant has worked closely with its
Comprehensive	COMP4		-AHMED		architect to attempt to meet this guidance.
Planning				"In Area 5 West, along the Langston	The purpose of the building layout and
				Boulevard and Spout Run Parkway	design as shown is to shift as much density
				frontagesabove the 7th floor should	as possible towards that portion of the site
				step back from the façade of the	bordering I-66 and Langston Boulevard and
				podium at least 10 feet." The concept	away from the Lyon Village community. Adding a step back would force the
				plan shows a small stepback along	Applicant to move density closer to the
				Langston Boulevard above the 3rd	Lyon Village community. Given the type of
				story (and up to the 12 story).	construction for this project, a 10-foot
				Staff recommends adjusting the	setback of the tower along Langston
				stepback to 10 feet, if practical, to	Boulevard would be very difficult to do
				create a similar pedestrian scale along	



				Langston Boulevard. No concern with stepback along Kirkwood Road.	especially if we were to consider a 10-foot setback at the 7th floor level. The amount of additional steel, structural challenges and the lack of stacking would make the project cost prohibitive.
CPHD Comprehensive Planning	CPHD- COMP5	A02	NALFONSO -AHMED	It is unclear what the proposed setback is along N. Kirkwood Road. Staff recommends the Applicant show the dimension from build-to-line to center line of the road.	Dimension shown on sheet C-08
				The Applicant should also consider providing door yards for the ground floor units to provide additional spaces for landscaping and privacy.	The unit entries have been setback off the sidewalk with stoop-like steps and terraced planters serving to give relief to the façade and individualizing the front door experience. Setting the units back further would affect the traffic flow of the garage and result in a significant loss of parking.
CPHD Comprehensive Planning	CPHD- COMP6	A02	NALFONSO -AHMED	Langston Boulevard: Staff will defer to DES for their direction, but preliminarily recommends the Applicant conduct an operational study to identify whether the Plan's recommended cross section for Langston Boulevard (east of Spout Run) is feasible at this location (west of Spout Run).	Dimension shown on sheet C-08
				It is unclear what the proposed setback is along Langston Boulevard, however, it appears to be greater than 59 feet from the center line of the road. Staff recommends the	Dimension shown on sheet C-08



				Applicant show the dimension from build-to-line to center line of the road	
				Staff requests the Applicant acknowledge the Plan's recommendations for improvements under the I-66 overpass and explain if/how they plan to address those recommendations.	The applicant acknowledges the Plan's recommendations and is reviewing how it can address those recommendations related to area under the I-66 overpass.
				The Applicant should be prepared to indicate how the site plan application will be consistent with the recommendations for ground floor priority areas, including appropriate locations for building amenity/retail/retail equivalent uses that do not hinder achievement of the primary frontages to support pedestrian and bicycle-based activities	Priority ground floor spaces have been placed along the entire extent of Langston Boulevard frontage to promote pedestrian and bicycle activities.
CPHD Comprehensive Planning	CPHD- COMP7	A02	NALFONSO -AHMED	Along Kirkwood: While the 50 feet wide setback applies mostly to the property to the east, the Pawn Shop, this site may also need to provide space for overland relief. This should be evaluated by the DES team to determine if additional setback along Kirkwood Road is necessary along with more specific flood resilient design.	Acknowledged. An overland relief path has been maintained along the property line with the Pawn Shop site to allow any floodwater that is ponding at the upstream end of the culverts under Kirkwood Road to proceed toward Langston Blvd. and ultimately down Spout Run Parkway.
CPHD Current Planning	CPHD- CURR-1	A02	PSCHULZ	Spaces fronting Langston Boulevard should follow the interior and exterior design standards for "Gold"	A minimum of 65% transparency has been achieved (actual approx. 71%). Greater than 15' clear height has been achieved for



				streets from the Arlington Retail Plan. 65% transparency between 2- 10 feet above grade; interior clear height of at least 15 feet; minimum 20 foot depth; direct access to service corridors for deliveries and trash removal; consider noise mitigation.	the NE corner retail space. A service pathway and egress corridor is directly behind this space.
CPHD Current Planning	CPHD- CURR-2		PSCHULZ	To what Zoning District do you propose to rezone?	C-O-2.5
CPHD Current Planning	CPHD- CURR-3		PSCHULZ	To what GLUP category do you propose to re-GLUP? Be aware that a change in GLUP triggers ACZO 15.5.8.H. Negotiate Affordable Housing Contribution jointly with Aaron Shriber and the Housing Division. This is in addition to the Affordable Housing requirements of 15.5.8.A-G. and any on-site affordable housing you may offer in order to earn additional density above the limit of the proposed zoning district.	Medium O-A-H. The Applicant has reached out to Aaron Shriber to begin a dialogue on this topic.
CPHD Current Planning	CPHD- CURR-4	A17 MATRIX	PSCHULZ	When filing site plan, need to know the proposed Zoning District and the permitted maximum density in that district. Calculate how much additional density you are requesting over the maximum density permitted by the proposed Zoning District (if indeed you are asking for additional density over that permitted by the proposed zoning district). Please be	



CPLID	CDUD	402	DCCITI II 7	cognizant some zoning districts calculate residential density by units per acre (not FAR). Calculate commercial density and residential density separately. You cannot count the same site area twice for the purposes of calculating mixeduse density.	
CPHD Current Planning	CPHD- CURR-5	A02	PSCHULZ	Can you move the townhouses back to create planted dooryards between the sidewalk and building facades?	The unit entries have been set back off the sidewalk with stoop-like steps and terraced planters serving to give relief to the façade and individualizing the front door experience. Setting the units back further would affect the traffic flow of the garage and result in a significant loss of parking.
CPHD Current Planning	CPHD- CURR-6	A02	PSCHULZ	Loading and trash spaces do not look like they meet our standards (no measurements). At least one loading space must be 40 feet in length. Be advised the staff and the County Board will not support deviations from the standard. Our standard site plan condition for loading and trash spaces states: Interior Loading Spaces (Footing to Grade Permit) The Developer agrees to obtain approval from the Zoning Administrator of drawings showing compliance with this condition prior to the issuance of the Footing to Grade Permit. The Developer agrees	Two interior loading spaces shall be provided: 1 @ 40' and 1 @ 25' loading spaces - both 12' wide have been provided. The clear height at these spaces is >20'.



СРНО	CPHD-	A02	PSCHULZ	that all loading spaces shall be in the interior of the building and shall also comply with the following requirements: A. Minimum 12-foot clear width, including entrances, and minimum 14-foot clear height, however, any loading dock to be used for trash removal shall have a minimum interior height clearance of 15 feet. B. At least one loading space shall have a minimum 40-foot clear length. There should be three (3) loading	Two loading spaces have been provided.
Current Planning	CURR-7			spaces according to the Zoning Ordinance: 1 (1) loading space for	The limited frontage on Kirkwood and tight parking conditions do not allow for a
				the retail/retail equivalent; and two	3rd loading space. The proposed two
				(2) for the residential use. Staff does	loading spaces will be managed and
				not support reductions in the loading	shared between the residential building
CDLID	CDLID	A O 1	DCCIIII 7	standards.	and the retail/retail equivalent uses.
CPHD Current	CPHD- CURR-8	A01	PSCHULZ	Can the bike storage be immediately off the street, or on the main level?	The design intent is for bike storage to be in the lower level, saving ground level
Planning	CURK-6			off the street, of oil the main lever?	spaces for more active amenities. The
Tallining					resident bike storage is immediately
					adjacent to the service elevator off the rear
					lobby. Visitor bike parking spaces will be
					provided along Langston Boulevard.



CPHD Current Planning	CPHD- CURR-10	A06	PSCHULZ	From Langston Plan, p. 161: Along Langston Boulevard in this area stories above the 7th story should step back from podium facade at least 10 feet. When filing your site plan, please prepare an exhibit that demonstrates compliance.	The Applicant has worked closely with its architect to attempt to meet this guidance. The purpose of the building layout and design as shown is to shift as much density as possible towards that portion of the site bordering I-66 and Langston Boulevard and away from the Lyon Village community. Adding a step back would force the Applicant to move density closer to the Lyon Village community. Given the type of construction for this project, a 10-foot setback of the tower along Langston Boulevard would be very difficult to do especially if we were to consider a 10-foot setback at the 7th floor level. The amount of additional steel, structural challenges and the lack of stacking would make the project cost prohibitive.
CPHD Current Planning	CPHD- CURR-11	L-01 LA CONCEPT	PSCHULZ	P. 169 of the Langston Plan: 25% of the buildable area should be private open space. When filing plan, please verify (do not include parklet, which will be public).	Acknowledged. Private and public open space has been indicated on the plan set.
CPHD Current Planning	CPHD- CURR-12	L-01 LA CONCEPT	PSCHULZ	Consider a dog run in the rooftop private space.	A dog run has been provided at the ground level.
CPHD Current Planning	CPHD- CURR-13	A17 MATRIX	PSCHULZ	Please bring the compact space percentage down to 15% or below.	For the required parking spaces, the proportion of compact spaces will be 15% or less. Any additional compact spaces are being provided in excess of the required parking minimum.



CPHD Current Planning	CPHD- CURR-14		MPFEIFFER	The concept plan indicates that the size of the proposed courtyard space is 10,880 SF and the roof deck is an additional 2,082 SF, for a total of 12,962 SF. The Applicant should provide more detailed information in the site plan application showing the extent and amount of buildable area and how it compares with the Plan's guidance.	Additional information on both terrace and podium, as well as the ground level, has been indicated on the plan set.
CPHD Current Planning	CPHD- CURR-15		MPFEIFFER	The Conceptual Plan lacks definition about the size of the proposed public space, however, it appears to be significantly smaller than 5,000 sf. If the Applicant proposes something less, a clear rationale should be provided along with a description of an alternative to offset this deviation from the Plan's guidance. Staff recommends adding a sidewalk along the west facade facing the public space and evaluating the opportunity for providing a crosswalk to Kirkwood Park at that location.	Additional information on both terrace and podium, as well as the ground level, has been indicated on the plan set. A sidewalk has been added along the west facade.
CPHD Urban Design	CPHD-UD-1	3130 Langston Concept Plan Set 5-20-24 lr	KKRIDER	Drawings should be corrected as the views include proposed and not just existing.	Acknowledged.
CPHD Urban Design	CPHD-UD-2	L-01 LA CONCEPT	KKRIDER	Make sure columnar trees are a minimum 10ft. away from the building facade	Acknowledged - all trees have been placed a minimum 10 feet away from building façade.



CPHD Urban Design	CPHD-UD-3	L-01 LA CONCEPT	KKRIDER	Provide an alternative description of the area described as a 'parklet' as the term is commonly associated with the conversion of a parking space to a public seating area. Consider ways to mitigate noise from the adjacent interstate highway. Consider making this area a POPS - Privately Owned Public Space	The park area has been labeled as a plaza / park hybrid per the Langston Boulevard Area Plan. This area is going to be a POPS and is labeled as such.
CPHD Urban Design	CPHD-UD-4	L-01 LA CONCEPT	KKRIDER	Consider a sidewalk connection along west facade to accommodate dog walking and access to the small park near Kirkwood.	A sidewalk connection from Langston Blvd. to the dog park on the western facade has been provided. See sheet C-08
CPHD Urban Design	CPHD-UD-5	A11	KKRIDER	If these are to be treated as existing views, the proposal should not be included	Acknowledged.
CPHD Urban Design	CPHD-UD-6	L-01 LA CONCEPT	LSHAUB	Please confirm that existing mature trees in the "parklet" area will be preserved.	The existing trees being saved have been included in the plaza/park hybrid area.
CPHD Urban Design	CPHD-UD-7	L-01 LA CONCEPT	KKRIDER	Consider green roof opportunity at corner	Other green roof areas have been provided - this space is being utilized for other private open space opportunities.
CPHD Urban Design	CPHD-UD-8	A15	LSHAUB	Potential area for greenroofs in this location. Please show any upper level amenities and planting	Amenities and planting have been shown on the upper level podium.
CPHD Urban Design	CPHD-UD-9	L-01 LA CONCEPT	LSHAUB	Will the corner park and open plaza area be considered public?	Yes, the park at grade will be public, the upper podium will be private.
CPHD Urban Design	CPHD-UD-10	L-01 LA CONCEPT	LSHAUB	Continue to develop corner and intersection where bike/ped and traffic is crossing. This is a heavily trafficked area. How will bike cross over ped areas near neighboring driveway entrance.	The intersection at the 66 off-ramp and Langston Blvd. has been reconfigured to more safely accommodate pedestrian and bike traffic. Bike traffic will be directed south along the eastern facade to avoid the narrow sidewalk at the existing pawn



					shop. See sheet C-08.
CPHD Urban Design	CPHD-UD-11	L-01 LA CONCEPT	KKRIDER	Consider a greater setback for the townhomes facing Kirkwood. This would allow a small green space, opportunities for stormwater management and a bit more privacy for the units.	Please see response to CPHD- CURR-5.
CPHD Urban Design	CPHD-UD-12	A08	KKRIDER	Consider additional fenestration on the exposed end wall of the townhouses. On the pool deck side, perhaps a nature or green wall to introduce more biophilic design elements	The applicant has considered but determined not to add additional fenestration. For proposed landscape plans including biophilic design, see Sheet L-100.
DES DSB Planning	DES-PLN-1		JGABOR	Currently there are no planned County transportation projects adjacent to the project site. As the projects moves forward staff will confirm if any projects have been initialed and the impacts.	Acknowledged.
DES DSB Planning	DES-PLN-2		JGABOR	There is a signal reconstruction project at Kirkwood and Langston Blvd. Construction anticipated to start this summer.	Acknowledged.
DES DSB Planning	DES-PLN-3		JSKIM	Langston Blvd. frontage requires VDOT approval for design changes. - Contact VDOT's Northern Virginia Permit Office (or the appropriate office as identified by VDOT) for a review of preliminary plans before submission of plans for a 2nd round	Acknowledged and understood.



			of reviews by Arlington County.	
			Provide supporting documentation of	
			the meeting, any	
			comments/requirements identified by	
			VDOT, a list of meeting participants	
			and a summary of next steps that	
			applicant may take to engage VDOT	
			prior to County Board approval and	
			CEP approval. When the applicant	
			provides a response to comments	
			letter to VDOT please provide a copy	
			as a part of the 4.1 supporting	
			documents for the project.	
			- The applicant is responsible for	
			coordinating and obtaining all	
			required VDOT approvals and	
			ensuring that VDOT and Arlington	
DEG DGD	DEG DIVI	TOTAL C	County comments do not conflict.	
DES DSB	DES-PLN-4	JSKIM	Recommend WSS utility meeting	Ongoing. A meeting will likely be
Planning			prior to Preliminary Plan	scheduled after the first submission
			submission. Reach out to Jane Kim	
			to schedule the meeting.	
DES DSB	DES-PLN-5	JSKIM	Currently there are no planned	Acknowledged and understood.
Planning			County transportation projects	
			adjacent to the project site. As the	
			projects moves forward staff will	
			confirm if any projects have been	
			initialed and the impacts.	
DES DSB	DES-PLN-6	JSKIM	Arlington County has information	Acknowledged. We have received the
Planning				information from DES and also met
			on and around your site. Email	briefly with them to understand the
			dcommerford@arlingtonva.us with	relevant HGL values to use for any storm
			your "project name - permit # -	drain calculations.
			Request for stormwater information"	
			in the subject line and I will provide	
			in the subject the and I will provide	



			our records.	
DES DSB Planning	DES-PLN-7	JSKIM	All proposed transformers to be underground; if above ground, must be adequately screened from public ROW	An underground transformer vault will be located on Langston Blvd. See sheet C-08.
DES DSB Planning	DES-PLN-8	JSKIM	Standard site plan condition requires all existing utility poles around the site vicinity to be undergrounded	Understood. See sheet C-08 for utility pole and overhead lines that are to be removed or undergrounded.
DES DSB Planning	DES-PLN-9	JSKIM	Please show RPA information as applicable. If there is an RPA on site, reach out to Jane Kim to schedule a meeting with applicable DES staff.	RPA information is shown on sheet C-01 and C-08. Additionally, we have met with Arlington County staff to clarify our request for redevelopment within the RPA. We are preparing a Site-Specific RPA plan to refine/confirm the exact location of the RPA and will work with DES staff to work through the CBORC to gain approval of our proposed project.
DES DSB Planning	DES-PLN-10	JSKIM	The project site is outside of the "Off-Street Parking Guidelines for Multi-Family Residential Projects" therefore parking ratios set by ZO; justification required for modifications.	Acknowledged.
DES Green Building	DES-GB-1	VKIECHEL	Please provide a narrative summarizing how the development intends to align with the Sustainability and Resiliency goals of the 2023 Langston Boulevard Area Plan with respect to	We have incorporated a design that will increase environmental resilience and sustainability with a biophilic landscape design that will effectively manage our stormwater while also reducing the urban heat island effect with limited



				decarbonization and energy efficiency improvements, minimization of impervious surface, incorporation of renewables and clean backup power technologies, and more.	imperviousness. We will make the site more resilient as we orient and build to a ensure safe conveyance of floodwaters and minimize risk to our residents. We propose to develop this site with a building that will reduce energy demand and emissions and will work with our residents to promote transit in an effort to align with the Sustainability and Resiliency Goals of the Langston Area Plan.
DES Green Building	DES-GB-2		VKIECHEL	Please clarify if the project intends to seek bonus density through the County's Green Building Incentive Policy.	Yes.
DES Green Building	DES-GB-3		PROMAN	Plan Langston Blvd recommends 5% coverage of non-tree vegetation, i.e. green roofs, walls, terraces. Please provide detail as to how the project will implement non-tree vegetation on-site.	Acknowledged; a narrative on these items has been added to the plan set.
DES Transportation Planning	DES-TP-1	L-01 LA CONCEPT	ABULLOCK 1	For the proposed median opening on Kirkwood Rd, it appears this is designed to only allow NB left turns from Kirkwood into the driveway, and not left turns out of the driveway and onto Kirkwood. Is the driveway proposed as right-out only? Please confirm.	The median opening has been designed to accommodate both left & right turns out of the garage. See sheet C-08.



DES	DES-TP-2	L-01 LA	ABULLOCK	At the east end of the site along	This location will all be paved. Pedestrians
Transportation		CONCEPT	1	Langston Blvd, can the space	and cyclists will have sufficient space to
Planning				between where the proposed	transition to the existing sidewalk within
				streetscape ends and the property	the neighboring property.
				line is be shown as transition space,	
				merging the proposed sidewalk and	
				cycle track back to the existing	
				sidewalk to the east? Pedestrians	
				and bicyclists will need to be able to	
				seamlessly navigate from the	
				proposed streetscape section to the	
				existing sidewalk to the east until	
				that property redevelops.	
DES	DES-TP-3	L-01 LA	ABULLOCK	At the corner of Langston Blvd and	Acknowledged and understood. This
Transportation		CONCEPT	1	the I-66 off-ramp, a curb ramp needs	intersection has been reconfigured. See
Planning				to be provided that meets PROWAG	sheet C-08 and C-10.
				and is wide enough to serve	
				bicyclists as well as pedestrians.	
DES	DES-TP-4	L-01 LA	ABULLOCK	Is any use planned in the 5' building	The 5' building zone will include planter
Transportation		CONCEPT	1	zone along Langston Blvd? Or is	beds, door swings and balcony
Planning				this intended to be solely shy space	projections.
				for door swing, etc.?	
DES	DES-TP-5	L-01 LA	KCALKINS	Where will PUDO be	Two to Three PUDO spaces will be
Transportation		CONCEPT		accommodated on site? There are no	provided on Kirkwood near the secondary
Planning				apparent curbside spaces available	lobby. See sheet C-08.
				for this.	
				Consider into costino this on the	
				Consider integrating this on the	
				Kirkwood frontage.	



DPR Urban Forestry	DPR-UF-1	L-01 LA CONCEPT	JPORTUHO NDO	Street trees are shown on renderings but make sure to provide sufficient street trees on Langston Blvd. The Langston Boulevard Area Plan adopted in December 2023 mandates the site to maximize tree canopy in the public-right-of-way by providing street trees at the minimum rate of one for every 30 feet along any property line abutting public right-of-way while also meeting soil volume requirements.	Street trees are now 30' on center.
DPR Urban Forestry	DPR-UF-2	L-01 LA CONCEPT	JPORTUHO NDO	The Langston Boulevard Area Plan mandates that on sites where the maximum building height is 7 stories or greater, the recommended tree canopy coverage on individual sites should be at least 35%, at least half of which should contain an understory of non-tree vegetation or understory trees. Page VII https://www.arlingtonva.us/files/sha redassets/public/v/3/projects/docum ents/plan-langston-blvd/lb-final-planadopted-2-2-24_high-res.pdf	Canopy coverage calculations have been added to the plan set and illustrate a 35% canopy coverage for the site.
DPR Urban Forestry	DPR-UF-3	L-01 LA CONCEPT	JPORTUHO NDO	A bus stop is located on your project, incorporate principles of biophilic design and green infrastructure as the transportation network is improved and modified as part of the Langston Boulevard Plan.	Biophilic design principles narrative has been added to the plan set.



DPR Urban Forestry	DPR-UF-4	L-01 LA CONCEPT	JPORTUHO NDO	Explore tree protection measures for trees outside of the construction footprint, especially in the existing screening canopy adjacent to Route 66 and large trees in the parklet area. Any native conserved trees can contribute to the canopy cover.	Tree protection measures have been added to the plan set.
DPR Urban Forestry	DPR-UF-5	L-01 LA CONCEPT	JPORTUHO NDO	Increase planting strip width to 6 feet on North Kirkwood Road per the recommendations of the Langston Plan.	The sidewalk has been widened in lieu of the planting strip.
DPR Urban Forestry	DPR-UF-6	L-01 LA CONCEPT	JPORTUHO NDO	Columnar trees do not provide the same amount of canopy cover as regular cultivars. Can regular tree cultivars be planted in this area? If not, plan for canopy credit reduction for the proposed trees. https://www.arlingtonva.us/files/sha redassets/public/v/5/forestry/master-list.pdf	Regular cultivars will be planted on site.
Fire Prevention	FP-1	A02	GKARL	Indicate which side will be used to meet aerial access requirements.	Langston and Kirkwood will be utilized to meet aerial access requirements. See Sheet C-11.
Fire Prevention	FP-2	A02	GKARL	Show proposed location of fire department connections and hydrants.	Proposed fire hydrants and fire department connections are shown. See Sheet C-08 & C-11.



8/8/2024

Nick Richardson VIKA

Re: 3130 Langston Blvd redevelopment

Dear Nick,

Davis Utility Consulting has performed preliminary load calculations for the 3130 Langston Blvd project in Arlington, VA. Based on the current tabulations for the site we anticipate the following:

Below Grade Vault

- 1. (1) 2500 kVA transformer
 - a. House Service 4000A, 277/480 and Retail Service 1000A, 277/480 switch gears
- 2. (1) 1500kva transformer
 - a. Residential 1 Service (175 units) 4000A, 120/208 switch gear
- 3. (1) 1000kva transformer
 - a. Residential 2 Service (97 units) 3000A, 120/208 switch gear
- 4. (1) VFI Switch

The below-grade vault is estimated at 77' long x 16.5' wide x 17' tall (inside dimension). The physical space required for these devices are calculated with 10' minimum clearance in the front, and minimum 4' on the sides and back. These dimensions and devices will need to be confirmed with Dominion Energy Virginia. Please let me know if you additional information.

Sincerely,

David Graham - Manager

Davis Utility Consulting



LEED MF MIDRISE v4 CHECKLIST 3130 Langston Blvd 322158.00

8/7/2024

ADDRESS: 3130 Langston Blvd, Arlington, VA 22201

LEED for Homes: Multifamily Midrise v4

				INTEGRATIVE PROCESS	0 D : 1
Yes	Targeted	?	No	INTEGRATIVE PROCESS	2 Points
	2			Credit 1 Integrative Process	2
0	2	0	0		455
Yes	Targeted	?	No	LOCATION AND TRANSPORTATION (8 pts req'd w/ EA)	15 Points
Υ				Pre 1 Floodplain Avoidance	Req'd
				Credit 1 LEED for Neighborhood Development Location-or-	15 -OR-
	8			Credit 2 Site Selection	8
3				Credit 3 Compact Development	3
2				Credit 4 Community Resources	2
1			1	Credit 5 Access to Transit	2
6	8	0	1		
Yes	Targeted	?	No	SUSTAINABLE SITES	7 Points
Υ				Pre 1 Construction Activity Pollution Prevention	Req'd
Υ				Pre 2 No Invasive Plants	Req'd
	2			Credit 1 Heat Island Reduction	2
	3			Credit 2 Rainwater Management	3
	2			Credit 3 Nontoxic Pest Control	2
0	7	0	0		
Yes	Targeted	?	No	WATER EFFICIENCY (3 pts required)	12 Points
Υ				Pre 1 Water Metering	Req'd
	6	2	4	Credit 1 Total Water Use -or-	12 -OR-
				Credit 2 Indoor Water Use	6
				Credit 3 Outdoor Water Use	4
0	6	2	4		
Yes	Targeted	?	No	ENERGY & ATMOSPHERE (8 pts required w/ LT)	37 Points
Υ				Pre 1 Minimum Energy Performance	Req'd
Υ				Pre 2 Energy Metering	Req'd
Υ				Pre 3 Education of Homeowner, Tenant, or Building Manager	Req'd
	11	13	6	Credit 1 Annual Energy Use	30
	2	3		Credit 2 Efficient Hot Water Distribution System	5
	2			Credit 3 Advanced Utility Tracking	2
0	15	16	6		
Yes	Targeted	?	No	MATERIALS & RESOURCES	9 Points
Υ				Pre 1 Certified Tropical Wood	Req'd
Υ				Pre 2 Durability Management	Req'd
	1			Credit 1 Durability Management Verification	1
	1	4		Credit 2 Environmentally Preferable Products	5
	2		1	Credit 3 Construction Waste Management	3
0	4	4	1		

Yes	Targeted	?	No	INDOO	R ENVIRONME	NTAL QU	ALITY (3 p	ots required)	18 Points
Υ]			Pre 1	Ventilation				Req'd
Υ				Pre 2	Combustion Ver	nting			Req'd
Υ				Pre 3	Garage Pollutan	t Protection	1		Req'd
Υ				Pre 4	Radon Resistan	t Construct	ion		Req'd
Υ	1			Pre 5	Air Filtering				Req'd
Υ	1			Pre 6	Environmental 1	obacco Sm	oke		Req'd
Υ				Pre 7	Compartmentali	zation			Req'd
	1		2	Credit 1	Enhanced Venti	lation			3
			2	Credit 2	Contaminant Co	ntrol			2
	1		2	Credit 3	Balancing of He	ating and C	ooling Distri	bution Sytems	3
		3		Credit 4	Enhanced Comp	partmentaliz	ation		3
	2			Credit 5	Enhanced Comb	oustion Ven	ting		2
	1			Credit 6	Enhanced Garaç	ge Pollutant	Protection		1
	2	1		Credit 7	Low-Emitting Pr				3
	1			Credit 8	No Environment	al Tobacco	Smoke		1
0	8	4	6						
Yes	Targeted	?	No	INNOV	ATION IN DESI	GN			6 Points
Υ				Pre 1	Preliminary Rati	ng	•	LEED meeting and a	
		1		Credit 1.1	Innovation in De	esign		charging stations for 2%	• •
	1			Credit 1.2	Innovation in De	esign	-	cify 20+ products with	
	1			Credit 1.3	Innovation in De	esign	•	cify 20+ products ith H	IPDs. 1
		1		Credit 1.4	Innovation in De	•	• •	ion reduction	1
		1		Credit 1.5	Innovation in De	esign	Bird-friendly	y design	1
1				Credit 2	LEED Accredite	d Professio	nal		1
1	2	3	0						
Yes	Targeted	?	No	REGIO	NAL PRIORITY				4 Points
	1			Credit 1.1	Regional Priority	/	Site Selectio	n (8 pts min)	1
	1			Credit 1.2	Regional Priority	*	•	Resources (2 pts min)	1
			1	Credit 1.3	Regional Priority	/	Access to Tr	ransit (2 pts min)	1
	1			Credit 1.4	Regional Priority	/	Rainwater M	lanagement (3 pts min)	1
0	3	0	1	+					
Yes	Targeted	?	No	PROJE	CT TOTALS				110 Points Possible
7	55	29	19	Certified	40 to 49 Points	Silver 50 t	o 59 Points	Gold 60 to 79 Points	Platinum 80+ Points
	2				oints Estimated				

IMPORTANT: LEED points shown represent our professional opinion of credit achievability. Credits are awarded by USGBC/GBCI only and are the result of collaborative effort and decisions by all team members. DCS cannot guarantee any LEED points or specific level of certification.

3130 Langston Blvd 322158 8/7/2024



LEED for Homes: Multifamily Midrise v4										
Credit	lit Subject Yes Targeted ? No Total Possible				Requirements	Performance (+1 Point)	Action By	Action Items/Comments		
Credit 1	Integrative Process (2 possible points Integrative Process 2		2				Option 1: Integrative Project Team (1 pt) a) Include req'd team members. b) Involve team members in multiple phases. c) Conduct monthly meeting. AND/OR Option 2: Design Charrette (1 pt) a) Conduct one full-day workshop w/ project team. AND/OR Option 3: Trades Training (1 pt) a) Conduct 8 min. hours LEED training for: plumbing, mechanical, insulation, framing, and air sealing trades.	N/A	ARCH	Option 1: Integrative Project Team (ARCH, MEP, LEED) and Option 2: Design Charrette
LT-Location	n and Transportatio	n (15	possil	ble po	ints)					
Pre 1	1 Floodplain Avoidance		Req'd	Do not build on land within flood hazard area.	N/A	OWNR	Project is previously developed and exempt.			
Credit 1	LEED for Neighborhood Development Location -or-				0		Locate project within a LEED for Neighborhood Development project.	N/A	OWNR	Not applicable. Cannot be combined with LT Credits 2-5.

Credit 2	Site Selection		8		8	Option 1: Sensitive Land Protection Path 1 - Previously developed (4 pts) Path 2 - Avoidance of sensitive land (3 pts) 1) Prime Farmland 2) Parkland 3) Floodplain 4) Habitat for treatened species 5) Wetlands w/i 50 ft 6) Water bodies w/i 100 ft AND/OR Option 2: Infill Development (2 pts) a) At least 75% of land within 1/2 mile is previously developed AND/OR Option 3: Open Space (1 pt) a) Locate w/i 1/2 mile or create publicly available open space AND/OR Option 4: Street Network (1 pt) a) Locate in high intersection density area (≥90/sq mi) AND/OR Option 5: Bicycle Network & Storage (1 pt) a) Locate near bicycle network. b) Provide bicycle storage.	OWNR	Option 1: Sensitive Land Protection - Path 1 - Previously developed (4 pts) Option 2: Infill Development (2 pts) Option 3: Open Space (1 pt) - Lyon Village Park Option 5: Bicycle Network & Storage (1 pt) - Custis Trail - Bike storage will be provided.
Credit 3	Compact Development	3			3	Construct building that meets dwelling unit per acre of buildable land density requirements below: ≥ 30 DU/acre = 1 pt ≥ 55 DU/acre = 2 pt ≥ 80 DU/acre = 3 pt	ARCH	276 dwelling units / 1.68 acres = 164 DU/acre

Credit 5 Access to Transit 1 Access to Transit Access to Transit 1 Access to Transit 1 Access to Transit Access to Transit	Credit 4	Community Resources	2			2	Locate w/i 1/2 mi walking distance of the following community use establishments: 4-7 uses = 1pt 8-11 uses = 1.5 pts ≥12 uses = 2 pts Include at least 2 Categories: - Food Retail (Supermarket, produce market, etc) - Community Retail (Clothing, Convenience, Pharmacy, etc) - Services (Restaurant, bank, gym, salon, laundry, dry cleaner) - Civic and Community Facilities (Child care, rec center, schools, place of worship, library, police/fire station, etc) No more than 2 of same establishment type.	20+ uses for EP	ARCH	12+ Community Establishments: CVS (Pharmacy) The Italian Store (Food market) Lyon Village Community House (Community Center) Lyon Village Park Starbucks (Coffee shop) BGR Burgers (Restaurant) Arlington Family Dental Center (Medical) Giant (Grocery) The Block Oven (Restaurant) Method Fitness (Gym) Hair Cuttery (Hair care) VINCI School (Elem School) Little Ambassadors Academy (Child care)
Total: 6 10 0 1	Credit 5		1	10	1	2	72 min. weekday 40 min. weekend = 1 pt 144 min. weekday 108 min. weekend = 1.5 pts 360 min weekday 216 min. weekend = 2 pts OR Locate entry w/i 1/2 mile walking distance of bus rapid transit, rail stations, or ferry terminals. 24 min. weekday = 1 pt 40 min. weekday = 1.5 pts	N/A	ARCH	

3130 Langston Blvd 322158 8/7/2024



										DESTUN
LEED for	Homes: Multifam	ily M	lidrise	e v4			<u></u>			<u></u>
Credit	Subject	Yes	Tar- geted	?	No	Total Possible	Requirements	Performance (+1 Point)	Action By	Action Items/Comments
CC Cuatain	sable Sites (7 Dessib	Jo Do	into\							
55-Sustain	able Sites (7 Possib	ie Po	าเกเรา							
_ ,	Construction						For site larger than 1 acre, confirm to erosion and sedimentation requirements of the 2012 US EPA Construction			
Pre 1	Activity Pollution	Υ				Req'd	General Permit.		CIVIL	E&SC Plan will be provided.
	Prevention									
Pre 2	No Invasive Plants	Υ				•	Introduce no invasive plants into the landscape.		LAND	No invasive plants will be used.
Credit 1	Heat Island Reduction		2				For sites where 50% (1 pt) or 75% (2 pts) of all hardscape <u>and</u> roofs meet one of the following: a) Shading: shaded by trees or plantings (after 10 yrs growth) b) ENERGYSTAR roofing c) Vegetated roofing d) Open pavers e) High SR: Pavers with 3 yr SR ≥0.28 or initial SR ≥0.33		ARCH	High SRI and vegetated roof will be provided, as well as shading from street trees and high SR pavers where possible.
Credit 2	Rainwater Management		3			3	CASE 1: Low Impact Development Percentage of lot area, including area under roof, that is permeable or can direct water to on-site catchment or filtration device*: 50-64% = 1 pt 65-79% = 2 pts 80-100% = 3 pts *Devices must handle 100% of runoff from 2-yr, 24-hr storm. OR CASE 2: NPDES Projects (non municipal storm sewer)		I (:IVII	Case 1: LIDs will be implementated to control at least 80% of runoff.

95th percentile storm = 2 pts 98th percentile storm = 3 pts

Credit 3	Nontoxic Pest Control		2			1) Implement IPM Plan (Reqd) 2) Up to 2 pts, each additional +0.5 pt EP up to 1 EP: - Steel mesh barrier termite control system (1 pt) - Physical termite barrier system (1 pt) - Below grade walls: solid concrete, masonry w/ bond beam, or concrete filled block (0.5 pt) - Post-tension slabs (0.5 pt) - Borate treatment of wood framing (0.5 pt) - Non-wood structural elements (0.5 pt) - Ports/openings at slab plumbing penetrations (0.5 pt) - Registered termite bait system (0.5 pt) - 6"+ space btw landscape grade/nonmasonry siding (0.5 pt) - Seal cracks/joints/penetrations, install pest screens at all openings >1/4 inch (0.5 pt) - Water discharge points 24"+ from foundation (0.5 pt) - 18"+ btwn plantings and exterior wall (0.5 pt)	OWNR	The following will be implemented: IPM Plan (Reqd) - Below grade walls: solid concrete (0.5 pt) - Non-wood structural elements (0.5 pt) - 6"+ space btw landscape grade/nonmasonry siding (0.5 pt) - Water discharge points 24"+ from foundation (0.5 pt)
	Total:	0	7	0	0			

Total: 0 6 2 4



LEED for	Homes: Multifam	ily N	lidris	e v4						
Credit	Subject	Yes	Tar- geted	?	No	Total Possible	Requirements	Performance (+1 Point)	Action By	Action Items/Comments
NAVE NAV	F. (40 P :	_								
WE-Water	Efficiency (12 Possik	ole Po	oints)							
Pre 1	Water Metering	Υ				Req'd	Install water meter for entire building or submeter each unit.		MEP	Whole building water meter will be provided.
Credit 1	Total Water Use -or-		6	2	4	12	PERFORMANCE PATH Calculate total water use using Water Reduction Calculator (indoor) and WaterSense Tool (outdoor). Reduce from baseline by:		MEP	Target 35% reduction. Cannot be combined Credits 2 & 3.
Credit 2	Indoor Water Use					h h	PRESCRIPTIVE PATH Install qualified low-flow/low-fllush indoor plumbing fixtures.		MEP	N/A. Use Total Water Performance Path above.
Credit 3	Outdoor Water Use					4	PRESCRIPTIVE PATH Reduce area of turf grass by planting native or adaptive plants instead: <60% turf, >25% native = 1 <40% turf, >50% native = 2 <20% turf, >75% native = 3 <5% turf, >75% native = 4		MEP	N/A. Use Total Water Performance Path above.



LEED for	ED for Homes: Multifamily Midrise v4											
Credit	Subject	Yes	Tar- geted	?	No	Total Possible	Requirements	Performance (+1 Point)	Action By	Action Items/Comments		
EA-Energy	and Atmosphere (37	7 Pos	sible	Point	s)	_		_	-			
Pre 1	Minimum Energy Performance	Υ				Req'd	ENERGY MODEL: Whole Bldg Energy Model w/ min. 10% reduction AND TESTING: One of the following: AND ENERGYSTAR MFNC certification Commissioning		MEP	Min. 10% energy saving over ASHRAE 90.1-2010 Appendix G required. EnergyStar MFHR or Commissioning also required.		
Pre 2	Energy Metering	Υ				Req'd	Electricity Meters: One per dwelling unit. Gas Meters (if used): Whole building or dwelling unit.		MEP	Electric submeters provided for each unit. Gas meter (if used) will be provided for whole building.		
Pre 3	Education of Homeowner, Tenant, or Building Manager	Υ				Req'd	O+M MANUAL: Provide ongoing maintenance manual for maintenance personnel. WALK-THROUGH: Conduct 1-hr walkthrough with occupants and building manager.		GC OWNR	O+M Manual and Walkthrough will be provided.		
Credit 1	Annual Energy Use		11	13	6		1) ENERGY REDUCTION: 1 pt for every 2% energy reduction above 10%. (Up to 15 pts) 2) GHG REDUCTION: 1 pt for every 2% GHG emissions reduction above 10%. (Up to 15 pts) 3) HOME AREA REDUCTION: +1 pt for every 7% reduction in DU floor area from EnergyStar baseline: 1 Bedroom = 1,000 sf 2 Bedroom = 1,600 sf 3 Bedroom = 2,200 sf 4 Bedroom = 2,800 sf Lose 1 pt for every 7% increase in DU floor area.		MEP	Savings targets: 20% Energy Reduction = 5 points 14% GHG Reduction = 2 points Home Size Adjustment = 4.5 points Minimum 20% energy savings req'd in Arlington. 24-28% energy savings required for bonus density. 29-34% required for add'l 5% savings option.		
Credit 2	Efficient Hot Water Distribution System		2	3		5	OPTION 1: PLUMBING PIPE LENGTH / VOLUME (2 pts) OPTION 2: PERFORMANCE TEST (3 pts) OPTION 3: PIPE INSULATION (2 pts)		MEP	R-4 insulation to be provided on all domestic HW piping. (2 pts).		

Credit 3	Advanced Utility Tracking		2			2	Option 1. Electric and Water (1 pt): Meet one: - Units: permanent energy-monitoring system at 1-hr interval - or Irrigation: irrigated area 1,000sf+ w/ submeter AND/OR Option 2. Third Party Utility Reporting (1 pt): Meet one: - Share utility data with USGBC (via EnergyStar) - 50% of unit owner share utility data with USGBC for 1 year	+1 EP for metering 4 end uses (i.e. space heating, DHW, lighting, plug loads)	MEP	Irrigation submeter to be provided. Dominion can likely aggregate energy data for all units for this location.
	Total:	0	15	16	6					



LEED for	EED for Homes: Multifamily Midrise v4												
Credit	Subject	Yes	Tar- geted	?	No	Total Possible	Requirements	Performance (+1 Point)	Action By	Action Items/Comments			
MR-Materia	lls and Resources (9	Pos	sible	Point	s)	_		_	_				
Pre 1	Certified Tropical Wood	Υ				Req'd	All wood on project must be: a) Non-tropical b) Reused or Reclaimed or c) FSC Certified		ARCH	No tropical wood will be used.			
Pre 2	Durability Management	Υ				Req'd	Required moisture control measures: 1) Use non-paper faced backer board at all bathtubs and showers. 2) Use water-resistant flooring at all kitchens, bathrooms, laundry rooms, spa areas. No carpet. 3) Use water-resistant flooring w/i 3 feet of entry from outdoors. No sheet carpet. 4) At tank water heaters, install pan and drain, pan and auto shut-off device, or slope floor to drain. AND 5) At conventional clothes dryers, exhaust directly to outdoors.		GC	Design will comply with moisture control measures.			
Credit 1	Durability Management Verification		1				ENERGY STAR for Homes v3: Water Management System Builder Checklist verified by Green Rater.		ARCH	Project will follow ENERGYSTAR for Homes: Water Management System Builder Checklist.			
Credit 2	Environmentally Preferable Products		1	4		5	OPTION 1: LOCAL PRODUCTION and/or OPTION 2: ENVIRONMENTALLY PREFERABLE PRODUCTS		ARCH GC				
Credit 3	Construction Waste Management		2		1		Reduce total construction waste or divert from landfill a large proportion of waste generated during construction.		ARCH GC	75% min. CWM diversion rate. Refer to CIR 10479.			
	Total:	0	4	4	1								



LEED for	Homes: Multifam	ily M	lidris	e v4	•						
Credit	Subject	Yes	Tar- geted	?	No	Total Possible	Requirements		Performance (+1 Point)	Action By	Action Items/Comments
IEQ-Indoor	Environmental Qual	ity (1	8 Pos	sible	Poin	ts)		•		•	
Pre 1	Ventilation	Υ				Req'd	Meet the following requirements and comply with ASHRAE 62.2-2010: 1) LOCAL EXHAUST i) Exhaust kitchens and baths to outdoors. ii) Use EnergyStar labelled fans. 2) WHOLE HOUSE MECHANICAL VENTILATION i) Provide OA to each unit per ASHRAE 62.2-2010. ii) Meet maximum allowable sound levels. AND 3) COMMON AREAS i) Meet ASHRAE 62.2-2010 minimum requirements.			МЕР	OA must be ducted to each unit. MEP to provide ASHRAE 62-2010 ventilation calcs for units and common spaces.
Pre 2	Combustion Venting	Υ				Req'd	Do not install unvented combustion appliances Install CO monitor on each floor. Install closing doors at all fireplaces and woodstoves. AND Meet requirements for space- and water-heating equipment that use combustion.			ARCH	No unvented combustion appliances. CO monitor in each unit.
Pre 3	Garage Pollutant Protection	Υ				Req'd	Place all AHUs and ductwork outside of garage. AND Tighly seal shared surfaces in conditioned spaces above and next to garage spaces.			MEP	Project will comply.
Pre 4	Radon Resistant Construction	Υ				Deald	CASE 1: NEW CONSTRUCTION In high-risk radon zones, design and build with radon-resistant construction techniques. OR CASE 2: RENOVATION a) Radon Testing or b) Install active radon ventilation system.			ARCH GC	Not applicable to Arlington, not Radon Zone 1.
Pre 5	Air Filtering	Y				Req'd	AIR FILTERS: Install MERV 8+ filters on all recirculating conditioning systems. OA AIR FILTERS: Install MERV 6+ filters on all mechanically supplied OA systems w/ at least 10 ft of ductwork. PRESSURE DROP: Design ductwork and central blower to account for pressure drop across filter. AND HOUSINGS: Housings must be air-tight to prevent bypass or			GC	Project will comply.

Pre 6	Environmental Tobacco Smoke	Υ				Req'd	Prohibit smoking in all common areas of the building and within 25ft of doors, windows, and air intakes. Comminicate policy with signage and lease agreements.	 GC	Project will comply.
Pre 7	Compartmentalizat ion	Υ				Req'd	Compartmentalize each dwelling unit to minimum leakage: 1) Seal penetrations. 2) Seal vertical chases. 3) Weather-strip doors to common hallways 4) Weather-strip exterior doors and operable windows. AND 5) Perform blower door tests to demonstrate maximum leakage rate (0.23 cfm/sf of enclosure area @ 50 Pa).	 MEP	Project will comply.
Credit 1	Enhanced Ventilation		1		2	3	Requirements Option 1. Enhanced Local Exhaust (1 point) Use one of the following strategies in every bathroom with a shower, bathtub, or spa (i.e., half-baths are exempt): - an occupancy sensor; - an automatic humidistat controller; - a continuously operating exhaust fan; or - a delay timer that operates the fan for at least 20 minutes. AND/OR Option 2. Enhanced Whole-House Ventilation (2 points) Install a balanced whole-house ventilation system (not just exhaust only or supply only) that meets the minimum ventilation requirements of ASHRAE Standard 62.2–2010, Sections 4 and 7, or local equivalent whichever is more stringent. Program the system such that it does not exceed the standard's requirements by more than 10%. For multifamily buildings, meet the above requirements for all in-unit residential spaces in both options 1 and 2.	MEP	An Option 1 strategy will be provided.
Credit 2	Contaminant Control				2	2	OPTION 1: WALK-OFF MATS (0.5 pt) OPTION 2: SHOE REMOVAL AND STORAGE (0.5 pt) OPTION 3: PREOCCUPANCY FLUSH (0.5 pt) and/or OPTION 4: AIR TESTING (1 pt)	ARCH	Not pursuing.
Credit 3	Balancing of Heating and Cooling Distribution Sytems		1		2	3	CASE 1: FORCED AIR SYSTEMS Option 1: Multiples Zones (1 pt) Option 2: Supply Air-Flow Testing (1 pt) Option 3: Pressure Balanacing (1 pt) CASE 2: RADIATIVE SYSTEMS Option 1: Multiples Zones (1pt) Option 2: Room-by-Room Controls (2 pts)	ARCH	Average unit size <1200 sf automatically comply with Option 1: Multiple zones.
Credit 4	Enhanced Compartmentalizat ion			3		3	Perform blower door tests to demonstrate maximum leakage rate (0.15 cfm/sf of enclosure area @ 50 Pa).	RATER	Required for Arlington bonus density.
Credit 5	Enhanced Combustion Venting		2			2	OPTION 1: No Fireplaces or Woodstoves or OPTION 2: Enhanced Combustion Venting Measures	ARCH	No combustion fireplaces or wood-stoves. (2 pts)

Credit 6	Enhanced Garage Pollutant Protection		1			1	OPTION 1: Exhaust Fan w/ Controls in Garage or OPTION 2: Detached Garage or No Garage	N	MEP	Garage exhaust fans will meet ASHRAE 62.1-2010 requirements and provide continuous exhaust or CO sensor triggered exhaust.
Credit 7	Low-Emitting Products		2	1		3	Provide low emitting products for 90% of a component category below: a) Paints and coatings (0.5 pt) b) Adhesives and sealants (0.5 pt) c) Flooring (0.5 pt) d) Insulation (0.5 pt) e) Composite wood products (1 pt)		ARCH MEP	Low emitting materials will be specified for a) thru d).
Credit 8	No Environmental Tobacco Smoke		1			1	Prohibit smoking throughout the building including dwelling units. Provisions for enforcement must be included.	Ol	WNR	Entire bldg and site shall be no smoking.
	Total:	0	8	4	6					



LEED for	EED for Homes: Multifamily Midrise v4												
Credit	Subject	Yes	Tar- geted	?	No	Total Possible	Requirements	Performance (+1 Point)	Action By	Action Items/Comments			
IO-Innovati	on and Design Proc	ess (6	6 Poss	sible	Point	s)		_	-				
Pre 1	Pre 1 Preliminary Rating Y Req'd Preliminary LEED meeting and action plan. ARCH Project will comply.												
Credit 1.1	Innovation in Design			1		1	Install EV charging stations for 2% of parking spaces.		ARCH	4% EV charging stations and 15% EV ready required for Arlington bonus density.			
Credit 1.2	Innovation in Design		1			1	EPDs, Specify 20+ products with EPDs.		ARCH	Project will comply.			
Credit 1.3	Innovation in Design		1			1	HPDs, Specify 20+ products ith HPDs.		ARCH	Project will comply.			
Credit 1.4	Innovation in Design			1		1	Light pollution reduction		ARCH	Required for Arlington bonus density.			
Credit 1.5	Innovation in Design			1		1	Bird-friendly design		ARCH	Required for Arlington bonus density.			
Credit 2	LEED Accredited Professional	1					At least 1 principal participant of the project team shall be a LEED AP with a specialty appropriate for the project.		ARCH	Project will comply.			
	Total: 1 2 3 0												

3130 Langston Blvd 322158 8/7/2024



LEED for	Homes: Multifam	ily M	lidris	e v4						
Credit	Subject	Yes	Tar- geted	?	No	Total Possible	Requirements	Performance (+1 Point)	Action By	Action Items/Comments
RP-Regiona	al Priority (4 Possibl	e Poi	nts)	-						
Credit 1.1	Regional Priority					1	Site Selection (8 pts min)		ARCH	
Credit 1.2		1				-	Community Resources (2 pts min)		ARCH	
Credit 1.3					1		Access to Transit (2 pts min)		ARCH	
Credit 1.4			1			1	Rainwater Management (3 pts min)		ARCH	
	Total:	2	1	0	1					

Certified 40 to 49 Points Silver 50 to 59 Points Gold 60 to 79 Points Platinum 80 Points and Above

Grand Total: 9 53 29 19

A-01 PROJECT INFORMATION/TABULATIONS

A-01.1 LEED SCORECARD

A-02 PARKING LOWER LEVEL (LL) FLOOR PLAN

A-03 GROUND LEVEL P1 FLOOR PLAN

A-04 LEVEL P2 FLOOR PLAN

A-05 2ND LEVEL P3 FLOOR PLAN

A-06 3RD FLOOR PLAN

A-07 4TH FLOOR PLAN

A-08 5TH THRU 11TH FLOOR PLANS

A-09 12TH FLOOR PLAN

A-10 ROOF PLAN

A-11 BUILDING ELEVATIONS

A-12 BUILDING ELEVATIONS

A-13 ENLARGED ELEVATIONS

A-14 ENLARGED ELEVATIONS

A-15 ENLARGED ELEVATIONS

A-16 CONCEPT - VIEWS

A-17 CONCEPT - VIEWS A-18 CONCEPT - VIEWS

A-19 CONCEPT - VIEWS

A-20 EXISTING MASSING

A-21 BUILDING SECTIONS
A-22 BUILDING SECTIONS

A-23 SITE SECTION

CIVIL:

C-01 CERTIFIED SURVEY

C-02 REZONING PLAT

C-02A PUBLIC EASEMENT EXHIBIT

C-03 ENCROACHMENT EXHIBIT

C-04 TREE INVENTORY PLAN

C-05 TREE INVENTORY AND REPLACEMENT

C-06 AERIAL CONTEXT PLAN
C-07 OVERALL CONTEXT PLAN

C-08 PLOT AND LOCATION PLAN

C-09 PRESENTATION PLAN

C-10 STRIPING AND MARKING PLAN

C-11 FIRE LANE MARKING PLAN
C-12 EXISTING STREET SECTIONS

C-13 PROPOSED STREET SECTIONS

C-14 PRE-SWM

C-15 POST-SWM

C-16 PROP. SWIM PLAN

C-17 STORMWATER MANAGEMENT COMPUTATIONS

C-18 STORMWATER MANAGEMENT COMPUTATIONS

C-19 STORMWATER MANAGEMENT COMPUTATIONS
C-20 AUTOTURN EXHIBIT

LANDSCAPE:

L-001 GENERAL NOTES

L-100 ILLUSTRATIVE PLAN

L-101 MATERIALS PLAN - GROUND LEVEL

L-102 MATERIALS PLAN - PODIUM & ROOF LEVEL L-201 OPEN SPACE PLAN - GROUND LEVEL

L-202 OPEN SPACE PLAN - PODIUM & ROOF LEVEL

L-301 SOILS PLAN - GROUND LEVEL

L-302 SOILS PLAN - PODIUM & ROOF LEVEL L-303 SOIL VOLUME TABULATIONS

L-401 PLANTING PLAN - GROUND LEVEL

L-402 PLANTING PLAN - PODIUM & ROOF LEVEL

L-403 PLANT SCHEDULE AND 20 YEAR CANOPY WORKSHEET

L-406 COUNTY LANDSCAPE PLAN NOTES

L-501 DETAILS - HARDSCAPE

L-502 DETAILS - HARDSCAPE L-511 DETAILS - FURNISHINGS

L-512 DETAILS - FURNISHINGS

L-531 DETAILS - WALLS

L-541 DETAILS - CUSTOM

L-551 DETAILS - FENCES
L-601 DETAILS - PLANTING ON GRADE

L-602 DETAILS - PLANTING ON STRUCTURE

4.1 SITE PLAN SUBMISSION - AUGUST 9, 2024



RPC #15-012-041

3130 LANGSTON BLVD.

ARLINGTON COUNTY, VIRGINIA

OWNER CONSULTANT

ROONEY PROPERTIES, LLC.
3330 WASHINGTON BLVD, SUITE 220
ARLINGTON, VA 22201
CASSIE GUY
CGUY@ROONEYPROPERTIESLLC.COM

ARCHITECTURAL

DCS DESIGN
8614 WESTWOOD CENTER DRIVE, SUITE 800
TYSONS, VA 22182
STEPHEN SAFF
SSAFF@DCSDESIGN.COM

LEED/SUSTAINABILITY

DCS DESIGN
8614 WESTWOOD CENTER DRIVE, SUITE 800
TYSONS, VA 22182
KATHY LAWSON
KLAWSON@DCSDESIGN.COM

CIVIL ENGINEER

VIKA VIRGINIA, LLC. 8180 GREENSBORO DRIVE, SUITE 200 TYSONS, VIRGINIA 22102 ROBERT COCHRAN COCHRAN@VIKA.COM

LANDSCAPE ARCHITECT

LAND DESIGN, INC. 200 S. PEYTON ST ALEXANDRIA, VA 22310 ANDREA CROSSETT ACROSSETT@LANDDESIGN.COM

LAND USE ATTORNEY

VENABLE LLP 600 MASSACHUSETTS AVE, NW. WASHINGTON, DC 20001 ZACHARY WILLIAMS ZGWILLIAMS@VENABLE.COM

TRANSPORTATION ENGINEER

VIKA VIRGINIA, LLC. 8180 GREENSBORO DRIVE, SUITE 200 TYSONS, VIRGINIA 22102 MIKE PINKOSKE PINKOSKE@VIKA.COM



VIKA NUMBER VV8574A SHEET A-00 8/8/2024

CONCEPT SUMMARY

276 UNITS

Multifamily apartment building with less than 136' of height and 276 units, including 12 maisonette units, ground floor retail and retail equivalent uses and building amenities. 10 Residential Stories in metal frame over 3 Level plus 1 below grade level podium building with cast-in-place concrete parking structure.

(Parking Structure Sprinklered and Ventilated)

BUILDING HEIGHT PER ZONING DEFINITION

<136'-0"

(Measured from average site elevation to highest point of roof surface)

	BELOW PODIUM	ABOVE PODIUM
CONSTRUCTION TYPE	Type IA Construction	Type IB Construction
		Type IIIB Construction for the maisonette units
SPRINKLER SYSTEM	NFPA 13	NFPA 13

BUILDING USES:

Apartment Units Residential Lobby / Amenities Leasing, Business Center, Mail Room R-2 Residential A-3 Assembly

B - Business

S-1 Storage (Moderate Hazard) Package Room, Storage Room Parking Garage

SQ. FT.

18,814

1,981

20,795

S-2 Storage (Low Hazard)

AMENITY AREAS:

Private open space:

L3 Courtyard

L12 Roof Deck

door Amenities:		SQ. FT
L1 Lobby Main		1,787
L1 2nd Lobby		931
L1 Amenities		8,221
L3 Amenities		1,650
LL Bike room		2,118
L1 Dog spa		661
L12 Party Room		988
	Total	16,356

Gross floor area: Gross floor area is the sum of the area of the horizontal surface of the several floors of a building measured from the exterior faces of exterior walls, to include all floor area not defined as gross parking area.

Gross parking area. The sum of the ground surface area actually used for parking spaces and the area of the horizontal surface of the floor(s) of a building, measured from the exterior faces of exterior walls, devoted to off-street parking, loading and maneuvering space including all corridors, air shafts, elevators, stairwells and toilets incidental thereto, but not including area devoted to permitted and accessory uses other than parking and loading.

Site buildable area= 56,949.50

Minimun private open space required, 25 % of the buildable area =

Total

14,237.38 SQ. FT. 20,795 SQ. FT.

BUILDING AREA CALCULATION

Private open space provided

			S	QUARE FOOTAGE					
	Level	Residential	Residential Amenities/ Retail Retail/ Retail Parking / Building Service		Parking / Building Service	Total	Basements	Floor Elevation	
	Parking LL	7,188			48,842	56,030	56,030	168'-170'	
BELOW PODIUM	Ground Level P1	14,617	7,292	5,320	36,093	56,030		180'	
(CONCRETE)	Level P2	12,801			43,229	56,030		192'	
	Level P3	16,901			39,129	56,030		202'	
	3RD Floor	33,376				33,376		213'	
	4TH Floor	28,622				28,622		222.79'	
	5TH Floor	28,622				28,622		232.58'	
	6TH Floor	28,622				28,622		242.37'	
A POLYE DODUMA	7TH Floor	28,622				28,622		252.16'	
ABOVE PODIUM	8TH Floor	28,622				28,622		261.95'	
(METAL FRAME)	9TH Floor	28,622				28,622		271.74'	
	10TH Floor	28,622				28,622		281.53'	
	11TH Floor	28,622				28,622		291.32'	
	12TH Floor	26,589		1		26,589		301.11'	
	Roof (HP)							313.69'	
UBTOTALS		340,448	12,6	12	167,293	513,061	56,030		
			353,060 TOTAL GFA		167,293 TOTAL Parking Area	513,061 TOTAL Building Area			

	TOTAL GFA	353,060	
	Density Exclusions	9,180	
	GFA with Density Exclusions	343,880	
ensity Exclusions			
	12	1	

2,100 SF at P2 open to below (Retail area) 1,074 SF at P2 open to below (loading spaces) 677 SF at P2 Open to below (Generator room)

Density Exclusions		7						0.01				
Lower Level		Ground Level		Level P2		Level P3	1.17	Floors 3-11		Floor 12		
Building Service	2,948	Stairs (2)	20	Stairs (3)	30	Stairs (3)	30	Stairs (4)	40	Stairs (4)	40	
Bike Storage	2,118	11.0		Trash	33	Trash	33	Trash	33	Trash	33	
Elevator Lobby	324			Unit Vents (9)	36	Unit Vents (12)	44	Unit Vents (26)	104	Unit Vents (25)	100	
Telecom	180							per floor	177			
Main Elec Room	558							1 100				
Water Pump Room	689											
Em Elec Room	150											
Storage	221							floors	9			
TotaL:	7,188		20		99		107	- T	1,593	_	173	9,180

BIKE STORAGE SUMMARY Standard Site Plan Conditions - Bike Parking

Note 1: Exterior bicycle racks are to be used for visitors. Refer to landscape and civil drawings for their

locations, type, and quantities.

			7.0	
Class II or III	Visitor (See note 1)	1/50 units; 2/10k sf	8	
Class	Resident	1/2.5 units	111	
Class I	Retail	1 per 25,000	1	
			120	

Total provided 34.78% 65.22%

UNIT MATRIX SUMMARY

2.04.40.00	Unit Area Net		Total Area									Levels						
Unit Name	(**)	Total Units	(Net)	Per	cent	Ground Level P1	P2	P3	3RD	4ТН	5ТН	6ТН	7TH	8TH	9ТН	10TH	11TH	12TH
Maisonettes 2L-2 Bed	1,564	6	9,384	2.17%	4.050/	6												
Maisonettes 2L-2 Bed	1,403	6	8,418	2.17%	4.35%			6										
Studio S1	588	9	5,292	3.26%	0.500/				1	1	1	1	1	1	1	1	1	
Studio S2	588	1	588	0.36%	3.62%													1
1 Bed A1	756	75	56,700	27.17%					12	14	5	5	5	5	5	5	5	14
1 Bed A2	692	63	43,596	22.83%							9	9	9	9	9	9	9	
1 Bed A3	820	1	820	0.36%	51.09%				1									
1 Bed A4	817	1	817	0.36%	10													1
1 Bed A5	693	1	693	0.36%				1										
1 Bed + Den AD1	966	10	9,660	3.62%					1	1	1	1	1	1	1	1	1	1
1 Bed + Den AD2	989	1	989	0.36%	7.070/				1									
1 Bed + Den AD3	968	9	8,712	3.26%	7.97%					1	1	1	1	1	1	1	1	1
1 Bed + Den AD4	890	2	1,780	0.72%			1	1										
2 Bed B1	1,075	14	15,050	5.07%							2	2	2	2	2	2	2	
2 Bed B2	1,134	24	27,216	8.70%					3	4	2	2	2	2	2	2	2	3
2 Bed B3	1,285	14	17,990	5.07%							2	2	2	2	2	2	2	
2 Bed B4	1,201	9	10,809	3.26%					1	1	1	1	1	1	1	1	1	
2 Bed B5	1,120	10	11,200	3.62%	32.97%				1	1	1	1	1	1	1	1	1	1
2 Bed B6	1,272	9	11,448	3.26%	32.3770					1	1	1	1	1	1	1	1	1
2 Bed B7	1,344	5	6,720	1.81%					2	2								1
2 Bed B8	1,347	4	5,388	1.45%			2	2										
2 Bed B9	1,117	1	1,117	0.36%				1										
2 Bed B10	1,096	1	1,096	0.36%				1										
Total		276	255,483	100.00%	100.00%	6	3	12	23	26	26	26	26	26	26	26	26	24

3.62%

59.06%

37.32%

100.00%

925.66 AVG. AREA*

(*) Excludes circulation and service core 76.52% Efficiency net/gross

(**) Excludes balconies

2 LEVEL UNITS (12 TOTAL)

Unit type	# of units	Area	Avg.	% units	
Maisonettes	12	17,802	1483.50	4.35%	
Studio	10	5,880	588.00	3.62%	Studio 7
1 Bed + 1 BedDen	163	123,767	759.31	59.06%	1 Bed T
2 Bed	91	108,034	1187.19	32.97%	2 Bed to
Total	276	255,483	925.66	100.00%	

PARKING TABULATION

PARKING REQUIRED PER ZONING

Total residential units

276 Retail sf 5,320

Use	Ratio per a	zoning	Total required	
Residential	1.125 for first 200du	225	301	
Residential	1 for du > 200	76	301	
Retail	1/250 sf		22	

323 TOTAL REQUIRED

PARKING PROVIDED

MENT IS THE PROPERTY OF DAVIS, CARTER, SCOTT . ALL BIGHTS RESERVED. THE DRAWINGS PRESENTED OR REFERRED TO HEREIN OR EXTENSIONS TO THIS PROJECT TO CHANGE BASED UPON FINAL DESIGN REQUIREMENTS, UNIT PLAN/FLOOR PLAN CHANGES, ETC.). AND MEP DESIGN REQUIREMENTS, UNIT PLAN/FLOOR PLAN CHANGES, ETC.).

	Ar. Nation	Last	Total Number of Spaces provided	Type of park	ing provided	Accessible parking spaces			
0.12.0	Elevation	Level	(Includes Accessible	Standard Size (8'-6"x18'-0")	Compact Size (8'-0"x15'-0")	Total	HC Std	HC Van	
Parking Structure	168'-170'	Parking LL	101	93	8	2	2		
	180'	Ground Level P1	53	52	1	4	2	2	
	192'	Level P2	87	65	22	2	2		
	202'	Level P3	90	68	22	2	2		
Surface Parking									
		SUBTOTA	LS	278	53	10	8	2	

TOTAL PARKING PROVIDED EXTRA SPACES

# of Standard size spaces provided	Proposed for residential	256	Includes 7 Handicap and 2 Van spaces
	Proposed for retail	22	Includes 1 Handicap space
	Total Standard size parking space provided	278	

of Compact size spaces provided (residential only) 15 % of the required parking parking space from extra spaces provided Total compact parking space provided

> Spaces/unit less retail parking sf per space

1.12 505.42 Residential Retail TOTAL: Loading space at 12' x 25' >15' clear hei Loading space at 12'x40' >15' clear heig TOTAL:

LOADING SPACE SUMMARY

Standard Site Plan Conditions - Compact Spaces: The number of compact spaces counted toward the total number of required spaces, exclusive of those required for retail, shall not exceed 15% of the total required spaces. Required spaces for retail shall not be compact. Spaces provided in excess of the required total may be either

standard or compact.

3130 Langston Boulevard Density and Zoning Tabulations

Overall Density Tabulations

Total Site Area (SF)	73,254
Total Site Area (Acres)	1.68
Total GFA (SF)	343,880.00
Total Density (FAR)	4.69
Residential Density Share	
Total Residential Units	276.00
Total Residential GFA	331,268.00
Residential Density (UN/AC)	164.12
Residential Density (FAR)	4.52
Net Buildable Area (SF)	56,949.50
Total Ground Floor Coverage (SF)	56,030.00
Total Ground Floor Coverage (%)	98.39%
Total Tower Coverage (SF)	28,622.00
Total Tower Coverage (%)	50.26%
Retail Density Share	
Total Retail GFA (SF)	12,612.00
Retail Density (FAR)	0.17
Zoning Tabulations	
Site Area Allocation	
Residential Site Area (SF)	70,567.37
Residential Site Area (AC)	1.62
Retail Site Area (AC)	2,686.63 0.06
Base Density	
Residential @ 115 UN/AC (Units)	186.00
Residential (SF GFA)	223,245.83
Retail @2.5 FAR (SF GFA)	6,716.58
Green Building Bonus @ 0.25 FAR	
Residential (Units)	14.00
Residential (SF GFA)	17,641.84
Retail (SF GFA)	671.66
Remaining Bonus	
Residential (Units)	76.00
Residential (SF GFA)	90,380.33
Retail (SF GFA)	5,223.76

CARTER SCOTT Ltd 8614 Westwood Center Dr Tysons, Virginia 22182 P 703.556.9275 F 703.821.6976 www.dcsdesign.com



PROPERTIES Rooney Properties LLC

3330 Washington Blvd **UNIT 220** Arlington, VA 22201 P 703. 204 . 1400

https://rooneypropertieslic.com/

08/09/2

REVISION DATE PROJECT TITLE

> 3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

> > 322158.00

4.1 SITE PLAN PROJECT NO.

DRAWING TITLE

PROJECT INFORMATION / **TABULATIONS**

DRAWN BY QC CHECKED BY CA REVIEWED BY

DRAWING NUMBER

LEED MF MIDRISE v4 CHECKLIST 3130 Langston Blvd 322158.00 DESIGN 8/7/2024 ADDRESS: 3130 Langston Blvd, Arlington, VA 22201 LEED for Homes: Multifamily Midrise v4 Yes Targeted / No INTEGRATIVE PROCESS 2 Credit 1 Integrative Process 0 2 0 0 Yes Targeted 7 No LOCATION AND TRANSPORTATION (8 pts reg'd w/ EA) Y Pre 1 Floodplain Avoidance Req'd Credit 1 LEED for Neighborhood Development Location-or-15 -OR-8 Credit 2 Site Selection 3 Credit 3 Compact Development Credit 4 Community Resources 1 1 Credit 5 Access to Transit 6 8 0 1 Yes Targeted 7 No. SUSTAINABLE SITES Y Pre-1 Construction Activity Pollution Prevention Pre-2 No Invasive Plants Reg'd 2 Credit 1 Heat Island Reduction 3 Credit 2 Rainwater Management 2 Credit 3 Nontoxic Pest Control 0 7 0 0 Yes Tengeted 7 No WATER EFFICIENCY (3 pts required) Pre 1 Water Metering Credit 1 Total Water Use -orCredit 2 Indoor Water Use Credit 3 Outdoor Water Use Req'd 12 -OR-Credit 3 Outdoor Water Use 0 6 2 4 Yes Targeted 2 No ENERGY & ATMOSPHERE (8 pts required w/ LT) Pre 1 Minimum Energy Performance Req'd Pre 2 Energy Metering Pre 3 Education of Homeowner, Tenant, or Building Manager 11 13 6 Credit 1 Annual Energy Use 2 3 Credit 2 Efficient Hot Water Distribution System 2 Credit 3 Advanced Utility Tracking 0 15 16 6 Ves Targeted 7 No MATERIALS & RESOURCES Pre 1 Certified Tropical Wood Req'd Pre 2 Durability Management 1 Credit 1 Durability Management Verification 1 4 Credit 2 Environmentally Preferable Products 2 1 Credit 3 Construction Waste Management 0 4 4 1 Yes Targeted. 7 No INDOOR ENVIRONMENTAL QUALITY (3 pts required) Pre 1 Ventilation Req'd Pre 2 Combustion Venting Req'd Pre 3 Garage Pollutant Protection Req'd Pre 4 Radon Resistant Construction Req'd Pre 5 Air Filtering Req'd Pre 6 Environmental Tobacco Smoke Req'd Pre 7 Compartmentalization 2 Credit 1 Enhanced Ventilation 2 Credit 2 Contaminant Control 2 Credit 3 Balancing of Heating and Cooling Distribution Sytems 3 Credit 4 Enhanced Compartmentalization Credit 5 Enhanced Combustion Venting Credit 6 Enhanced Garage Pollutant Protection Credit 7 Low-Emitting Products 1 Credit 8 No Environmental Tobacco Smoke 0 8 4 6 Yes Targeled 7 No INNOVATION IN DESIGN Preliminary LEED meeting and action plan. Pre 1 Preliminary Rating 1 Credit 1.1 Innovation in Design Install EV charging stations for 2% of parking sp EPDs, Specify 20+ products with EPDs. Credit 1.2 Innovation in Design HPDs, Specify 20+ products ith HPDs. Credit 1.3 Innovation in Design 1 Credit 1.4 Innovation in Design Light pollution reduction 1 Credit 1.5 Innovation in Design Bird-friendly design Credit 2 LEED Accredited Professional 1 2 3 0 Yes Targeted / REGIONAL PRIORITY 1 Credit 1.1 Regional Priority 1 Credit 1.2 Regional Priority Site Selection (8 pts min) Community Resources (2 pts min) 1 Credit 1.3 Regional Priority Access to Transit (2 pts min) Credit 1.4 Regional Priority Rainwater Management (3 pts min)

0 3 0 1

62

PROJECT TOTALS

= Total Points Estimated

7 55 29 19 Certified 40 to 49 Points Silver 50 to 59 Points Gold 60 to 79 Points Platinum 80+ Points

IMPORTANT: LEED points shown represent our professional opinion of credit achievability. Credits are awarded by USGBC/GBCI only and are the

result of collaborative effort and decisions by all team members. DCS cannot guarantee any LEED points or specific level of certification.

ntegrati	Subject	Yes	gete		No	Possible	Requirements	Restourance (+1 Point)	Action	Action (tems/Comments
megran	ve Process (2 poss	ible p	oints		-		Option 1; Integrative Project Team (1 pt)	7	7	
							a) Include req'd learn members. b) Involve team members in multiple phases.			
							c) Conduct monthly meeting. AND/OR Option 2: Design Charrette (1 pt)			
							a) Conduct one full-day workshop w/ project team. AND/OR			
	Sec. 10						Option 3: Trades Training (1 pt) a) Conduct 8 min. hours LEED training for: plumbing.			and the second s
redit 1	Integrative Process		2			2	mechanical, insulation, framing, and air sealing trades.	N/A	ARCH	Option 1: Integrative Project Team (ARCH, MEP, LEED) and Option 2: Design Charrette
										Option 2. Design Unarrette
		L								
Location	n and Transportation	on (15	poss	sible p	oints)			2		
Pre 1	Floodplain	2				Reg'd	Do not build on land within flood hazard area.	N/A	OWNE	R Project is previously developed and exempt.
rie (Avoidance	ľ				Med d		W.O.	O min	r Project is previously developed and exampt.
	LEED for						Locate project within a LEEO for Neighborhood Development project.			
redit 1	Neighborhood Development Location				0	15		N/A	OWNE	Not applicable. Cannot be combined with LT Credits 2-
	-or-									
		1		1			Option 1: Sensitive Land Protection			
							Path 1 - Previously developed (4 pts) Path 2 - Avoidance of sensitive land (3 pts) 1) Prime Farmland			
							2) Parkiand 3) Floodplain			
							Haditat for treatened species Wetlands wii 50 ft			
							6) Water bodies w/i 100 ft AND/OR			Option 1: Sensitive Land Protection - Path 1 - Previously developed (4 pts)
edit 2	Site Selection		8			8	Option 2: Infili Development (2 pts) a) At least 75% of land within 1/2 mile is previously developed		OWNR	Option 2: Infill Development (2 pts) Option 3: Open Space (1 pt) - I von Village Park
	- Section						AND/OR Option 3: Open Space (1.pt)			- Lyon Village Park Option 5: Bicycle Network & Sterage (1 pt) - Custis Trail
							b) Locate wii 1/2 mile or create publicly available open space. AND/OR. Option 4: Street Network (1 pt).			- Custis Trail - Bike storage will be provided.
							Option 4: Street Network (1 pt) a) Locate in high Intersection density area (≥90/sq mi) AND/OR			
							Option 5: Bicycle Network & Storage (1 pt) a) Locate near bicycle network,			
							b) Provide bioyole storage.			
		-					Construct building that meets dwelling unit per acre of buildable land density requirements below;			
							≥ 30 DU/acre = 1 pt			
							≥ 55 DU/acre = 2 pt ≥ 80 DU/acre = 3 pt			
edit 3	Compact	3				3			ARCH	276 dwelling units / 1.68 acres = 164 DU/acre
	Development					X				The state of the s
				-	1 +		Locate w/i 1/2 mi walking distance of the following community	-		171 C
							use establishments. 4-7 uses = 1 pt 8-11 uses = 1.5 pts			12+ Community Establishments: CVS (Pharmacy) The Italian Store (Food market)
							8-11 uses = 1.5 pts =12 uses = 2 pts			Lyon Village Community House (Community Genter) Lyon Village Park
edit 4	Community	2				2	Include at least 2 Categories: - Food Retail (Supermarket, produce market, etc.)	20+ uses for EP	ARCH	Starbucks (Coffee shop) BGR Burgers (Restaurant)
ouit 4	Resources	*					Community Retail (Clothing, Convenience, Pharmacy, etc) Services (Restaurant, bank, gym, salon, laundry, dry	EV 10309 TOF EP	ARCH	Arlington Family Dental Center (Medical) Giant (Grocery)
							cleaner) - Crvic and Community Facilities (Child care, rec center,			The Block Oven (Restaurant) Method Fitness (Gym) Hair Cuttery (Bair pare)
		1					achools, place of worship, library, police/fire station, etc)			Hair Cuttery (Hair care) VINCI School (Elem School)
							No make there it all annual materials to the			Little Ambassadors Academy (Child care)
					H		No more than 2 of same establishment type. a) Locate entry w/1/4 mile walking distance of bus, streetcar,			Little Ambassadors Academy (Child care)
							a) Locate entry w/l 1/4 mile walking distance of bus, streetcar, or informal transit stops. 72 min. weekday 40 min. weekend = 1 pt			Little Ambassadors Academy (Child care)
							a) Locate entry w/i 1/4 mile walking distance of bus, streetcar, or informal transist stops.			
redit 5	Access to Transit	ń			X	2	a) Locate entry wil 1/4 mile walking distance of bus, streetcar, or informal transist stops. 72 min. weekday 40 min. weekend = 1 pt 144 min. weekday 108 min. weekend = 1.5 pts.	N/A	ARCH	Bus stops for Routes 3Y (13 weekday, 0 weekend), ARTS (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.6 miles away.
edit 5	Access to Transit	1			X	2	a) Locate entry wil 1/4 mile walking distance of bus, streetcar, or informal transist stops. 72 min. weekday 40 min. weekend = 1 pt. 144 min. weekday 108 min. weekend = 1.5 pts. 360 min weekday 216 min. weekend = 2 pts. OR. Locate entry wil 1/2 mile walking distance of bus rapid transit, rail stations, or ferry leminals. 24 min. weekday = 1 pt. 40 min. weekday = 1 5 pts.	N/A	ARCH	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART! (151 weekday, 70 weekend) wii 1/4 mile.
redit 5	Access to Transit	ŋ			X	2	a) Locate entry wil 1/4 mile walking distance of bus, streetcar, or informal transist stops. 72 min. weekday 40 min. weekend = 1 pt 144 min. weekday 108 min. weekend = 1.5 pts 360 min weekday 216 min. weekend = 2 pts 0R Locate entry wil 1/2 mile walking distance of bus rapid transit. ral stations, or ferry terminals. 24 min. weekday = 1 pt.	N/A	ARCH	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART! (151 weekday, 70 weekend) wii 1/4 mile.
redit 5			10	0	X 1	2	a) Locate entry wil 1/4 mile walking distance of bus, streetcar, or informal transit stops. 72 min. weekday 40 min. weekend = 1 pt. 144 min. weekday 108 min. weekend = 1.5 pts. 360 min weekday 216 min. weekend = 2 pts. OR. Locate entry wil 1/2 mile walking distance of bus rapid transit. rall stations, or ferry terminals. 24 min. weekday = 1 pt. 40 min. weekday = 1 5 pts. 60 min. weekday = 2 pts.	N/A	ARCH	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART! (151 weekday, 70 weekend) wii 1/4 mile.
		: 6			1	2	a) Locate entry wil 1/4 mile walking distance of bus, streetcar, or informal transit stops. 72 min. weekday 40 min. weekend = 1 pt. 144 min. weekday 108 min. weekend = 1.5 pts. 360 min weekday 216 min. weekend = 2 pts. OR. Locate entry wil 1/2 mile walking distance of bus rapid transit. rall stations, or ferry terminals. 24 min. weekday = 1 pt. 40 min. weekday = 1 5 pts. 60 min. weekday = 2 pts.	N/A	ARCH	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART! (151 weekday, 70 weekend) wii 1/4 mile.
	Total	: 6			90	Total Possible	a) Locate entry wil 1/4 mile walking distance of bus, streetcar, or informal transit stops. 72 min. weekday 40 min. weekend = 1 pt. 144 min. weekday 108 min. weekend = 1.5 pts. 360 min weekday 216 min. weekend = 2 pts. OR. Locate entry wil 1/2 mile walking distance of bus rapid transit. rall stations, or ferry terminals. 24 min. weekday = 1 pt. 40 min. weekday = 1 5 pts. 60 min. weekday = 2 pts.	Exemplary Parformanca (+1 Point)	Action By	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART! (151 weekday, 70 weekend) wii 1/4 mile.
D for H	Total Homes: Multifam Subject ble Sites (7 Possib	ily M	idris Ter- geted		90	Total	a) Locate entry wil 1/4 mile walking distance of bus, streetcar, or informal transit stops. 72 min. weekday 40 min. weekend = 1 pt 144 min. weekday 108 min. weekend = 1.5 pts 360 min weekday 216 min weekend = 2 pts OR Locate entry wil 1/2 mile walking distance of bus rapid transit, ral-stations, or ferry terminals. 24 min. weekday = 1 pt 40 min. weekday = 1 5 pts 60 min. weekday = 2 pts b) Meet both weekday and weekend trip frequency minimums. Requirements	Exemplary Parformance	Action	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART! (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.6 miles away.
D for H	Total formes: Multifarm Subject ble Sites (7 Possib Construction Activity Pollution	ily M	idris Ter- geted		90	Total Possible	a) Locate entry wil 1/4 mile walking distance of bus, streetcar, or informal transit stops. 72 min. weekday 40 min. weekend = 1 pt. 144 min. weekday 108 min. weekend = 1.5 pts. 360 min weekday 216 min. weekend = 2 pts. OR. Locate entry wil 1/2 mile walking distance of bus rapid transit. rall stations, or ferry terminals. 24 min. weekday = 1 pt. 40 min. weekday = 1 pts. 60 min. weekday = 2 pts. b) Meet both weekday and weekend trip frequency minimums. Requirements For site larger than 1 acre. confirm to erosion and sedimentation requirements of the 2012 US EPA Construction.	Exemplary Parformance	Action By	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART! (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.6 miles away.
D for H	Total formes: Multifam Subject ble Sites (7 Possib Construction	ily M	idris Ter- geted		90	Total Possible Req'd	a) Locate entry wil 1/4 mile walking distance of bus, streetcar, or informal transit stops. 72 min. weekday 40 min. weekend = 1 pt. 144 min. weekday 108 min. weekend = 1.5 pts. 360 min weekday 216 min. weekend = 2 pts. OR. Locate entry wil 1/2 mile walking distance of bus rapid transit, rall stations, or ferry terminals. 24 min. weekday = 1 pt. 40 min. weekday = 1 pt. 40 min. weekday = 2 pts. 60 min. weekday = 2 pts. b) Meet both weekday and weekend trip frequency minimums. Requirements For site larger than 1 acre, confirm to erosion and sedimentation requirements of the 2012 US EPA Construction General Permit. Introduce no invasive plants into the landscape,	Exemplary Parformance	Action By	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART: (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.6 miles away. Action items/Comments
D for H	Total formes: Multifam Subject ble Sites (7 Possib Construction Activity Pollution Prevention	ily M	idris Ter- geted		90	Total Possible Req'd	a) Locate entry wil 1/4 mile walking distance of bus, streetcar, or informal transit stops. 72 min. weekday 40 min. weekend = 1 pt. 144 min. weekday 108 min. weekend = 1.5 pts. 360 min weekday 216 min. weekend = 2 pts. OR. Locate entry wil 1/2 mile walking distance of bus rapid transit, rall-stations, or ferry terminals. 24 min. weekday = 1 pt. 40 min. weekday = 1 pt. 40 min. weekday = 2 pts. 60 min. weekday = 2 pts. b) Meet both weekday and weekend trip frequency minimums. Requirements Requirements For site larger than 1 acre, confirm to erosion and sedimentation requirements of the 2012 US EPA Construction General Permit. Introduce no invasive plants into the landscape. For sites where 50% (1 pt) or 75% (2 pts) of all hardscape and roots meet one of the following.	Exemplary Parformance	Action By	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.6 miles away. Action Items/Comments E&SC Plan will be provided.
D for H	Total formes: Multifam Subject ble Sites (7 Possib Construction Activity Pollution Prevention No Invasive Plants Heat Island	ily M	idris Ter- geted		90	Total Possible Req'd	a) Locate entry will 1/4 mile walking distance of bus, streetcar, or informal transit stops. 72 min. weekday 40 min. weekend = 1 pt. 144 min. weekday 108 min. weekend = 1.5 pts. 360 min weekday 216 min. weekend = 2 pts. OR. Locate entry will 1/2 mite walking distance of bus rapid transit, rall stations, or ferry terminals. 24 min. weekday = 1 pt. 40 min. weekday = 1 pts. 60 min. weekday = 2 pts. 60 min. weekday = 2 pts. b) Meet both weekday and weekend trip frequency minimums. Requirements For site larger than 1 acre, confirm to erosion and sedimentation requirements of the 2012 US EPA Construction General Permit. Introduce no invasive plants into the landscape. For sites where 50% (1 pt) or 75% (2 pts) of all hardscape and roots meet one of the following. a) Shading, shaded by trees or plantings (after 10 yrs growth) b) ENERGYSTAR rooting	Exemplary Parformance	Action By CIVIL LAND	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.6 miles away. Action Items/Comments E&SC Plan will be provided. No invasive plants will be used. High SRI and vegetated roof will be provided, as well as shading from street trees and high SR pavers where
D for H	Total formes: Multifarm Subject ble Sites (7 Possib Construction Activity Pollution Prevention No Invasive Plants	ily M	Targeted		90	Total Possible Req'd Req'd	a) Locate entry wil 1/4 mile walking distance of bus, streetcar, or informal transit stops. 72 min. weekday 40 min. weekend = 1 pt. 144 min. weekday 108 min. weekend = 1.5 pts. 360 min weekday 216 min. weekend = 2 pts. OR. Locate entry wil 1/2 mile walking distance of bus rapid transit. rall stations, or ferry terminals. 24 min. weekday = 1 pt. 40 min. weekday = 1 pt. 40 min. weekday = 1 pts. 60 min. weekday = 2 pts. 60 min. weekday = 2 pts. b) Meet both weekday and weekend trip frequency minimums. Requirements For site larger than 1 acre, confirm to erosion and sedimentation requirements of the 2012 US EPA Construction General Permit. Introduce no invasive plants into the landscape, For sites where 50% (1 pt) or 75% (2 pts) of all hardscape and roots meet one of the following: a) Shading, shaded by trees or plantings (after 10 yrs growth) b) ENERGYSTAR rooting c) Vegetated moting d) Open pavers	Exemplary Parformance	Action By CIVIL	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.6 miles away. Action Items/Comments E&SC Plan will be provided. No invasive plants will be used.
D for H	Total formes: Multifam Subject ble Sites (7 Possib Construction Activity Pollution Prevention No Invasive Plants Heat Island	ily M	Targeted		90	Total Possible Req'd Req'd	a) Locate entry wil 1/4 mile walking distance of bus, streetcar, or informal transit stops. 72 min. weekday 40 min. weekend = 1 pt. 144 min. weekday 108 min. weekend = 2 pts. 360 min weekday 216 min. weekend = 2 pts. OR. Locate entry wil 1/2 mile walking distance of bus rapid transit, rall stations, or ferry terminals. 24 min. weekday = 1 pt. 40 min. weekday = 1 pt. 40 min. weekday = 1 pt. 60 min. weekday = 2 pts. b) Meet both weekday and weekend trip frequency minimums. Requirements Requirements For site larger than 1 acre, confirm to erosion and sedimentation requirements of the 2012 US EPA Construction General Permit. Introduce no invasive plants mtg the landscape. For sites where 50% (1 pt) or 75% (2 pts) of all hardscape and roots meet one of the following. a) Shading, shaded by trees or plantings (after 10 yrs growth) b) ENERGYSTAR rooting c) Vegetaled rooting d) Open pavers. e) High SR: Pavers with 3 yr SR ≥0.28 or initial SR ≥0.33 CASE 1: Low Impact Development	Exemplary Parformance	Action By CIVIL LAND	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.6 miles away. Action Items/Comments E&SC Plan will be provided. No invasive plants will be used. High SRI and vegetated roof will be provided, as well as shading from street trees and high SR pavers where
D for H edit ustainal e 1	Total formes: Multifam Subject ble Sites (7 Possib Construction Activity Pollution Prevention No Invasive Plants Heat Island	ily M	Targeted		90	Total Possible Req'd Req'd	a) Locate entry wil 1/4 mile walking distance of bus, streetcar, or informal transit stops. 72 min. weekday 40 min. weekend = 1 pt. 144 min. weekday 108 min. weekend = 2 pts. 380 min weekday 216 min. weekend = 2 pts. 380 min weekday 216 min. weekend = 2 pts. 380 min weekday 216 min. weekend = 2 pts. 380 min. weekday 216 min. weekend = 2 pts. 40 min. weekday = 1 pt. 40 min. weekday = 1 pt. 40 min. weekday = 1 pt. 40 min. weekday = 2 pts. 60 min. weekday = 2 pts. b) Meet both weekday and weekend trip frequency minimums. Requirements For site larger than 1 acre, confirm to erosion and sedimentation requirements of the 2012 US EPA Construction General Permit. Introduce no invasive plants mto the landscape. For sites where 50% (1 pt) or 75% (2 pts) of all hardscape and roots meet one of the following: a) Shading, shaded by trees or plantlings (after 10 yrs growth) b) ENERGYSTAR roofing c) Vegetaled roofing d) Open pavers e) High SR: Pavers with 3 yr SR ≥0.28 or initial SR ≥0.33 CASE 1: Low Impact Development. Percentage of lot area, including area under roof; that is permeable or can direct water to on-site catchment or fill ration.	Exemplary Parformance	Action By CIVIL LAND	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART: (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.6 miles away. Action Items/Comments E&SC Plan will be provided. No invasive plants will be used. High SRI and vegetated roof will be provided, as well as shading from street trees and high SR pavers where
D for Houstainal	Total formes: Multifam Subject ble Sites (7 Possib Construction Activity Pollution Prevention No Invasive Plants Heat Island Reduction	ily M	Targeted		90	Total Possible Req'd Req'd	a) Locate entry wil 1/4 mile walking distance of bus, streetcar, or informal transis stops. 72 min. weekday 40 min. weekend = 1 pt. 144 min. weekday 108 min. weekend = 2 pts. 360 min weekday 216 min. weekend = 2 pts. OR. Locate entry wil 1/2 mile walking distance of bus rapid transit, rall stations, or ferry terminals. 24 min. weekday = 1 pt. 40 min. weekday = 1 pt. 40 min. weekday = 1 pt. 50 min. weekday = 2 pts. b) Meet both weekday and weekend trip frequency minimums. Requirements For site larger than 1 acre, confirm to erosion and sedimentation requirements of the 2012 US EPA Construction General Permit. Introduce no invasive plants into the landscape. For sites where 50% (1 pt) or 75% (2 pts) of all hardscape and roots meet one of the following: a) Shading, shaded by trees or plantings (after 10 yrs growth) b) ENERGYSTAR rooting c) Vegetaled rooting d) Open pavers e) High SR: Pavers with 3 yr SR ≥0, 28 or initial SR ≥0.33 CASE 1: Low Impact Development. Percentage of lot area, including area under roof, that is permeable or can direct water to on-site catchment or filtration device* 50-64% = 1 pt	Exemplary Parformance	Action By CIVIL LAND LAND ARCH	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART: (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.6 miles away. Action Items/Comments E&SC Plan will be provided. No invasive plants will be used. High SRI and vegetated roof will be provided, as well as shading from street trees and high SR pavers where possible.
D for H	Total formes: Multifam Subject ble Sites (7 Possib Construction Activity Pollution Prevention No Invasive Plants Heat Island	ily M	Targeted		90	Total Possible Req'd Req'd	a) Locate entry wil 1/4 mile walking distance of bus, streetcar, or informal transit stops. 72 min. weekday 40 min. weekend = 1 pt. 144 min. weekday 108 min. weekend = 1.5 pts. 380 min weekday 216 min. weekend = 2 pts. OR. Locate entry wil 1/2 mile walking distance of bus rapid transit. rall stations, or ferry terminals. 24 min. weekday = 1 pt. 40 min. weekday = 1 pt. 60 min. weekday = 2 pts. b) Meet both weekday and weekend trip frequency minimums. Requirements For site larger than 1 acre. confirm to erosion and sedimentation requirements of the 2012 US EPA Construction General Permit. Introduce no invasive plants into the landscape. For sites where 50% (1 pt) or 75% (2 pts) of all hardscape and roofs meet one of the following: a) Shading, shaded by trees or plantings (after 10 yrs growth) b) ENERGYSTAR roofing c) Vegetated molting d) Open pavers e) High SR: Pavers with 3 yr SR ≥0.28 or initial SR ≥0.33 CASE 1: Low Impact Development Percentage of lot area, including area under roof; that is permeable or can direct water to on-site catchment or filtration device: 9 50-64% = 1 pt. 65-79% = 2 pts. 80-100% = 3 pts.	Exemplary Parformance	Action By CIVIL LAND ARCH	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART: (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.6 miles away. Action Items/Comments E&SC Plan will be provided. No invasive plants will be used. High SRI and vegetated roof will be provided, as well as shading from street trees and high SR pavers where possible.
D for Houstainal	Total formes: Multifam Subject ble Sites (7 Possib Construction Activity Pollution Prevention No Invasive Plants Heat Island Reduction Rainwater	ily M	Targeted ints)		90	Total Possible Req'd Req'd	a) Locate entry wil 1/4 mile walking distance of bus, streetcar, or informal transit stops. 72 min. weekday 40 min. weekend = 1 pt. 144 min. weekday 108 min. weekend = 1.5 pts. 360 min weekday 216 min. weekend = 2 pts. OR. Locate entry wil 1/2 mile walking distance of bus rapid transit, rall stations, or ferry terminals. 24 min. weekday = 1 pt. 40 min. weekday = 1 pt. 40 min. weekday = 1 5 pts. 60 min. weekday = 2 pts. b) Meet both weekday and weekend trip frequency minimums. Requirements For site larger than 1 acre. confirm to erosion and sedimentation requirements of the 2012 US EPA Construction General Permit. Introduce no invasive plants into the landscape. For sites where 50% (1 pt) or 75% (2 pts) of all hardscape and roots meet one of the following: a) Shading shaded by trees or plantings (after 10 yrs growth) b) ENERCYSTAR rooting of Vegetaled rooting d) Open pavers e) High SR: Pavers with 3 yr SR ≥0.28 or initial SR ≥0.33 CASE 1: Low Impact Development Percentage of lot area, including area under roof, that is permeable or can direct water to on-site catchment or filtration device. 50.64% = 1 pt. 65-79% = 2 pts	Exemplary Parformance	Action By CIVIL LAND LAND ARCH	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART. (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.6 miles away. Action Items/Comments E&SC Plan will be provided. No invasive plants will be used. High SRI and vegetated roof will be provided, as well as shading from street trees and high SR pavers where possible. Case 1: LIDs will be implementated to control at least 80
D for H edit ustainal e 1	Total formes: Multifam Subject ble Sites (7 Possib Construction Activity Pollution Prevention No Invasive Plants Heat Island Reduction Rainwater	ily M	Targeted ints)		90	Total Possible Req'd Req'd	a) Locate entry will 1/4 mile walking distance of bus, streetcar, or informal transis stops. 72 min. weekday 40 min. weekend = 1 pt. 144 min. weekday 108 min. weekend = 1.5 pts. 360 min weekday 216 min. weekend = 2 pts. OR. Locate entry will 1/2 mile walking distance of bus rapid transit, rall stations, or ferry terminals. 24 min. weekday = 1 pt. 40 min. weekday = 1 pt. 60 min. weekday = 2 pts. 60 min. weekday and weekend trip frequency minimums. Requirements Requirements For site larger than 1 acre. confirm to erosion and sedimentation requirements of the 2012 US EPA Construction General Permit. Introduce no invasive plants into the landscape. For sites where 50% (1 pt) or 75% (2 pts) of all handscape and roots meet one of the following: a) Shading, shaded by trees or plantlings (after 10 yrs growth) b) ENERGYSTAR rooting: c) Vegetaled rooting: d) Open pavers: e) High SR: Pavers with 3 yr SR ≥0.28 or initial SR ≥0.33 CASE 1: Low Impact Development. Percentage of lot area, including area under roof, that is permeable or can direct water to on-site catchment or filtration device** 50-64% = 1 pt. 65-79% = 2 pts. 30-100% = 3 pts. Oevices must handle 100% of runoff from 2-yr, 24-hr storm. OR	Exemplary Parformance	Action By CIVIL LAND LAND ARCH	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART. (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.6 miles away. Action Items/Comments E&SC Plan will be provided. No invasive plants will be used. High SRI and vegetated roof will be provided, as well as shading from street trees and high SR pavers where possible. Case 1: LIDs will be implementated to control at least 80
D for H ustainal e 1	Total formes: Multifam Subject ble Sites (7 Possib Construction Activity Pollution Prevention No Invasive Plants Heat Island Reduction Rainwater	ily M	Targeted ints)		90	Total Possible Req'd Req'd	a) Locate entry will 1/4 mile walking distance of bus, streetcar, or informal transit stops. 72 min. weekday 40 min. weekend = 1 pt. 144 min. weekday 108 min. weekend = 2 pts. 360 min weekday 216 min. weekend = 2 pts. 360 min weekday 216 min. weekend = 2 pts. 360 min weekday 216 min. weekend = 2 pts. 40 min. weekday = 1 pt. 40 min. weekday = 1 pt. 40 min. weekday = 1 pt. 40 min. weekday = 2 pts. 60 min. weekday = 2 pts. b) Meet both weekday and weekend trip frequency minimums. Requirements For site larger than 1 acre. confirm to erosion and sedimentation requirements of the 2012 US EPA Construction General Permit. Introduce no invasive plants into the landscape. For sites where 50% (1 pt) or 75% (2 pts) of all hardscape and roots meet one of the following: a) Shading shaded by trees or plantings (after 10 yrs growth) b) ENERGYSTAR rooting: c) Vegetated rooting: d) Open pavers: e) High SR: Pavers with 3 yr SR ≥0, 28 or initial SR ≥0.33 CASE 1: Low Impact Development Percentage of lot area, including area under roof, that is permeable or can direct water to on-site catchment or filtration device* 50-64% = 1 pt. 65-79% = 2 pts. 30-100% = 3 pts. CASE 2: NPDES Projects (non municipal storm sewer) 9-5th percentitle storm = 2 pts.	Exemplary Parformance	Action By CIVIL LAND LAND ARCH	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART. (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.6 miles away. Action Items/Comments E&SC Plan will be provided. No invasive plants will be used. High SRI and vegetated roof will be provided, as well as shading from street trees and high SR pavers where possible. Case 1: LIDs will be implementated to control at least 80
D for H ustainal e 1	Total formes: Multifam Subject ble Sites (7 Possib Construction Activity Pollution Prevention No Invasive Plants Heat Island Reduction Rainwater	ily M	Targeted ints)		90	Total Possible Req'd Req'd	a) Locate entity will 1/4 mile walking distance of bus, streetcar, or informal transis stops. 72 min. weekday 40 min. weekend = 1 pt. 144 min. weekday 108 min. weekend = 2 pts. 360 min weekday 216 min. weekend = 2 pts. 360 min weekday 216 min. weekend = 2 pts. 360 min weekday 216 min. weekend = 2 pts. 40 min. weekday = 1 pt. 40 min. weekday = 1 pt. 40 min. weekday = 1 pt. 40 min. weekday = 2 pts. 60 min. weekday = 2 pts. b) Meet both weekday and weekend trip frequency minimums. Requirements For site larger than 1 acre. confirm to erosion and sedimentation requirements of the 2012 US EPA Construction General Permit. Introduce no invasive plants into the landscape. For sites where 50% (1 pt) or 75% (2 pts) of all hardscape and roots meet one of the following: a) Shading, shaded by trees or plantings (after 10 yrs growth) b) ENERGYSTAR roofing c) Vegetated roofing d) Open pavers e) High SR: Pavers with 3 yr SR ≥0, 28 or initial SR ≥0.33 CASE 1: Low Impact Development Percentage of lot area, including area under roof, that is permeable or can direct water to on-site catchment or filtration device* 50-64% = 1 pt. 65-79% = 2 pts. 80-109% = 3 pts. 10-109cs must handle 100% of runoff from 2-yr, 24-hr storm. OR CASE 2: NPDES Projects (non municipal storm sewer) 95th percentile storm = 2 pts. 96th percentile storm = 3 pts. 1 (mplement IPM Plan (Reqd)) 2) Up to 2 pts, each additional +0.5 pt EP up to 1 EP. Steel mesh barrier termite control system (1 pt)	Exemplary Parformance	Action By CIVIL LAND LAND ARCH	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART. (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.6 miles away. Action Items/Comments E&SC Plan will be provided. No invasive plants will be used. High SRI and vegetated roof will be provided, as well as shading from street trees and high SR pavers where possible. Case 1: LIDs will be implementated to control at least 80
D for H ustainal e 1	Total formes: Multifam Subject ble Sites (7 Possib Construction Activity Pollution Prevention No Invasive Plants Heat Island Reduction Rainwater	ily M	Targeted ints)		90	Total Possible Req'd Req'd	a) Locate entry wil 1/4 mile walking distance of bus, streetcar, or informal transit stops. 72 min. weekday 40 min. weekend = 1 pt. 144 min. weekday 108 min. weekend = 2 pts. 380 min weekday 216 min. weekend = 2 pts. 380 min weekday 216 min. weekend = 2 pts. 380 min weekday 216 min. weekend = 2 pts. 40 min. weekday = 1 pt. 40 min. weekday = 1 pt. 40 min. weekday = 1 pts. 60 min. weekday = 2 pts. b) Meet both weekday and weekend trip frequency minimums. Requirements For site larger than 1 acre. confirm to erosion and sedimentation requirements of the 2012 US EPA Construction General Permit. Introduce no invasive plants into the landscape. For sites where 50% (1 pt) or 75% (2 pts) of all hardscape and roofs meet one of the following: a) Shading, shaded by trees or plantings (after 10 yrs growth) b) ENERGYSTAR roofing c) Vegetated mofing d) Open pavers e) High SR: Pavers with 3 yr SR ≥0.28 or initial SR ≥0.33 CASE 1: Low Impact Development Percentage of lot area, including area under roof, that is permeable or can direct water to on-site catchment or filtration device* 50-64% = 1 pt. 65-79% = 2 pts. 30-100% = 3 pts. Devices must handle 100% of runoff from 2-yr. 24-hr storm. OR CASE 2: NPDES Projects (non municipal storm sewer) 95th percentile storm = 2 pts. 98th percentile storm = 3 pts. Implement IPM Plan (Reqd) Planting the properties termine system (1 pt) Planting the properties termine to the pts of the pts	Exemplary Parformance	Action By CIVIL LAND LAND ARCH	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART. (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.6 miles away. Action Items/Comments E&SC Plan will be provided. No invasive plants will be used. High SRI and vegetated roof will be provided, as well as shading from street trees and high SR pavers where possible. Case 1: LIDs will be implementated to control at least 80
D for Hestit ustainal	Total formes: Multifam Subject ble Sites (7 Possib Construction Activity Pollution Prevention No Invasive Plants Heat Island Reduction Rainwater	ily M	idris Targeted ints)		90	Total Possible Req'd Req'd	a) Locate entry wit 1/4 mile walking distance of bus, streetcar, or informal transis stops. 72 min. weekday 40 min. weekend = 1 pt. 144 min. weekday 108 min. weekend = 1.5 pts. 360 min weekday 216 min. weekend = 2 pts. OR. Locate entry wit 1/2 mile walking distance of bus rapid transit, rall stations, or ferry terminals. 24 min. weekday = 1 pt. 40 min. weekday = 1 pt. 40 min. weekday = 1 5 pts. 60 min. weekday = 2 pts. b) Meet both weekday and weekend trip frequency minimums. Requirements For site larger than 1 acre. confirm to erosion and sedimentation requirements of the 2012 US EPA Construction General Permit. Introduce no invasive plants into the landscape. For sites where 50% (1 pt) or 75% (2 pts) of all hardscape and roots meet one of the following: a) Shading, shaded by trees or plantings (after 10 yrs growth) b) ENERGYSTAR roofing c) Vegetated roofing d) Open pavers e) High SR: Pavers with 3 yr SR ≥0 28 or initial SR ≥0.33 CASE 1: Low Impact Development Percentage of lot area, including area under roof, that is permeable or can direct water to on-site catchment or filtration device* 50-64% = 1 pt. 65-79% = 2 pts. 30-100% = 3 pts. Devices must handle 100% of runoff from 2-yr. 24-hr storm. OR CASE 2: NPDES Projects (non municipal storm sewer) 95th percentile storm = 2 pts. 98th percentile storm = 3 pts.) Implement IPM Plan (Reqd) 2) Up to 2 pts, each additional +0.5 pt EP up to 1 EP; Steel mesh barrier termite control system (1 pt) Physical Files blance in termite control system (1 pt) Physical Files blance in termite control system (1 pt) Physical Files blance in termite control system (1 pt) Physical Files blance in termite control system (1 pt) Physical Files blance in termite control system (1 pt) Physical Files blance in termite control system (1 pt) Physical Files blance in termite control system (1 pt) Physical Files blance in termite control system (1 pt) Physical Files blance in termite control system (1 pt) Physical Files blance in termite control system (1 pt) Physical Files blance	Exemplary Parformance	Action By CIVIL LAND LAND CIVIL CIVIL	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.6 miles away. Action Items/Comments E&SC Plan will be provided. No invasive plants will be used. High SRI and vegetated roof will be provided, as well as shading from street trees and high SR pavers where possible. Case 1: LIDs will be implementated to control at least 80 of runoff. The following will be implemented: [PM Plan (Reqd) - Below grade walls; solid concrete (0.5 pt)
D for Hestit ustainal	Total formes: Multifam Subject ble Sites (7 Possib Construction Activity Pollution Prevention No Invasive Plants Heat Island Reduction Rainwater Management	ily M	Targeted ints)		90	Total Possible Req'd 2	a) Locate entry will 1/4 mile walking distance of bus, streetcar, or informal transit stops. 72 min. weekday 40 min. weekend = 1 pt. 144 min. weekday 108 min. weekend = 1.5 pts. 380 min weekday 216 min. weekend = 2 pts. OR. Locate entry will 1/2 mile walking distance of bus rapid transit. rall stations, or ferry terminals. 24 min. weekday = 1 pt. 40 min. weekday = 1 pt. 40 min. weekday = 1 pt. 50 min. weekday = 2 pts. 60 min. weekday = 2 pts. 60 min. weekday = 2 pts. b) Meet both weekday and weekend trip frequency minimums. Requirements For site larger than 1 acre. confirm to erosion and sedimentation requirements of the 2012 US EPA Construction General Permit. Introduce no invasive plants into the landscape. For sites where 50% (1 pt) or 75% (2 pts) of all hardscape and roots meet one of the following: a) Shading shaded by trees or plantings (after 10 yrs growth) b) ENERGYSTAR rooting () Vegetated rooting d) Open pavers: e) High SR: Pavers with 3 yr SR ≥0.28 or initial SR ≥0.33 CASE 1: Low Impact Development Percentage of lot area, including area under roof, that is permeable or can direct water to on-site catchment or filtration device*. 9 50-64% = 1 pt. 65-79% = 2 pts. 30-100% = 3 pts. 10 evices must handle 100% of runoff from 2-yr, 24-hr storm. OR CASE 2: NPDES Projects (non municipal storm sewer). 95th percentile storm = 2 pts. 98th percentile storm = 3 pts. 11 implement IPM Plan (Reqd). 12 Up to 2 pts, each additional +0.5 pt EP up to 1 EP. Stoel mesh barrier termier system (1 pt). Post-tension stabs (0.5 pt). Post-tension stabs (0.5 pt). Post-tension stabs (0.5 pt). Post-tension stabs (0.5 pt). Borate treatment of wood framing (0.5 pt). Non-wood structural elements (0.5 pt). Non-wood structural elements (0.5 pt).	Exemplary Parformance	Action By CIVIL LAND LAND CIVIL CIVIL	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.6 miles away. Action items/Comments E&SC Plan will be provided. No invasive plants will be used. High SRI and vegetated roof will be provided, as well as shading from street trees and high SR pavers where possible. Case 1: LIDs will be implementated to control at least 80 of runoff. The following will be implemented: IPM Plan (Reqd) - Below grade walls; solid concrete (0.5 pt) - Non-wood structural elements (0.5 pt)
D for H ustainal e 1 dit 1	Total formes: Multifam Subject ble Sites (7 Possib Construction Activity Pollution Prevention No Invasive Plants Heat Island Reduction Rainwater Management Nontoxic Pest	ily M	idris Targeted ints)		90	Total Possible Req'd 2	a) Locate entry wit 1/4 mile walking distance of bus, streetcar, or informal transis stops. 72 min. weekday 40 min. weekend = 1 pt. 144 min. weekday 108 min. weekend = 2 pts. 360 min weekday 216 min. weekend = 2 pts. OR. Locate entry wit 1/2 mile walking distance of bus rapid transit, rall stations, or ferry terminals. 24 min. weekday = 1 pt. 40 min. weekday = 1 pt. 40 min. weekday = 1 s. pts. 60 min. weekday = 2 pts. b) Meet both weekday and weekend trip frequency minimums. Requirements For site larger than 1 acre, confirm to erosion and sedimentation requirements of the 2012 US EPA Construction General Permit. Introduce no invasive plants into the landscape. For sites where 50% (1 pt) or 75% (2 pts) of all hardscape and rootsteed on the following: a) Shading, shaded by trees or plantings (after 10 yrs growth) b) ENERGYSTAR rooting c) Vegetated rooting d) Open pavers e) High SR: Pavers with 3 yr SR ≥0.28 or initial SR ≥0.33 CASE 1: Low Impact Development. Percentage of lot area, including area under roof, that is permeable or can direct water to on-site catchment or filtration device* 50-64% = 1 pt. 65-79% = 2 pts. 30-100% = 3 pts. Devices must handle 100% of runoff from 2-yr, 24-hr storm. OR CASE 2: NPDES Projects (non municipal storm sewer) 95th percentile storm = 2 pts. 98th percentile storm = 3 pts.) Implement IPM Plan (Reqd) 2) Up to 2 pts, each additional +0.5 pt EP up to 1 EP: Steel mesh barrier termite control system (1 pt) Post-tension stabs (0.5 pt) Borate freatment of wood framing (0.5 pt) Post-tension stabs (0.5 pt) Borate freatment of wood framing (0.5 pt) Post-tension stabs (0.5 pt) Post-tension stabs (0.5 pt) Borate freatment of wood framing (0.5 pt) Post-tension stabs (0.5 pt) Pos	Exemplary Parformance	CIVIL LAND LAND ARCH	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.6 miles away. Action items/Comments E&SC Plan will be provided. No invasive plants will be used. High SRI and vegetated roof will be provided, as well as shading from street trees and high SR pavers where possible. Case 1: LIDs will be implementated to control at least 80 of runoff. The following will be implemented: IPM Plan (Reqd) - Below grade walls; solid concrete (0.5 pt) - Non-wood structural elements (0.5 pt)
D for Houstainal	Total formes: Multifam Subject ble Sites (7 Possib Construction Activity Pollution Prevention No Invasive Plants Heat Island Reduction Rainwater Management Nontoxic Pest	ily M	idris Targeted ints)		90	Total Possible Req'd 2	a) Locate entry wil 1/4 mile walking distance of bus, streetcar, or informal transistops. 72 min. weekday 40 min. weekend = 1 pt 144 min. weekday 108 min. weekend = 1.5 pts 380 min weekday 126 min. weekend = 2 pts 0R Locate entry wil 1/2 mile walking distance of bus rapid transit. rall stations, or ferry forminals. 24 min. weekday = 1 pt 40 min. weekday = 1 5 pts 60 min. weekday = 1 5 pts 60 min. weekday = 2 pts b) Meet both weekday and weekend trip frequency minimums. Requirements For site larger than 1 acre. confirm to erosion and sedimentation requirements of the 2012 US EPA Construction General Permit. Introduce no invasive plants into the landscape. For sites where 50% (1 pt) or 75% (2 pts) of all hardscape and roofs meet one of the following: a) Shading, shaded by trees or plantings (after 10 yrs growth) b) ENERGYSTAR roofing: c) Vegetated molling: d) Open pavers: e) High SR: Pavers with 3 yr SR ≥0.28 or initial SR ≥0.33 CASE 1: Low Impact Development Percentage of lot area, including area under roof; that is permeable or can direct water to on-site catchment or filtration device: CASE 2: NPDES Projects (non municipal storm sewer) 95th percentile storm = 2 pts 80-100% = 3 pts Devices must handle 100% of runoff from 2-yr, 24-hr storm, OR CASE 2: NPDES Projects (non municipal storm sewer) 95th percentile storm = 3 pts Implement IPM Plan (Reqd) Post-fension states termine system (1 pt) Below grade walls solid concrete, masonry w/ bond bearn, or concrete filled block (0.5 pt) Post-fension stabs (0.5 pt) Borate treatment of wood framing (0.5 pt) Non-wood structural defining penetrations (0.5 pt) Post-fension stabs (0.5 pt) Post-fension sta	Exemplary Parformance	CIVIL LAND LAND ARCH	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.6 miles away. Action Items/Comments E&SC Plan will be provided. No invasive plants will be used. High SRI and vegetated roof will be provided, as well as shading from street trees and high SR pavers where possible. Case 1: LIDs will be implementated to control at least 80 of runoff. The following will be implemented: IPM Plan (Reqd) Below grade walls; solid concrete (0.5 pt) Non-wood structural elements (0.5 pt) Non-wood structural elements (0.5 pt) Non-wood structural elements (0.5 pt)
D for Heedit sustainal	Total formes: Multifam Subject ble Sites (7 Possib Construction Activity Pollution Prevention No Invasive Plants Heat Island Reduction Rainwater Management Nontoxic Pest Control	te Pool	idris Tarregeted ints)	e v4	Ra	Total Possible Req'd Req'd	a) Locate entry will 1/4 mile walking distance of bus, streetcar, or informal transistops. 72 min. weekday 40 min. weekend = 1 pt. 144 min. weekday 108 min. weekend = 1.5 pts. 360 min weekday 216 min. weekend = 2 pts. OR. Locate entry will 1/2 mile walking distance of bus rapid transit, rall stations, or ferry terminals. 24 min. weekday = 1 pt. 40 min. weekday = 1 pt. 40 min. weekday = 1 pt. 5 pts. 60 min. weekday = 2 pts. b) Meet both weekday and weekend trip frequency minimums. Requirements For site larger than 1 acre. confirm to erosion and sedimentation requirements of the 2012 US EPA Construction General Permit. Introduce no invasive plants into the landscape. For sites where 50% (1 pt) or 75% (2 pts) of all hardscape and roots meet one of the following: a) Shading shaded by trees or plantings (after 10 yrs growth) b) ENERGYSTAR rooting: c) Vegetated rooting: d) Open pavers: e) High SR: Pavers with 3 yr SR ≥0, 28 or initial SR ≥0.33 CASE 1: Low Impact Development Percentage of lot area, including area under roof, that is permeable or can direct water to on-site catchment or filtration device* 50-64% = 1 pt. 65-79% = 2 pts. 30-100% = 3 pts. Devices must handle 100% of runoff from 2-yr, 24-hr storm. OR CASE 2: NPDES Projects (non municipal storm sewer) 95th percentile storm = 3 pts.) Implement IPM Plan (Reqd) 2) Up to 2 pts, each additional +0.5 pt EP up to 1 EP; Stoel mesh barrier termines control system (1 pt) Post-tension states (0.5 pt) Borate realment of wood framing (0.5 pt) Non-wood structural elements (0.5 pt) Post-tension states (0.5 p	Exemplary Parformance	CIVIL LAND LAND ARCH	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.6 miles away. Action Items/Comments E&SC Plan will be provided. No invasive plants will be used. High SRI and vegetated roof will be provided, as well as shading from street trees and high SR pavers where possible. Case 1: LIDs will be implementated to control at least 80 of runoff. The following will be implemented: IPM Plan (Reqd) Below grade walls; solid concrete (0.5 pt) Non-wood structural elements (0.5 pt) Non-wood structural elements (0.5 pt) Non-wood structural elements (0.5 pt)
D for Headit Justainal Press 1 Addit 1 Addit 1 Addit 3	Total formes: Multifam Subject ble Sites (7 Possib Construction Activity Pollution Prevention No Invasive Plants Heat Island Reduction Rainwater Management Nontoxic Pest Control	Yan Yan Y	idris Terregeted ints)	0	90	Total Possible Req'd Req'd	a) Locate entry wit 1/4 mile walking distance of bus, streetcar, or informal transistops. 72 min. weekday 40 min. weekend = 1 pt. 144 min. weekday 108 min. weekend = 2 pts. 360 min weekday 216 min. weekend = 2 pts. OR. Locate entry wit 1/2 mile walking distance of bus rapid transit, rall stations, or ferry terminals. 24 min. weekday = 1 pt. 40 min. weekday = 1 pt. 40 min. weekday = 2 pts. 60 min. weekday = 2 pts. b) Meet both weekday and weekend trip frequency minimums. Requirements Requireme	Exemplary Parformance	CIVIL LAND LAND ARCH	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.6 miles away. Action Items/Comments E&SC Plan will be provided. No invasive plants will be used. High SRI and vegetated roof will be provided, as well as shading from street trees and high SR pavers where possible. Case 1: LIDs will be implementated to control at least 80 of runoff. The following will be implemented: IPM Plan (Reqd) Below grade walls; solid concrete (0.5 pt) Non-wood structural eage grade/nonmasonry siding (0.5 pt) Non-wood structural eage grade/nonmasonry siding (0.5 pt)
D for Headit Justainal Press 1 Addit 1 Addit 1 Addit 3	Total formes: Multifam Subject ble Sites (7 Possib Construction Activity Pollution Prevention No Invasive Plants Heat Island Reduction Rainwater Management Nontoxic Pest Control Total:	Yan Yan Y	idrise Tergeted ints)	0	Na	Total Possible Req'd 2	a) Locate entry wit 1/4 mile walking distance of bus, streetcar, or informal transistops. 72 min. weekday 40 min. weekend = 1 pt. 144 min. weekday 108 min. weekend = 2 pts. 360 min weekday 216 min. weekend = 2 pts. OR. Locate entry wit 1/2 mile walking distance of bus rapid transit, rall stations, or ferry terminals. 24 min. weekday = 1 pt. 40 min. weekday = 1 pt. 40 min. weekday = 2 pts. 60 min. weekday = 2 pts. b) Meet both weekday and weekend trip frequency minimums. Requirements Requireme	Exemplary Parformance (+1 Point) Exemplary Conformance	Action By CIVIL LAND ARCH OWNR ARCH	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.6 miles away. Action Items/Comments E&SC Plan will be provided. No invasive plants will be used. High SRI and vegetated roof will be provided, as well as shading from street trees and high SR pavers where possible. Case 1: LIDs will be implementated to control at least 80 of runoff. The following will be implemented: IPM Plan (Reqd) Below grade walls; solid concrete (0.5 pt) Non-wood structural eage grade/nonmasonry siding (0.5 pt) Non-wood structural eage grade/nonmasonry siding (0.5 pt)
D for Headit 1	Total formes: Multifam Subject ble Sites (7 Possib Construction Activity Pollution Prevention No Invasive Plants Heat Island Reduction Rainwater Management Nontoxic Pest Control Total: omes: Multifamil Subject	ity Miryan	idrise Targeted ints) 2 2 7	0	Na	Total Possible Req'd 2	a) Locate entry whi 1/4 mile walking distance of bus, streetcar, or informal transis stops: 72 min. weekday 40 min. weekend = 1 pt 144 min. weekday 216 min. weekend = 1.5 pts 360 min weekday 216 min. weekend = 1.5 pts 360 min weekday 216 min. weekend = 2 pts OR Locate entry wii 1/2 mile walking distance of bus rapid transit, rall stations, or ferry terminals. 24 min. weekday = 1 pt 40 min. weekday = 1 pt 40 min. weekday = 1 pt 40 min. weekday = 1 pt 5 pts 60 min. weekday = 2 pts b) Meet both weekday and weekend trip frequency minimums. Requirements Requirements For site larger than 1 acte, confirm to erosion and sedimentation requirements of the 2012 US EPA Construction General Permit. Introduce no invasive plants mtg the landscape. For sites where 50% (1 pt) or 75% (2 pts) of all hardscape and roots meet one of the following: a) Shading, shaded by trees or plantings (after 10 yrs growth) b) ENERGYSTAR roofing (1 Vegetaled roofing d) Open pavers e) High SR: Pavers with 3 yr SR ≥0 28 or initial SR ≥0.33 CASE 1: Low Impact Development Percentage of lot area, including area under roof, that is permeable or can direct water to on-site catchment or fillration device* 50-84% = 1 pt 65-79% = 2 pts 80-100% = 3 pts 10-evices must handle 100% of runoff from 2-yr, 24-hr storm. OR CASE 2: NPDES Projects (non municipal storm sewer) 95th percentile storm = 2 pts 96th percentile storm = 3 pts 1 (up to 2 pts, each additional +0.5 pt EP up to 1 EP; Steel mesh barrier termite control system (1 pt) Privaical termite barrier system (1 pt) Borate realment of wood framing (0.5 pt) Prosidersion stabs (Parformance (+1 Point)	CIVIL LAND ARCH OWNR ARCH	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.6 miles away. Action Items/Comments E&SC Plan will be provided. No invasive plants will be used. High SRI and vegetated roof will be provided, as well as shading from street trees and high SR pavers where possible. Case 1: LIDs will be implementated to control at least 80 of runoff. The following will be implemented: IPM Plan (Reqd) Below grade walls; solid concrete (0.5 pt) Non-wood structural elements (0.5 pt) On-space btw landscape grade/nonmasonry siding (0.5 pt) - Water discharge points 24"+ from foundation (0.5 pt)
D for Househill and the state of the state o	Total formes: Multifam Subject ble Sites (7 Possib Construction Activity Pollution Prevention No Invasive Plants Heat Island Reduction Rainwater Management Nontoxic Pest Control Total:	ity Miryan	idrise Targeted ints) 2 2 7	0	No No	Total Possible Req'd Req'd 2	a) Locate entry wit 144 mile walking distance of bus, streetcar, or informal transis stops: 72 min. weekday 40 min. weekend = 1 pt 144 min. weekday 108 min. weekend = 1.5 pts 360 min weekday 1216 min weekend = 2 pts OR Locate entry wit 102 mile walking distance of bus rapid transit, raal stations, or ferry terminals. 24 min. weekday = 1 pt 40 min. weekday = 1 pt 40 min. weekday = 1 pt 50 min. weekday = 2 pts b) Meet both weekday and weekend up frequency minimums. Requirements For site larger than 1 acte, confirm to erosion and sedimentation requirements of the 2012 US EPA Construction General Permit. Introduce no invasive plants into the landscape. For sites where 50% (1 pt) or 75% (2 pts) of all hardscape and roots meet one of the following: a) Shading, shaded by trees or plantlings (after 10 yrs growth) b) ENERGYSTAR roofing c) Vegetated roofing d) Open pavers e) High SR: Pavers with 3 yr SR ≥0, 28 or initial SR ≥0.33 CASE 1: Low Impact Development Percentage of fot area, including area under roof, that is permeable or can direct water to on-site catchment or filtration device* 50-64% = 1 pt 65-79% = 2 pts 30-100% = 3 pts Devices must handle 100% of runoff from 2-yr, 24-hr storm. OR CASE 2: NPDES Projects (non municipal storm sewer) 96th percentile storm = 2 pts 98th percentile storm = 3 pts 1) Implement IPM Plan (Reqd) 2) Up to 2 pts, each additional +0-5 pt EP up to 1 EP: Steel mesh barrier termite control system (1 pt) Post-termite barrier system (1 pt) Below grade walls, solid concrete, masonry w/ bond beam, or concrete filled block (0.5 pt) Porsidersion stabs (0.5 pt) Porsidersion stabs (0.5 pt) Porsidersion stabs (0.5 pt) Porsidersion stabs (0.5 pt) Porsidersion stabs (0.5 pt) Porsidersion stabs (0.5 pt) Porsidersion stabs (0.5 pt) Porsidersion stabs (0.5 pt) Porsidersion stabs (0.5 pt) Porsidersion stabs (0.5 pt) Porsidersion stabs (0.5 pt) Porsidersion stabs (0.5 pt) Porsidersion stabs (0.5 pt) Porsidersion stabs (0.5 pt) Porsidersion stabs (0.5 pt) Porsidersion stabs (0.5 pt) Pors	Exemplary Parformance (+1 Point) Exemplary Conformance	CIVIL LAND ARCH CIVIL	Bus stops for Routes 3Y (13 weekday, 0 weekend), ART! (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.6 miles away. E&SC Plan will be provided. No invasive plants will be used. High SRI and vegetated roof will be provided, as well as shading from street trees and high SR pavers where possible. Case 1: LIDs will be implementated to control at least 80 of runoff. The following will be implemented: IPM Plan (Reqd) Below grade walls; solid concrete (0.5 pt) Non-wood structural elements (0.5 pt) On-wood structural elements (0.5 pt) - Water discharge points 24"+ from foundation (0.5 pt) - Water discharge points 24"+ from foundation (0.5 pt)
D for He dit 2	Total formes: Multifam Subject ble Sites (7 Possib Construction Activity Pollution Prevention No Invasive Plants Heat Island Reduction Rainwater Management Nontoxic Pest Control Total: omes: Multifamil Subject ciency (12 Possible Water Metering	ity Miryan	idrise Targeted ints)	0 2 v4	No Pe	Total Possible Req'd Req'd 2	a) Locate entry wit 144 mile walking distance of bus, streetcar, br informal transis stops: 72 min. weekday 40 min. weekend = 1 pt 144 min. weekday 108 min. weekend = 1.5 pts 360 min weekday 1216 min weekend = 2 pts OR Locate entry wit 1/2 mite walking distance of bus rapid transit, rail stations, or ferry terminals. 24 min. weekday = 1 pt 40 min. weekday = 1 5 pts 60 min. weekday = 2 pts b) Meet both weekday and weekend urp frequency minimums. Requirements Requirements Requirements For site larger than 1 acre, confirm to erosion and sedimentation requirements of the 2012 US EPA Construction General Permit. Introduce no invasive plants into the landscape. For sites where 50% (1 pt) or 75% (2 pts) of all hardscape and roots meet one of the following. 3) Stading, shaded by trees or plantings (after 10 yrs growth) b) ENERGYSTAR roofing () Vegetaled roofing () Open pavers e) High SR: Pavers with 3 yr SR ≥0,28 or initial SR ≥0.33 CASE 1: Low Impact Development. Percentage of fot area, including area under roof, that is permeable or can direct water to on-site catchment or filtration device: Devices must handle 100% of runoff from 2-yr, 24-hr storm. OR CASE 2: NPDES Projects (non municipal storm sewer) 95th percentile storm = 2 pts 96th percentile storm = 3 pts) Implement IPM Plan (Reqd) 2) Up to 2 pts, each additional +0.5 pt EP up to 1 EP: Steel mesh barrier termise control system (1 pt) Better grade walls, solid concrete, masonry w/ bond beam, or concrete filled block (0.5 pt) Post-fersion stabs (0.5 pt) Post-fersion stabs (0.5 pt) Ports-fersion stabs (0.5 pt) Post-fersion stabs (0.5 pt) Requirements Requirements Requirements	Exemplary Parformance (+1 Point) Exemplary Conformance	CIVIL LAND LAND ARCH OWNR ARCH MEP	Bus stops for Routes 3Y (13 weekday, 0 weekend), ARTS (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.5 miles away. Action items/Comments E&SC Plan will be provided. No invasive plants will be used. High SRI and vegetated roof will be provided, as well as shading from street trees and high SR pavers where possible. Case 1: LIDs will be implementated to control at least 80 of runoff. The following will be implemented: IPM Plan (Reqd) Below grade walls; solid concrete (0.5 pt) Non-wood structural elements (0.5 pt) 6" space btw landscape grade/nonmasonry siding (0.5 pt) - Water discharge points 24"+ from foundation (0.5 pt) Action items/Comments Whole building water meter will be provided.
D for Headit 1 dit 1 dit 3	Total formes: Multifam Subject ble Sites (7 Possib Construction Activity Pollution Prevention No Invasive Plants Heat Island Reduction Rainwater Management Nontoxic Pest Control Total: omes: Multifamil Subject ciency (12 Possible	ity Miryan	idrise Targeted ints) 2 2 7	e v4	No No	Total Possible Req'd Req'd 2	a) Locate entry wit 144 mile walking distance of bus, streetcar, or informal transis stops: 72 min. weekday 40 min. weekend = 1 pt 144 min. weekday 108 min. weekend = 1.5 pts 360 min weekday 176 min. weekend = 2 pts OR Locate entry wit 1/2 mile walking distance of bus rapid transit, raal stations, or ferry terminals. 24 min. weekday = 1 pt 40 min. weekday = 1 5 pts 60 min. weekday = 2 pts b) Meet both weekday and weekend trip frequency minimums. Requirements. For site larger than 1 acts, confirm to erosion and sedimentation requirements of the 2012 US EPA Construction General Permit. Introduce no invasive plants into the landscape. For sites where 50% (1 pt) or 75% (2 pts) of all hardscape and roots meet one of the following: a) Shading, shaded by trees or plantings (after 10 yrs growth) b) ENERGYSTAR roofing d) Open pavers e) High SR: Pavers with 3 yr SR ≥0 28 or initial SR ≥0.33 CASE 1: Low Impact Development Percentage of lot area, including area under roof, that is permeable or can direct water to on-site catchment or filtration device* 50-64% = 1 pt 65-79% = 2 pts 80-100% = 3 pts Devices must handle 100% of runoff from 2-yr, 24-hr storm. OR CASE 2: NPDES Projects (non murricipal storm sewer) 95th percentile storm = 2 pts 98th percentile storm = 3 pts Implement IPM Plan (Regd) 2) Up to 2 pts, each additional +0.5 pt EP up to 1 EP: Steel mesh barrier termite control system (1 pt) Post-tension stabs of 5 pt) Bootate treatine barrier system (1 pt) Post-tension stabs (0.5 pt) Requirements Requirements Requirements	Exemplary Parformance (+1 Point) Exemplary Conformance	CIVIL LAND LAND ARCH OWNR ARCH MEP	Bus stops for Routes 3Y (13 weekday, 0 weekend), ARTS (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.5 miles away. E&SC Plan will be provided. No invasive plants will be used. High SRI and vegetated roof will be provided, as well as shading from street trees and high SR pavers where possible. Case 1: LIDs will be implementated to control at least 80 of runoff. The following will be implemented: IPM Plan (Reqd) Below grade walls; solid concrete (0.5 pt) Non-wood structural elements (0.5 pt) - 6"+ space btw landscape grade/nonmasonry siding (0.5 pt) - Water discharge points 24"+ from foundation (0.5 pt) Action litems/Comments
D for House and the second of	Total formes: Multifam Subject ble Sites (7 Possib Construction Activity Pollution Prevention No Invasive Plants Heat Island Reduction Rainwater Management Total: Omes: Multifamil Subject Ciency (12 Possible Water Metering Total Water Use	ity Miryan	idrise Targeted ints)	0 2 v4	No Pe	Total Possible Req'd Req'd 2 2 3 3 4 Calculate the period of the	a) Locate entry wh 14 mile walking distance of bus, streetcar, or informal transis stops. 72 min. weekday 108 min. weekend = 1 pt 144 min. weekday 108 min. weekend = 1.5 pts 360 min weekedy 108 min. weekend = 1.5 pts 360 min weekday 108 min. weekend = 2 pts 0R	Exemplary Parformance (+1 Point) Exemplary Conformance	Action By CIVIL LAND ACTION ACTION BY MEP	Bus stops for Routes 3Y (13 weekday, 0 weekend), ARTS (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.5 miles away. Action items/Comments E&SC Plan will be provided. No invasive plants will be used. High SRI and vegetated roof will be provided, as well as shading from street trees and high SR pavers where possible. Case 1: LIDs will be implementated to control at least 80 of runoff. The following will be implemented: IPM Plan (Reqd) Below grade walls; solid concrete (0.5 pt) Non-wood structural elements (0.5 pt) 6" space btw landscape grade/nonmasonry siding (0.5 pt) - Water discharge points 24"+ from foundation (0.5 pt) Action items/Comments Whole building water meter will be provided.
D for House and the second of	Total formes: Multifam Subject ble Sites (7 Possib Construction Activity Pollution Prevention No Invasive Plants Heat Island Reduction Rainwater Management Total: omes: Multifamil Subject ciency (12 Possible Water Metering Total Water Use -or-	ity Miryan	idrise Targeted ints)	0 2 v4	No Pe	Total Possible Req'd Req'd 2 3 Total ssible 12 (in the piece of	a) Locate entry wh 1,4 mile walking distance of bus, streetcar, or informal transist stops. 72 min. weekday 100 min. weekend = 1 pt 144 min. weekday 100 min. weekend = 1.5 pts 360 min weekday 100 min. weekend = 2 pts 0R Locate entry wit U2 mile walking distance of bus rapid transit. rall stations, or ferry terminals. 24 min. weekday = 1 pt 40 min. weekday = 1 pt 40 min. weekday = 1 pt 5 pts 60 min. weekday = 2 pts 9 min. Weekday = 3 min.	Exemplary Parformance (+1 Point) Exemplary Conformance	Action By CIVIL LAND ACTION ACTION BY MEP	Bus stops for Routes 3Y (13 weekday, 0 weekend), ARTS (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.6 miles away. Action Items/Comments E&SC Plan will be provided. No invasive plants will be used. High SRI and vegetated roof will be provided, as well as shading from street trees and high SR pavers where possible. Case 1: LIDs will be implemented to control at least 80 of runoff. The following will be implemented: IPM Plan (Reqd) Below grade walls; solid concrete (0.5 pt) Non-wood structural elements (0.5 pt) Other wood structural elements (0.5 pt) Water discharge points 24"+ from foundation (0.5 pt) Water discharge points 24"+ from foundation (0.5 pt) Action Items/Comments Whole building water meter will be provided.
Office Head I was a second of the second of	Total formes: Multifam Subject ble Sites (7 Possib Construction Activity Pollution Prevention No Invasive Plants Heat Island Reduction Rainwater Management Total: omes: Multifamil Subject ciency (12 Possible Water Metering Total Water Use -or-	ity Miryan	idrise Targeted ints)	0 2 v4	No Pe	Total Possible Req'd Req'd 2 2 12 6 Pin Pin Req'd 12 12 13	a) Locate entry w/n 1/4 mile walking distance of bus, streetcar, or informal transis stops. 72 min. weekday 108 min. weekend = 1 pt 144 min. weekday 108 min. weekend = 1.5 pts 360 min weekedy 126 min weekend = 2 pts 0R Locate entry win 1/2 mile walking distance of bus rapid transit. rall stations, or ferry terminals. 24 min. weekday = 1 pt 40 min. weekday = 1 pt 40 min. weekday = 1 pt 5 pts 60 min. weekday = 2 pts 60 min. weekday = 2 pts 60 min. weekday = 2 pts 6) Meet both weekday and weekend trip frequency minimums. Requirements Requirement IPM Plan (Reqd) Requirements (0.5 pt) Reproduct A pt 1 p	Exemplary Parformance (+1 Point) Exemplary Conformance	Action By CIVIL LAND ACTION ACTION BY MEP MEP MEP	Bus stops for Routes 3Y (13 weekday, 0 weekend), ARTS (151 weekday, 70 weekend) wii 1/4 mile. Clarendon Metro is too far at 0.6 miles away. Action Items/Comments E&SC Plan will be provided. No invasive plants will be used. High SRI and vegetated roof will be provided, as well as shading from street trees and high SR pavers where possible. Case 1: LIDs will be implemented to control at least 80 of runoff. The following will be implemented: IPM Plan (Reqd) Below grade walls; solid concrete (0.5 pt) Non-wood structural elements (0.5 pt) Other wood structural elements (0.5 pt) Water discharge points 24"+ from foundation (0.5 pt) Water discharge points 24"+ from foundation (0.5 pt) Action Items/Comments Whole building water meter will be provided.

THIS DOCUMENT IS THE PROPERTY OF DAVIS, CARTER, SCOTT . IT IS TO BE USED FOR THE SPECIFIC PROJECT TO CHARGE BASED UPON FINAL DESIGN REFERRED TO HEREIN OR EXTENSIONS (I.E. APPLICABLE CODES, STRUCTURAL, AND MEP DESIGN REQUIREMENTS, UNIT PLAN/FLOOR PLAN CHARGES, ETC.).

Credit	Subject	Yes	Tar- geled	4	Nu	Total Possible	Requirements	Performance (+1 Point)	Action By	Action Items/Comments
	and Atmosphere (37 Minimum Energy		sible	Poin	ts)		ENERGY MODEL: Whole Bidg Energy Model w/ min. 10% reduction AND			Min. 10% energy saving over ASHRAE 90.1-2010 Ap G required.
Pre 1	Performance	¥.				Req'd	TESTING: One of the following: a) ENERGYSTAR MFNC certification b) Commissioning		MEP	EnergyStar MFHR or Commissioning also required
Pre 2	Energy Metering	ķ		Ī		Req'd	Blectricity Meters: One per dwelling unit. Gas Meters (if used): Whole building or dwelling unit.		MEP	Electric submeters provided for each unit. Gas meter (if used) will be provided for whole build
Pre 3	Education of Homeowner, Tenant, or Building	Y.		i	i	Req'd	O-M MANUAL: Provide ongoing maintenance manual for maintenance personnel. WALK-THROUGH: Conduct 1-hr walkthrough with		GC OWNR	O+M Manual and Walkthrough will be provided.
	Manager						occupants and building manager. 1) ENERGY REDUCTION: 1 pt for every 2% energy reduction above 10% (Up to 15 pts)			Savings targets:
							2) GHG REDUCTION: 1 pt for every 2% GHG emissions reduction above 10%. (Up to 15 pts) 3) HOME AREA REDUCTION: +1 pt for every 7% reduction in	, 1		20% Energy Reduction = 5 points 14% GHG Reduction = 2 points Home Size Adjustment = 4.5 points
Credit 1	Annual Energy Use		11	13	5	30	DU floor area from EnergyStar baseline: 1 Bedroom = 1,000 sf 2 Bedroom = 1,800 sf 3 Bedroom = 2,200 sf		MEP	Minimum 20% energy savings req'd in Arlington. 2- energy savings required for bonus density, 29-34% required for add'l 5% savings option.
	Efficient Hot Water		-				# Bedroom = 2,800 sf Lose 1 pt for every 7% increase in DU floor area. OPTION 1: PLUMBING PIPE LENGTH / VOLUME (2 pts) OPTION 2: PERFORMANCE TEST (3 pts)			R-4 insulation to be provided on all domestic HW p
Credit 2	Distribution System		2	3		5	OPTION 3: PIPE INSULATION (2 pts) Option 1: Electric and Water (1 pt): Meet one		MEP	(2 pts).
redit 3	Advanced Utility		2			2	Units: permanent energy-monitoring system at 1-in interval - or- Irrigation: irrigated area 1.000sH+ w/ submeter AND/OR	+1 EP for metering 4 end uses (i.e. space heating,	MEP	Irrigation submeter to be provided.
, don't	Tracking		+				Option 2. Third Party Uliflity Reporting (1 pt): Meet one: - Share utility data with USGBC (via EnergyStar) - 50% of unit owner share utility data with USGBC for 1 year	DHW, lighting, plug loads)		Dominion can likely aggregate energy data for all i this location.
	Total:	0	15	16	6					
Credit	Homes: Multifam	nily N	Tar-	-	4 No	Total Possible	Requirements.	Exemplary Parformance (+1 Point)	Action	Action Homs/Comments
/R-Materi	als and Resources (S	9 Pos	sible	Poir	its)		All wood on project must be:	(Fry any		
Pre 1	Certified Tropical Wood	Y				Regid	a) Non-tropical b) Reused or Rectailment or	-	ARCH	No tropical wood will be used.
					1		c) FSC Certified. Required moisture control measures: 1) Use non-paper faced backer board at all bathtubs and showers.			
Pre 2	Durability Management	٧				Reg'd	Use water-resistant flooring at all kitchens, bathrooms, laundry rooms, spe areas. No carpet Use water-resistant flooring will 3 leat of entry from outdoors. No shaet carpet.	i. —	GC.	Design will comply with moisture control measure
	-						At tank water heaters, install pan and drain, pan and auto shut-off device, or slope floor to drain. AND.			
Credil 1	Durability Management Verification		19			1	 At conventional clothes dryers, exhaust directly to outdoors. ENERGY STAR for Homes v3. Water Management System Builder Checklist verified by Green Rater. 		ARCH	Project will follow ENERGYSTAR for Homes: Wate Management System Builder Checklist.
Credit 2	Environmentally Preferable		i	4		5	OPTION 1: LOCAL PRODUCTION and/or OPTION 2: ENVIRONMENTALLY PREFERABLE PRODUCTS	S	ARCH	
Credit 3	Products Construction Waste		2		1	3	Reduce total construction waste or divert from landfill a large proportion of waste generated during construction.		ARCH	75% min. CWM diversion rate. Refer to CIR 10479.
	Management Total:	. 0	4	4	1					
Credit	Homes: Multifam	rily N	Tar-	1.	4 No	Total Possible	Requirements	Exemplary	Action	Action Items/Comments
EQ-Indoo	r Environmental Qua	lity (1		-	e Poir	7.000	Meet the following requirements and comply with ASHRAE	(+1 Point)	Ву	
							62:2-2010: 1) LOCAL EXHAUST i) Exhaust kitchens and baths to outdoors ii) Use EnergyStar labelled fans.			DA must be ducted to each unit.
Pre 1										TOTAL STREET,
774.6	Ventilation	Ÿ				Req'd	WHOLE HOUSE MECHANICAL VENTILATION Provide OA to each unit per ASHRAE 62.2-2010, Meet maximum allowable sound levels.	_	MEP	MEP to provide ASHRAE 62-2010 ventilation calcs for units and common spaces.
,,,,,	Ventilation	Ÿ				Req'd	i) Provide OA to each unit per ASHRAE 62.2-2010.		MEP	
Pre 2	Ventilation Combustion Venting	Y		<u> </u>		Reg'd	i) Provide OA to each unit per ASHRAE 62.2-2010, ii) Meet maximum allowable sound levels. AND 3) COMMON AREAS ii) Meet ASHRAE 62.2-2010 minimum requirements. i) Do not install unvented combustion appliances 2) Install CO monitor on each floor. 3) Install closing doors at all fireplaces and woodstoves. AND	-		
	Combustion Venting Garage Pollutant	Y				Reg'd	i) Provide OA to each unit per ASHRAE 62.2-2010, ii) Meet maximum allowable sound levels. AND 3) COMMON AREAS 1) Meet ASHRAE 62.2-2010 minimum requirements. 1) Do not install unvented combustion appliances 2) Install CO monitor on each floor. 3) Install closing doors at all fireplaces and woodstoves. AND 4) Meet requirements for space- and water-heating equipment that use combustion. 1) Place all AHUs and ductwork outside of garage, AND		ARCH	units and common spaces. No unvented combustion appliances.
Pre-2	Combustion Venting	Y				Req'd	i) Provide OA to each unit per ASHRAE 62.2-2010, ii) Meet maximum allowable sound levels, AND 3) COMMON AREAS j) Meet ASHRAE 62.2-2010 minimum requirements. 1) Do not install unvented combustion appliances 2) Install CO monitor on each floor; 3) install closing doors at all fireplaces and woodstoves. AND 4) Meet requirements for space- and water-neating equipment that use combustion. 1) Place all AHUs and ductwork outside of garage. AND 2) Tighly seal shared surfaces in conditioned spaces above and next to garage spaces. CASE 1: NEW CONSTRUCTION In high-nisk radon zones, design and build with radon-resistant.		ARCH	units and common spaces. No unvented combustion appliances. CO monitor in each unit.
Pre-2	Combustion Venting Garage Pollutant	Y Y				Req'd	i) Provide OA to each unit per ASHRAE 62.2-2010, ii) Meet maximum allowable sound levels, AND 3) COMMON AREAS j) Meet ASHRAE 62.2-2010 minimum requirements. i) Do not install unvented combustion appliances 2) install CO monitor on each floor. 3) Install closing doors at all fireplaces and woodstoves. AND 4) Meet requirements for space- and water-reating equipment that use combustion. i) Place all AHUs and ductwork outside of garage. AND 2) Trighly seal shared surfaces in conditioned spaces above and next to garage spaces. CASE 1: NEW CONSTRUCTION		ARCH	units and common spaces. No unvented combustion appliances. CO monitor in each unit.
Pre 2	Combustion Venting Garage Pollutant Protection Radon Resistant	Y				Reg'd Reg'd	i) Provide OA to each unit per ASHRAE 62.2-2010, ii) Meet maximum allowable sound levels, AND 3) COMMON AREAS i) Meet ASHRAE 62.2-2010 minimum requirements. 1) Do not install unvented combustion appliances 2) install CO monitor on each floor. 3) Install closing doors at all fireplaces and woodstoves. AND 4) Meet requirements for space- and water-heating equipment that use combustion. 1) Place all AHUs and ductwork outside of garage. AND 2) Tighly seal shared surfaces in conditioned spaces above and next to garage spaces. CASE 1: NEW CONSTRUCTION in the construction techniques. OR CASE 2: RENOVATION a) Radon Testing or b) Install active radon ventiliation system. 1) AIR FILTERS: Install MERV 8+ filters on all recirculating		ARCH MEP	units and common spaces. No unvented combustion appliances. CO monitor in each unit. Project will comply.
Pre 2	Combustion Venting Garage Pollutant Protection Radon Resistant	A A				Reg'd Reg'd	i) Provide OA to each unit per ASHRAE 62.2-2010, ii) Meet maximum allowable sound levels, AND 3) COMMON AREAS ii) Meet ASHRAE 62.2-2010 minimum requirements. 1) Do not install unvented combustion appliances 2) install CO monitor on each floor. 3) Install closing doors at all fireplaces and woodstoves. AND 4) Meet requirements for space- and water-heating equipment that use combustion. 1) Place all AHUs and ductwork outside of garage. AND 2) Tighty seal shared surfaces in conditioned spaces above and next to garage spaces. CASE 1: NEW CONSTRUCTION In high-nsk radon zones, design and build with radon-resistant construction techniques. OR CASE 2: RENOVATION a) Radon Testing or b) Install active radon ventiliation system. 1) AIR FILTERS: Install MERV 6+ filters on all recirculating conditioning systems. 2) OA AIR FILTERS: Install MERV 6+ filters on all mechanically supplied OA systems w/ at least 10 ft of ductwork.		ARCH MEP ARCH GC	units and common spaces. No unvented combustion appliances. CO monitor in each unit. Project will comply.
Pre 2 Pre 3	Combustion Venting Garage Pollutant Protection Radon Resistant Construction	Y				Req'd Req'd	i) Provide OA to each unit per ASHRAE 62.2-2010, ii) Meet maximum allowable sound levels, AND 3) COMMON AREAS i) Meet ASHRAE 62.2-2010 minimum requirements, 1) Do not install unvented combustion appliances 2) Install CO monitor on each floor. 3) Install closing doors at all fireplaces and woodstoves, AND 4) Meet requirements for space- and water-neating equipment that use combustion. 1) Place all AHUs and ductwork outside of garage, AND 2) Tighly seal shared surfaces in conditioned spaces above and next to garage spaces. CASE 1: NEW CONSTRUCTION In high-nsk radon zones, design and build with radon-resistant construction techniques, OR CASE 2: RENOVATION a) Radon Tasting or b) Install active radon ventiliation system. 1) AIR FILTERS: Install MERV 8+ filters on all recirculating conditioning systems. 2) OA AIR FILTERS: Install MERV 6+ filters on all mechanically supplied OA systems w at least 10 ft of		ARCH MEP ARCH GC	units and common spaces. No unvented combustion appliances. CO monitor in each unit. Project will comply. Not applicable to Arlington, not Radon Zone 1.
Pre 2 Pre 3	Combustion Venting Garage Pollutant Protection Radon Resistant Construction	*				Req'd Req'd	i) Provide OA to each unit per ASHRAE 62.2-2010, ii) Meet maximum allowable sound levels, AND 3) COMMON AREAS ii) Meet ASHRAE 62.2-2010 minimum requirements. 1) Do not install unvented combustion appliances 2) install CO monitor on each floor, 3) Install closing doors at all fireplaces and woodstoves. AND 4) Meet requirements for space- and water-heating equipment that use combustion. 1) Place all AHUs and ductwork outside of garage. AND 2) Tighty seal shared surfaces in conditioned spaces above and next to garage spaces. CASE 1: NEW CONSTRUCTION in high-risk radion zones, design and build with radion-resistant construction techniques. OR CASE 2: RENOVATION a) Radion Testing or b) Install active radion ventiliation system. 1) AIR FILTERS: Install MERV 6+ filters on all recirculating conditioning systems. 2) OA AIR FILTERS: Install MERV 6+ filters on all machanically supplied OA systems what least 10 ft of ductwork. 3) PRESSURE DROP: Design ductwork and central blower to account for pressure drop across filter. AND 4) HOUSINGS: Housings must be air-light to prevent bypass of with signage and lease agreements.	-	ARCH MEP ARCH GC	units and common spaces. No unvented combustion appliances. CO monitor in each unit. Project will comply. Not applicable to Arlington, not Radon Zone 1.
Pre 3 Pre 4 Pre 5	Combustion Venting Garage Pollutant Protection Radon Resistant Construction Air Filtering	*				Req'd Req'd Req'd	i) Provide OA to each unit per ASHRAE 62.2-2010, ii) Meet maximum allowable sound levels, AND 3) COMMON AREAS ii) Meet ASHRAE 62.2-2010 minimum requirements. 1) Do not install unvented combustion appliances 2) install CO monitor on each floor. 3) Install closing doors at all fireplaces and woodstoves. AND 4) Meet requirements for space- and water-heating equipment that use combustion. 1) Place all AHUs and ductwork outside of garage, AND 2) Tighty seal shared surfaces in conditioned spaces above and next to garage spaces. CASE 1: NEW CONSTRUCTION In high-nsk radon zones, design and build with radon-resistant construction techniques. OR CASE 2: RENOVATION a) Radon Testing or b) Install active radon ventiliation system. 1) AIR FILTERS: Install MERV 6+ filters on all recirculating conditioning systems. 2) OA AIR FILTERS: Install MERV 6+ filters on all mechanically supplied OA systems w at least 10 ft of ductwork. 3) PRESSURE DROP: Design ductwork and central blower to account for pressure drop scroos filter. AND 4) HOUSINGS: Housings must be air-light to prevent bypass or	-	ARCH MEP ARCH GC	units and common spaces. No unvented combustion appliances. CO monitor in each unit. Project will comply. Not applicable to Arlington, not Radon Zone 1. Project will comply.
Pre 2 Pre 3 Pre 4	Combustion Venting Garage Pollutant Protection Radon Resistant Construction Air Filtering Environmental Tobacco Smoke	Y Y Y				Req'd Req'd Req'd	i) Provide OA to each unit per ASHRAE 62.2-2010, ii) Meet maximum allowable sound levels. AND 3) COMMON AREAS ii) Meet ASHRAE 62.2-2010 minimum requirements. 1) Do not install unvented combustion appliances 2) install CO monitor on each floor. 3) Install closing doors at all fireplaces and woodstoves. AND 4) Meet requirements for space- and water-heating equipment that use combustion. 1) Place all AHUs and ductwork outside of garage. AND 2) Tighly seal shared surfaces in conditioned spaces above and next to garage spaces. CASE 1: NEW CONSTRUCTION In high-risk radon zones, design and build with radon-resistant construction techniques. OR CASE 2: RENOVATION a) Radon Testing or b) Install active radon ventilation system. 1) AIR FILTERS: Install MERV 6+ filters on all recirculating conditioning systems. 2) OA AIR FILTERS: Install MERV 6+ filters on all mechanically supplied OA systems what least 10 ft of ductwork. 3) PRESSURE DROP: Design ductwork and central blower to account for pressure drop across filter. AND 4) HOUSINGS: Housings must be air-light to prevent bypass or Prohibit snicking in all common areas of the building and within 25ft of doors. Windows, and air intakes. Comminicate policy with signage and lease agreements. Compartmentalize each dwelling unit to minimum leakage: 1) Seal perietrations, 2) Seal vertical chases. 3) Weather-strip extenor doors and operable windows. AND 5) Perform blower door tests to demonstrate maximum leakage.		ARCH MEP ARCH GC	units and common spaces. No unvented combustion appliances. CO monitor in each unit. Project will comply. Not applicable to Arlington, not Radon Zone 1. Project will comply.
Pre 3 Pre 4 Pre 5	Combustion Venting Garage Pollutant Protection Radon Resistant Construction Air Filtering Environmental Tobacco Smoke	Y				Req'd Req'd Req'd	i) Provide OA to each unit per ASHRAE 62.2-2010, ii) Meet maximum allowable sound levels. AND 3) COMMON AREAS ii) Meet ASHRAE 62.2-2010 minimum requirements. 1) Do not install unvented combustion appliances 2) Install CO monitor on each floor. 3) Install closing doors at all fireplaces and woodstoves. AND 4) Meet requirements for space- and water-neating equipment that use combustion. 1) Place all AHUs and ductwork outside of garage. AND 2) Tighly seal shared surfaces in conditioned spaces above and next to garage spaces. CASE 1: NEW CONSTRUCTION In high-ask radon zones, design and build with radon-resistant construction techniques. OR CASE 2: RENOVATION a) Radon Testing or b) Install active radon ventilation system. 1) AIR FILTERS: Install MERV 6+ filters on all recirculating conditioning systems. 2) OA AIR FILTERS: Install MERV 6+ filters on all machanically supplied OA systems what least 10 ft of ductwork. 3) PRESSURE DROP: Design ductwork and central blower to account for pressure drop across filter. AND 4) HOUSINGS: Housings must be air-light to prevent bypass or Prohibit smicking in all common areas of the building and within 25ft of doors, windows, and air intakes, Comminicate policy with signage and lease agreements. Compartmentalize each dwelling unit to minimum leakage: 1) Seal vertical chases. 3) Weather-strip extenior doors and operable windows. AND 5) Perform blower door tests to demonstrate maximum leakage rate (0.23 christ of enclosure area @ 50 Pa). Requirements Coption 1. Enhanced Local Exhaust (1 point) Use one of the fellowing strategies in every bathroom with a		ARCH MEP ARCH GC	units and common spaces. No unvented combustion appliances. CO monitor in each unit. Project will comply. Not applicable to Arlington, not Radon Zone 1. Project will comply.
Pre 3 Pre 4 Pre 5	Combustion Venting Garage Pollutant Protection Radon Resistant Construction Air Filtering Environmental Tobacco Smoke	Y Y Y				Req'd Req'd Req'd	i) Provide OA to each unit per ASHRAE 62.2-2010, ii) Meet maximum allowable sound levels. AND 3) COMMON AREAS ii) Neet ASHRAE 62.2-2010 minimum requirements. 1) Do not install unvented combustion appliances 2) install CO monitor on each floor. 3) Install closing doors at all fireplaces and woodstoves. AND 4) Meet requirements for space- and water-heating equipment that use combustion. 1) Place all AHUs and ductwork outside of garage. AND 2) Tighty seal shared surfaces in conditioned spaces above and next to garage spaces. CASE 1: NEW CONSTRUCTION In high-risk radon zones, design and build with radon-resistant construction techniques. OR CASE 2: RENOVATION a) Radon Testing or b) Install active radon ventilation system. 1) AIR FILTERS: Install MERV 6+ filters on all recirculating conditioning systems. 2) OA AIR FILTERS: Install MERV 6+ filters on all machanically supplied OA systems will thast 10 ft of ductwork. 3) PRESSURE DROP: Design ductwork and central blower to account for pressure drop across filter. AND 4) HOUSINGS: Housings must be air-light to prevent bypass or prohibit smicking in all common areas of the building and within 25ft of doors, windows, and air intakes. Comminicate policy with signage and lease agreements. Compartmentalize each dwelling unit to minimum leakage: 1) Seal ventical chases. 3) Weather-strip exterior doors and operable windows. AND 5) Perform blower door tests to demonstrate maximum leakage rate (0.23 clm/sf of enclosure area @ 50 Pa). Reguirements Coption 1. Enhanced Local Exhaust (1 point)		ARCH MEP ARCH GC	units and common spaces. No unvented combustion appliances. CO monitor in each unit. Project will comply. Not applicable to Arlington, not Radon Zone 1. Project will comply.
Pre 3 Pre 4 Pre 5	Combustion Venting Garage Pollutant Protection Radon Resistant Construction Air Filtering Environmental Tobacco Smoke Compartmentalizat ion	Y				Req'd Req'd Req'd	i) Provide OA to each unit per ASHRAE 62.2-2010, ii) Meet maximum allowable sound levels, AND 3) COMMON AREAS j) Meet ASHRAE 62.2-2010 minimum requirements. 1) Do not install unvented combustion appliances 2) install CO monitor on each floor, 3) Install closing doors at all fireplaces and woodstoves. AND 4) Meet requirements for space- and water-heating equipment that use combustion. 1) Place all AHUs and ductwork outside of garage. AND 2) Tighty seal shared surfaces in conditioned spaces above and next to garage spaces. CASE 1: NEW CONSTRUCTION In high-risk radon zones, design and build with radon-resistant construction techniques. OR CASE 2: RENOVATION a) Radon Testing or b) Install active radon ventilation system. 1) AIR FILTERS: Install MERV 6+ filters on all recirculating conditioning systems. 2) OA AIR FILTERS: Install MERV 6+ filters on all reachanically supplied OA systems what least 10 ft of ductwork. 3) PRESSURE DROP: Design ductwork and central blower to account for pressure drop across filter. AND 4) HOUSINGS: Housings must be air-light to prevent bypess or broth sinking in all common areas of the building and within 25ft of doors, windows, and air intakes, Comminicate policy with signage and lease agreements. Compartmentalize each dwelling unit to minimum leakage: 1) Seal vertical chases. 3) Weather-strip extenior doors and operable windows. AND Perform blower door tests to demonstrate maximum leakage; and (0.23 clm/sf of enclosure area @ 50 Pa). Requirements Coston 1: Enhanced Local Exhaust (1 point) Use one of the following strategas in every bathroom with a shower, bathtub, or spa (i.e., half-baths are exempt): - an occupancy sensor an automatic humidistat controller;		ARCH MEP ARCH GC	units and common spaces. No unvented combustion appliances. CO monitor in each unit. Project will comply. Project will comply. Project will comply.
Pre 3 Pre 4 Pre 5 Pre 7	Combustion Venting Garage Pollutant Protection Radon Resistant Construction Air Filtering Environmental Tobacco Smoke Compartmentalizat ion	Y			2	Req'd Req'd Req'd Req'd	i) Provide OA to each unit per ASHRAE 62.2-2010, ii) Meet maximum allowable sound levels. AND 3) COMMON AREAS ii) Meet ASHRAE 62.2-2010 minimum requirements. 1) Do not install unvented combustion appliances 2) install closing doors at all fireplaces and woodstoves. AND 4) Meet requirements for space- and water-heating equipment that use combustion. 1) Place all AHUs and ductwork outside of garage. AND 2) Tighty seal shared surfaces in conditioned spaces above and next to garage spaces. CASE 1: NEW CONSTRUCTION In high-nsk radon zones, design and build with radon-resistant construction techniques. OR CASE 2: RENOVATION a) Radon Testing or b) Install active radon ventilation system. 1) AIR FILTERS: Install MERV 6+ filters on all recirculating conditioning systems. 2) OA AIR FILTERS: Install MERV 6+ filters on all mechanically supplied OA systems will fusst 10 ft of ductwork. 3) PRESSURE DROP: Design ductwork and central blower to account for pressure drop across filter. AND 4) HOUSINGS: Housings must be air-light to prevent bypess or Prohibit snicking in all common areas of the building and within 25ft of doors, windows, and air intakes, Comminicate policy with signage and lease agreements. Compartmentalize each dwelling unit to minimum leakage: 1) Seal penetrations. 2) Seal vertical chases. 3) Weather-strip exterior doors and operable windows. AND 5) Perform blower door tests to demonstrate maximum leakage rate (0.23 chruls of enclosure area @ 50 Pa). Requirements Option 1. Enhanced Local Exhaust (1 point) Use one of the following strategies in every balthroom with a shower, bathiob, or spa (i.e., half-baths are exempt): - an occupancy sensor; - a pationatic humidistat controller; - a continuously operating exhaust fan; or - a delay timer that operates the fan for at least 20 minutes. AND/OR		ARCH MEP ARCH GC GC	units and common spaces. No unvented combustion appliances. CO monitor in each unit. Project will comply. Not applicable to Arlington, not Radon Zone 1. Project will comply. Project will comply.
Pre 3 Pre 4 Pre 5 Pre 7	Combustion Venting Garage Pollutant Protection Radon Resistant Construction Air Filtering Environmental Tobacco Smoke Compartmentalizat ion	Y	1		7	Req'd Req'd Req'd Req'd	i) Provide OA to each unit per ASHRAE 62.2-2010, ii) Meet maximum allowable sound levels. AND 3) COMMON AREAS ii) Meet ASHRAE 62.2-2010 minimum requirements. 1) Do not install unvented combustion appliances 2) install closing doors at all fireplaces and woodstoves. AND 4) Meet requirements for space- and water-heating equipment that use combustion. 1) Place all AHUs and ductwork outside of garage. AND 2) Tighly seal shared surfaces in conditioned spaces above and next to garage spaces. CASE 1: NEW CONSTRUCTION In high-risk radon zones, design and build with radon-resistant construction techniques. OR CASE 2: RENOVATION a) Radon Testing or b) Install active radon ventilation system. 1) AIR FILTERS: Install MERV 6+ filters on all recirculating conditioning systems. 2) OA AIR FILTERS: Install MERV 6+ filters on all mechanically supplied OA systems what least 10 ft of ductwork. 3) PRESSURE DROP: Design ductwork and central blower to account for pressure drop across filter. AND 4) HOUSINGS: Housings must be air-tight to prevent bypess or Prohibit smoking in all common areas of the building and within 25ft of doors, windows, and air intakes. Comminicate policy with signage and lease agreements. Compartmentalize each dwelling unit to minimum leakage: 1) Seal penetrations. 2) Seal vertical chases. 3) Weather-strip exterior doors and operable windows. AND 5) Perform blower door tests to demonstrate maximum leakage rate (0.23 cm/sf of enclosure area @ 50 Pa). Requirements Coption 1. Enhanced Local Exhaust (1 point) Use one of the following strategies in every bathroom with a shower, bathtub, or spa (i.e., half-baths are exempt): - an occupancy sensor; - an automatic humidistat controller; - a continuously operating exhaust (an; or - a delay timer that operates the fan for at least 20 minutes. ANDIOR	n	ARCH MEP ARCH GC GC	units and common spaces. No unvented combustion appliances. CO monitor in each unit. Project will comply. Not applicable to Arlington, not Radon Zone 1. Project will comply. Project will comply.
Pre 3 Pre 4 Pre 5 Pre 7	Combustion Venting Garage Pollutant Protection Radon Resistant Construction Air Filtering Environmental Tobacco Smoke Compartmentalizat ion Enhanced Ventilation	Y Y			7	Req'd Req'd Req'd Req'd	i) Meet maximum allowable sound levels. AND 3) COMMON AREAS i) Meet ASHRAE 62.2-2010 minimum requirements. 1) Do not install unvented combustion appliances 2) install CO monitor on each floor. 3) Install allowable sound fireplaces and woodstoves. AND 4) Meet requirements for space- and water-heating equipment that use combustion. 1) Place all AHUs and ductwork outside of garage. AND 2) Tighly seal shared surfaces in conditioned spaces above and next to garage spaces. CASE 1: NEW CONSTRUCTION In high-ask radon zones, design and build with radon-resistant construction techniques. OR CASE 2: RENOVATION a) Radon Testing or b) Install active radon ventilation system. 1) AIR FILTERS: Install MERV 6+ filters on all recirculating conditioning systems. 2) OA AIR FILTERS: Install MERV 6+ filters on all mechanically supplied OA systems what least 10 ft of ductwork. 3) PRESSURE DROP: Design ductwork and central blower to account for pressure drop across filter. AND 4) HOUSINGS: Housings must be air-light to prevent bypass or Prohibit smicking in all common areas of the building and within 25ft of doors, windows, and air intakes. Comminicate policy with signage and lease agreements. Compartmentalize each dwelling unit to minimum leakage: 1) Seal penetrations. 2) Seal vertical chases. 3) Weather-strip extensor doors and operable windows. AND 5) Perform blower door tests to demonstrate maximum leakage: 1) Seal penetrations of enclosure area @ 50 Pa). Requirements Local Enhanced Local Exhaust (1 point) Use one of the following strategies in every bathroom with a shower, bathfub, or spa (i.e., haif-baths are exempt): - a continuously operating exhaust (an) or - a delay timer that operates the fan for at least 20 minutes. AND/OR Cption 1. Enhanced Whole-House Ventilation (2 points) install a batancad whole-house ventilation system (not just exhaust only or supply only) that meets the minimum ventilation requirements by more than 10%. For multifamily buildings, meet had only options 1 and 2. OPTION 1: WALK-OFF MATS (0.5 pt)	e e	ARCH MEP ARCH GC GC	units and common spaces. No unvented combustion appliances. CO monitor in each unit. Project will comply. Not applicable to Arlington, not Radon Zone 1. Project will comply. Project will comply.
Pre 3 Pre 4 Pre 5 Pre 7	Combustion Venting Garage Pollutant Protection Radon Resistant Construction Air Filtering Environmental Tobacco Smoke Compartmentalizat ion	Y Y			2	Req'd Req'd Req'd Req'd	i) Meet maximum allowable sound levels. AND 3) COMMON AREAS i) Meet ASHRAE 62.2-2010 minimum requirements. 1) Do not install unvented combustion appliances 2) Install Comonitor on each floor. 3) install closing doors at all fireplaces and woodstoves. AND 4) Meet requirements for space- and water-neating equipment that use combustion. 1) Place all ARIVs and ductwork outside of garage. AND 2) Tighty seal shared surfaces in conditioned spaces above and next to garage spaces. CASE 1: NEW CONSTRUCTION In high-risk radon zones, design and build with radon-resistant construction techniques. OR CASE 2: RENOVATION a) Radon Testing or b) Install active radon ventiliation system. 1) AIR FILTERS: Install MERV 6+ filters on all recirculating conditioning systems. 2) OA AIR FILTERS: Install MERV 6+ filters on all machanically supplied OA systems will fusst 10 ft of ductwork. 3) PRESSURE DROP: Design ductwork and central blower to account for pressure drop across filter. AND 4) HOUSINGS: Housings must be air-light to prevent bypass or Prohibit smicking in all common areas of the building and within 25ft of doors, windows, and air intakes, Committicate policy with signage and lease agreements. Compartmentalize each dwelling unit to minimum leakage: 1) Seal penetrations. 2) Seal vertical chases. 3) Weather-strip exterior doors and operable windows. AND 5) Perform blower door tests to demonstrate maximum leakage rate (0.23 climist) endors to common hallways 4) Weather-strip exterior doors and operable windows. AND 5) Perform blower door feets to demonstrate maximum leakage rate (0.23 climist) endors to common hallways 4) Weather-strip exterior doors and operable windows. AND 5) Perform blower door feets to demonstrate maximum leakage: 1) Seal vertical chases. 3) Weather-strip exterior doors and operable windows. AND 5) Perform blower door feets to common strate maximum leakage: 1) Seal vertical chases. 3) Weather-strip exterior for the strip of the strip of the strip of the strip of the s	e e	ARCH MEP ARCH GC GC MEP	units and common spaces. No unvented combustion appliances. CO monitor in each unit. Project will comply. Not applicable to Arlington, not Radon Zone 1. Project will comply. Project will comply.
Pre 2 Pre 3 Pre 4 Pre 5 Pre 6	Combustion Venting Garage Pollutant Protection Radon Resistant Construction Air Filtering Environmental Tobacco Smoke Compartmentalizat ion Enhanced Ventilation	Y	1			Req'd Req'd Req'd Req'd	i) Provide OA to each unit per ASHRAE 62.2-2010, ii) Meet maximum allowable sound levels. AND 3) COMMON AREAS j) Meet ASHRAE 62.2-2010 minimum requirements. j) Inon continustal unverted combustion appliances j) Install CO monitor on each floor. j) Install closing doors at all fireplaces and woodstoves. AND j) Meet requirements for space- and water-neating equipment that use combustion. j) Place all AHUs and ductwork outside of garage, AND j) Tighly seel shared surfaces in conditioned spaces above and next to garage spaces. CASE 1: NEW CONSTRUCTION in high-risk radon zones, design and build with radon-resistant construction techniques. OR CASE 2: RENOVATION a) Radon Testing or b) Install active radon ventilation system. 1) AIR FILTERS: Install MERV 8+ filters on all recirculating conditioning systems. 2) OA AIR FILTERS: Install MERV 8+ filters on all mechanically supplied OA systems w/ at least 10 ft of ductwork. j) PRESSURE DROP: Design ductwork and central blower to account for pressure drop across filter. AND 4) HOUSINGS: Housings must be air-light to prevent bypass or prohibit smoking in all common areas of the building and within 25th of doors, windows, and air intakes, Comminicate policy with signage and lease agreements. Compartmentalize each dwelling unit to minimum leakage: 1) Seal penetrations. 2) Seal vertical chases. 3) Weather-strip doors to common hallways 4) Weather-strip doors to common hallways 4) Weather-strip doors to common hallways 4) Weather-strip doors to common hallways 6) Perform blower door tests to demonstrate maximum leakage rate (0.23 chm/sf of endosure area @ 50 Pa). Requirements Compartments of ASHRAE Standard 82.2-2010, Sections 4 and 7, or local equivalent whichever is more stringent. Program the system such that it does not exceed the strongent. Program the system such that it does not exceed the strongent by the program of the propr	e e	ARCH MEP ARCH GC GC MEP	units and common spaces. No unvented combustion appliances. CO monitor in each unit. Project will comply. Not applicable to Arlington, not Radion Zone 1. Project will comply. Project will comply. Project will comply.
Pre 2 Pre 3 Pre 4 Pre 5 Pre 6 Pre 7	Combustion Venting Garage Pollutant Protection Radon Resistant Construction Air Filtering Environmental Tobacco Smoke Compartmentalizat ion Compartmentalizat ion Compartmentalizat ion Environmental Tobacco Smoke Compartmentalizat ion Balancing of Heating and Cooling Distribution Sytems	Y	1		2	Req'd Req'd Req'd 2	i) Provide OA to each unit per ASHRAE 62.2-2010, ii) Meet maximum allowable sound levels, AND 3) COMMON AREAS i) Meet ASHRAE 62.2-2010 minimum requirements. 1) Do not install unvented combustion appliances 2) Install Committer on each floor, 3) Install closing doors at all fireplaces and woodstoves. AND 4) Meet requirements for space- and water-heating equipment that use combustion. 1) Place all AHUs and ductwork outside of garage, AND 2) Tighly seal shared surfaces in conditioned spaces above and next to garage spaces. CASE 1: NEW CONSTRUCTION in high-risk radio rores design and build with radion-resistant construction techniques. OR CASE 2: RENOVATION a) Radion Testing, or b) Install active radion ventilation system. 1) AIR FILTERS: Install MERV 8+ filters on all recirculating conditioning systems. 2) OA AIR FILTERS: Install MERV 6+ filters on all machanically supplied OA systems w at least 10 ft of occurred for pressure drop across filter. AND 4) MOUSINGS: Housings must be air-light to prevent bypass or Prohibit smoking in all common areas of the building and within 25th of doors, windows, and air intakes, Comminicate policy with signage and lease agreements. Compartmentalize each dwelling unit to minimum leakage: 1) Seal penetrations. 2) Seal vertical chases. 3) Weather-strip extenior doors and operable windows. AND 5) Perform blower door feets to demonstrate maximum leakage: 1, Seal penetrations of the following strategies in every bathroom with a shower, bathtub, or spa (i.e., hail-baths are exempt): - an occupancy sensor; - an automatic humidistal controller; - a continuously operating exhaust (1 point) Use one of the following strategies in every bathroom with a shower, bathtub, or spa (i.e., hail-baths are exempt): - an occupancy sensor; - an automatic humidistal controller; - a continuously operating exhaust (1 point) Use one of the following strategies in every bathroom with a shower, bathroom by Room than 10%. For multifamily buildings, meet the above requirements for all in-unit residen	e e	ARCH MEP ARCH GC	units and common spaces. No unvented combustion appliances. CO monitor in each unit. Project will comply. Project will comply. Project will comply. Project will comply. An Option 1 strategy will be provided.
Pre 2 Pre 3 Pre 4 Pre 5 Pre 6 Pre 7	Combustion Venting Garage Pollutant Protection Radon Resistant Construction Air Filtering Environmental Tobacco Smoke Compartmentalizat ion Control Balancing of Heating and Cooling Distribution Sytems Enhanced Compartmentalizat ion		1	:3	2	Req'd Req'd Req'd 2	i) Preside OA to each unit per ASHRAE 62.2-2010, ii) Meet maximum allowable sound levels. AND 3) COMMON AREAS i) Meet ASHRAE 62.2-2010 minimum requirements. i) Do not install unvented combustion appliances 2) install CO monitor on each floor. 3) Install Committed combustion appliances 2) install CO monitor on each floor. 3) Install closing doors at all fireplaces and woodstoves. AND 4) Meet requirements for space- and water-meating equipment that use combustion. 1) Place all AHUs and ductwork outside of garage. AND 2) Tighty seal shared surfaces in conditioned spaces above and next to garage spaces. CASE 1: NEW CONSTRUCTION In high-nsk radon zones, design and build with radon-resistant construction techniques. OR CASE 2: RENOVATION a) Radon Testing. 1) AIR FILTERS: Install MERV 8+ filters on all recirculating conditioning systems. 1) AIR FILTERS: Install MERV 8+ filters on all mechanically supplied OA systems w/ at least 10 ft of ductwork. 3) PRESSURE DROP: Design ductwork and central blower to account for pressure drop across filter. AND 4) HOUSINGS: Housings must be air-light to prevent bypass or decimal signage and lease agreements. Compartmentalize each dwelling unit to minimum leakage: 1) Seal penetrations. 2) Seal vertical chases. 3) Weather-strip exterior doors and operable windows. AND 5) Perform blower door feets to demonstrate maximum leakage: 1) Seal penetrations. 2) Seal vertical chases. 3) Weather-strip exterior doors and operable windows. AND 5) Perform blower door feets to demonstrate maximum leakage: 1) Seal penetrations of seal of tests are every bathroom with a shower, bathrub, or spa (i.e., trait-baths are exempt): - an outomatic humidistal controller: - a continuously operating exhaust (1 point) Use one of the following strategies in every bathroom with a shower, bathrub, or spa (i.e., trait-baths are exempt): - an occupancy sensor: - an automatic humidistal controller: - a continuously operating exhaust (1 point) Defion 2: Enhanced Whole-house ventilation system (not just exh	e e	ARCH MEP ARCH ARCH ARCH	units and common spaces. No unvented combustion appliances. CO monitor in each unit. Project will comply. Not applicable to Arlington, not Radion Zone 1. Project will comply. Project will comply. Project will comply.
Pre 2 Pre 3 Pre 4 Pre 5 Pre 6 Pre 7 Credit 1	Combustion Venting Garage Pollutant Protection Radon Resistant Construction Air Filtering Environmental Tobacco Smoke Compartmentalizat ion Control Balancing of Heating and Cooling Distribution Sytems Enhanced Compartmentalizat		1 2	-3	2	Req'd Req'd Req'd Req'd 2	ii) Provide OA to each unit per ASHRAE 62.2-2010, iii) Meet maximum allowable sound levels. AND 3) COMMON AREAS i) Meet ASHRAE 62.2-2010 minimum requirements. 1) Do not linstall unvented combustion appliances 2) install CO monitor on each floor. 3) install closing doors at all fireplaces and woodstoves. AND 4) Meet requirements for space- and water-heating equipment that use combustion. 1) Place all AFUs and ductwork outside of garage. AND 2) Tighly seal shared surfaces in conditioned spaces above and next to garage spaces. CASE 1: NEW CONSTRUCTION In high-risk radon zones, design and build with radon-resistant construction techniques. OR CASE 2: RENOVATION a) Radon Testing or b) Install active radon ventilation system. 1) AIR FILTERS: Install MERV 8+ filters on all recirculating conditioning systems. 2) OA AIR FILTERS: Install MERV 8+ filters on all recirculating conditioning systems. 2) OA AIR FILTERS: Install MERV 8+ filters on all recirculating conditioning systems. 3) PRESSURE DROP- Design ductwork and pentral blower to account for pressure drop across filter. AND 4) HOUSINGS: Housings must be art-light to prevent bypeas or 19 for pressure drop across filter. AND 4) HOUSINGS: Housings must be art-light to prevent bypeas or 19 for pressure drop across filter. AND 7) Prohibit smoking in all common areas of the building and within 25k of doors, windows, and air intakes, Committed policy with signage and lease agreements. Compartmentalize each dwelling unit to minimum leakage: 1) Seal penetrations. 2) Seal vertical chases. 3) Weather-strip extenior doors and operable windows. AND 7) Proform blower door fests to demonstrate maximum leakage rate (2.23 dmist of enclosure area @ 50 Pa). Requirements Option 1. Enhanced Local Exhaust (1 point) Use one of the following strategaes in every bathroom with a shower, bathrub, or spa (i.e., half-baths are exempt): - an occupancy sensor a delay timer that operates the fan for at least 20 minutes. AND/OR Option 2: Enhanced Whole-house Ventilation (2 points) install a bat	e e	ARCH MEP ARCH ARCH ARCH ARCH	units and common spaces. No univented combustion appliances. CO monitor in each unit. Project will comply. Not applicable to Arlington, not Radon Zone 1. Project will comply. Project will comply. Project will comply. An Option 1 strategy will be provided. Not pursuing. A verage unit size <1200 sf automatically comply will option 1: Multiple zones. R Required for Arlington bonus density.
Pre 2 Pre 3 Pre 4 Pre 5 Pre 6 Pre 7 Credit 1 Credit 2 Credit 2	Combustion Venting Garage Pollutant Protection Radon Resistant Construction Air Filtering Environmental Tobacco Smoke Compartmentalizat ion Contaminant Control Balancing of Heating and Cooling Distribution Sytems Enhanced Compartmentalizat ion Enhanced Combustion		1	-3	2	Req'd Req'd Req'd Req'd 2	i) Provide OA to each unit per ASHRAE 62.2-2010. ii) Meet maximum allowable sound levels. AND 3) COMMON AREAS j, Meet ASHRAE 62.2-2010 minimum requirements. j) Meet ASHRAE 62.2-2010 minimum requirements. j) Install Cosing doors at all fireplaces and woodstoves. AND 4) Meet requirements for space- and water-neating equirement that use combustion. 1) Place all ARUs and ductwork outside of garage. AND 2) Tighily seal shared surfaces in conditioned spaces above and next to garage spaces. CASE 1: NEW CONSTRUCTION in high-risk radon zones, design and build with radon-resistant construction techniques. OR CASE 2: RENOVATION a) Radon Testing or b) Install active radon ventilation system. 1) AIR FILTERS: Install MERV 8+ filters on all recirculating conditioning systems. 2) QA AIR FILTERS: Install MERV 8+ filters on all mechanically supplied OA systems what least 10 ft of ductwork. 3) PRESSURE DROP- Design ductwork and central blower to account for pressure drop across filter. AND 4) HOUSINGS: Housings must be air-light to prevent bypeas or Prohibit smoking in all common areas of the building and within 25th of doors, wind lesse agreements. Compartmentalize each dwelling unit to minimum teakage: 1) Seal vertical chases. 3) Weather-strip doors to common hallways 4) Weather-strip extenor doors and operable windows. AND 5) Perform blower door tests to demonstrate maximum leakage rate (0.23 dimits of endosure area @ 50 Pa). Requirements Option 1: Enhanced Local Exhaust (1 point) Use one of the following strategas in every bathroom with a shower, bathbub, or spa (i.e., half-baths are exempt): - an occupancy sensor; - an automabo humidistat controller; - a continuously operating exhaust fan: or - a delay timer that operates the fan for at least 20 minutes. ANDIOR Cp6m 2: Enhanced Whole-House Ventilation (2 points) Install a balanced whole-house ventilation system (not just exhaust only or supply only) t	e e	ARCH MEP ARCH ARCH ARCH ARCH	units and common spaces. No univented combustion appliances. CO monitor in each unit. Project will comply. Not applicable to Arlington, not Radon Zone 1. Project will comply. Project will comply. Project will comply. An Option 1 strategy will be provided. Not pursuing. Average unit size <1200 sf automatically comply will option 1: Multiple zones. Required for Arlington bonus density. No combustion fireplaces or wood-stoves, (2 pts) Garage exhaust fans will meet ASHRAE 62.1-2010
Pre 2 Pre 3 Pre 4 Pre 5 Pre 6 Pre 7 Credit 1 Credit 2 Credit 5 Credit 5	Combustion Venting Garage Pollutant Protection Radon Resistant Construction Air Filtering Environmental Tobacco Smoke Compartmentalizat ion Enhanced Ventilation Control Balancing of Heating and Cooling Distribution Sytems Enhanced Compartmentalizat ion Control Low-Emitting Enhanced Combustion Venting Enhanced Combustion Venting Low-Emitting		4	-3	2	Req'd Req'd Req'd Req'd 2 3 3	i) Provide OA to each unit per ASHRAE 62.2-2010. ii) Meet maximum allowable sound levels. AND 3) COMMON AREAS j, Meet ASHRAE 62.2-2010 minimum requirements. 1) Do not install unvented combustion appliances 2) Install CO monitor on each floor. 3) install closing doors at all fireplaces and woodstoves. AND 4) Meet requirements for space- and water-heating equirement that use combustion. 1) Place all AHUs and ductwork outside of garage. AND 2) Tighily seal shared surfaces in conditioned spaces above and next to garage spaces. CASE 1: NEW CONSTRUCTION In high-risk radon zones, design and build with radon-resistant construction techniques. OR CASE 2: RENOVATION a) Radon Testing or b) Install active radon ventilation system. 1) AIR FILTERS: Install MERV 8+ filters on all recirculating conditioning systems. 2) OA AIR FILTERS: Install MERV 6+ filters on all machanically supplied OA systems will all uses 10 ft of ductwork. 3) PRESSURE DROP. Design ductwork and central blower to account for pressure drop across filter. AND 4) HOUSINGS: Housings must be air-light to prevent bypass or Prohibit snicking in all common areas of the building and within Staff doors, windows, and air intakes, Comminicate policy with signage and lease agreements. Compartmentalize each dwelling unit to minimum leakage: 1) Seal penetrations. 2) Seal vertical chases. 3) Weather-sirip doors to common hallways 4) Weather-sirip extend doors and operable windows. AND Capton 1: Enhanced Local Exhaust (1 point) Use one of the following strateges in every bathroom with a shower, bathtub, or spa (i.e., trait-baths are exempt): a a occupancy sensor; a sucomatic humidistat controller; a contlimiously operating exhaust fain; or a delay timer that operates the fain for at least 20 minutes. ANDIOR Option 2: Enhanced Whole-house Ventilation (2 points) install a batanced whole-house ventilation system (not just exhaust only or supply only) that meets the minimum ventilation requirements of ASHRAE Standard 62.2-2010, Sections 4 and 7, or local equivalent whitehever	e e	ARCH MEP ARCH ARCH ARCH ARCH	units and common spaces. No unvented combustion appliances: CO monitor in each unit. Project will comply. Not applicable to Arlington, not Radon Zone 1. Project will comply. Project will comply. Project will comply. An Option 1 strategy will be provided. An Option 1: Multiple zones. Required for Arlington bonus density. No combustion fireplaces or wood-stoves. (2 pts) Garage exhaust fans will meet ASHRAE 62.1-2010 requirements and provide continuous exhaust or sensor triggered exhaust.
Pre 2 Pre 3 Pre 4 Pre 5 Pre 6 Pre 7 Credit 1 Credit 2 Credit 4 Credit 5	Combustion Venting Garage Pollutant Protection Radon Resistant Construction Air Filtering Environmental Tobacco Smoke Compartmentalizat ion Enhanced Ventilation Control Balancing of Heating and Cooling Distribution Sytems Enhanced Compartmentalizat ion Enhanced Compartm			3	2	Req'd Req'd Req'd Req'd 2	ii) Provide OA to each unit per ASHRAE 62.2-2010, iii Meet maximum allowable sound levels. AND 3) COMMON AREAS 1, Meet ASHRAE 62.2-2010 minimum requirements. 1) Do not install unverted combustion appliances 2) install Co monitor on each floor. 3) Install closing doors at all fireplaces and woodstoves. AND 4) Meet requirements for space- and water-neating equipment that use combustion. 1) Place all AHUs and diuctwork outside of garage. AND 2) Tighty seal shared surfaces in conditioned spaces above and rext to garage spaces. CASE 1: NEW CONSTRUCTION In high-resk radon or sones, design and build with radon-resistant construction techniques. OR CASE 2: RENOVATION a) Radon Testing or b) Install active radon ventilation system. 1) AIR FILTERS: Install MERV 8+ filters on all recirculating conditioning systems. 2) Id AIR FILTERS: Install MERV 6+ filters on all machanically supplied OA systems what least 10 fl of ductwork. 3) PRESSURE DROP- Design diuctwork and central blower to account for pressure drop across filter. AND 4) HOUSINGS: Housings must be air-light to prevent bypass or the seal research design unit to minimum leakage: 11 Seal penetrations. 2) Seal vertical chases. 3) Weather-strip extenior doors and operable windows. AND 5) Perform blower door tests to demonstrate maximum leakage: 11 Seal penetrations. 2) Seal vertical chases. 3) Weather-strip extenior doors and control of the control of	e e	ARCH MEP ARCH ARCH ARCH ARCH ARCH	No unvented combustion appliances. CO monitor in each unit. Project will comply. Not applicable to Arlington, not Radon Zone 1. Project will comply. Project will comply. Project will comply. An Option 1 strategy will be provided. An Option 1 strategy will be provided. An Option 1: Multiple zones. Required for Arlington bonus density. Ro combustion fireplaces or wood-stoves. (2 pts) Garage exhaust fans will meet ASHRAE 52.1-2010 requirements and provide continuous exhaust or consensor triggered exhaust.

Credit	Subject	Ves	Tar- geted	7	No.	Total Possible	Requirements	Parformance (+1 Point)	Action By	Action (tems/Comments
0-Innovati	on and Design Proce	255 (i Pos	sible	Point	s)	and the same of th	-	-	and the same of th
Pre 1	Preliminary Rating	γ			-	Req'd	Preliminary LEED meeting and action plan.	-	ARCH	Project will comply.
Credit 1.1	Innovation in Design			1		t	Install EV charging stations for 2% of parking spaces.	7		4% EV charging stations and 15% EV ready required for Arlington bonus density.
Credit 1.2	Innovation in Design		1			1	EPDs. Specify 20+ products with EPDs.	9	ARCH	Project will comply.
Credit 1.3	Innovation in Design		(i)	П		4	HPDs, Specify 20+ products ith HPDs	-	ARCH	Project will comply.
Credit 1.4	Innovation in Design			1		4	Light pollution reduction	-	ARCH	Required for Arlington bonus density.
Credit 1.5	Innovation in Design			-1		*	Bird-friendly design	-	ARCH	Required for Arlington bonus density.
Credit 2	LEED Accredited Professional	(1)		ĪĪ		1	At least 1 principal participant of the project team shall be a LEED AP with a specialty appropriate for the project.	-	ARCH	Project will comply.
	Total:	1	2	3	G			N	1	

Credit	Subject	Yes	7ar- geled	7	Ho	Total Possible	Requirements	Performance (#1 Point)	Action By	Action Items/Comments
RP-Regional	Priority (4 Possibl	e Poi	nts)				The same of the sa			
							Site Selection (6 pts min)		ARCH	
Credit 1.1	Regional Priority	1					Service Services (Services)		PHOOF	
Charles Control Control	Regional Priority	1					Community Resources (2 pts min)	-	ARCH	
Credit 1.2		1			4	1			1000000	
Credit 1.2 Credit 1.3	Regional Priority	1	1		4	1	Community Resources (2 pts min)	-	ARCH	

Certified 40 to 49 Points Silver 50 to 59 Points Gold 60 to 79 Points Platinum 80 Points and Above
Grand Total: 9 53 29 19





P 703.556.9275

F 703,821,6976 www.dcsdesign.com

ROONEY PROPERTIES Rooney Properties LLC

3330 Washington Blvd
UNIT 220
Arlington,VA 22201

P 703. 204 1400
https://rooneypropertieslic.com/

ISSUE DATE

REVISION DATE

3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

322158.00

4.1 SITE PLAN
PROJECT NO.

DRAWING TITLE

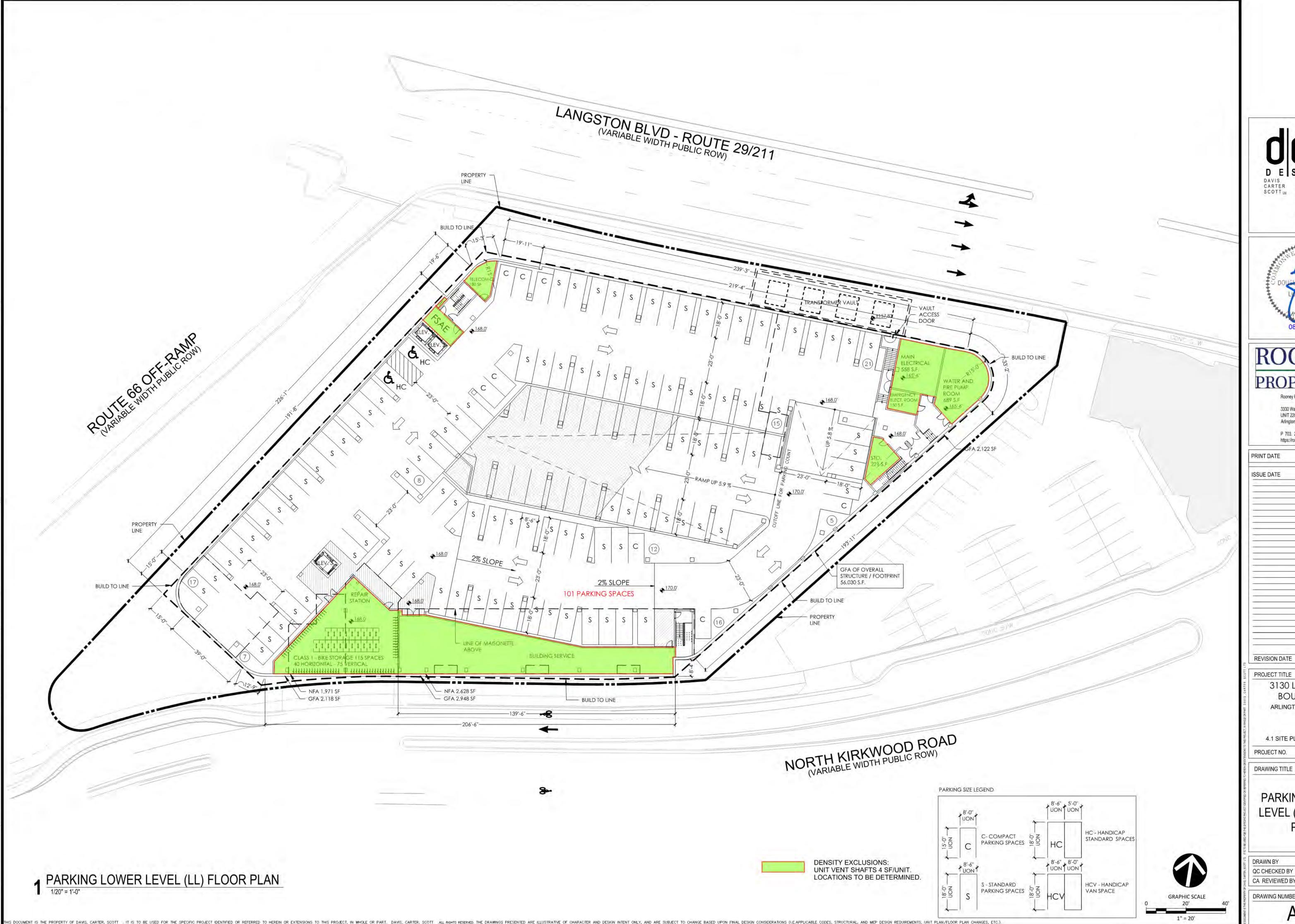
PROJECT TITLE

LEED SCORECARD

DRAWN BY RM
QC CHECKED BY RV
CA REVIEWED BY RV

DRAWING NUMBER

A-01.1



DAVIS CARTER SCOTT LM 8614 Westwood Center Dr Suite 800 Tysons, Virginia 22182 P 703.556.9275 F 703.821.6976



ROONEY **PROPERTIES**

3330 Washington Blvd Arlington, VA 22201

P 703. 204 . 1400 https://rooneypropertiesllc.com/

3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

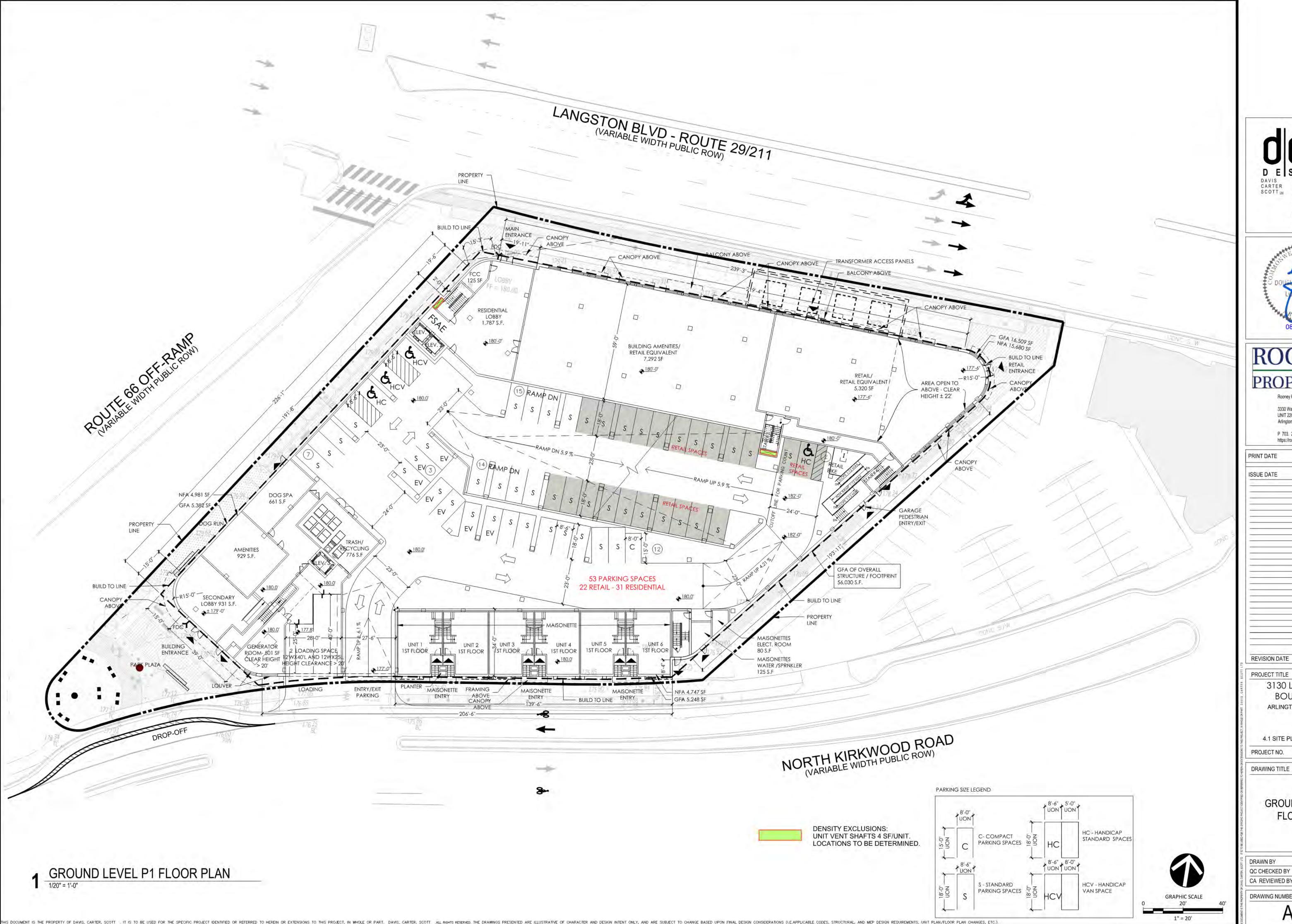
4.1 SITE PLAN

PARKING LOWER

LEVEL (LL) FLOOR **PLAN**

DRAWN BY QC CHECKED BY CA REVIEWED BY

DRAWING NUMBER



DAVIS CARTER SCOTT LM Architecture Interior Architecture Land Planning 8614 Westwood Center D Suite 800 Tysons, Virginia 22182 P 703.556.9275 F 703.821.6976 www.dcsdesign.com



ROONEY **PROPERTIES**

3330 Washington Blvd **UNIT 220** Arlington, VA 22201

Rooney Properties LLC

P 703. 204 . 1400 https://rooneypropertiesllc.com/

REVISION DATE

PROJECT TITLE

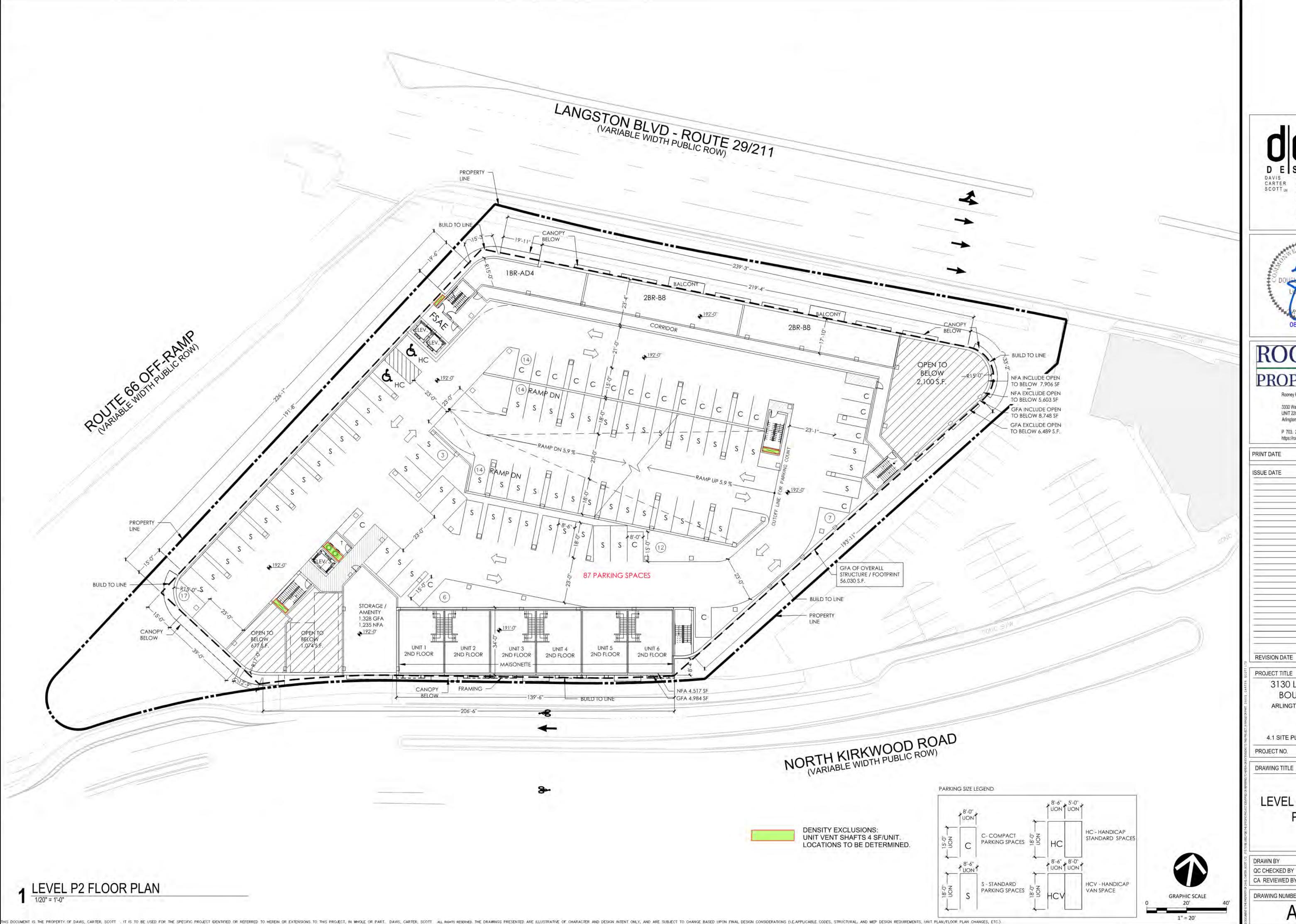
3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

4.1 SITE PLAN

GROUND LEVEL P1 FLOOR PLAN

DRAWN BY QC CHECKED BY CA REVIEWED BY

DRAWING NUMBER



DAVIS CARTER SCOTT LM 8614 Westwand Center D Suite 800 Tysons, Virginia 22182 P 703.556.9275 F 703.821.6976 www.dcsdesign.com



ROONEY **PROPERTIES**

Rooney Properties LLC 3330 Washington Blvd

UNIT 220 Arlington, VA 22201

P 703. 204 . 1400 https://rooneypropertiesllc.com/

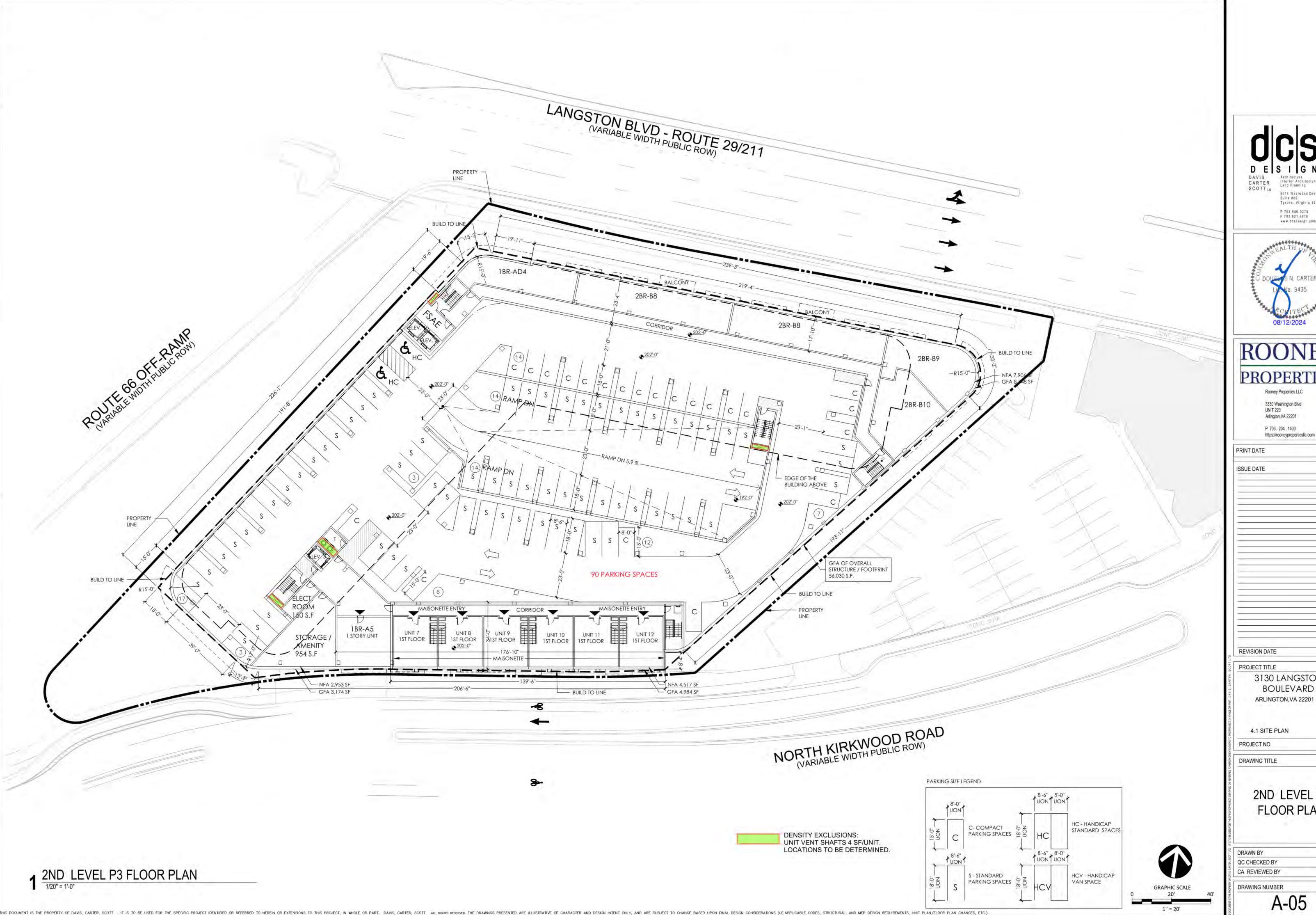
3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

4.1 SITE PLAN

LEVEL P2 FLOOR

DRAWN BY QC CHECKED BY CA REVIEWED BY

DRAWING NUMBER



DAVIS CARTER SCOTT LM 8614 Westwood Center Dr Suite 800 Tysons, Virginia 22182 P 703.556.9275 F 703.821.6976 www.dcsdesign.com



ROONEY **PROPERTIES**

3330 Washington Blvd

Arlington, VA 22201

P 703. 204 . 1400 https://rooneypropertiesllc.com/

REVISION DATE

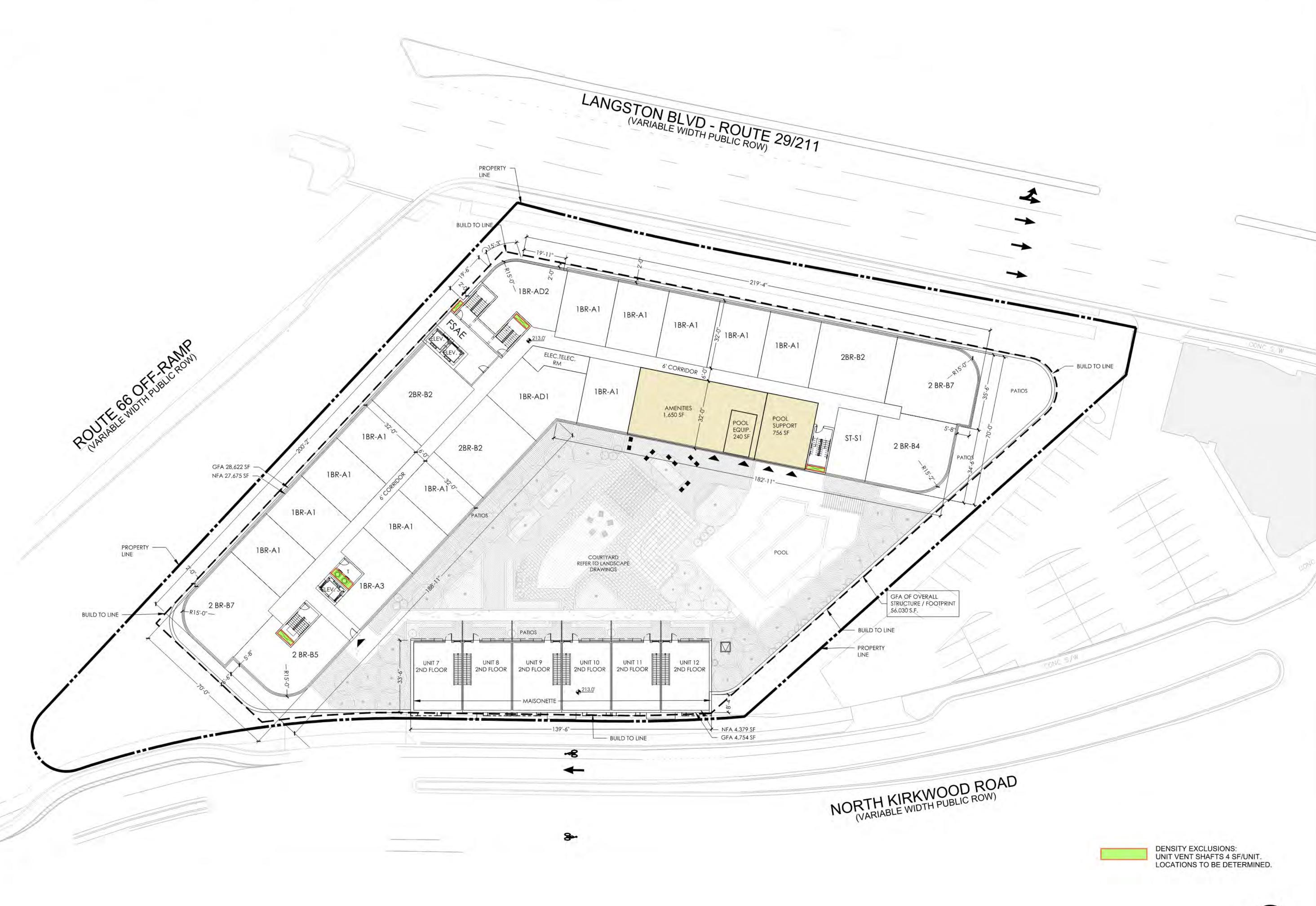
3130 LANGSTON BOULEVARD

4.1 SITE PLAN

2ND LEVEL P3 FLOOR PLAN

DRAWN BY QC CHECKED BY CA REVIEWED BY

DRAWING NUMBER



THIS DOCUMENT IS THE PROPERTY OF DAVIS, CARTER, SCOTT . IT IS TO BE USED FOR THE SPECIFIC PROJECT IDENTIFIED OR REFERRED TO HEREIN OR EXTENSIONS TO THIS PROJECT, IN WHOLE OR PART. DAVIS, CARTER, SCOTT .. IT IS TO BE USED FOR THE SPECIFIC PROJECT IDENTIFIED OR REFERRED TO HEREIN OR EXTENSIONS TO THIS PROJECT, IN WHOLE OR PART. DAVIS, CARTER, SCOTT .. IT IS TO BE USED FOR THE SPECIFIC PROJECT IDENTIFIED OR REFERRED TO HEREIN OR EXTENSIONS TO THIS PROJECT, IN WHOLE OR PART. DAVIS, CARTER, SCOTT .. IT IS TO BE USED FOR THE SPECIFIC PROJECT IDENTIFIED OR REFERRED TO CHARGE BASED UPON FINAL DESIGN REQUIREMENTS, UNIT PLAN/FLOOR PLAN CHARGES, ETC.).

GRAPHIC SCALE
0 20'

DESIGN

Architecture Interior Architecture Land Planning

8614 Westwood Center Dr. Suite 800
Tysons, Virginia 22182

P 703.556.9275
F 703.821.6976
www.dcsdesign.com



ROONEY PROPERTIES

3330 Washington Blvd UNIT 220

Arlington,VA 22201

P 703. 204 . 1400 https://rooneypropertiesllc.com/

PRINT DATE

ISSUE DATE

REVISION DATE

PROJECT TITLE

3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

4.1 SITE PLAN

PROJECT NO.

DRAWING TITLE

3RD FLOOR

PLAN

T-1

DRAWN BY

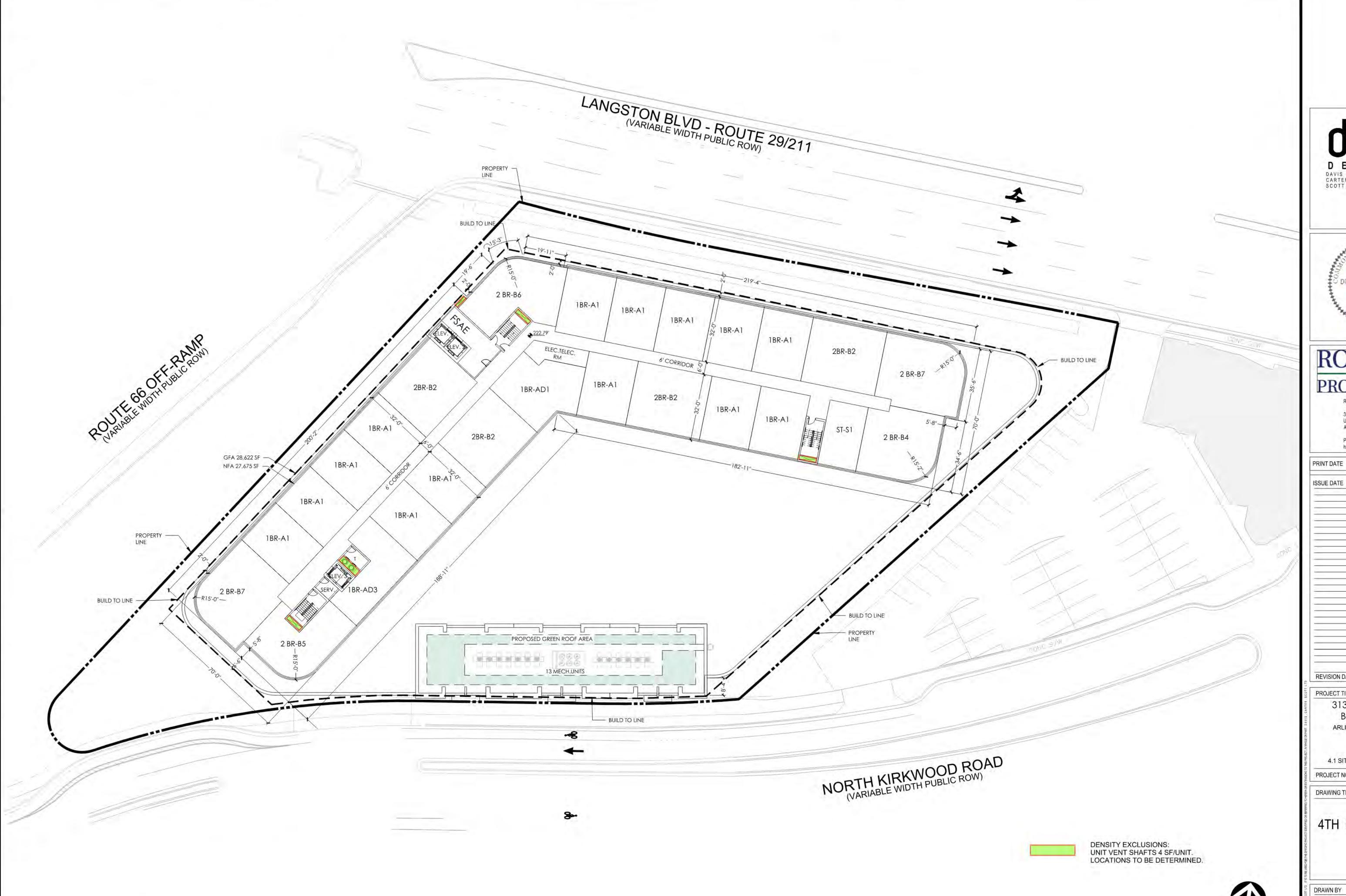
QC CHECKED BY

CA REVIEWED BY

DRAWING NUMBER

A-06

3RD FLOOR PLAN



THIS DOCUMENT IS THE PROPERTY OF DAVIS, CARTER, SCOTT . IT IS TO BE USED FOR THE SPECIFIC PROJECT IDENTIFIED OR REFERRED TO HEREIN OR EXTENSIONS TO THIS PROJECT, IN WHOLE OR PART. DAVIS, CARTER, SCOTT .ALL RIGHTS RESERVED. THE DRAWINGS PRESENTED ARE ILLUSTRATIVE OF CHARACTER AND DESIGN INTENT ONLY, AND ARE SUBJECT TO CHARACTER AND DESIGN INTENT ONLY, AND ARE SUBJECT TO CHARACTER AND DESIGN INTENT ONLY, AND ARE SUBJECT TO CHARACTER AND DESIGN INTENT ONLY, AND ARE SUBJECT TO CHARACTER AND DESIGN REQUIREMENTS, UNIT PLAN/FLOOR PLAN CHARACTER AND DESIGN INTENT ONLY, AND ARE SUBJECT TO CHARACTER AND DESIGN REQUIREMENTS, UNIT PLAN/FLOOR PLAN CHARACTER AND DESIGN INTENT ONLY, AND ARE SUBJECT TO CHARACTER AND DESIGN REQUIREMENTS, UNIT PLAN/FLOOR PLAN CHARACTER AND DESIGN REQUIREMENTS.

DAVIS CARTER SCOTT LM Architecture Interior Architecture Land Planning 8614 Westwood Center Dr Suite 800 Tysons, Virginia 22182 P 703.556.9275 F 703.821.6976 www.dcsdesign.com



ROONEY **PROPERTIES** Rooney Properties LLC

3330 Washington Blvd **UNIT 220**

Arlington, VA 22201 P 703. 204 . 1400

https://rooneyproperties/lc.com/

ISSUE DATE

PROJECT TITLE

REVISION DATE

3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

4.1 SITE PLAN

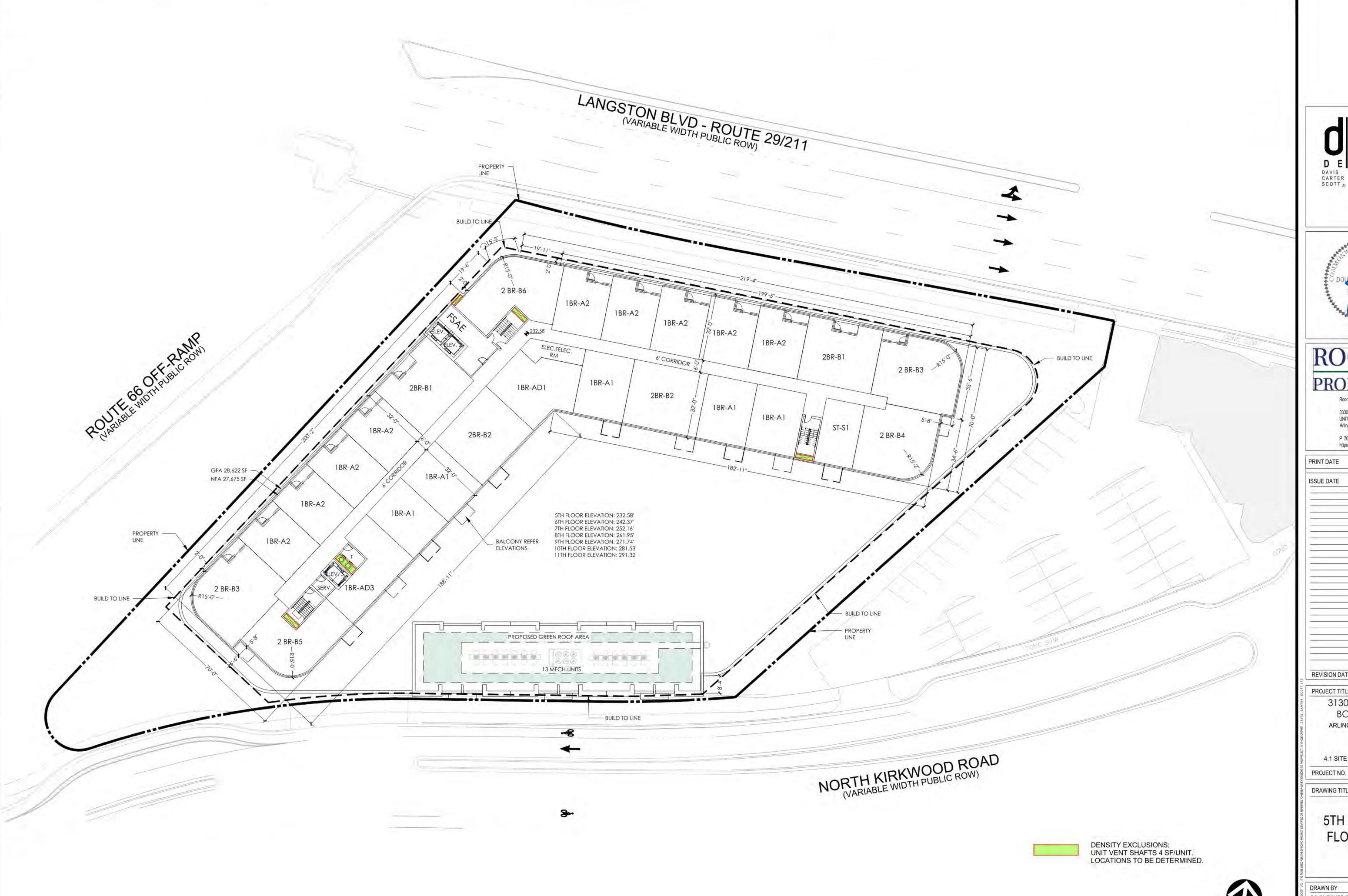
DRAWING TITLE

PROJECT NO.

4TH FLOOR PLAN

DRAWN BY QC CHECKED BY CA REVIEWED BY

DRAWING NUMBER



THIS DOCUMENT IS THE PROPERTY OF DAVIS, CARTER, SCOTT . IT IS TO BE USED FOR THE SPECIFIC PROJECT IDENTIFIED OR REFERRED TO HEREIN OR EXTENSIONS TO THIS PROJECT, IN WHOLE OR PART. DAVIS, CARTER, SCOTT .ALL RIGHTS RESERVED. THE DRAWINGS PRESENTED ARE ILLUSTRATIVE OF CHARACTER AND DESIGN INTENT ONLY, AND ARE SUBJECT TO CHARACTER AND DESIGN INTENT ONLY.

5TH THRU 11TH FLOOR PLANS

DAVIS CARTER SCOTT LM 8614 Westwood Center Dr Suite 800 Tysons, Virginia 22182 P 703.556.9275 F 703.821.6976 www.dcsdesign.com



ROONEY **PROPERTIES**

3330 Washington Blvd **UNIT 220**

Arlington, VA 22201 P 703. 204 . 1400

https://rooneypropertiesllc.com/ PRINT DATE

ISSUE DATE

REVISION DATE

PROJECT TITLE

3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

4.1 SITE PLAN

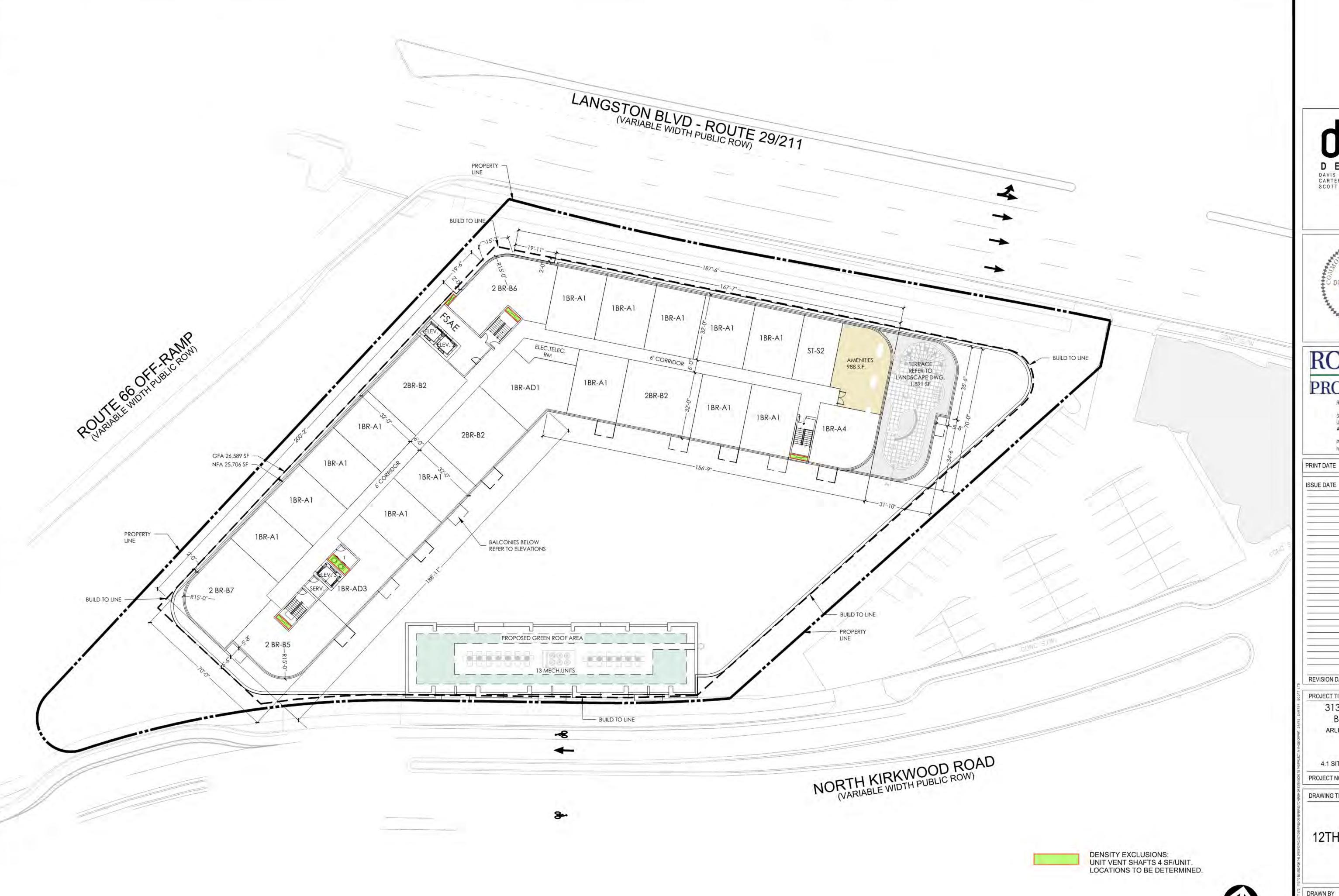
DRAWING TITLE

5TH THRU 11TH

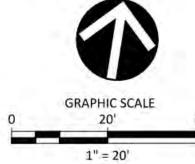
FLOOR PLANS

DRAWN BY QC CHECKED BY CA REVIEWED BY

DRAWING NUMBER



HIS DOCUMENT IS THE PROPERTY OF DAVIS, CARTER, SCOTT . IT IS TO BE USED FOR THE SPECIFIC PROJECT TO CHARGE BASED UPON FINAL DESIGN CONSIDERATIONS (I.E.APPLICABLE CODES, STRUCTURAL, AND MEP DESIGN REQUIREMENTS, UNIT PLAN/FLOOR PLAN CHARGES, ETC.).



DAVIS CARTER SCOTT LM 8614 Westwood Center Dr Suite 800 Tysons, Virginia 22182 P 703.556.9275 F 703.821.6976 www.dcsdesign.com



ROONEY **PROPERTIES**

3330 Washington Blvd **UNIT 220** Arlington, VA 22201

P 703. 204 . 1400 https://rooneypropertiesllc.com/

PRINT DATE

REVISION DATE

PROJECT TITLE

3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

4.1 SITE PLAN

PROJECT NO. DRAWING TITLE

12TH FLOOR PLAN

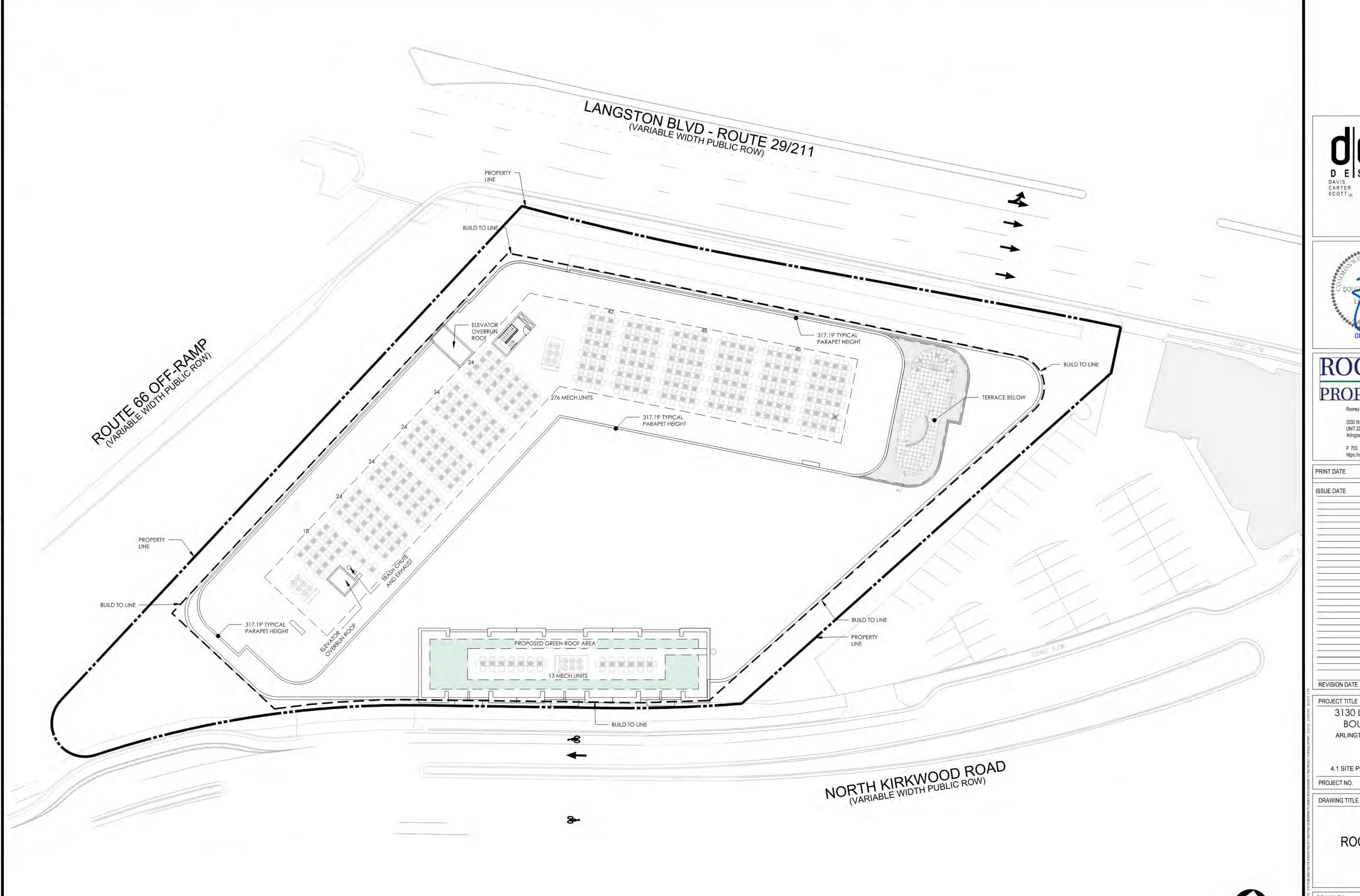
DRAWN BY QC CHECKED BY

DRAWING NUMBER

CA REVIEWED BY

A-09

12TH FLOOR PLAN



HIS DOCUMENT IS THE PROPERTY OF DAVIS, CARTER, SCOTT . IT IS TO BE USED FOR THE SPECIFIC PROJECT TO CHARGE BASED UPON FINAL DESIGN CONSIDERATIONS (I.E.APPLICABLE CODES, STRUCTURAL, AND MEP DESIGN REQUIREMENTS, UNIT PLAN/FLOOR PLAN CHARGES, ETC.).

DESIGN

DAVIS
CARTER
SCOTTIM DAVIS CARTER SCOTT Ltd 8614 Westwood Center Dr Suite 800 Tysons, Virginia 22182 P 703.556.9275 F 703.821.6976 www.dcsdesign.com



ROONEY **PROPERTIES** Rooney Properties LLC

3330 Washington Blvd **UNIT 220** Arlington, VA 22201

P 703. 204 . 1400 https://rooneyproperties/lc.com/

ISSUE DATE

PROJECT TITLE

3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

4.1 SITE PLAN

DRAWING TITLE

ROOF PLAN

QC CHECKED BY CA REVIEWED BY

DRAWING NUMBER



Architecture Interior Architecture Land Planning CARTER SCOTT Ltd 8614 Westwood Center Dr Tysons, Virginia 22182 P 703.556.9275 F 703.821.6976 www.dcsdesign.com



ROONEY PROPERTIES

Rooney Properties LLC

3330 Washington Blvd **UNIT 220** Arlington, VA 22201

https://rooneypropertiesllc.com/

P 703. 204 . 1400

08/09/2024

PROJECT TITLE

3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

322158.00

RRV

4.1 SITE PLAN

DRAWING TITLE

BUILDING **ELEVATIONS**

DRAWN BY QC CHECKED BY CA REVIEWED BY

DRAWING NUMBER

T.O.PARAPET ROOF LEVEL 133.69'(313.69') 12TH FLOOR LEVEL 121.11'(301.11') 11TH FLOOR LEVEL 111.32'(291.32') 1== 10TH FLOOR LEVER 101.53'(281.53') **1**--●9TH FLOOR LEVEL 91.74'(271.74') 1--▲8TH FLOOR LEVEL® 81.95'(261.95') 7TH FLOOR LEVEL 72.16'(252.16') 04 6TH FLOOR LEVEL 62.37'(242.37') 5TH FLOOR LEVEL 52.58'(232.58') 4TH FLOOR LEVEL PARKING LEVEL P2 22.0'(202-0') PARKING LEVEL P1 12.0'(192-0') GROUND FLOOR LEVEL-GF 0.0' (180-9) PARKING LOWER LEVEL-LL -10.0'(170.0') ENTRANCE ENTRANCE #24 GARAGE INTAKE AND 12 25 EXHAUST VIA OPEN SCREEN 22 PANELS AT GARAGE LEVELS _____ $1 \frac{E3 - ELEVATION}{\frac{1}{1}=20'-0"}$ T.O.PARAPET ROOF LEVEL SIGNAGEO 133.69'(313.69') 12TH FLOOR LEVEL 121.11'(301.11') ▲11TH FLOOR LEVER 111.32'(291.32') 10TH FLOOR LEVEE 101.53'(281.53') 9TH FLOOR LEVEL

HIS DOCUMENT IS THE PROPERTY OF DAVIS, CARTER, SCOTT . IT IS TO BE USED FOR THE SPECIFIC PROJECT IDENTIFIED OR REFERRED TO HEREIN OR EXTENSIONS TO THIS PROJECT, IN WHOLE OR PART. DAVIS, CARTER, SCOTT . IT IS TO BE USED FOR THE SPECIFIC PROJECT IDENTIFIED OR REFERRED TO HEREIN OR EXTENSIONS TO THIS PROJECT, IN WHOLE OR PART. DAVIS, CARTER, SCOTT . ALL RIGHTS RESERVED. THE DRAWINGS PRESENTED ARE ILLUSTRATIVE OF CHARACTER AND MEP DESIGN REQUIREMENTS, UNIT PLAN/FLOOR PLAN CHARACTER AND MEP DESIGN REQUIREMENTS, UNIT PLAN/FLOOR PLAN CHARACTER AND MEP DESIGN REQUIREMENTS.

91.74'(271.74')

8TH FLOOR LEVEL 81.95'(261.95')

7TH FLOOR LEVEL 72.16'(252.16')

♠6TH FLOOR LEVEL®

57H FLOOR LEVEL 52.58'(232.58')

4TH FLOOR LEVEL 42.79'(222.79')

33.0'(213-0')

PARKING LEVEL P1 12.0'(192-0')

PARKING LOWER LEVEL-LL -10.0'(170.0')

GROUND FLOOR
LEVEL-GF 0.0' (180-0)

2 E4 - ELEVATION

62.37'(242.37')

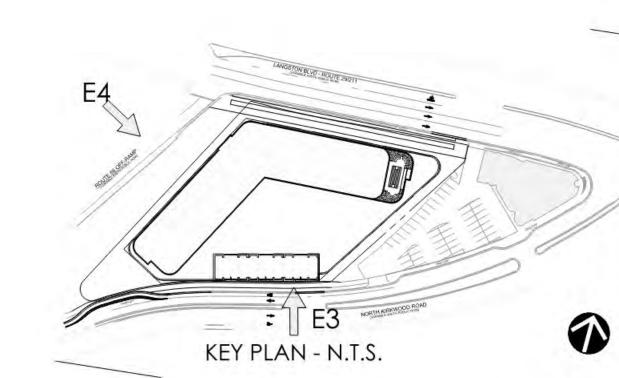
NOTE: ARCHITECTURAL PLANS, INTERNAL PARKING LAYOUTS, PERSPECTIVES, ELEVATIONS AND SECTIONS ARE SUBJECT TO REVISION IN SITE PLAN APPLICATIONS. BUILDING DESIGN AND MATERIALS ARE SUBJECT TO CHANGE.

02 BRICK VENEER TYPE 2 03 BRICK VENEER TYPE 3 04 METAL MESH RAILING 05 METAL CORNICE 06 METAL PANEL TYPE 2 07 PRECAST 08 CONTINUOUS INSULATION WALL SYSTEM 09 PRECAST WITH STONE INSET 10 SIGNAGE 11 SIGNAGE / ART METAL CANOPY 13 DECO-ISH WALL SCONCE TYPE 1 DECO-ISH WALL SCONCE TYPE 2 15 WHITE TRANSLUCENT GARAGE DOOR METAL & GLASS CANOPY PRECAST / CAST STONE CAP 18 |METAL PANEL FOR STAIR & ELEVATOR -OVER RUN ENCLOSUR 19 PAINTED & PARGED CONCRETE PRECAST 20 METAL RAILING 21 DECOISH WALL SCONCE TYPE 3 22 METAL CLADDING SYSTEM 23 PRECAST WATER TABLE 24 METAL SCREENINGIN FRAME SYSTEM 25 LOUVER / SCREEN ENCLOSURE 26 NANA WALL BRICK VENEER TYPE 3 - STACK BOND 28 STORE FRONT GLAZING 29 SPLIT / SMOOTH FACE CMU BLOCK 30 FAUX WOOD WALL PANELS

EXTERIOR ELEVATIONS KEYNOTES

BRICK VENEER TYPE 1

NOTE: #13 IS SCONCE ALONG NORTH ELEVATION #16 IS THE CANOPY @ NORTHWEST CORNER.



GRAPHIC SCALE 20' 4 1" = 20' DESIGN

DAVIS
CARTER
SCOTT Ltd

Architecture
Interior Architecture
Land Planning

8614 Westwood Center Dr
Suite 800
Tysons, Virginia 22182

P 703.556.9275



F 703.821.6976

www.dcsdesign.com

ROONEY PROPERTIES Rooney Properties LLC

3330 Washington Blvd UNIT 220

Arlington,VA 22201

P 703. 204 .1400

https://rooneypropertiesllc.com/

PRINT DATE 08/09/2024
ISSUE DATE

REVISION DATE

PROJECT TITLE

3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

322158.00

4.1 SITE PLAN

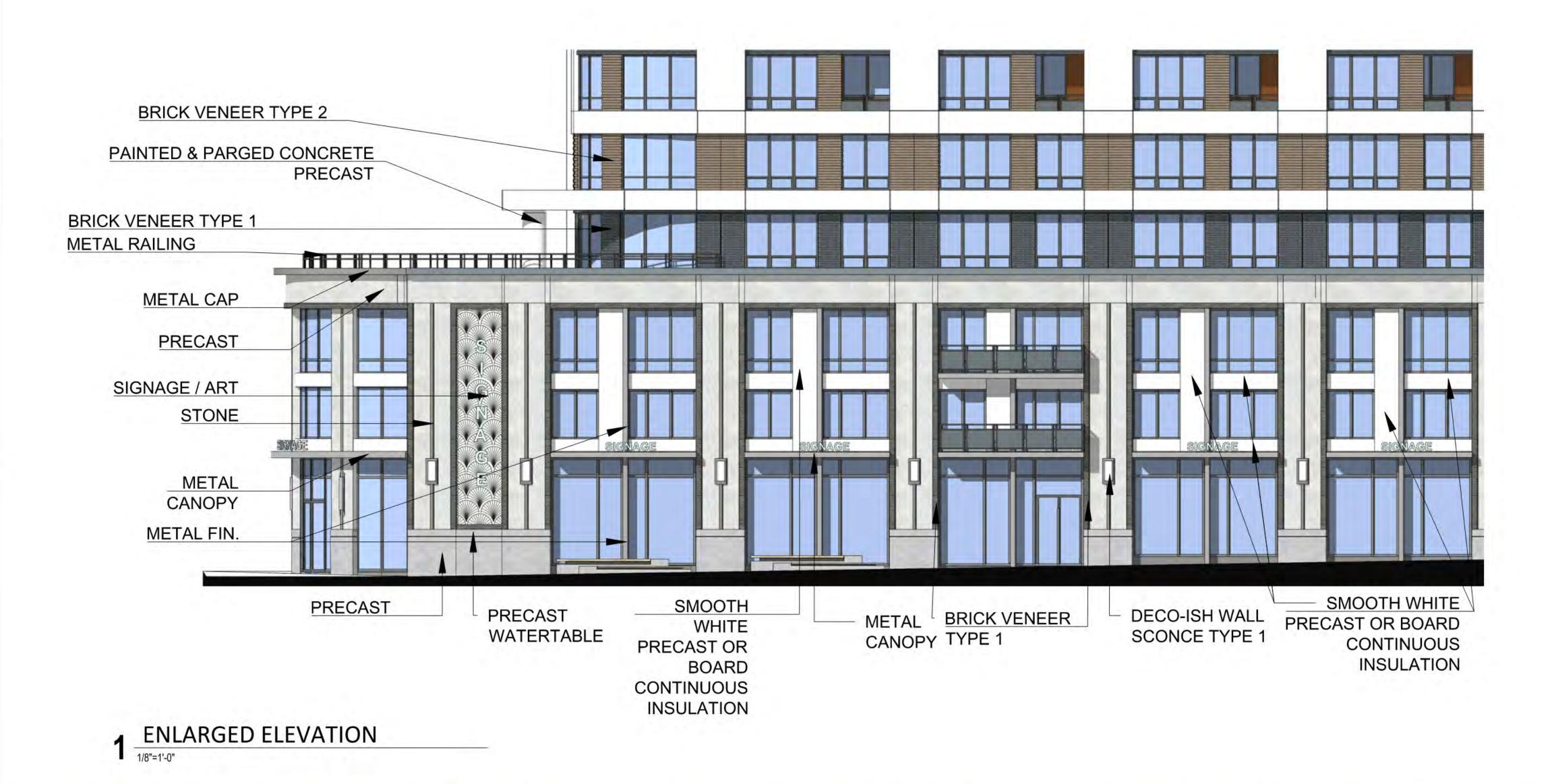
DRAWING TITLE

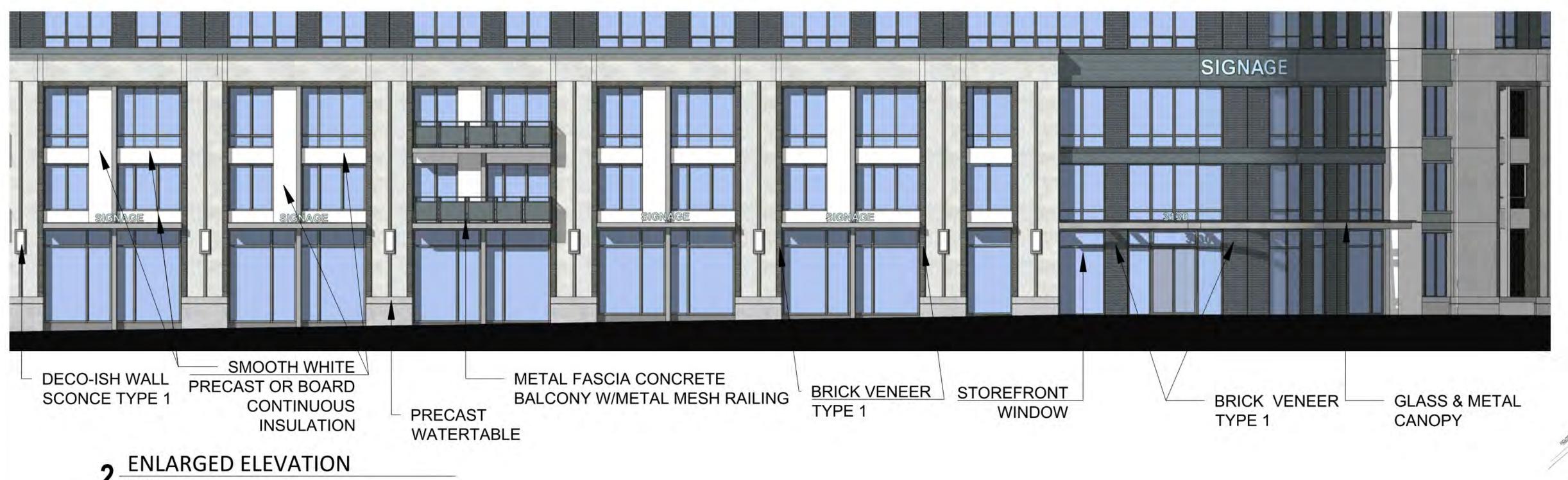
PROJECT NO.

BUILDING ELEVATIONS

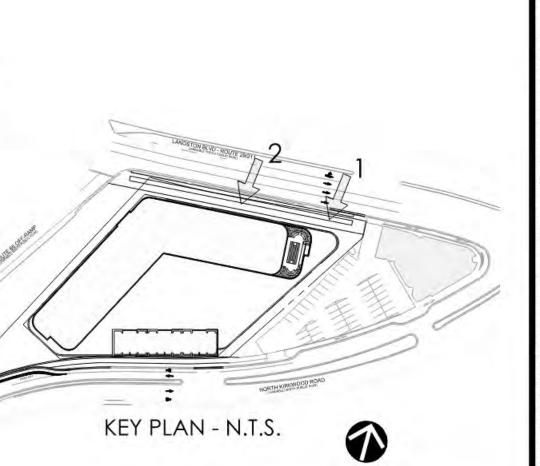
DRAWN BY RM
QC CHECKED BY RV
CA REVIEWED BY RRV

DRAWING NUMBER





THIS DOCUMENT IS THE PROPERTY OF DAVIS, CARTER, SCOTT . IT IS TO BE USED FOR THE SPECIFIC PROJECT IDENTIFIED OR REFERRED TO CHARGE BASED UPON FINAL DESIGN CONSIDERATIONS (I.E.APPLICABLE CODES, STRUCTURAL, AND MEP DESIGN REQUIREMENTS, UNIT PLAN/FLOOR PLAN CHARGES, ETC.).



GRAPHIC SCALE

1/8" = 1'-0"

NOTE: ARCHITECTURAL PLANS, INTERNAL PARKING LAYOUTS, PERSPECTIVES, ELEVATIONS AND SECTIONS

APPLICATIONS. BUILDING DESIGN AND MATERIALS ARE

ARE SUBJECT TO REVISION IN SITE PLAN

SUBJECT TO CHANGE.

DESIGN

Architecture Interior Architecture Land Planning

8614 Westwood Center Dr. Suite 800
Tysons, Virginia 22182

P 703.556.9275
F 703.821.6976
www.dcsdesign.com



ROONEY PROPERTIES

Rooney Properties LLC 3330 Washington Blvd

UNIT 220 Arlington, VA 22201

P 703. 204 .1400 https://rooneypropertiesllc.com/

PRINT DATE 08

PROJECT TITLE

3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

4.1 SITE PLAN

DRAWING TITLE

PROJECT NO.

ENLARGED ELEVATIONS

DRAWN BY
QC CHECKED BY
CA REVIEWED BY

DRAWING NUMBER

TYPE 3

1 ENLARGED ELEVATION 1/8"=1'-0"



FACE CMU BLOCK

THIS DOCUMENT IS THE PROPERTY OF DAVIS, CARTER, SCOTT . IT IS TO BE USED FOR THE SPECIFIC PROJECT IDENTIFIED OR REFERRED TO HEREIN OR EXTENSIONS TO THIS PROJECT, IN WHOLE OR PART. DAVIS, CARTER, SCOTT .ALL RIGHTS RESERVED. THE DRAWINGS PRESERVED. THE DRAWINGS PRESERVED.

2 ENLARGED ELEVATION

1/8"=1'-0"

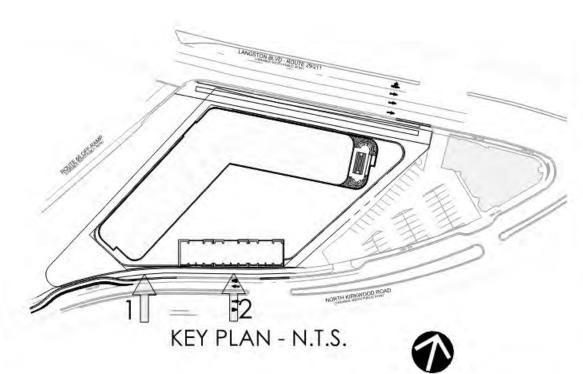
NOTE: ARCHITECTURAL PLANS, INTERNAL PARKING LAYOUTS, PERSPECTIVES, ELEVATIONS AND SECTIONS ARE SUBJECT TO REVISION IN SITE PLAN APPLICATIONS. BUILDING DESIGN AND MATERIALS ARE SUBJECT TO CHANGE.

TYPE 3

WALL

SCONCE

LIGHTING



GRAPHIC SCALE

1/8" = 1'-0"

Architecture Interior Architecture Land Planning CARTER SCOTT Ltd 8614 Westwood Center Dr Tysons, Virginia 22182 P 703.556.9275 F 703.821.6976 www.dcsdesign.com



ROONEY PROPERTIES

Rooney Properties LLC

3330 Washington Blvd Arlington, VA 22201

P 703. 204 . 1400 https://rooneypropertiesllc.com/

PRINT DATE ISSUE DATE

REVISION DATE

PROJECT TITLE 3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

4.1 SITE PLAN

PROJECT NO.

DRAWING TITLE

ENLARGED ELEVATIONS

QC CHECKED BY CA REVIEWED BY

DRAWING NUMBER



Architecture Interior Architecture Land Planning 8614 Westwood Center Dr Tysons, Virginia 22182 P 703.556.9275 F 703.821.6976

www.dcsdesign.com

ROONEY PROPERTIES

Rooney Properties LLC

3330 Washington Blvd Arlington, VA 22201

P 703. 204 . 1400 https://rooneypropertiesllc.com/

REVISION DATE

PROJECT TITLE

3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

4.1 SITE PLAN

ENLARGED ELEVATIONS

QC CHECKED BY CA REVIEWED BY

DRAWING NUMBER

NOTE: ARCHITECTURAL PLANS, INTERNAL PARKING LAYOUTS, PERSPECTIVES, ELEVATIONS AND SECTIONS
ARE SUBJECT TO REVISION IN SITE PLAN
APPLICATIONS. BUILDING DESIGN AND MATERIALS ARE
SUBJECT TO CHANGE.



VIEW 1



VIEW 3



VIEW 2





P 703.556.9275 F 703.821.6976 www.dcsdesign.com

ROONEY **PROPERTIES**

3330 Washington Blvd UNIT 220 Arlington, VA 22201

P 703. 204 . 1400 https://rooneypropertiesllc.com/

ISSUE DATE

REVISION DATE

PROJECT TITLE 3130 LANGSTON

BOULEVARD ARLINGTON, VA 22201

4.1 SITE PLAN

DRAWING TITLE

PROJECT NO.

CONCEPT - VIEWS

QC CHECKED BY CA REVIEWED BY

DRAWING NUMBER

NOTE: ARCHITECTURAL PLANS, INTERNAL PARKING LAYOUTS, PERSPECTIVES, ELEVATIONS AND SECTIONS ARE SUBJECT TO REVISION IN SITE PLAN APPLICATIONS. BUILDING DESIGN AND MATERIALS ARE SUBJECT TO CHANGE.



VIEW 4

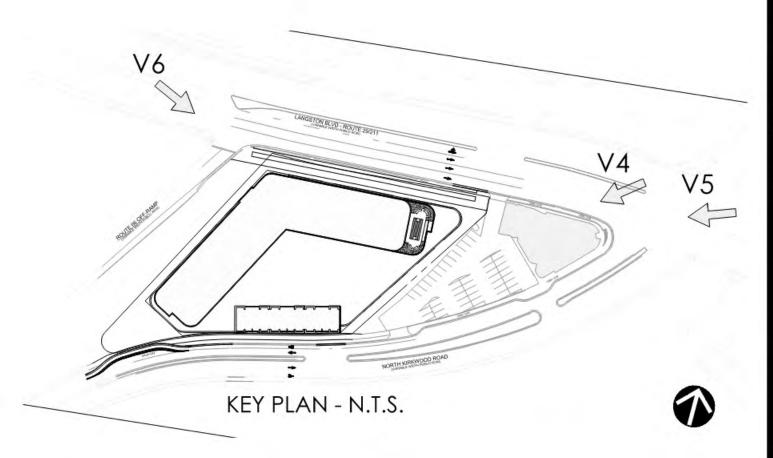


VIEW 6

THIS DOCUMENT IS THE PROPERTY OF DAVIS, CARTER, SCOTT . IT IS TO BE USED FOR THE SPECIFIC PROJECT IDENTIFIED OR REFERRED TO HEREIN OR EXTENSIONS TO THIS PROJECT, IN WHOLE OR PART. DAVIS, CARTER, SCOTT .ALL RIGHTS RESERVED. THE DRAWINGS PRESENTED ARE ILLUSTRATIVE OF CHARACTER AND MEP DESIGN REQUIREMENTS, UNIT PLAN/FLOOR PLAN CHANGES, ETC.).



VIEW 5





Interior Architecture
Land Planning

8614 Westwood Center Dr.
Suite 800
Tysons, Virginia 22182

P 703.556.9275
F 703.821.6976
www.dcsdesign.com



ROONEY PROPERTIES

Rooney Properties LLC

3330 Washington Blvd UNIT 220 Arlington,VA 22201

P 703. 204 . 1400 https://rooneypropertiesllc.com/

PRINT DATE 08/09/

ISSUE DATE

REVISION DATE
PROJECT TITLE

3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

4.1 SITE PLAN

PROJECT NO.

DRAWING TITLE

CONCEPT - VIEWS

DRAWN BY
QC CHECKED BY
CA REVIEWED BY

DRAWING NUMBER

NOTE: ARCHITECTURAL PLANS, INTERNAL PARKING LAYOUTS, PERSPECTIVES, ELEVATIONS AND SECTIONS ARE SUBJECT TO REVISION IN SITE PLAN APPLICATIONS. BUILDING DESIGN AND MATERIALS ARE SUBJECT TO CHANGE.



VIEW 7

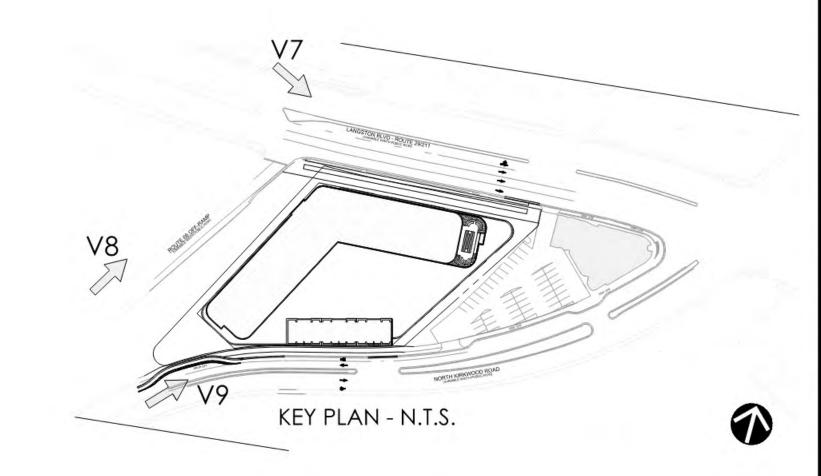


VIEW 9

THIS DOCUMENT IS THE PROPERTY OF DAVIS, CARTER, SCOTT . IT IS TO BE USED FOR THE SPECIFIC PROJECT IDENTIFIED OR REFERRED TO HEREIN OR EXTENSIONS TO THIS PROJECT, IN WHOLE OR PART. DAVIS, CARTER, SCOTT . ALL RIGHTS RESERVED. THE DRAWINGS PRESENTED ARE ILLUSTRATIVE OF CHARACTER AND DESIGN REQUIREMENTS, UNIT PLAN/FLOOR PLAN CHANGES, ETC.).



VIEW 8







www.dcsdesign.com

ROONEY PROPERTIES

Rooney Properties LLC 3330 Washington Blvd

Arlington,VA 22201

P 703. 204 . 1400 https://rooneypropertiesllc.com/

PRINT DATE 08/09
ISSUE DATE

PROJECT TITLE

REVISION DATE

3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

4.1 SITE PLAN

PROJECT NO.

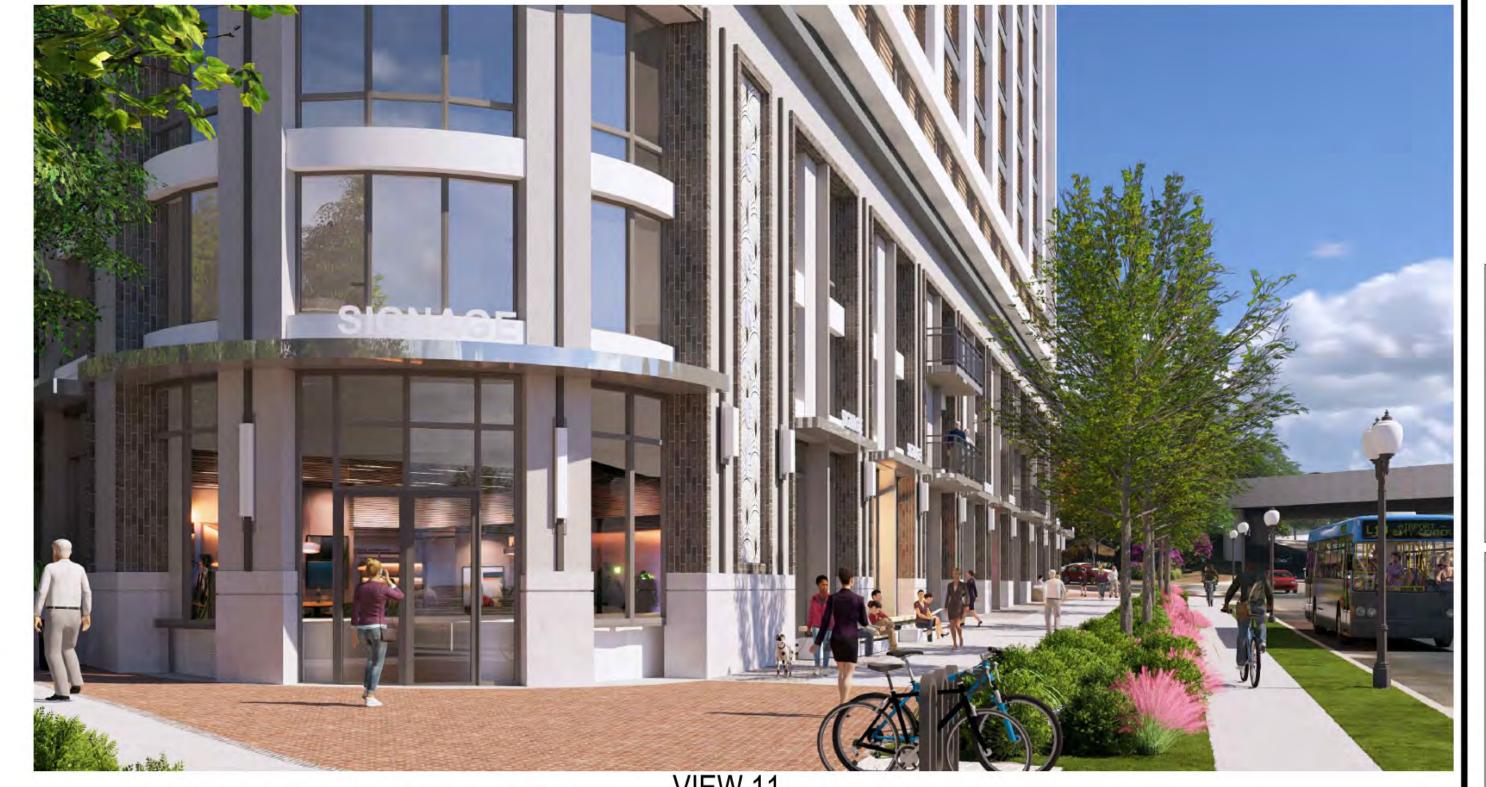
DRAWING TITLE

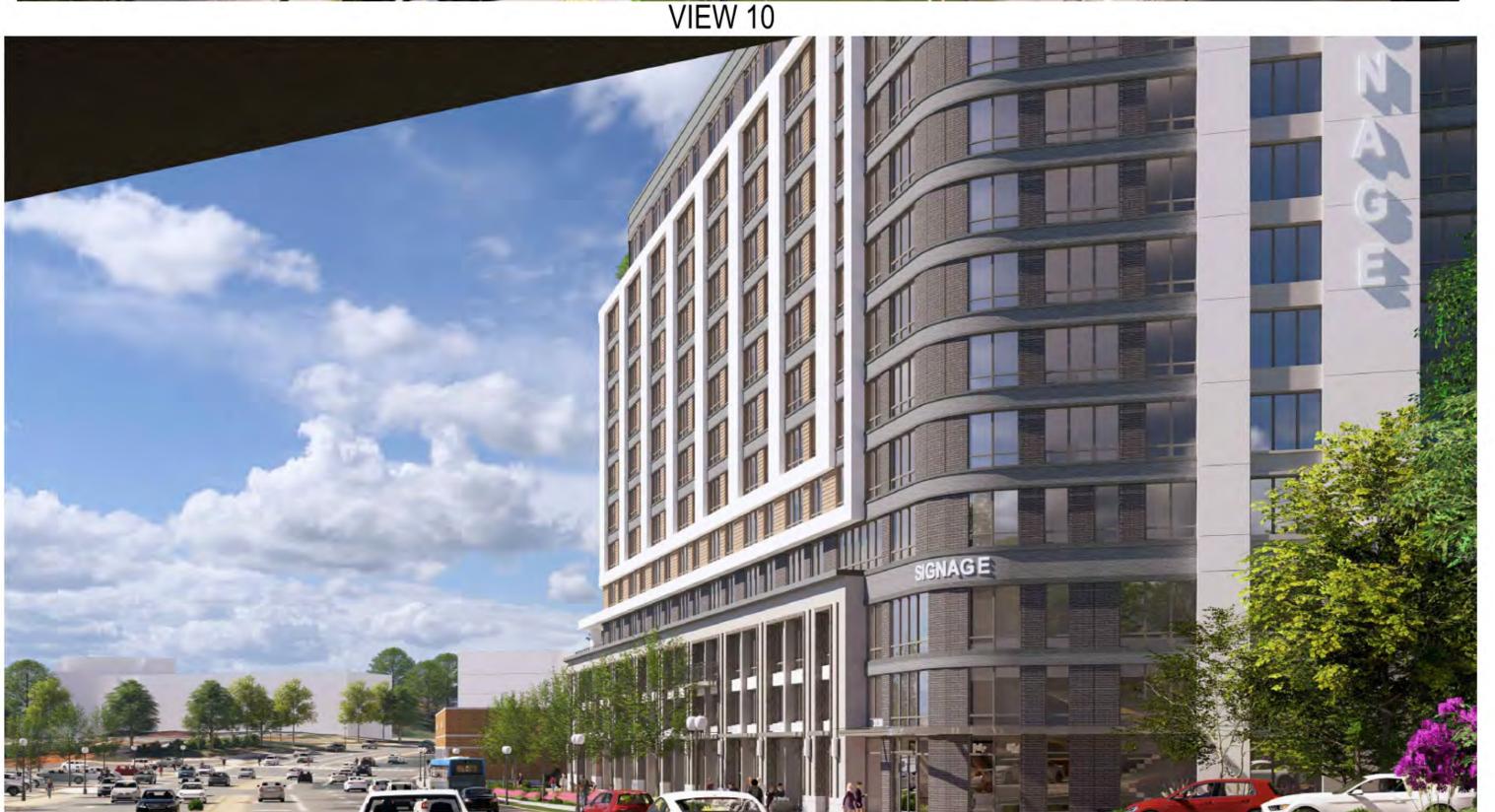
CONCEPT - VIEWS

DPAWN RV

DRAWING NUMBER

QC CHECKED BY







VIEW 13





KEY PLAN - N.T.S.

NOTE: ARCHITECTURAL PLANS, INTERNAL PARKING LAYOUTS, PERSPECTIVES, ELEVATIONS AND SECTIONS ARE SUBJECT TO REVISION IN SITE PLAN APPLICATIONS. BUILDING DESIGN AND MATERIALS ARE SUBJECT TO CHANGE.



PROPERTIES

REVISION DATE

PROJECT TITLE 3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

4.1 SITE PLAN

PROJECT NO. DRAWING TITLE

CONCEPT - VIEWS

DRAWN BY QC CHECKED BY CA REVIEWED BY

DRAWING NUMBER





3- EXISTING VIEW FROM NW

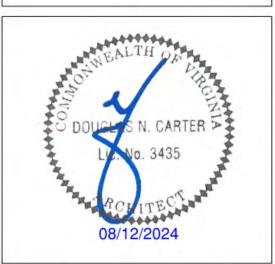


2- EXISTING VIEW FROM SE



4- EXISTING VIEW FROM SW





ROONEY **PROPERTIES**

Arlington, VA 22201

https://rooneypropertiesllc.com/

ISSUE DATE

REVISION DATE

PROJECT TITLE

3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

4.1 SITE PLAN

DRAWING TITLE

PROJECT NO.

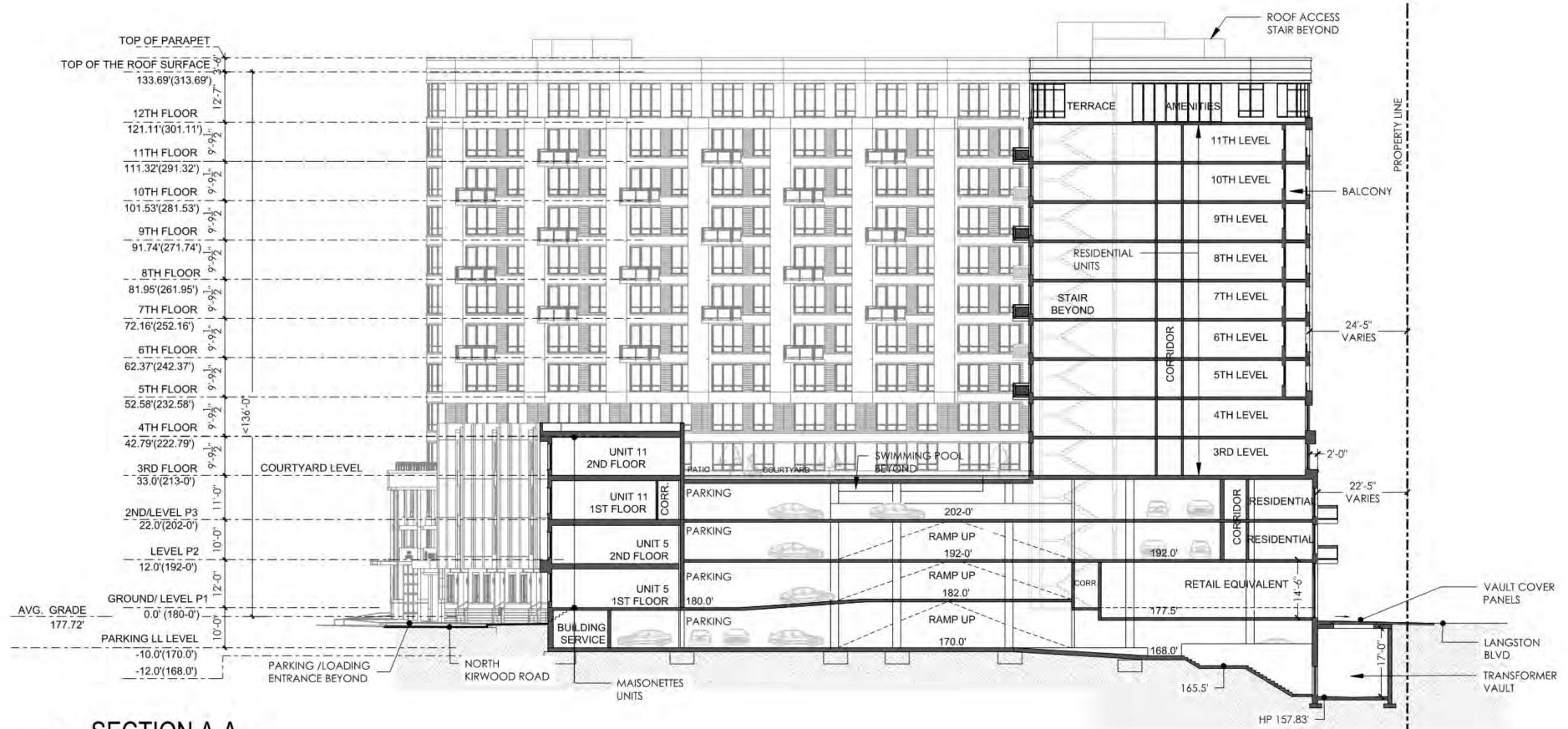
EXISTING MASSING

QC CHECKED BY CA REVIEWED BY

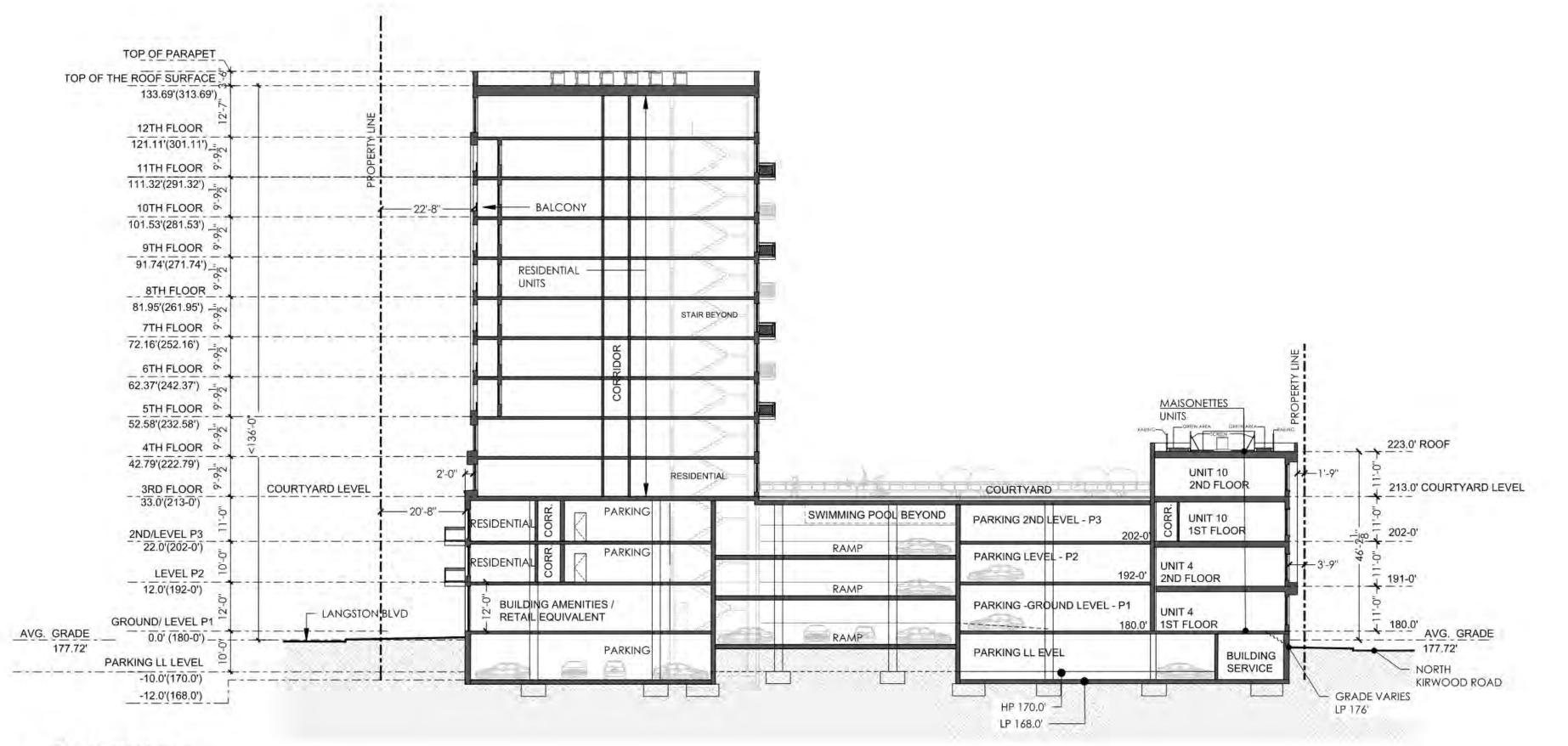
DRAWING NUMBER

NOTE: ARCHITECTURAL PLANS, INTERNAL PARKING LAYOUTS, PERSPECTIVES, ELEVATIONS AND SECTIONS ARE SUBJECT TO REVISION IN SITE PLAN APPLICATIONS. BUILDING DESIGN AND MATERIALS ARE SUBJECT TO CHANGE.

NOTE: ARCHITECTURAL PLANS, INTERNAL PARKING LAYOUTS, PERSPECTIVES, ELEVATIONS AND SECTIONS ARE SUBJECT TO REVISION IN SITE PLAN APPLICATIONS. BUILDING DESIGN AND MATERIALS ARE SUBJECT TO CHANGE.

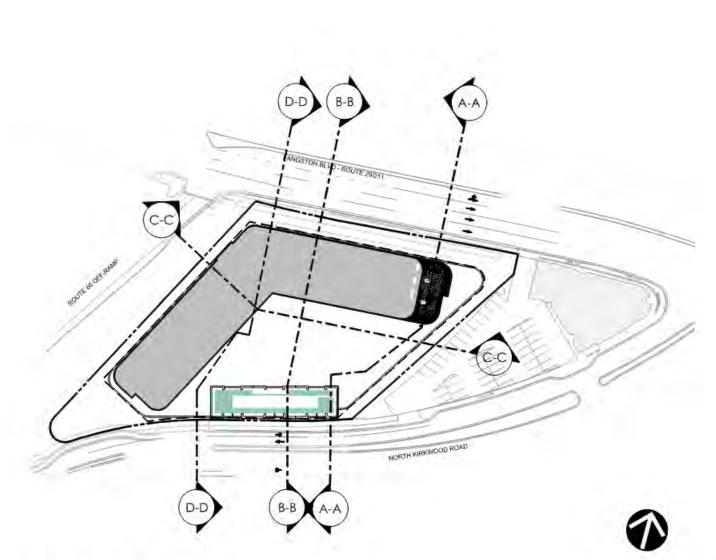


1 SECTION A-A



THIS DOCUMENT IS THE PROPERTY OF DAVIS, CARTER, SCOTT . IT IS TO BE USED FOR THE SPECIFIC PROJECT IDENTIFIED OR REFERRED TO HEREIN OR EXTENSIONS TO CHARGE BASED UPON FINAL DESIGN CONSIDERATIONS (I.E.APPLICABLE CODES, STRUCTURAL, AND MEP DESIGN REQUIREMENTS, UNIT PLAN/FLOOR PLAN CHARGE BASED UPON FINAL DESIGN CONSIDERATIONS (I.E.APPLICABLE CODES, STRUCTURAL, AND MEP DESIGN REQUIREMENTS, UNIT PLAN/FLOOR PLAN CHARGES, ETC.).

2 SECTION B-B



KEY PLAN

GRAPHIC SCALE
0 20' 40

1" = 20'

DESIGN

DAVIS
CARTER
SCOTT Ltd

Architecture
Interior Architecture
Land Planning

8614 Westwood Center Dr.
Suite 800
Tysons, Virginia 22182



P 703.556.9275

F 703.821.6976

www.dcsdesign.com

ROONEY PROPERTIES

Rooney Properties LLC 3330 Washington Blvd UNIT 220

Arlington, VA 22201
P 703. 204 . 1400

08/09/2024

https://rooneypropertiesllc.com/

ISSUE DATE

REVISION DATE

PROJECT TITLE

3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

4.1 SITE PLAN

DRAWING TITLE

PROJECT NO.

BUILDING

322158.00

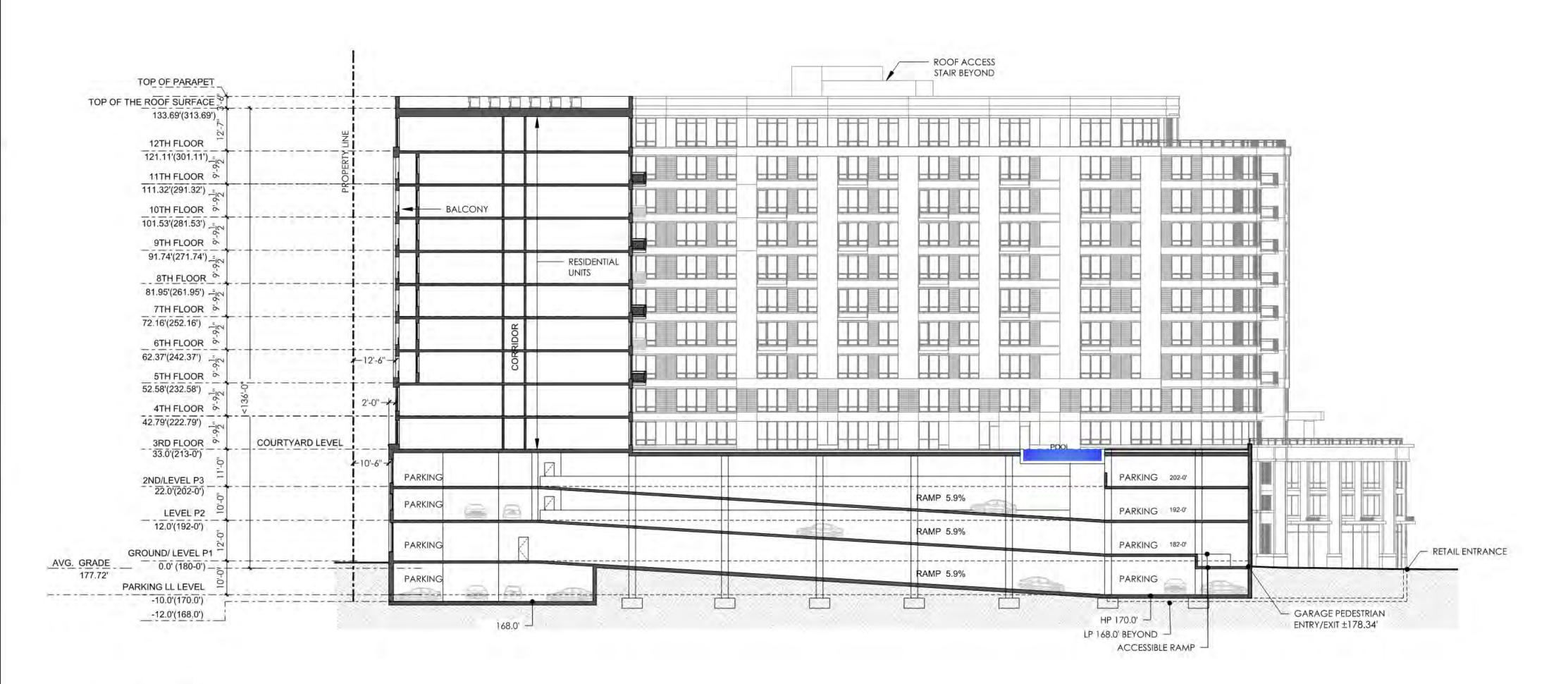
DRAWN BY RM

QC CHECKED BY RV

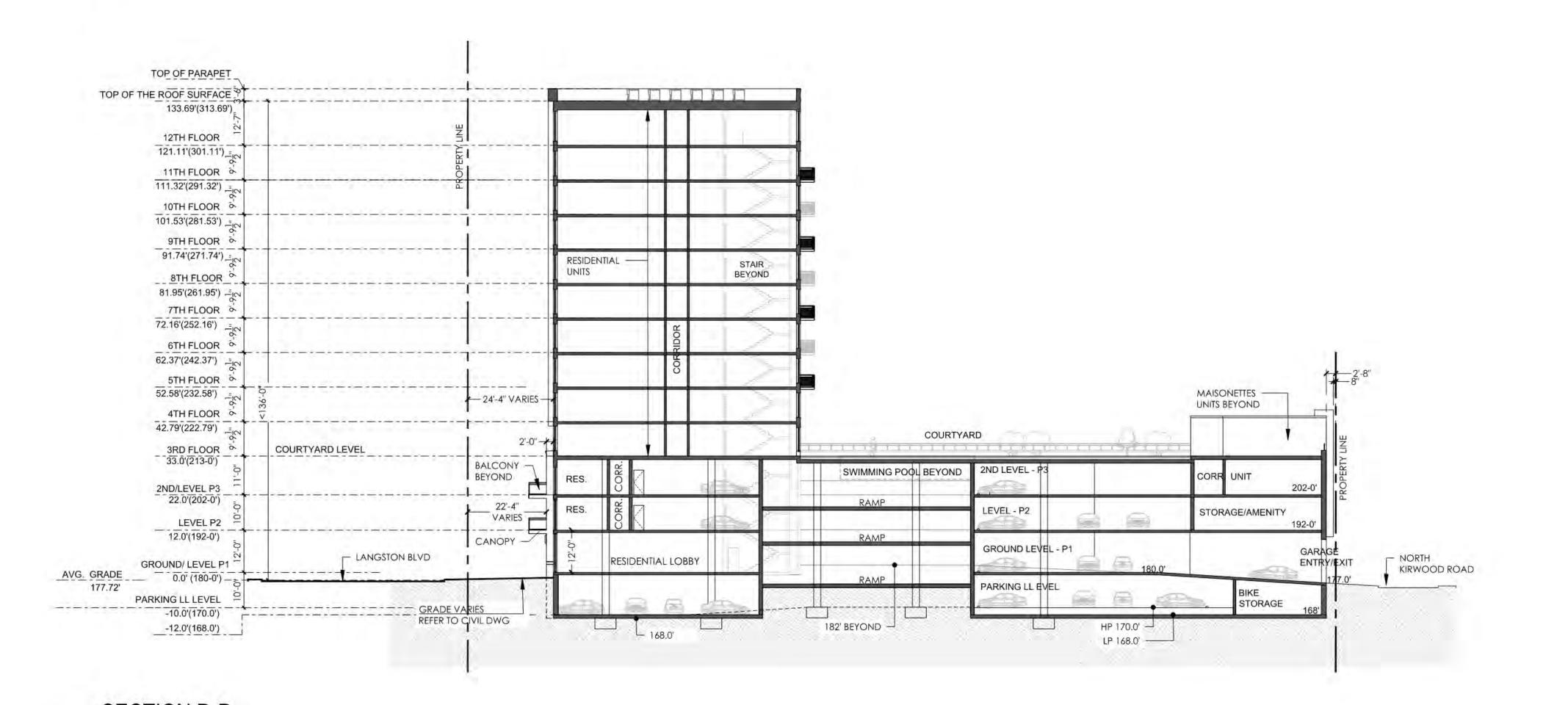
CA REVIEWED BY RRV

DRAWING NUMBER

NOTE: ARCHITECTURAL PLANS, INTERNAL PARKING LAYOUTS, PERSPECTIVES, ELEVATIONS AND SECTIONS ARE SUBJECT TO REVISION IN SITE PLAN APPLICATIONS. BUILDING DESIGN AND MATERIALS ARE SUBJECT TO CHANGE.



1 SECTION C-C



HIS DOCUMENT IS THE PROPERTY OF DAVIS, CARTER, SCOTT . IT IS TO BE USED FOR THE SPECIFIC PROJECT, IN WHOLE OR PART. DAVIS, CARTER, SCOTT .ALL RIGHTS RESERVED. THE DRAWINGS PRESENTED ARE ILLUSTRATIVE OF CHARACTER AND MEP DESIGN REQUIREMENTS, UNIT PLAN/FLOOR PLAN CHARGES, ETC.).

KEY PLAN

GRAPHIC SCALE
0 20' 40'

DESIGN

Architecture
Interior Architecture
Land Planning

8614 Westwood Center Dr.
Suite 800
Tysons, Virginia 22182

P 703.556.9275
F 703.821.6976



www.dcsdesign.com

ROONEY PROPERTIES

Rooney Properties LLC 3330 Washington Blvd

UNIT 220 Arlington,VA 22201

P 703. 204 . 1400 https://rooneypropertiesllc.com/

08/09/2024

PRINT DATE

ISSUE DATE

REVISION DATE

PROJECT TITLE

3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

4.1 SITE PLAN

DRAWING TITLE

PROJECT NO.

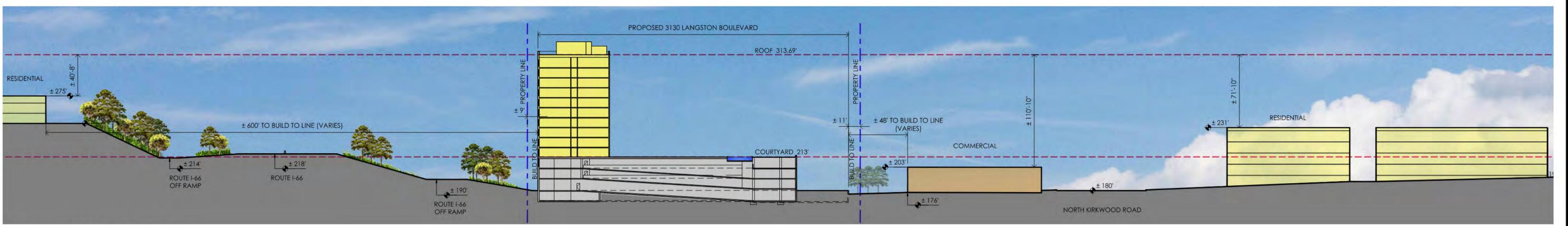
BUILDING

DRAWN BY RI
QC CHECKED BY R
CA REVIEWED BY R

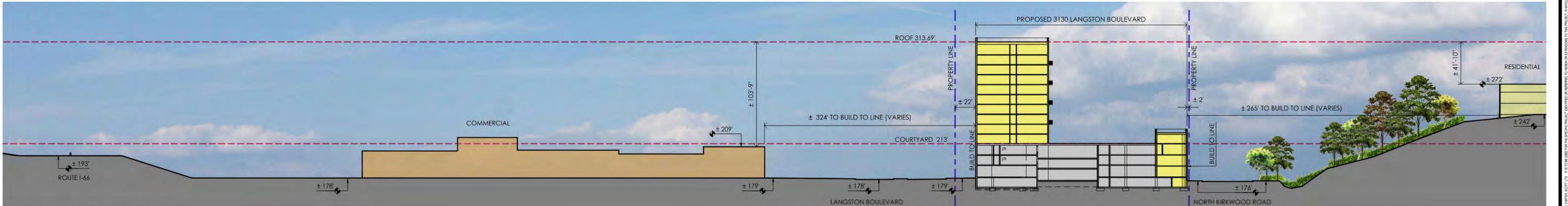
DRAWING NUMBER

A-22





1 SECTION A-A



THIS DOCUMENT IS THE PROPERTY OF DAVIS, CARTER, SCOTT . IT IS TO BE USED FOR THE SPECIFIC PROJECT, IN WHOLE OR PART. DAVIS, CARTER, SCOTT .ALL RIGHTS RESERVED. THE DRAWINGS PRESENTED ARE ILLUSTRATIVE OF CHARACTER AND MEP DESIGN REQUIREMENTS, UNIT PLAN/FLOOR PLAN CHANGES, ETC.).

CARTER SCOTT Ltd Suite 800 Tysons, Virginia 22182



P 703.556.9275 F 703.821.6976 www.dcsdesign.com

ROONEY PROPERTIES

3330 Washington Blvd Arlington, VA 22201

Rooney Properties LLC

P 703. 204 . 1400 https://rooneypropertiesllc.com/

PRINT DATE ISSUE DATE

REVISION DATE

PROJECT TITLE

3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

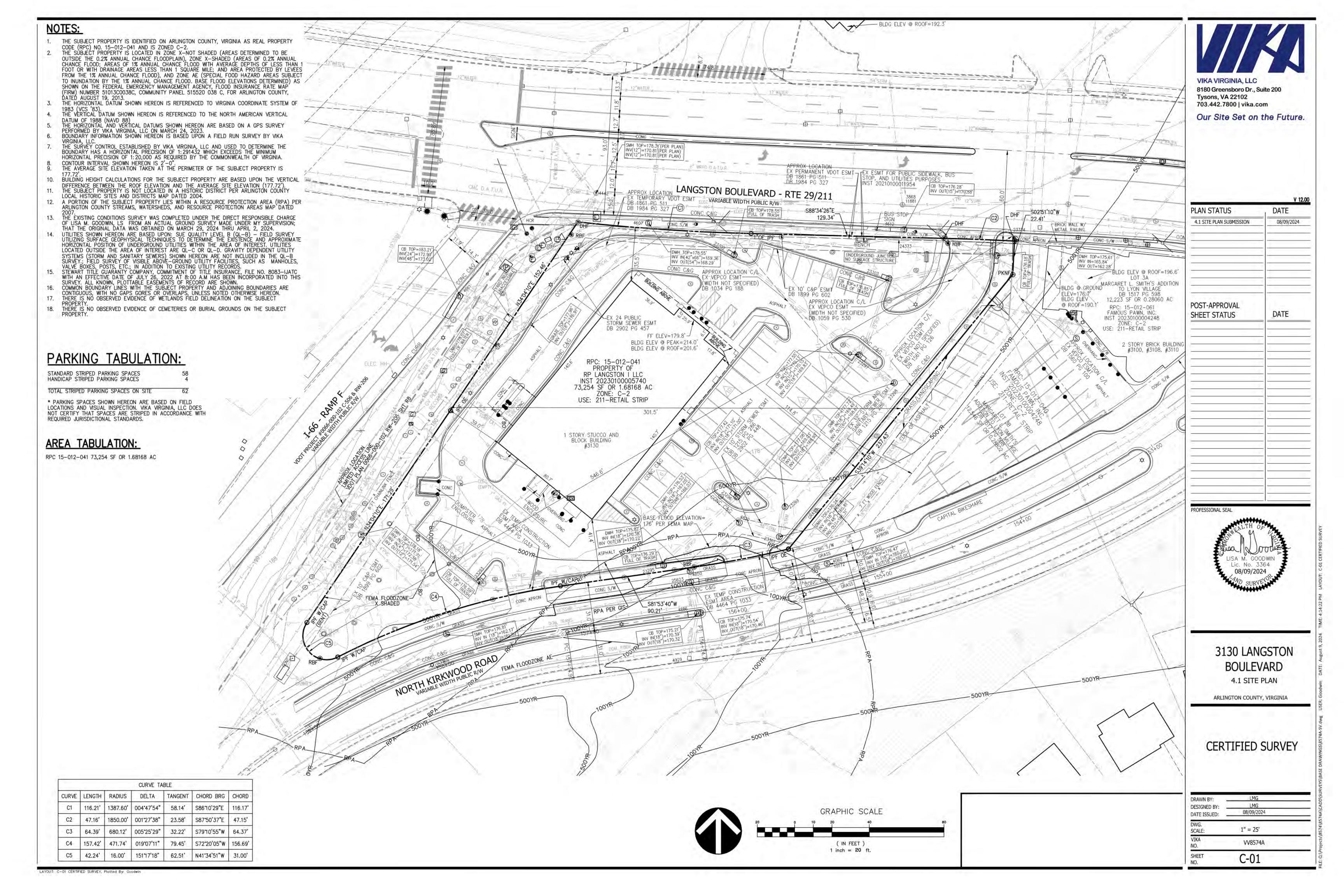
4.1 SITE PLAN

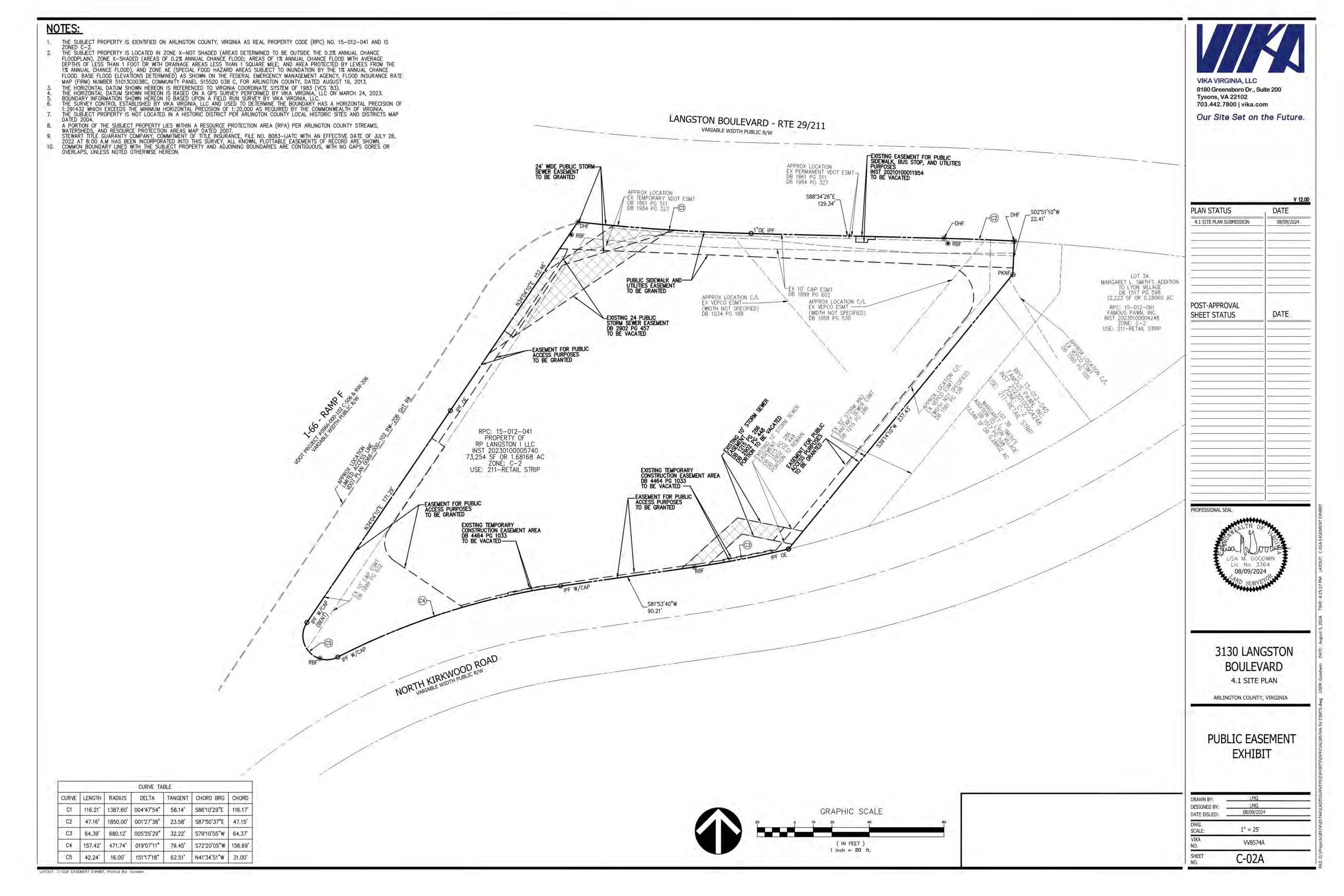
DRAWING TITLE

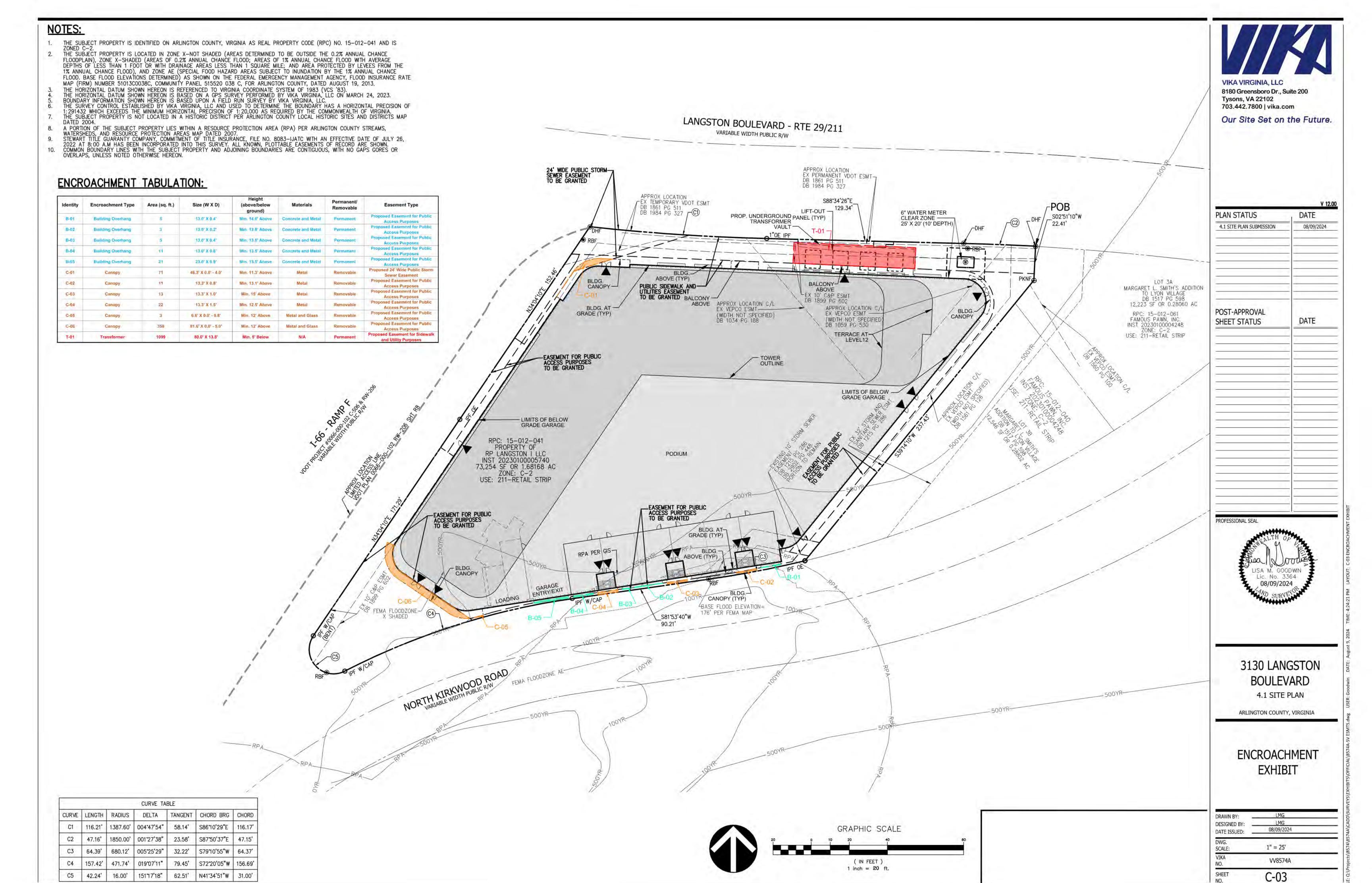
PROJECT NO.

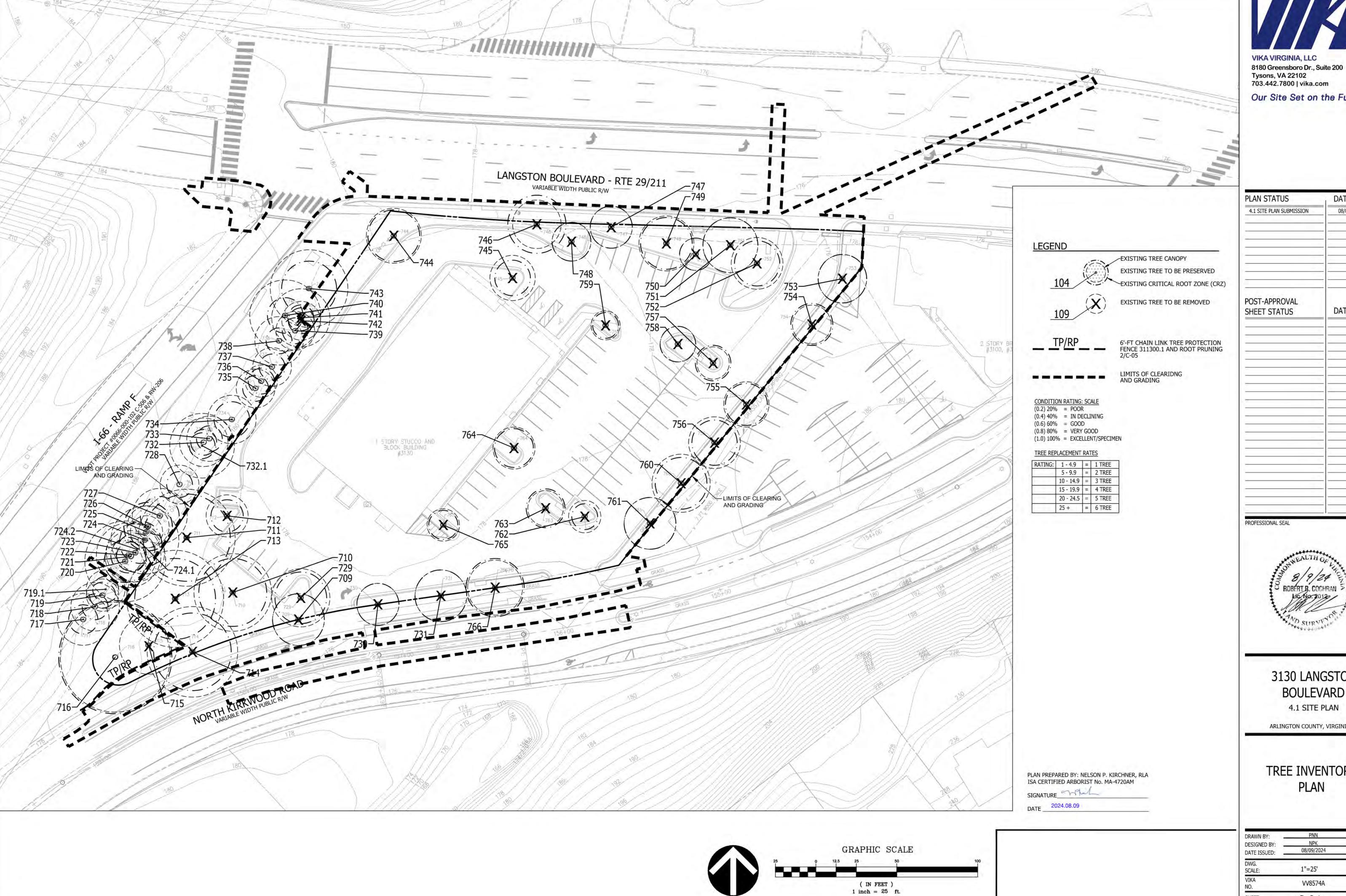
DRAWN BY QC CHECKED BY CA REVIEWED BY

DRAWING NUMBER









VIKA VIRGINIA, LLC

Our Site Set on the Future.

PLAN STATUS	DATE
4.1 SITE PLAN SUBMISSION	08/09/2024
POST-APPROVAL SHEET STATUS	DATE

3130 LANGSTON **BOULEVARD**

4.1 SITE PLAN

ARLINGTON COUNTY, VIRGINIA

TREE INVENTORY **PLAN**

DRAWN BY:	PNN	
DESIGNED BY: DATE ISSUED:	NPK 08/09/2024	
DWG. SCALE:	1"=25'	
VIKA NO.	VV8574A	
SHEET NO.	C-04	

200 Company of the Company of th	Tree No.	Species	Size	CRZ	Field Condition	Species Rating	Disturbed Area Within CRZ	Canopy Position	Total Score	Status	Invasive Species	Replacement Trees Requirement	Tree Replacement Totals For All Trees Inventoried (FOR INFORMATION ONLY)	Existing Tree Condition Observations
			*DBH (in)	R (ft)	%		%							
Part	729	Quercus phellos, Willow Oak	15.3	16	0.75	0,75	100.0%	Dominant	8.6	Remove	NO	2	2	NO APPARENT BIOTIC ISSUES OBSERVED. GOOD COLOR, VIGOR VITALITY & STRUCTURE. DEADWOOD AT LOWER CANOPY. ROOT GIRDLE.
	709	Quercus phellos, Willow Oak	15.7	16	0.75	0.75	100.0%	Dominant	8.8	Remove	NO	2		NO APPARENT BIOTIC ISSUES OBSERVED. GOOD COLOR, VIGOR VITALITY & STRUCTURE. DEADWOOD AT
Part	710		20.6	21	0.63	0.75	100.0%	Dominant	9.7	Remove	NO	2		NO SEVERE BIOTIC ISSUES OBSERVED. GOOD COLOR, VIGOR & VITALITY. FAIR/GOOD (F/G) STRUCTURE. DEADWOOD IN CANOPY. INVASIVE ENGLISH IVY POPULATED IN CRZ. INVASIVE VINE FROM GRADE TO
Mathematical Control of the Control of Con	711	Zelkova serrata, Zelkova	27.0	27	0.63	0.75	100.0%	Dominant	12.8	Remove	NO	3	3	NO SEVERE BIOTIC ISSUES OBSERVED. GOOD GOLOR, VIGOR & VITALITY. FAIR/GOOD (F/G) STRUCTURE. ENGLISH IVY (EI) PPOPULATED AT GRADE IN CRITICAL ROOT ZONE AND FROM GRADE TO CANOPY. MUILTI-
April	712	Acer rubrum, Red Maple	9.6	10	0.60	0.70	100.0%	Codominant	4.0	Remove	NO	1	1	STEM TRUNK UNION W/ LOW ANGLE "V" CONNECTIONS. DEADWOOD POPULATED W/ FUN NO SEVERE BIOTIC ISSUES OBSERVED. GOOD COLOR, VIGOR & VITALITY. ASYMETRIC CANOPY WITH DEADWOOD. ROOT GIRDLE AT GRADE. UPPER TRUNK
Part	713	Zelkova serrata, Zelkova	25.0	25	0.65	0.75	0.0%	Dominant	12.2	Preserve	NO	0		NO SEVERE BIOTIC ISSUES OBSERVED. GOOD COLOR, VIGOR & VITALITY, FAIR/GOOD STRUCTURE. DEADWOOD IN CANOPY. ENGLISH IVY (EI) PPOPULATED AT GRADE IN CRITICAL ROOT ZONE AND FROM GRADE TO CANOPY. MUILTI-STEM TRUNK UNION W/ LOW
Process	714	Quercus phellos, Willow Oak	24.0	24	0.75	0.75	100.0%	Dominant	13.5	Remove	NO	3	3	NO APPARENT BIOTIC ISSUES OBSERVED. GOOD COLOR, VIGOR, VITALITY & STRUCTURE. TREE SHOWS
Process	715	Tsuga canadensis, Dwarf Weepng Hemlock	18.0	0	0.00	0.60	#DIV/0!	Dominant	0.0	Remove	NO	0	0	
Page	716	Zelkova serrata, Zelkova	34.7	35	0.62	0.75	26.5%	Dominant	16.1	Preserve	NO	0	4	NO SEVERE BIOTIC ISSUES OBSERVED. GOOD COLOR, VIGOR & VITALITY. FAIR/POOR (F/P) STRUCTURE. MUILTI-STEM TRUNK UNION W/ LOW ANGLE "V" & INCLUDED BARKDEADWOOD IN CANOPY & INVASIVE ENGLISH IVY FROM GRADE TO LIPPER TRUNK STEM
Proceedings	717		8.3	9	0.10	0.50	0.0%	Codominant	0.4	Preserve	YES	0	0	T-717 W/ EXTREAM INVASIVE ENGISH IVY & WILD GRAPE FROM GRADE TO CANOPY. TREE WITH SIGNIFICCANT DEADWOOD & POOR SCAFFOLD
Process	718	the second control of	6.7	8	0.28	0.50	0.0%	Codominant	1.1	Preserve	YES	0	1	T-718 SHOWS DECLINE. EXISTING INVASIVE ENGLISH IVY FROM GRADE TO CANOPY. ~25° UPPER CANOPY LEAN. POOR SCAFFOLD BRANCHING & LOW CANOPY
Process	719		3.8	8	0.23	0.50	0.0%	Intermediate	0.4	Preserve	YES	0	0	T-719 W/ V-POOR STRUCTURE. INVASIVE ENGLISH IVY FROM GRADE TO CANOPY. ~20° UPPER CANOPY TRUNK ST4EM LEAN. V-POOR CANOPY RATION & SCAFFOLD
Preserve No	719.1		5.8	8	0.60	0.55	0.0%	Codominant	1.9	Preserve	NO	ō	1	NO SEVERE BIOTIC ISSUES OBSERVED. GOOD COLOR, VIGOR & VITALITY. FAIR/GOOD SCAFFOLD BRANCHING.
TEST No.	720	Robinia pseudoacacia,	12.7	13	0.18	0.55	0.0%	Codominant	1.3	Preserve	NO	0	d	T-720 IS IN DECLINE W/ SIGNIFICANT DEADWOOD IN
Packets presentational Packets presentational Packets Pack	721	Robinia pseudoacacia,	9.0	9	0.50	0.55	0.0%	?	2.5	Preserve	NO	0	1	STEM. T-720 W/ EXTREAM INVASIVE ENGLISH IVY EMBEEDDED INTO TRUNK STEM. EXFOLIATING BARK. LOW CANOPY RATIO & POOR SCAFFOD BRANCHING. DEAD STEM AT
Present Pres	722		11.3	0	0.00	0.55	#DIV/0!	Codominant	0.0	Preserve	NO	o	ō	
274	723		12.0	12	0.10	0.55	0.0%	Codominant	0.7	Preserve	NO	0	0	T-723 W/ EXTREAM INVASIVE ENGLISH IVY FROM GRADE TO CANOPY. EXFOLIATING BARK ON TRUNK STEM AT GRADE. V-LOW CANOPY RATIO. , POOR
Preserve No	724		14.0	0	0.00	0.55	#DIV/0!	Codominant	0.0	Preserve	NO	0	0	T-724 W/ EXTREAM EMBEDDED ENGLISH IVY FROM GRADE TO CANOPY. TREE IS TOPPED. TREE IS DEAD.
Part	724.1	and the second s	12.5	13	0.00	0.55	0.0%	Codominant	0.0	Preserve	NO	0	ō	EXTREAM EMBEDDED ENGLISH IVY FROM GRADE TO UPPER CANOPY. TREE W/ V-LOW CANOPY RATIO.
## Back Locust	724.2		7.0	0	0.00	0.55	#DIV/0!	Codominant	0.0	Preserve	NO	0	0	T-724.2 IS DEAD WITH ~20° LEAN.
Black Locust	725		16.0	0	0.00	0.55	#DIV/0!	Codominant	0.0	Preserve	NO	0	0	T-725 W/ EXTREAM EMBEDDED ENGLISH IVY FROM GRADE TO CANOPY. TREE IS DEAD.
Catalogia Speciologia 11.2 12 0.35 0.55 0.0% Codominant 2.2 Preserve YES 0 1 WINES FROM GRADE TO COMOPY, RAIL/POOR STANDING CANOPY RATIO.	726		14.7	15	0.15	0,55	0.0%	Codominant	1.2	Preserve	NO	0	1	T-726 W/ EXTREAM EMBEDDED ENGLISH IVY FROM GRADE TO CANOPY. V-POOR CANOPY RATIO.
Pear	727		11.2	12	0.35	0.55	0.0%	Codominant	2.2	Preserve	YES	0	1)	T-727 WITH SEVERE EMBEDDED INVASIVE ENGLISH IVY VINES FROM GRADE TO CANOPY. FAIR/POOR SCAFFOLD BRANCHING & CANOPY RATIO.
2 COLOR, VIGOR, VITALITY AND STRUCTURE. TO CALLEY PRESERVE WILD A PRESERVE	728	The second secon	3.5	8	0.15	0.50	0.0%	Intermediate	0,3	Preserve	YES	0	0	T-728 CANOPY W/ V-SEVERE INVASIVE WILD GRAPE VINE. V-POOR SCAFFOLD BRANCHING & CANOPY RATIO.
2. Color, Widow 15.8 16 0.70 0.75 100.0% Dominant 8.3 Remove NO 2 2 Color, Widow Tractifue 1.723 LW VEX SEVERE INVASIVE GRAPE VID 1.723 LW VEX SEVERE INVASIVE SEVER INVASIVE MICHORY CONTON SERVER INVASIVE SEVER INVASIVE SEVERE INVASIVE SEVER INVA	730	Quercus phellos, Willow Oak	12.4	13	0.73	0.75	100.0%	Dominant	6,8	Remove	NO	2	2	NO APPARENT BIOTIC ISSUES OBSERVED. GOOD COLOR, VIGOR, VITALITY AND STRUCTURE. TREE WITH SLIGHT CANOPY DEADWOOD.
732. Pyrus calleryana, Callery Pear	731	Quercus phellos, Willow Oak	15.8	16	0.70	0.75	100.0%	Dominant	8.3	Remove	NO	2	2	NO APPARENT BIOTIC ISSUES OBSERVED. GOOD COLOR, VIGOR, VITALITY AND STRUCTURE. TREE WITH SLIGHT CANOPY DEADWOOD.
Pyrus Calleryana, Callery 4.7 8 0.20 0.50 0.0% Intermediate 0.5 Preserve YES 0 0 CANOPY, V-POR SCAFFOLD BRANCHING & LICANOPY ATIOL. ASYMMETRICAL CANOPY.	732		3.5	8	0.15	0.50	0.0%	Intermediate	0.3	Preserve	YES	0	0	T-732 W/ VERY SEVERE INVASIVE GRAPE VINE IN CANOPY. ASYMMETRIC CANOPY W/ V-POOR SCAFFOLD BRANCHING & CANOPY RATIO.
Pear 4.4 8 0.30 0.50 0.0% Intermediate 0.7 Preserve YES 0 0 ~18°LEAN. INVASIVE GRAPE VINE THROUGH 734 Catalpa speciosa, Catalpa (Catalpa (Catalpa)) 10.5 11 0.55 0.45 0.0% 7 2.6 Preserve YES 0 1 VIGOR & VITALITY, FAIR/GOOD STRUCTURE. A CATALPA (CANOPY W) DeaDWOOD. 735 Pyrus calleryana, Callery Pear 8.0 8 0.45 0.50 0.0% Intermediate 1.8 Preserve YES 0 1 NO SEVERE BIOTIC ISSUES OBSERVED. ASYM CANOPY W) DeaDWOOD. 736 Pyrus calleryana, Callery Pear 9.0 1 NO SEVERE BIOTIC ISSUES OBSERVED. ASYM CANOPY W) DeaDWOOD. 737 Pyrus calleryana, Callery Pear 9.0 1 NO SEVERE BIOTIC ISSUES OBSERVED. ASYM CANOPY W) DeaDWOOD. 738 Pyrus calleryana, Callery Pear 9.0 0 SCAFFOLD BRANCHING. INVASIVE HONEYSUG INTO CANOPY. 739 Pyrus calleryana, Callery Pear 9.0 0 SCAFFOLD BRANCHING. INVASIVE HONEYSUG INTO CANOPY. STRUCTURE & RA (CANOPY) Pear 9.0 0 SCAFFOLD BRANCHING. INVASIVE HONEYSUG INTO CANOPY. STRUCTURE & RA (CANOPY) Pear 9.0 0 SCAFFOLD BRANCHING. INVASIVE HONEYSUG INTO CANOPY. STRUCTURE & RA (CANOPY) Pear 9.0 0 SCAFFOLD BRANCHING. INVASIVE HONEYSUG INTO CANOPY. STRUCTURE & RA (CANOPY) Pear 9.0 0 SCAFFOLD BRANCHING. INVASIVE HONEYSUG INTO CANOPY. PATILO. THE RAIL PATILOR PA	732.1	The second secon	4.7	8	0.20	0.50	0.0%	Intermediate	0.5	Preserve	YES	0	0	T-732.1 W/ V-SEVERE INVASIVE WILD GRAPE VINE IN CANOPY. V-POOR SCAFFOLD BRANCHING & LOW CANOPY RATIO. ASYMMETRICAL CANOPY.
Catalpa speciosa, Catalpa speciosa, Catalpa speciosa, Catalpa (Catalpa (Cat	733		4.4	8	0.30	0.50	0.0%	Intermediate	0.7	Preserve	YES	0	0	T-733 W/ VERY POOR SCAFFOLD BRANCHING. TREE W/ ~18° LEAN. INVASIVE GRAPE VINE THROUGH CANOPY.
Pyrus calleryana, Callery Pear R.0	734		10.5	11	0.55	0.45	0.0%	?	2.6	Preserve	YES	0	1	NO SEVERE BIOTIC ISSUES OBSERVED. GOOD COLOR, VIGOR & VITALITY. FAIR/GOOD STRUCTURE. TREE W/MULTI-TRUNK STEM UNION AT ~5VF. ASYMMETRICAL CANOPY W/ DEADWOOD.
Pyrus calleryana, Callery Pear 736 Pyrus calleryana, Callery Pear 737 Pyrus calleryana, Callery Pear 738 Pyrus calleryana, Callery Pear 739 Pyrus calleryana, Callery Pear 739 Pyrus calleryana, Callery Pear 730 Pyrus calleryana, Callery Pear 731 Pyrus calleryana, Callery Pear 732 Pyrus calleryana, Callery Pear 733 Pyrus calleryana, Callery Pear 734 Pyrus calleryana, Callery Pear 755 Preserve YES 757 Preserve YES 758 Preserve YES 759 Pyrus calleryana, Callery Pear 750 Pyrus calleryana, Callery Pear 750 Preserve YES 750 Preserve YES	735		8.0	8	0.45	0.50	0.0%	Intermediate	1.8	Preserve	YES	0	1	NO SEVERE BIOTIC ISSUES OBSERVED. ASYMMETRIC CANOPY. TREE W/ MULTI-TRUNK STEM UNION AT ~3VF. ASYMMETRICAL CANOPY.
Pyrus calleryana, Callery Pear 737 Pyrus calleryana, Callery Pear 738 Pyrus calleryana, Callery Pear 739 Pyrus calleryana, Callery Pear 730 Pyrus calleryana, Callery Pear 740 Pear 750 Preserve PES 750 0 760 Preserve PES 770 Preserve PES 770 Preserve PES 770 Pyrus calleryana, Callery Pear 770 Poor Structure, Poor Canopy Ratio. Tructure,	736	3	3.0	8	0.35	0.50	0.0%	Intermediate	0,5	Preserve	YES	0	0	
Pyrus calleryana, Callery Pear 5.2 8 0.50 0.50 0.0% Intermediate 1.3 Preserve YES 0 1 VIGOR & VITALITY. FAIR/POOR STRUCTUREV ASYMETRICAL CANOPY W/ INVASIVE VEG. PO CANOPY RATIO. 739 Pyrus calleryana, Callery Pear 3.0 8 0.30 0.50 0.0% Intermediate 0.5 Preserve YES 0 0 0 Preserve YES 0 NO. SEVERE BIOTIC ISSUES ORSERVED. GOOD NO. SEVERE BIOTIC ISSUES ORSERVED.	737		5.0	8	0.35	0.50	0.0%	Intermediate	0.9	Preserve	YES	0	0	NO SEVERE BIOTIC ISSUES OBSERVED. INVASIVE ENGLISH IVY POPULATED IN CRZ & FROM GRADE TO MID-CANOPY. POOR CANOPY STRUCTURE & RATIO. NO SEVERE BIOTIC ISSUES OBSERVED. GOOD COLOR,
Pyrus calleryana, Callery Pear 3.0 8 0.30 0.50 0.0% Intermediate 0.5 Preserve YES 0 TR-739 WITH SEVERE INVASIVE VEG IN CANO POOR STRUCTURE. POOR CANOPY RATIO. TR LEAN.	738		5.2	8	0.50	0,50	0.0%	Intermediate	1.3	Preserve	YES	0	1	VIGOR & VITALITY, FAIR/POOR STRUCTUREVERY ASYMETRICAL CANOPY W/ INVASIVE VEG. POOR
NO SEVERE BIOTIC ISSUES OBSERVED. GOOD	739		3.0	8	0.30	0.50	0.0%	Intermediate	0.5	Preserve	YES	0	0	TR-739 WITH SEVERE INVASIVE VEG IN CANOPY & VERY POOR STRUCTURE. POOR CANOPY RATIO. TREE W/ ~20°
American Beech II.0 II 0.53 0.80 0.0% Dominant 4.7 Preserve NO 0 I VIGOR & VITALITY. SEVERE INVASIVE VINE E	740	Fagus grandifolïa, American Beech	11.0	11	0.53	0.80	0.0%	Dominant	4.7	Preserve	NO	0	i	NO SEVERE BIOTIC ISSUES OBSERVED. GOOD COLOR, VIGOR & VITALITY. SEVERE INVASIVE VINE EMBEDDED INTO TRUNK STEM FROM GRADE TO CANOPY.
Dyruc calleryana Callery	741	Pyrus calleryana, Callery Pear	3.0	8	0.30	0.50	100.0%	Suppressed	0.5	Remove	YES	0		T-714 HAS POOR CANOPY STRUCTURE. VERY POOR CANOPY RATIO, INVASIVE VINE THROUGH CANOPY, TRUNK STEM W/ ~22° LEAN.

EXISTING TREE REPLACEMENT SUBTOTAL

Tree No.	Species	Size	CRZ	Field Condition	Species Rating	Disturbed Area Within CRZ	Position Position	Total Score	Status	Invasive Species	Replacement Trees Requirement	For All Trees Inventoried (FOR INFORMATION ONLY)	Existing Tree Condition Observations
		*DBH (in)	R (ft)	%		%							
742	Pyrus calleryana, Callery Pear	4.0	8	0.30	0.50	100.0%	Suppressed	0.6	Remove	YES	0	0	T-742 WITH VERY POOR CANOPY STRUCTURE, INVASI VEG THROUGH CANOPY. TREE WITH ~ 32° LEAN. V- POOR CANOPY RATIO & W/ INVASIVE VEG.
743	Fagus grandifolia, American Beech	17.0	17	0.68	0.80	0.0%	Dominant	9.2	Preserve	NO	0	2	NO SEVERE BIOTIC ISSUES OBSERVED. GOOD COLOR, VIGOR, VITALITY & STRUCTURE. SEVER INVASIVE HONEYSUCKLE ROOTED IN CRZ. SLIGHT DEADWOOD CANOPY.
744	Acer rubrum, Red Maple	15.5	16	0.66	0.70	100.0%	Dominant	2.3	Remove	NO	1	1	NO SEVERE BIOTICISSUES OBSEVED, GOOD COLOR, VIGOR VITALITY & SRTUCTURE, INVASIVE VEG AT LOVER TRUNK STEM.
745	Zelkova serrata, Zelkova	10.5	11	0.68	0.75	100.0%	Codominant	5.4	Remove	NO	2	2	NO APPARENT BIOTIC ISSUES OBSERVED. GOOD COLOR, VIGOR VITALITY & STRUCTURE. SIGNIFICANT ROOT GIRDLE AT GRADE.
746	Zelkova serrata, Zelkova	17.5	18	0.65	0.75	100.0%	Codominant	8.5	Remove	NO	2	2	NO APPARENT BIOTIC ISSUES OBSERVED. GOOD COLOR, VIGOR, VITALITY & STRUCTURE. TREE W/ SIGNIFICANT CANOPY PRUNING. EMBEDDED ENGLISHIVY AT LOW TRUNK STEM.
747	Zelkova serrata, Zelkova	12.4	13	0.68	0.75	100.0%	Codominant	6.3	Remove	NO	2	2	NO APPARENT BIOTIC ISSUES OBSERVED. GOOD COLOR, VIGOR, VITALITY & STRUCTURE. SLIGHT CANOPY DEADWOOD. ROOT GIRDLE AT GRADE.
748	Zelkova serrata, Zelkova	11.4	12	0.68	0.75	100.0%	Codominant	4.1	Remove	NO	1	ì	NO APPARENT BIOTIC ISSUES OBSERVED. GOOD COLOR, VIGOR, VITALITY & STRUCTURE. INVASIVE ENGLISH IVY AT LOW TRUNK STEM.
749	Quercus phellos, Willow Oak	16.0	16	0.75	0.75	100.0%	Dominant	9.0	Remove	NO	2		NO APPARENT BIOTIC ISSUES OBSERVED, GOOD COLOR, VIGOR, VITALITY & STRUCTURE.
750	Zelkova serrata, Zelkova	10.0	10	0.70	0.75	100.0%	Dominant	5.3	Remove	NO	2	2	NO APPARENT BIOTIC ISSUES OBSERVED, GOOD COLOR, VIGOR, VITALITY & STRUCTURE, SLIGHT CANOPY DEADWOOD, ROOT GIRDLE AT GRADE, EXPOSED CRZ AT GRADE.
751	Quercus phellos, Willow Oak	16.8	17	0.75	0,75	100.0%	Dominant	9.5	Remove	NO	2	2	NO APPARENT BIOTIC ISSUES OBSERVED, GOOD COLOR, VIGOR, VITALITY & STRUCTURE.
752	Żelkova serrata, Żelkova	14.0	14	0.70	0.75	100.0%	Dominant	7.4	Remove	NO	2	2	NO APPPARENT BIOTIC ISSUES OBSERVED. GOOD COLOR, VIGOR, VITALITY & STRUCTURE. SLIGHT CANOPY DEADWOOD. ROOT GIRDLE AT GRADE. MULT TRUNK STEM UNION AT ~10VF.
753	Acer rubrum, Red Maple	14.8	15	0.67	0.70	100.0%	Codominant	6.9	Remove	NO	2	2	NO APPARENT BIOTIC ISSUES OBSERVED. GOOD COLOR, VIGOR & VITALITY. LOW TO MODERATE CANORATIO. ROOT GIRDLE AT GRADE. FAIR/GOOD SCAFOL BRANCHING.
754	Acer rubrum, Red Maple	13.0	13	0.70	0.70	100.0%	Dominant	6.4	Remove	NO	2	2	NO APPARENT BIOTIC ISSUES OBSERVED, GOOD COLOR, VIGOR, VITALITY & STRUCTURE. NO ROOT FLAIR AT GRADE. SLIGHT CANOPY DEADWOOD.
755	Acer rubrum, Red Maple	12.8	13	0.72	0.70	100.0%	Dominant	6.5	Remove	NO	2	2	NO APPARENT BIOTIC ISSUES OBSERVED, GOOD COLOR, VIGOR, VITALITY & STRUCTURE. ROOT GIRDLAT GRADE.
756	Acer rubrum, Red Maple	13.3	14	0.70	0.70	100.0%	Dominant	1.5	Remove	NO	1	1	NO APPARENT BIOTIC ISSUES OBSERVED, GOOD COLOR, VIGOR, VITALITY & STRUCTURE. ROOT GIRDLAT GRADE. SLIGHT DEADWOOD.
757	Prunus x yedoensis, Yoshino Cherry	10.4	11	0.59	0.55	100.0%	Intermediate	3.4	Remove	NO	1		T-757 SHOW STRESS. LOW LEAF CANOPY DENSITY, ROOT GIRDLE AT GRADE. POOR SCAFFOLD BRANCHIN
758	Prunus x yedoensis, Yoshino Cherry	10.5	11	0.58	0.55	100.0%	Intermediate	3.3	Remove	NO	1	1	NO APPARENT BIOTIC ISSUES OBSERVED, GOOD COLOR, VIGOR, VITALITY & STRUCTURE. ROOT GIRDL AT GRADE.
759	Pyrus calleryana, Callery Pear	7.4	8	0.70	0.50	100.0%	Intermediate	2.6	Remove	YES	1	1	NO APPARENT BIOTIC ISSUES OBSERVED, GOOD COLOR, VIGOR, VITALITY & STRUCTURE. NO ROOT FLAIR.
760	Acer rubrum, Red Maple	16.0	16	0.68	0,70	100.0%	Dominant	1,9	Remove	NO	i	i i	NO SEVERE BIOTIC ISSUES OBSERVED, GOOD COLOR VIGOR, VITALITY & STRUCTURE. SIGNIFICANT ROOT GIRDLE AT GRADE. SLIGHT CANOPY DEADWOOD.
761	Acer rubrum, Red Maple	15.7	16	0.70	0.70	100.0%	Dominant	7.7	Remove	NO	2	2	NO APPARENT BIOTIC ISSUES OBSERVED, GOOD COLOR, VIGOR, VITALITY & STRUCTURE. ROOT GORD AT GRADE.
762	Prunus x yedoensis, Yoshino Cherry	7.6	8	0.67	0.55	100.0%	Intermediate	2.8	Remove	NO	1	1	NO SEVERE BIOTIC ISSUES OBSERVED. GOOD COLOR VIGOR & VITALITY. FAIR/GOODSTRUCTURE & SCAFFO BRANCHING. SLIGHT CANOPY DEADWOOD. NO ROOT FLAIR.
763	Prunus x yedoensis, Yoshino Cherry	12.0	12	0.69	0.55	100.0%	Intermediate	4.6	Remove	NO	1	1	NO APPARENT BIOTIC ISSUES OBSERVED, GOOD COLOR, VIGOR, VITALITY & STRUCTURE. ROOT GIRDLAT GRADE.
764	Pyrus calleryana, Callery Pear	12.0	12	0.68	0,50	100.0%	Codominant	4.1	Remove	YES	1	1	NO APPARENT BIOTIC ISSUES OBSERVED. GOOD COLOR, VIGOR, VITASLITY & STRUCTURE. MUITI-STEI UNION AT ~7VF. NO ROOT FLAIR AT GRADE.
765	Zelkova serrata, Zelkova	8.2	9	0.68	0.75	100.0%	Intermediate	4.2	Remove	NO	1	1	NO SEVERE BIOTIC ISSUES OBSERVED. GOOD COLOR VIGOR, VITALITY & STRUCTURE. ROOT GIRDLE AT GRADE W/ EXPOSED CRZ AR GRADE.
766	Quercus phellos. Willow Oak	18.0	18	0.75	0.75	100.0%	Dominant	10.1	Remove	NO	3	3	NO APPARENT BIOTIC ISSUES OBSERVED. GOOD COLOR, VIGOR, VITALITY & STRUCTURE. CANOPY WIT DEADWOOD AND LOW CANOPY RATIO.
							EXISTIN	G TREE REPL	ACEMENT SU	JBTOTAL	36		
							EXISTING	TREE REPLA	CEMENT GRA	ND TOTAL	53		
							EXISTING	TREE REPLAC		ALL TREES		71	

* = Diameter measurement as recorded at the root crown where tree has a codominant, or mulit-stem trunk which precludes a measurement at 4.5 ft above existing grade.

Critical Root Zone (CRZ): For trees with < 8" caliper trunk stem, CRZ shall be 8-ft radius around the trunk of the tree. Those trees with > 8" caliper trunk stem, for each 1" diameter trunk stem at breast height equals 1-ft of CRZ diameter. CRZ for trees

Conditions Ratings provided as percentages as based on methods outlined in the 9th edition of the "Guide for Plant Appraisal", published by the International Socielty of Arboriculture.

Q:\Projects\8574\8574A\DATA\Landscape & Trees\[Langstn Blvd Tree Invtory (2024.08.02).xls]Sheet1

VIKA VIRGINIA, LLC 8180 Greensboro Dr., Suite 200 Tysons, VA 22102 703.442.7800 | vika.com

Our Site Set on the Future.

PLAN STATUS

4.1 SITE PLAN SUBMISSION

POST-APPROVAL
SHEET STATUS

DATE

DATE

DATE

PROFESSIONAL SEAL



3130 LANGSTON BOULEVARD 4.1 SITE PLAN

ARLINGTON COUNTY, VIRGINIA

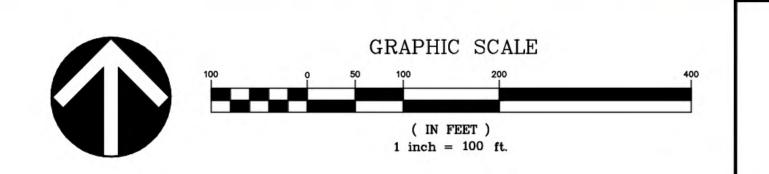
TREE INVENTORY
AND REPLACEMENT
PLAN

DRAWN BY:	PNN	
DESIGNED BY:	NPK	
DATE ISSUED: _	08/09/2024	
DWG. SCALE:	N/A	
VIKA NO.	VV8574A	
SHEET NO.	C-05	

LEGEND

EXISTING TREE TO BE REMOVED

PLAN PREPARED BY: NELSON P. KIRCHNER, RLA ISA CERTIFIED ARBORIST No. MA-4720AM
SIGNATURE





VIKA VIRGINIA, LLC 8180 Greensboro Dr., Suite 200 Tysons, VA 22102 703.442.7800 | vika.com

Our Site Set on the Future.

	٧
PLAN STATUS	DATE
4.1 SITE PLAN SUBMISSION	08/09/2024
POST-APPROVAL	
SHEET STATUS	DATE

PROFESSIONAL SEAL



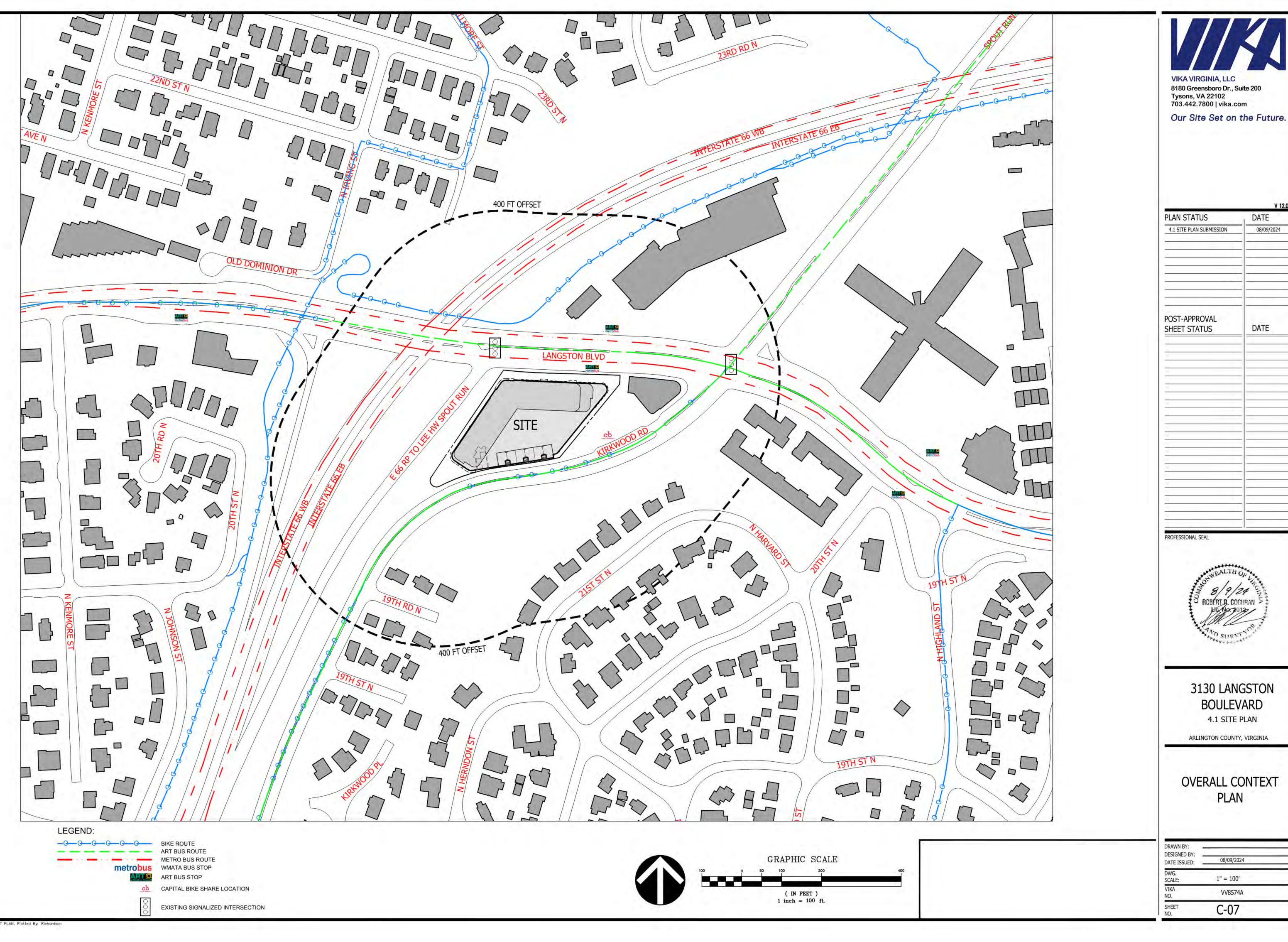
3130 LANGSTON BOULEVARD

4.1 SITE PLAN

ARLINGTON COUNTY, VIRGINIA

AERIAL CONTEXT PLAN

DRAWN BY:		
DESIGNED BY: _ DATE ISSUED: _	08/09/2024	
DWG. SCALE:	1" = 100'	
VIKA NO.	VV8574A	
SHEET NO.	C-06	



8180 Greensboro Dr., Suite 200 Tysons, VA 22102 703.442.7800 | vika.com

DATE 08/09/2024

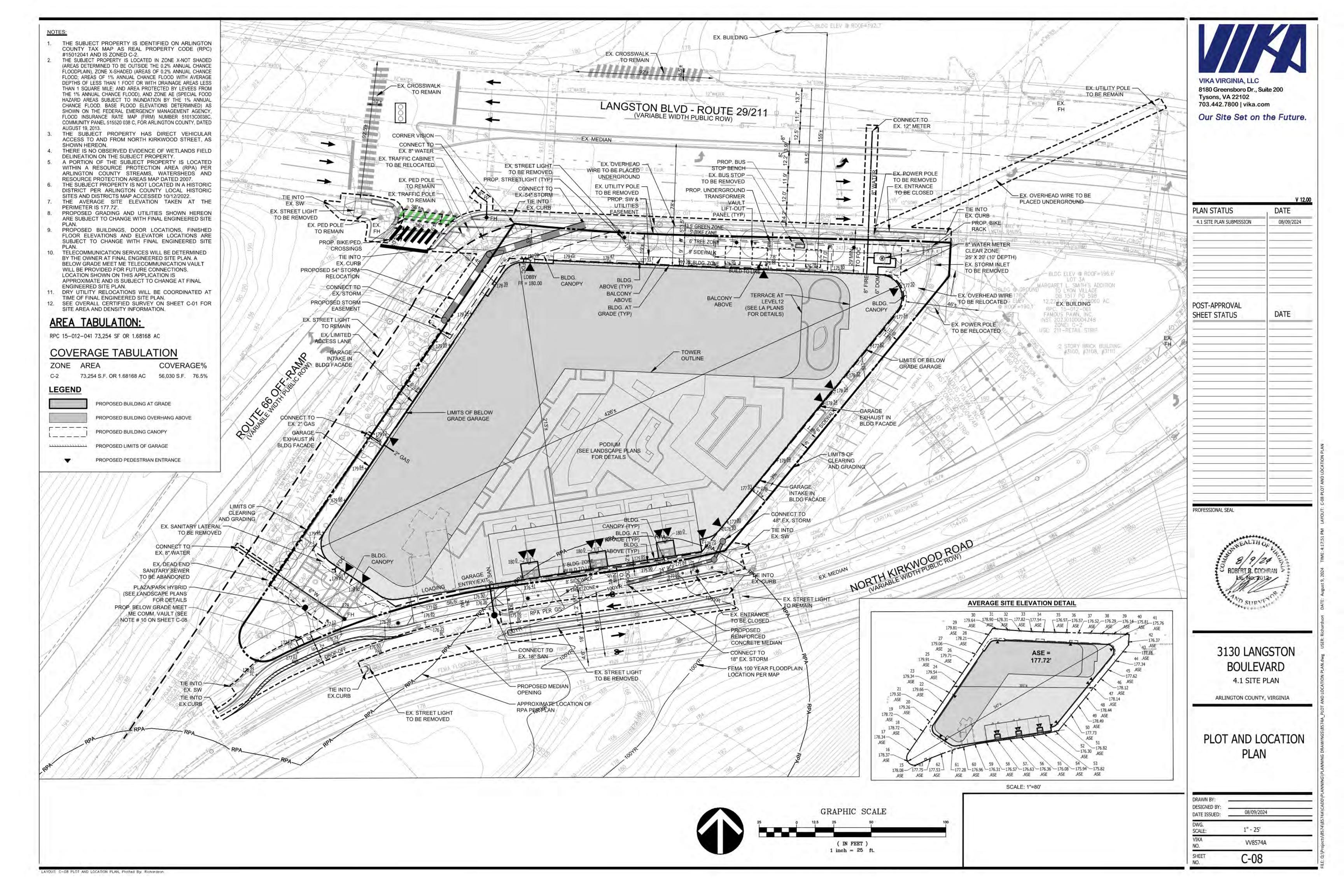
DATE

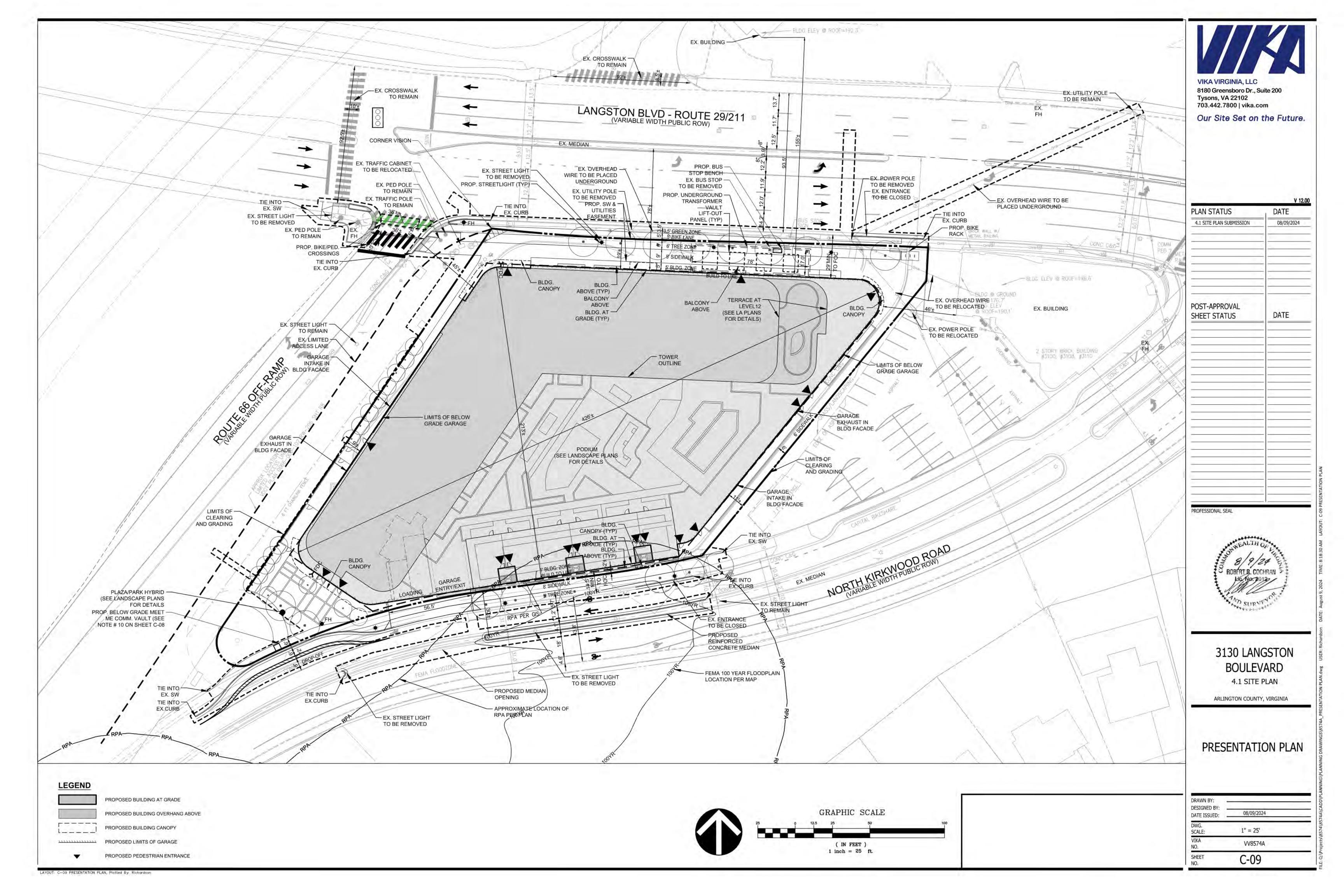


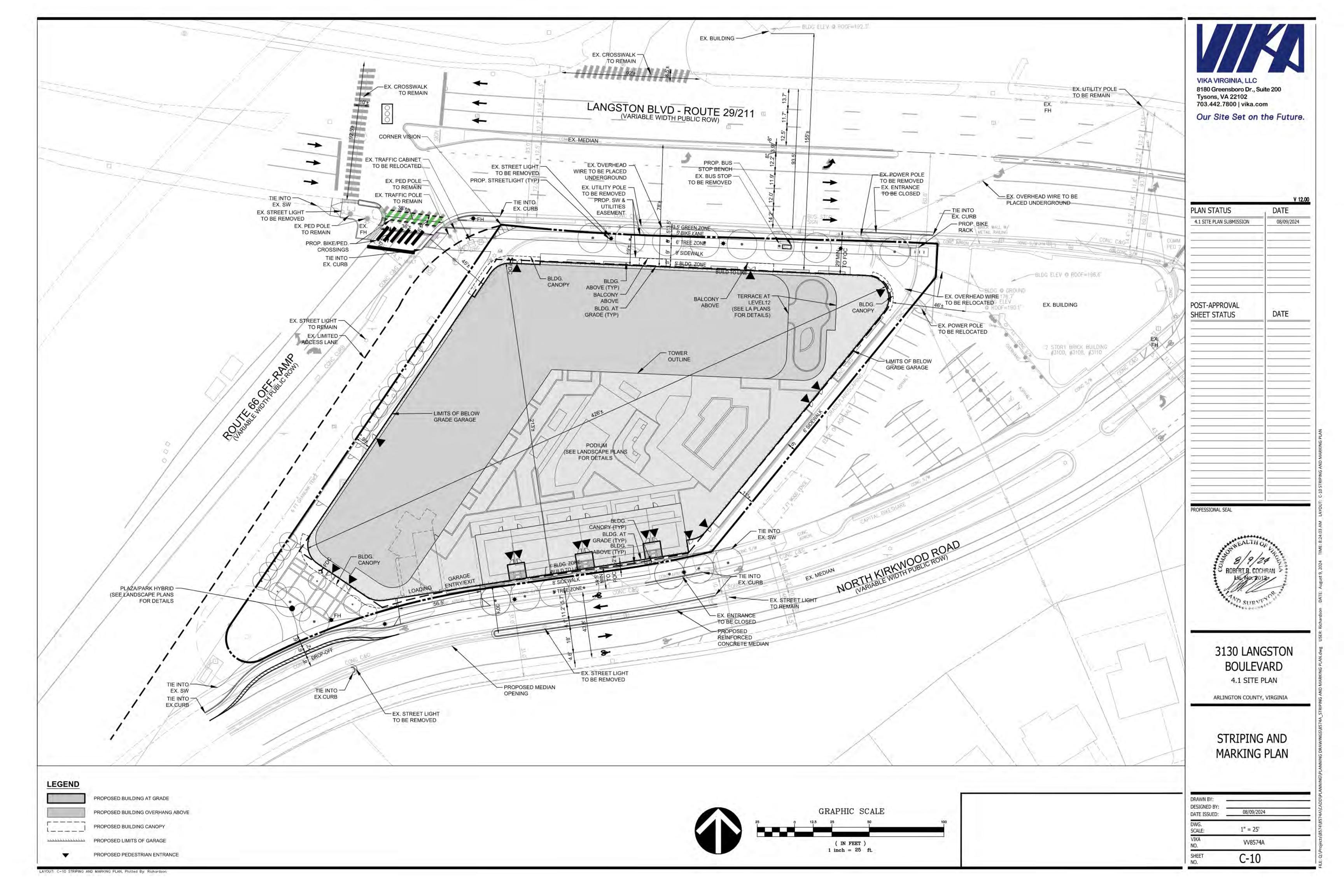
3130 LANGSTON BOULEVARD

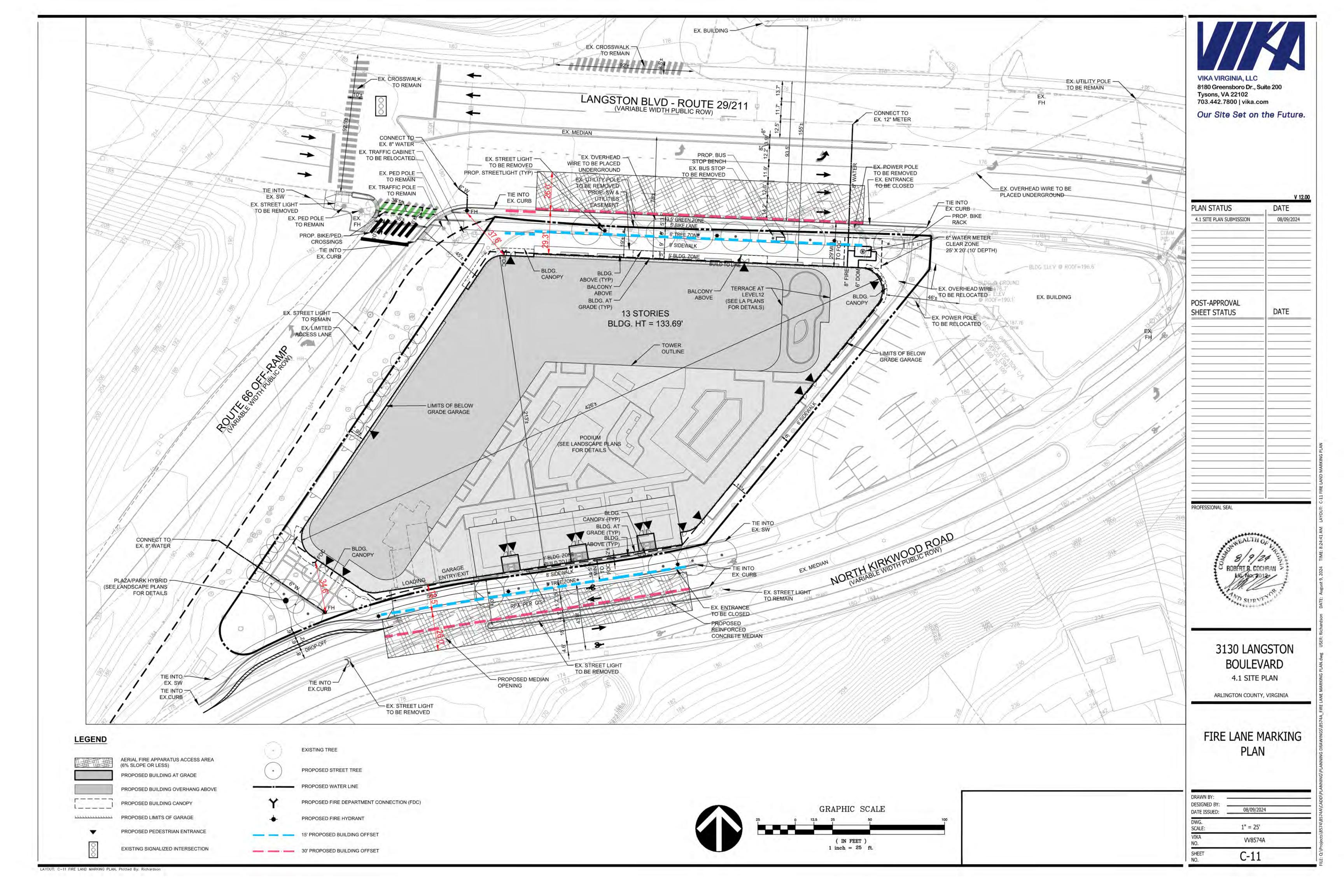
OVERALL CONTEXT

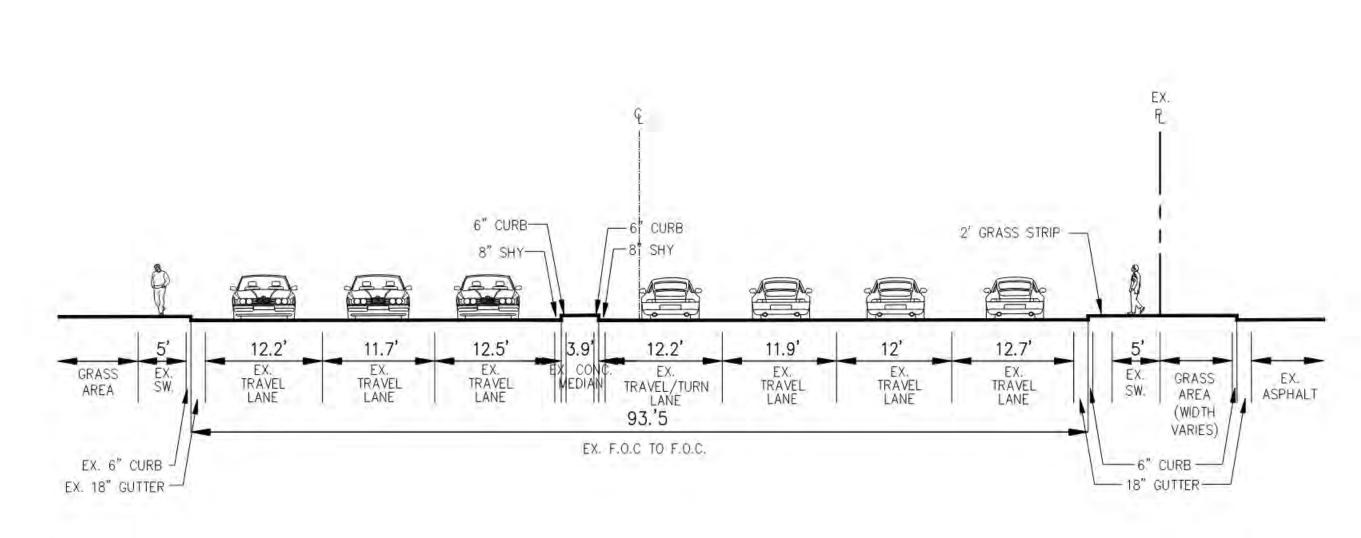
DRAWN BY:		
DESIGNED BY: _ DATE ISSUED: _	08/09/2024	
DWG. SCALE:	1" = 100'	
VIKA NO.	VV8574A	
SHEET NO.	C-07	





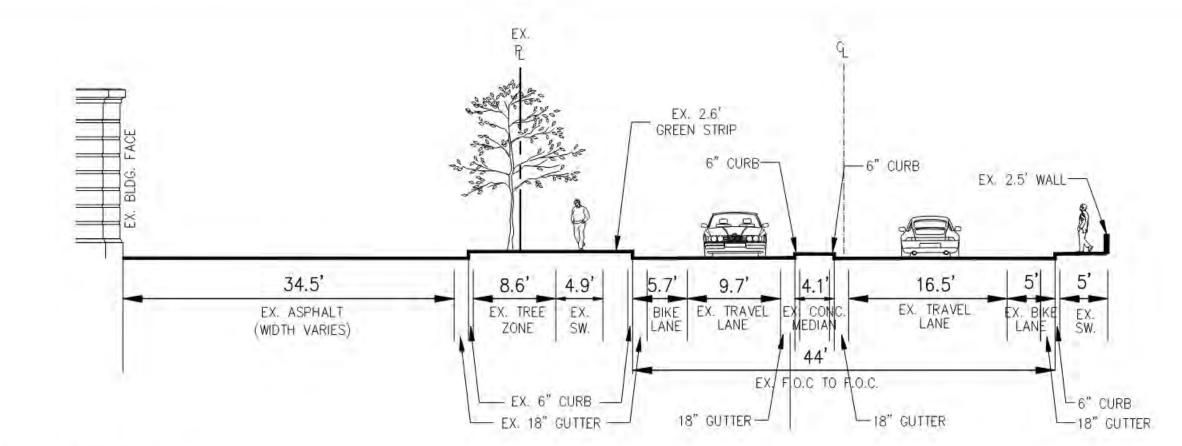






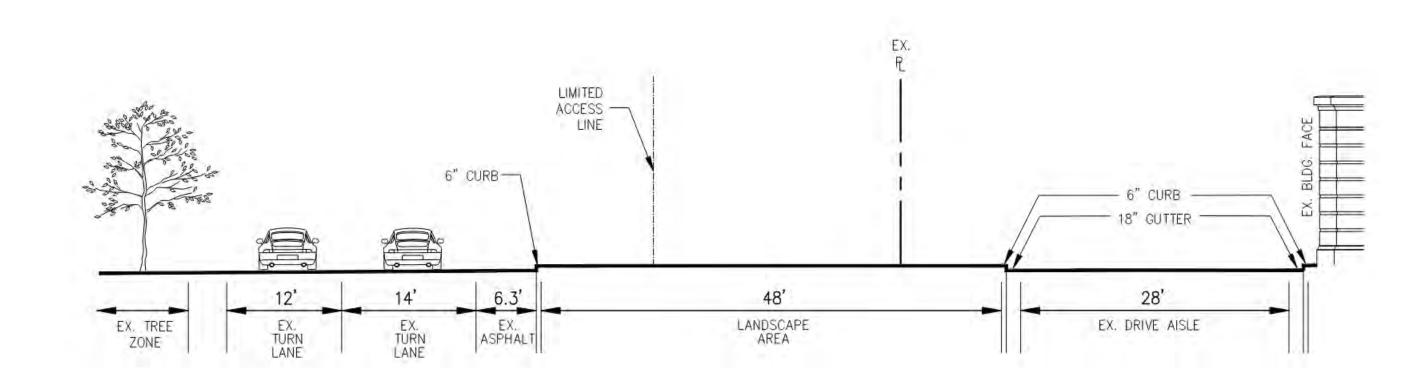
SECTION A-A (LOOKING EAST)

LANGSTON BLVD



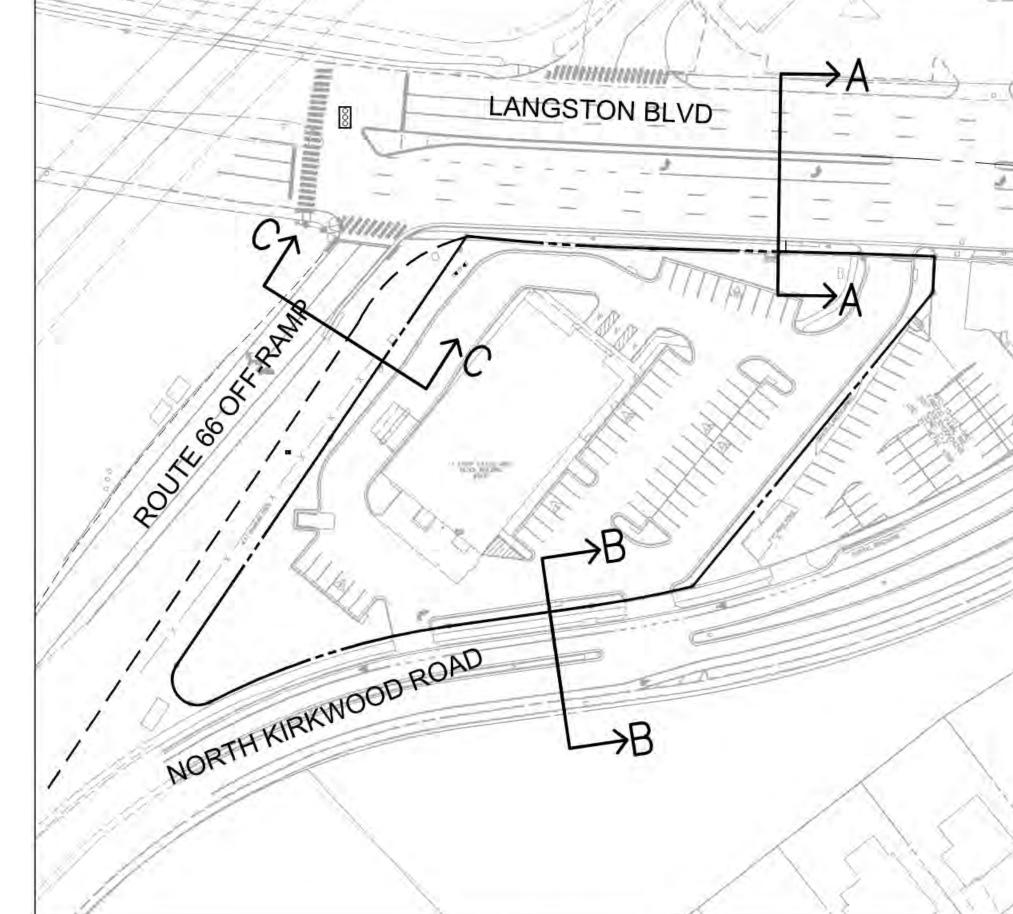
SECTION B-B (LOOKING EAST)

NORTH KIRKWOOD ROAD



SECTION C-C (LOOKING NORTH)

ROUTE 66 OFF-RAMP



SCALE: 1" = 60'



PLAN STATUS	DATE
4.1 SITE PLAN SUBMISSION	08/09/2024
POST-APPROVAL SHEET STATUS	DATE

PROFESSIONAL SEAL

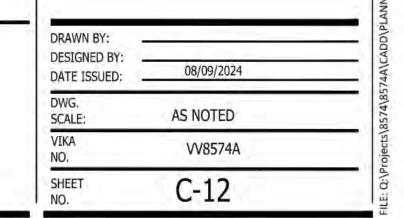


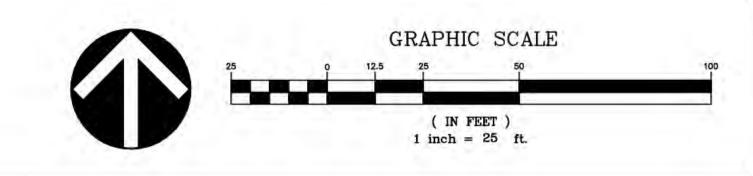
3130 LANGSTON BOULEVARD

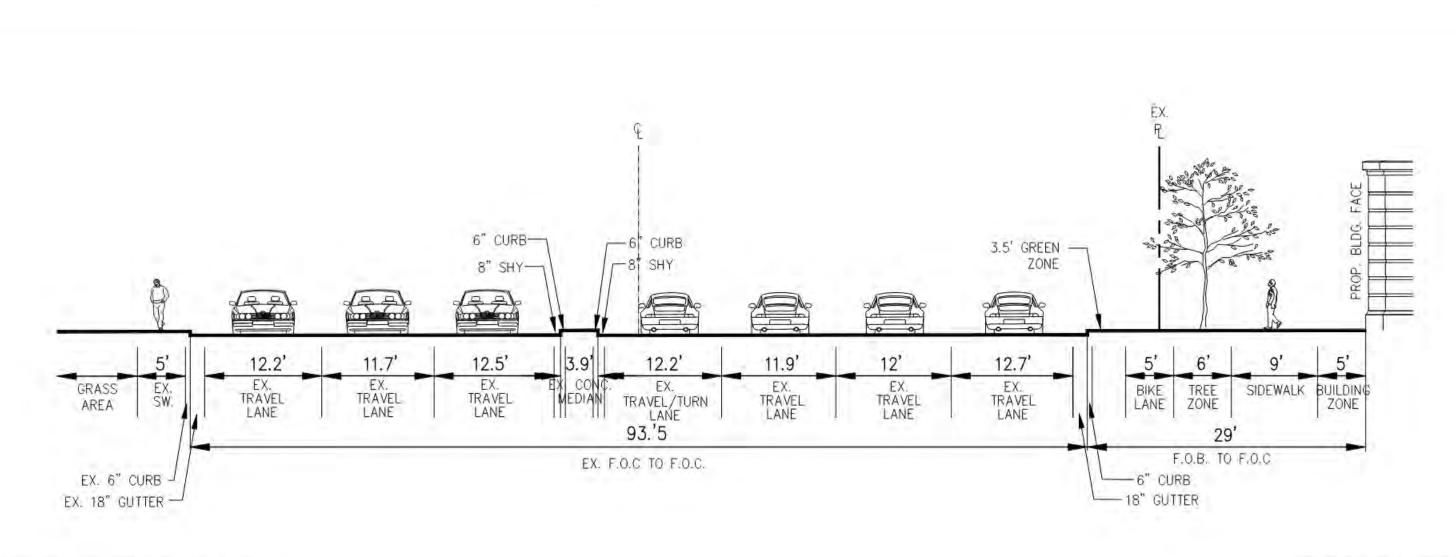
4.1 SITE PLAN

ARLINGTON COUNTY, VIRGINIA

EXISTING STREET SECTIONS

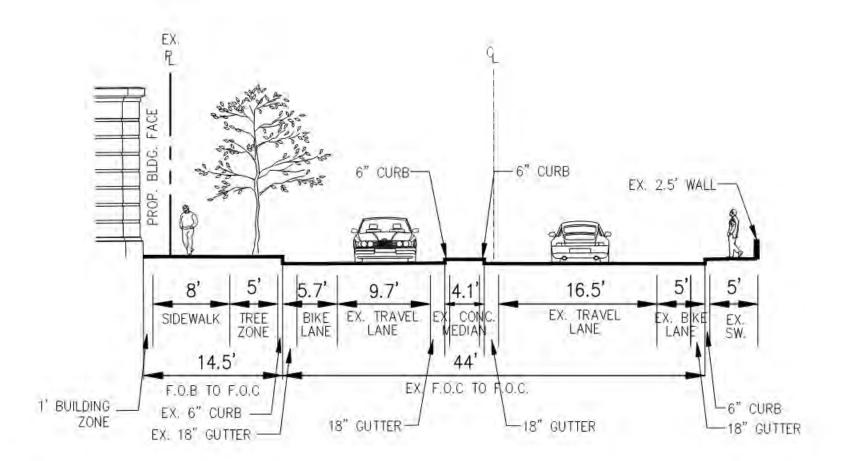






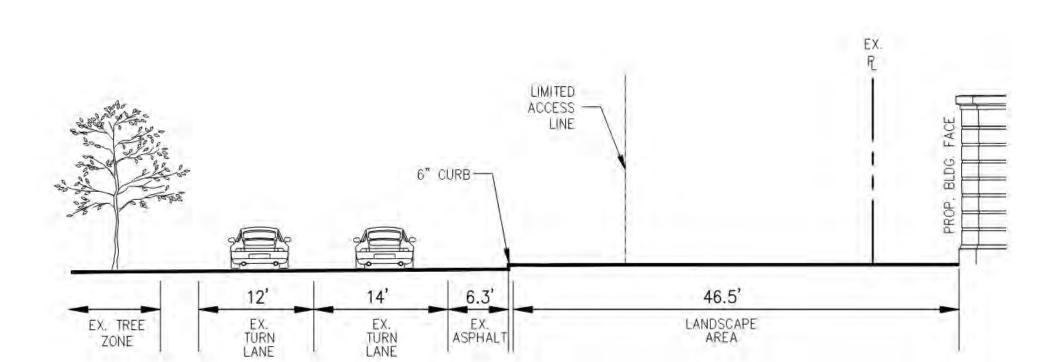
SECTION A-A (LOOKING EAST)

LANGSTON BLVD



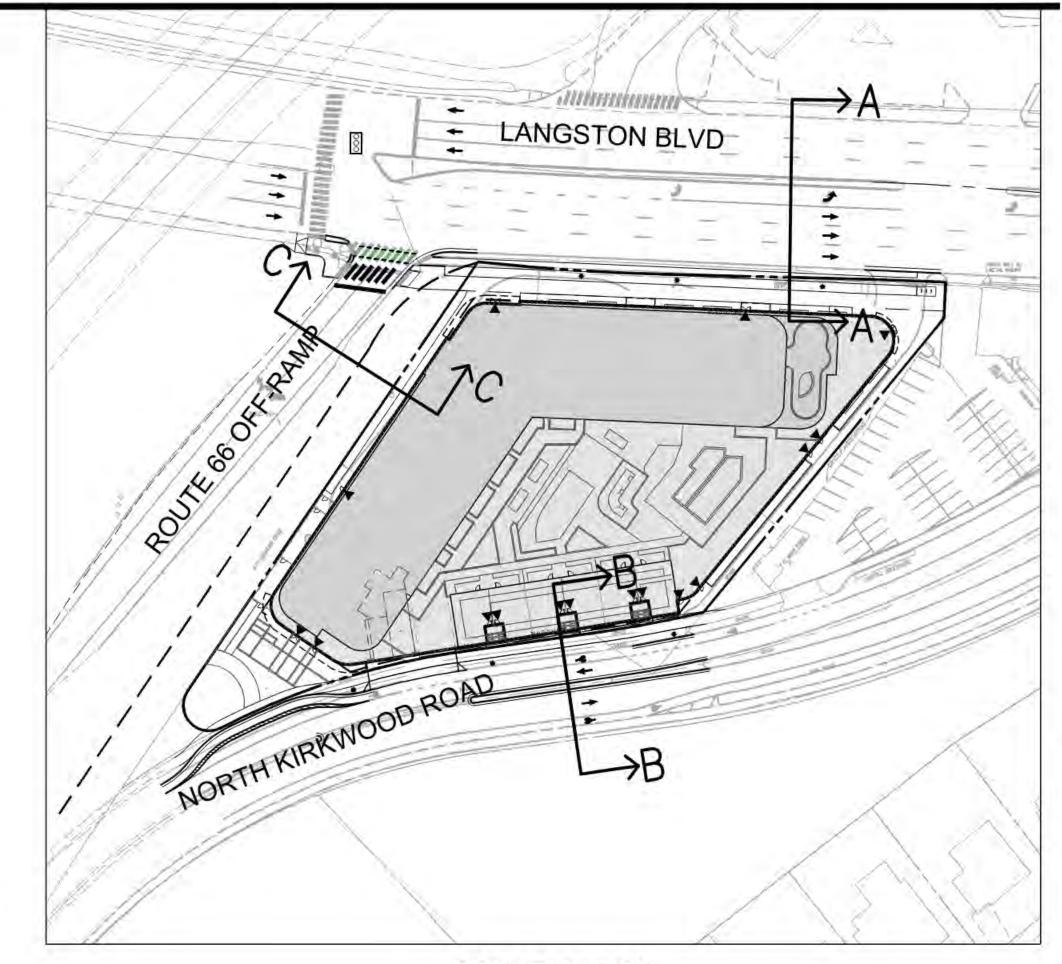
SECTION B-B (LOOKING EAST)

NORTH KIRKWOOD ROAD



SECTION C-C (LOOKING NORTH)

ROUTE 66 OFF-RAMP



SCALE: 1" = 60'



PLAN STATUS	DATE
4.1 SITE PLAN SUBMISSION	08/09/2024
POST-APPROVAL SHEET STATUS	DATE

PROFESSIONAL SEAL

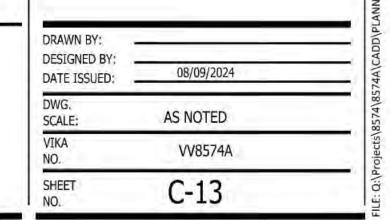


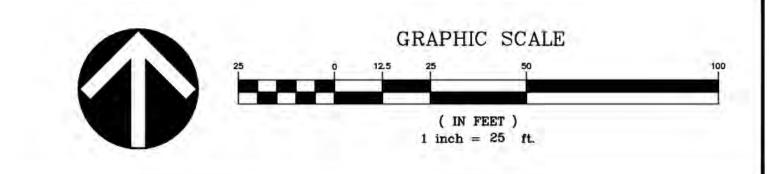
3130 LANGSTON BOULEVARD

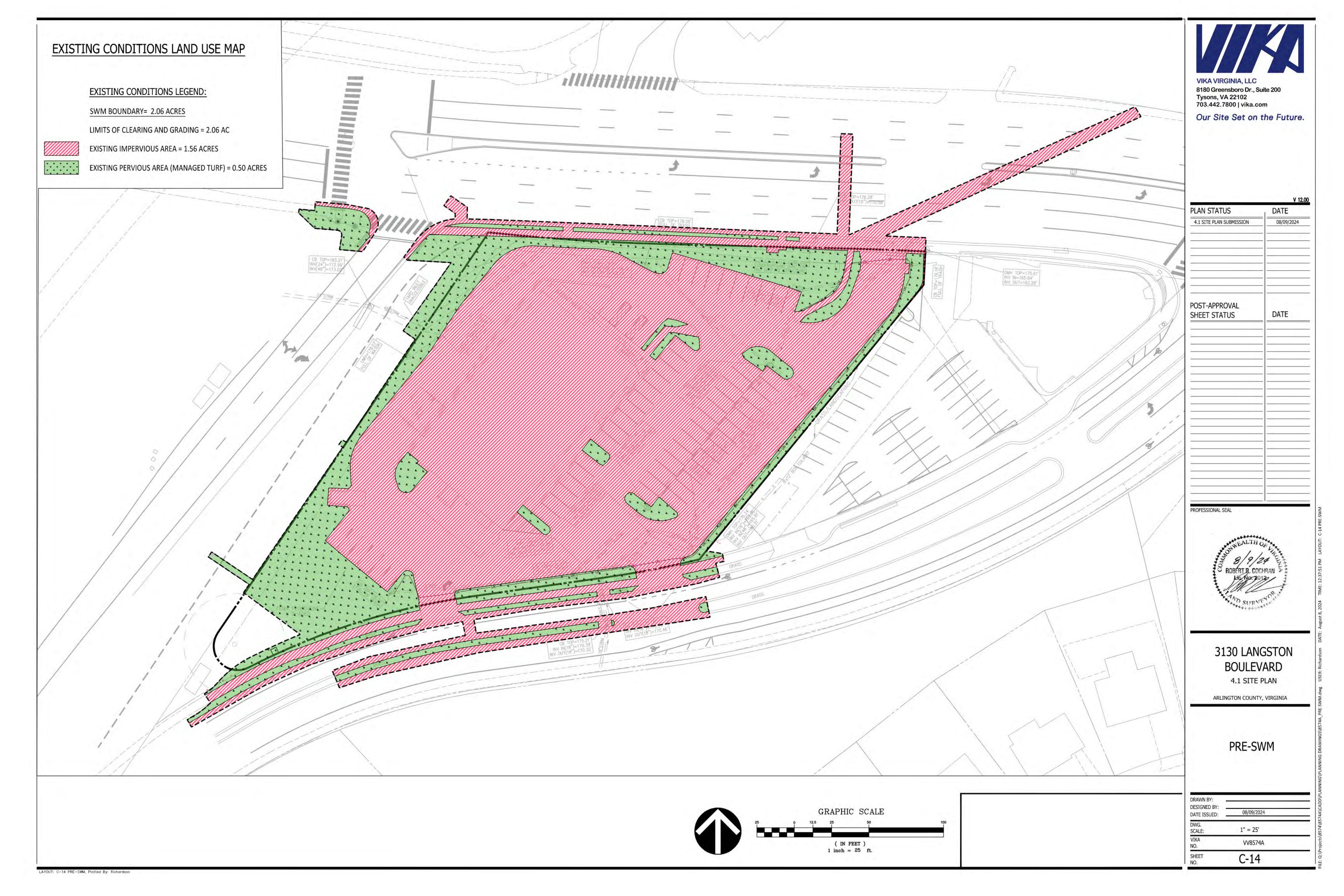
4.1 SITE PLAN

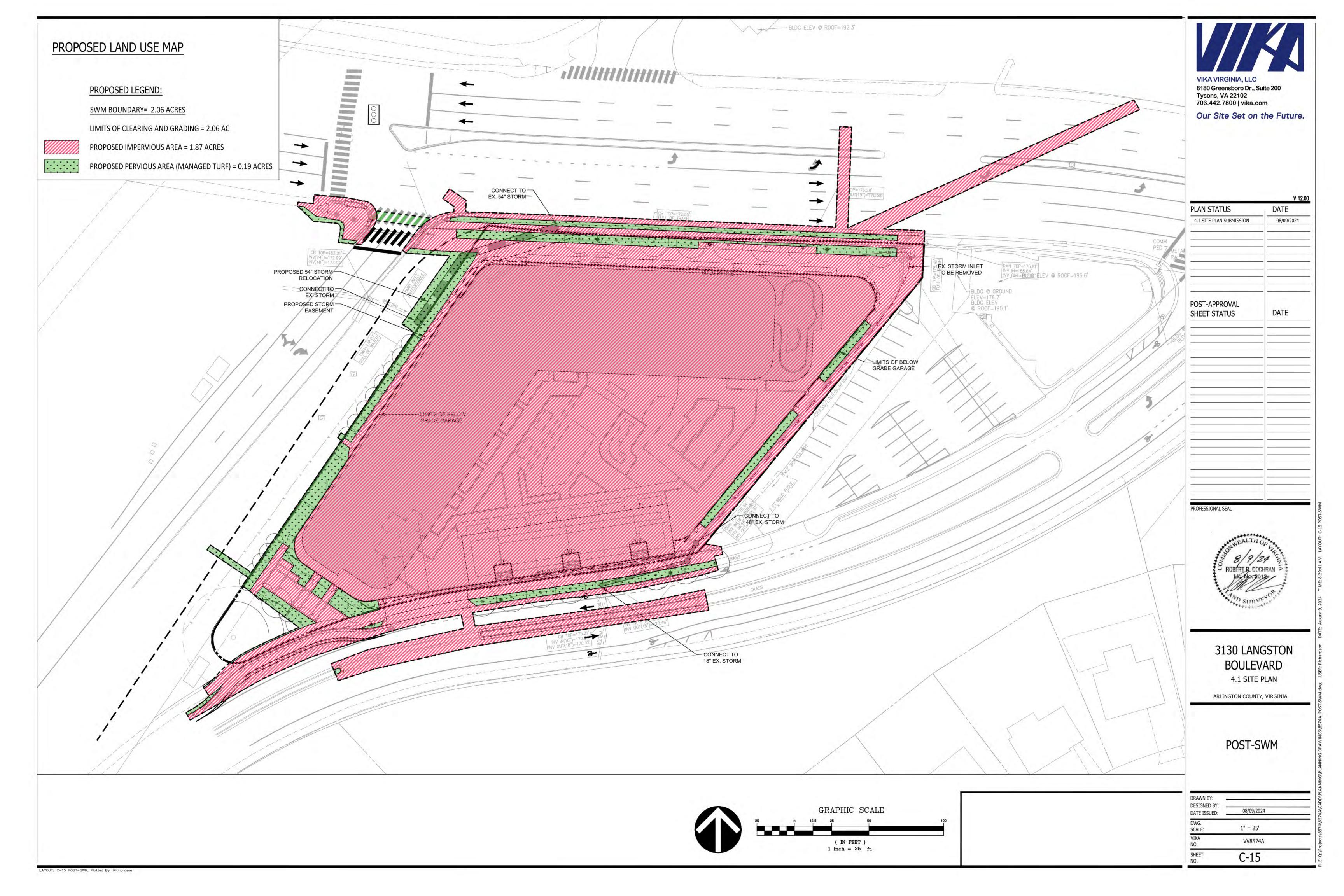
ARLINGTON COUNTY, VIRGINIA

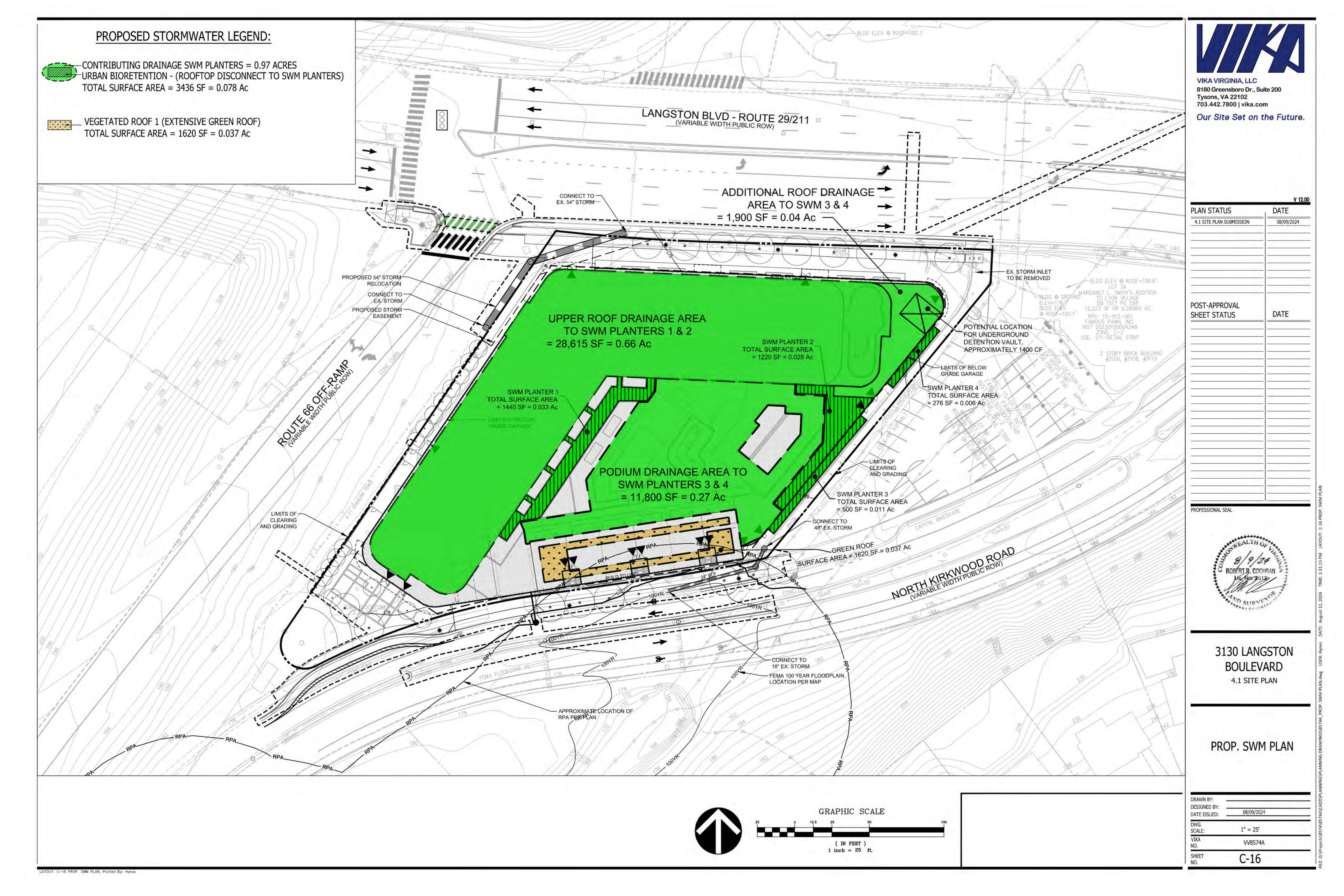
PROPOSED STREET SECTIONS

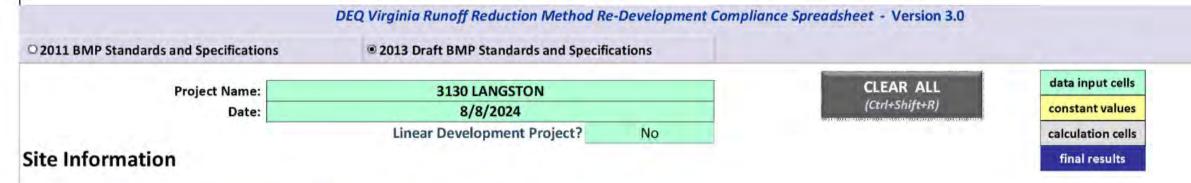












Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area (acres) →	2.0600
Maximum reduction required:	20%
The site's net increase in impervious cover (acres) is:	0.3100
Post-Development TP Load Reduction for Site (lb/yr):	1.2422

Check:	
BMP Design Specifications List:	2013 Draft Stds & Specs
Linear project?	No
Land cover areas entered correctly?	1
Total disturbed area entered?	1

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) undisturbed forest/open space					0.0000
Managed Turf (acres) — disturbed, graded for yards or other turf to be mowed/managed				0.5000	0.5000
Impervious Cover (acres)				1.5600	1,5600
					2.0600

Post-Development Land Cover (acres)									
	A Soils	B Soils	C Soils	D Soils	Totals				
Forest/Open Space (acres) — undisturbed, protected forest/open space or reforested land					0.0000				
Managed Turf (acres) disturbed, graded for yards or other turf to be mowed/managed				0.1900	0.1900				
Impervious Cover (acres)				1.8700	1.8700				
Area Check	OK.	OK.	OK.	OK.	2.0600				

Constants Annual Rainfall (inches)	43
Target Rainfall Event (inches)	1.00
Total Phosphorus (TP) EMC (mg/L)	0.26
Total Nitrogen (TN) EMC (mg/L)	1.86
Target TP Load (lb/acre/yr)	0.41
Pj (unitless correction factor)	0.90

Runoff Coefficients (Rv)										
	A Soils	B Soils	C Soils	D Soils						
Forest/Open Space	0.02	0.03	0.04	0.05						
Managed Turf	0.15	0.20	0.22	0.25						
Impervious Cover	0.95	0.95	0.95	0.95						

Land Cover Summary-Pre							
Pre-ReDevelopment	Listed	Adjusted ¹					
Forest/Open Space Cover (acres)	0.0000	0.0000					
Weighted Rv(forest)	0.0000	0.0000					
% Forest	0%	0%					
Managed Turf Cover (acres)	0.5000	0.1900					
Weighted Rv(turf)	0.2500	0.2500					
% Managed Turf	24%	11%					
Impervious Cover (acres)	1.5600	1.5600					
Rv(impervious)	0.9500	0.9500					
% Impervious	76%	89%					
Total Site Area (acres)	2.0600	1.7500					
Site Rv	0.7801	0.8740					

Treatment Volume an	d Nutrient Loa	d
Pre-ReDevelopment Treatment Volume (acre-ft)	0.1339	0.1275
Pre-ReDevelopment Treatment Volume (cubic feet)	5,833.4100	5,552.0850
Pre-ReDevelopment TP Load (lb/yr)	3.6651	3.4884
Pre-ReDevelopment TP Load per acre (lb/acre/yr)	1.7800	1,9900
Baseline TP Load (lb/yr) (0.41 lbs/acre/yr applied to pre-redevelopment are land proposed for new impervious o		0.7175

Pre ReDevelopment land cover minus pervious land cover (forest/open space or managed turf) acreage proposed for new impervious cover.

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).

	Land Cover Summ
ed ¹	Post ReDev. & Ne
00	Forest/Open Space Cover (acres)
00	Weighted Rv(forest)
	% Forest
00	Managed Turf Cover (acres)
00	Weighted Rv (turf)
5	% Managed Turf
00	Impervious Cover (acres)
00	Rv(impervious)
6	% Impervious
00	Final Site Area (acres)

Treatment Volume an	d Nutrient Loa	ıd
Pre-ReDevelopment Treatment Volume (acre-ft)	0.1339	0.1275
Pre-ReDevelopment Treatment Volume (cubic feet)	5,833.4100	5,552.0850
Pre-ReDevelopment TP Load (lb/yr)	3.6651	3.4884
Pre-ReDevelopment TP Load per acre (lb/acre/yr)	1.7800	1.9900
Baseline TP Load (lb/yr) (0.41 lbs/acre/yr applied to pre-redevelopment are land proposed for new impervious of		0.7175

Post-Development Requirement for Site Area

Land Cover Summary-Post (Final)

Post ReDev. & New Impervious

0.0000

0.0000

0.1900

0.2500

1.8700

0.9500

91%

2.0600

6,621.1200

Final Post Dev Site Rv

Treatment Volume

inal Post-Developm

Treatment Volume

(cubic feet)

Final Post-Development

TP Load per acre

(lb/acre/yr)

TP Load Reduction Required (lb/yr) 1.2422

Nitrogen Loads (Informational Purposes Only)

re-ReDevelopment TN Load (lb/yr)	26.2197	

inal Post-Development TN Load		
(Post-ReDevelopment & New	29.7602	
Impervious) (lb/yr)		

LAND COVER SUMMARY -- POST DEVELOPMENT

Forest/Open Space

Cover (acres)

Weighted Rv(forest)

% Forest

Managed Turf Cover

(acres)

Weighted Rv (turf)

% Managed Turf

ReDev. Impervious

Cover (acres)

Rv(impervious)

% Impervious Total ReDev. Site Area

(acres)

ReDev Site Rv

(Below Pre-ReDevelopment Load)

TP Load Reduction

Redeveloped Area

Land Cover Summary-Post

Post-ReDevelopment

0.0000

0.0000

0.1900

0.2500

11%

1.5600

0.9500

89%

1.7500

0.8740

0.6977

Drainage Area A CLEAR BMP AREAS

Drainage Area A Land Cover (acres)						-
	A Soils	B Soils	C Soils	D Soils	Totals	Land Cover Rv
Forest/Open Space (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Managed Turf (acres)	0.0000	0.0000	0.0000	0.1900	0.1900	0.2500
Impervious Cover (acres)	0.0000	0.0000	0.0000	1.8700	1.8700	0.9500

Total 2.0600

Total Phosphorus Available for Removal in D.A. A (lb/yr) Post Development Treatment Volume in D.A. A (ft³) 6,621.1200

Practice	Runoff Reduction Credit (%)	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	Volume from Upstream Practice (ft ³)	Runoff	Remaining Runoff Volume (ft ³)	Total BMP Treatment Volume (ft ³)	Phosphorus Removal Efficiency (%)	Phosphorus Load from Upstream Practices (lb)	Untreated Phosphorus Load to Practice (lb)	Phosphorus Removed By Practice (lb)	Remaining Phosphorus Load (lb)	Downstream Practice to be Employed
1. Vegetated Roof (RR)													
1.a. Vegetated Roof #1 (Spec #5)	45		0.0372		57.7125	70.5375	128.2500	0		0.0805	0.0362	0.0443	
1.b. Vegetated Roof #2 (Spec #5)	60				0.0000	0.0000	0.0000	0		0.0000	0.0000	0.0000	
2. Rooftop Disconnection (RR)													
2.i. To Stormwater Planter, Urban Bioretention (Spec #9, Appendix A)	40		1.0503	0.0000	1,448.7817	2,173.1725	3,621.9542	25	0.0000	2.2731	1.2502	1,0229	

VIKA VIRGINIA, LLC

8180 Greensboro Dr., Suite 200 Tysons, VA 22102 703.442.7800 | vika.com

Our Site Set on the Future.

PLAN STATUS DATE 4.1 SITE PLAN SUBMISSION 08/09/2024 0.9500

rea	atment Volume and	Nutrient Load			
	Post-ReDevelopment Treatment Volume (acre-ft)	0.1275	Post-Development Treatment Volume (acre-ft)	0.0245	POST-APPROVAL SHEET STATUS
	Post-ReDevelopment Treatment Volume (cubic feet)	5,552.0850	Post-Development Treatment Volume (cubic feet)	1,069.0350	
	Post-ReDevelopment Load (TP) (lb/yr)*	3.4884	Post-Development TP Load (lb/yr)	0.6717	
	Post-ReDevelopment TP Load per acre (lb/acre/yr)	1.9900			
	Max. Reduction Required (Below Pre-	20%			

Land Cover Summary-Post

Post-Development New Impervious

0.3100

New Impervious Cover

Rv(impervious)

TP Load Reduction Required for New Impervious Area (lb/yr)	0.5446

PROFESSIONAL SEAL



3130 LANGSTON **BOULEVARD** 4.1 SITE PLAN

ARLINGTON COUNTY, VIRGINIA

SWM COMPUTATIONS

DRAWN BY:		
DESIGNED BY: _ DATE ISSUED: _	08/09/2024	
DWG. SCALE:	AS NOTED	
VIKA NO.	VV8574A	
SHEET NO.	C-17	

LAYOUT: C-17 SWM COMPUTATIONS, Plotted By: Hynes

WATER QUALITY - VRRM

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

BMP Design Specifications List: 2013 Draft Stds & Specs

Site Summary

Project Title: 3130 LANGSTON Date: 45516

Total Rainfall (in):	43
Total Disturbed Acreage:	2.0600

Site Land Cover Summary

Pre-ReDevelopment Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Managed Turf (acres)	0.0000	0.0000	0.0000	0.5000	0.5000	24.2718
Impervious Cover (acres)	0.0000	0.0000	0.0000	1.5600	1.5600	75.7282
					3.0600	100,0000

Post-ReDevelopment Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Managed Turf (acres)	0.0000	0.0000	0.0000	0.1900	0.1900	9,2233
Impervious Cover (acres)	0.0000	0.0000	0.0000	1.8700	1.8700	90.7767
					2.0600	100,0000

Site Tv and Land Cover Nutrient Loads

	Final Post-Development (Post-ReDevelopment & New Impervious)	Post- ReDevelopment	Post- Development (New Impervious)	Adjusted Pre- ReDevelopment	
Site Rv	0.8854	0.8740	0.9500	0.8740	
Treatment Volume (ft ³)	6,621.1200	5,552.0850	1,069.0350	5,552,0850	
TP Load (lb/γr)	4.1600	3.4884	0.6717	3.4884	

ReDevelopment	Final Post-Development	Post-ReDevelopment TF	
TP Load per acre	TP Load per acre	Load per acre	
(lb/acre/yr)	(lb/acre/yr)	(lb/acre/yr)	
1,9900	2.0200	1,9900	

Total TP Load Reduction Required (lb/yr) 1.2422 0.6977

	Final Post-Development Load (Post-ReDevelopment & New Impervious)	Pre- ReDevelopment	
TN Load (lb/yr)	29.7602	26,2197	

Site Compliance Summary

700	Maximum % Reduction Required Below
209	Pre-ReDevelopment Load

Total Runoff Volume Reduction (ft ³)	1,506.4942
Total TP Load Reduction Achieved (lb/yr)	1.2864
Total TN Load Reduction Achieved (lb/yr)	10.6664
Remaining Post Development TP Load (lb/yr)	2.8736
Remaining TP Load Reduction (lb/yr)	0.0000

** TARGET TP REDUCTION EXCEEDED BY 0.0442 LB/YEAR **

0.5446

Drainage Area Summary

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
Forest/Open (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Managed Turf (acres)	0.1900	0,0000	0.0000	0.0000	0.0000	0.1900
Impervious Cover (acres)	1.8700	0.0000	0.0000	0.0000	0.0000	1.8700
Total Area (acres)	2.0600	0.0000	0.0000	0.0000	0.0000	2.0600

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)	1.2864	0.0000	0.0000	0.0000	0.0000	1.2864
TN Load Reduced (lb/yr)	10.6664	0.0000	0.0000	0.0000	0.0000	10.6664

Drainage Area A Summary

Land Cover Summary

	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest/Open (acres)	0.0000	0.0000	0,0000	0.0000	0.0000	0
Managed Turf (acres)	0,0000	0.0000	0.0000	0.1900	0.1900	9
Impervious Cover (acres)	0.0000	0.0000	0.0000	1.8700	1.8700	91
					2.0600	

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.a. Vegetated Roof #1 (Spec #5)		0.0372	128.2500		0.0805	0.0362	0.0443	
2.i. To Stormwater Planter, Urban Bioretention (Spec #9, Appendix A)		1.0503	3,621.9542	0.0000	2.2731	1,2502	1.0229	

Total Impervious Cover Treated (acres)	1,0875
Total Turf Area Treated (acres)	0.0000
Total TP Load Reduction Achieved in D.A. (lb/yr)	1.2864
Total TN Load Reduction Achieved in D.A.	10.6664

Runoff Volume and CN Calculations

	1-year storm	2-year storm	10-year storm			
Target Rainfall Event (in)	2.69	3,11	4.84			
Drainage Areas	RV & CN	Drainage Area A	Drainage Area B	Drainage Area C	Drainage Area D	Drainage Area 6
CN		96	0	0	0	Ó
RR (ft ³)		1,506,4942	0.0000	0.0000	0.0000	0.0000
1-year return period	RV wa RR (ws-in)	2.2474	0.0000	0.0000	0.0000	0.0000
	RV w RR (ws-in)	2.0460	0,0000	0,0000	0.0000	0.0000
	CN adjusted	94	0	0	0	0
	RV wo RR (ws-in)	2.6604	0.0000	0.0000	0.0000	0.0000
2-year return period	RV w RR (ws-in)	2.4590	0.0000	0.0000	0.0000	0.0000
	CN adjusted	94	O	0	0	0
	RV wa RR (ws-in)	4.3736	0.0000	0,0000	0.0000	0,0000
10-year return period	RV w RR (ws-in)	4.1721	0.0000	0.0000	0.0000	0.0000
	CN adjusted	94	0	0	0	0

STORMWATER PLANTER SIZING COMPUTATIONS

SWM Planter ID	BUILDING/LOCATION	DA TO SP (Ac.) (Total)	Rv	SURFACE AREA REQ'D (SFT)	TV REQ'D (CFT)	SURFACE AREA PROV'D (SFT)	PONDING DEPTH (INCH)	SOIL DEPTH (FT)	GRAVEL DEPTH (FT)	PONDING Vr	SOIL Vr	GRAVEL Vr	STORAGE DEPTH (FT)	Tv PROV'D (CFT)
SWM PLANTER SP#1	PODIUM	0.38	0.95	930	1,302	1,440	3	3	1	1	0.25	0.4	1.40	2,015
SWM PLANTER SP#2	PODIUM	0,33	0.95	804	1,125	1,220	3	3	1	1	0.25	0.4	1.40	1,708
SWM PLANTER SP#3	AT GRADE	0.21	0.95	434	716	500	6	3	1	1	0.25	0.4	1,65	825
SWM PLANTER SP#4	AT GRADE	0.12	0.95	252	430	276	6	3	1	- 1	0.25	0.4	L71	471
	SWM PLANTERS TOTALS	1.04		2419.13	3572,63	3436.00						4		5020.19

Q:\Projects\8574\8574A\DATA\SWM\1ST SUB 4.1\[SIZING COMPS - PRELIM.xlsx]SWM PLANTERS

Note: Sizing based on DCR Spec# 3-A

SA(REQ'D)=TV/SD

Note: Sizing based on DCR Spec# 5

Tv(PROV'D)=(Surface Area*Soil Depth*Porosity)/12

Tv(RED'Q)=1.1"*Rv*DA/12

Tv(RED'Q)=1"*Rv*A/12 Tv(PROV'D)=SA*SUM OF STORAGE

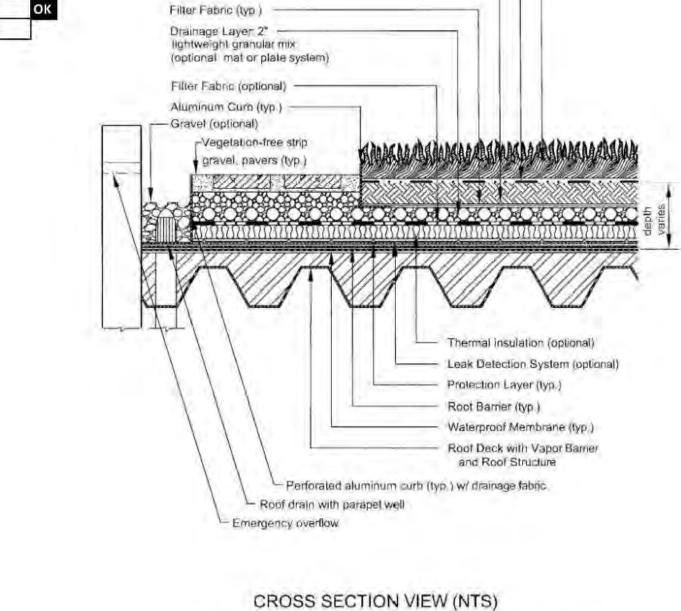
g DA is the Surface Area of the SWM Planter. This is thadded to Non-Veg Area and included in V.

4" TREE PIT UNDERDRAIN WITH 2" STONE ABOVE AND BELOW

SECTION A-A

EXTENSIVE GREEN ROOF SIZING COMPUTATIONS

GREEN ROOF NUMBER	INTENSIVE/EXTENSIVE	DA (VEGETATIVE) (SQ. FT.)	DA (NON-VEGETATIVE) (SQ.FT.)	Rv	Tv REQ'D (CFT)	SURFACE AREA PROV'D (SFT)	SOIL DEPTH (in)	MEDIA POROSITY	Tv PROV'D (CFT)
GREEN ROOF 1	EXTENSIVE	1620	0	0.95	128	1620	4	0.30	162
Total		0.04	0.00		128	1620			162



Low Plants: sedums/herbs (typ.)

Eresion control (wind blanket or jute mesh)
3" to 6" growth medium (typ.)

Figure 5.2. Typical Section – Extensive Vegetated Roof (Source: Northern VA Regional Commission)

4" TREE PIT UNDERDRAIN WITH 2" STONE ABOVE AND BELOW

SECTION B-B

EXTENSIVE GREEN ROOF TYPICAL DETAIL BY PLAN VIEW HIGH FLOW 100 NR PIPASS HIGH FLOW 100 NR PIP

- HIGHFLOW 100 YR BYPASS

WITH PARAPET

-ALUMINUM CURBING

TYPICAL STORMWATER PLANTER DETAIL ON BUILDING (RAISED PLANTER)

NOT TO SCA

NOTE: PER CLEARINGHOUSE SPEC NO. 9A SECTION 9-A-5 IF THE 2500 SF CONTRIBUTING DRAINAGE AREA IS EXCEED, THE DESIGN SHALL BE IN ACCORDANCE WITH LEVEL 1 BIORETENTION.



VIKA VIRGINIA, LLC

703.442.7800 | vika.com

Tysons, VA 22102

8180 Greensboro Dr., Suite 200

Our Site Set on the Future.

PROFESSIONAL SEAL



3130 LANGSTON BOULEVARD

4.1 SITE PLAN

ARLINGTON COUNTY, VIRGINIA

SWM COMPUTATIONS

AWN BY: - SIGNED BY: - TE ISSUED: -	08/09/2024	
/G. ALE:	AS NOTED	
KA	VV8574A	
EET	C-18	

kmo

3130 LANGSTON

Existing Arlington County, Virginia

Sub-Area Land Use and Curve Number Details

Sub-Area Identifie		Hydrologic Soil Group	Sub-Area Area (ac)	Number
Existing	Open space; grass cover > 75% (good)	D	. 5	80
	Paved parking lots, roofs, driveways	D	1.56	98
	Total Area / Weighted Curve Number		2.06	94
				==

kmo

3130 LANGSTON Existing

Arlington County, Virginia

Watershed Peak Table

Sub-Area	Peal	Flow by Rainfall Return Period
or Reach	10-Yr	1-Yr
Identifier	(cfs)	(cfs)
SUBAREAS		
Existing	10.37	5.37

EXISTING CONDITIONS COMPUTATION NOTE:

ALL EXISTING CONDITIONS WERE MODELED USING WINTR-55 SOFTWARE. EXISTING LAND COVER WAS TAKEN FROM FIELD SURVEY DATA AND THEN INPUTTED INTO TR-55 TO COMPUTE THE CURVE NUMBER AND PEAK FLOW RATES FOR THE 1-YEAR AND 10-YEAR 24 HOUR STORMS.

EXISTING 1-YEAR PEAK = 5.37 CFS EXISTING 10-YEAR PEAK = 10.37 CFS

WATER QUANTITY - ENERGY BALANCE

SWM Water Quantity Energy Balance Worksheet

SITE AREA (acre)	2.06			
		1-year	10-	year
	PRE	POST (adjusted)	PRE	POST (adjusted
P	2.69	2.69	4.84	4.84
CN	94	94	94	94
S=1000/CN-10	0.64	0.64	0.64	0.64
0.25	0.13	0.13	0.13	0.13
RV=(P-0.2S) ² /(P-0.2S)+S	2.05	2.05	4.15	4.15

QPost Development <= I.F.* (Qpre-development* RVpre-development)/RVDeveloped)

LF	0.8	
CHANNEL PROTECT	ION	
Qpre-development	5.37	From TR55
QPost Development	5.37	From TR55
RVPost Development (with runoff	- Libera	
reduction)	2.0459	From RRM
Qallowable	4.31	

Qallowable/QPost Development	0.80	
Vs/Vr	0.18	Fig 11.7 of DEQ Manual
Vs	0.36	
Storage required (cf)	2680	

FLOOD CONTROL		
Qpre-development	10.37	From TR55
QPost Development	10.37	From TR55
RVPost Development (with runoff		
reduction)	4.1721	From RRM
Qallowable	10.32	

Qallowable/QPost Development	0.99	
Vs/Vr	0.09	SEE COMPS BELO
Vs	0.38	
Storage required (cf)	2837	

Figure B.2 can also be used to estimate V_s/V_s. For a Type II or Type III rainfall distribution, V_s/V_s can also be calculated using the following equation:

> $V_s/V_t = 0.682 - 1.43 (q_o/q_t) + 1.64 (q_o/q_t)^2 - 0.804 (q_o/q_t)^3$ V_s = required storage volume (acre-feet)

V, = runoff volume (acre-feet) qo = peak outflow discharge (cfs)

 $q_1 = peak inflow discharge (cfs)$

The required storage volume can then be calculated by:

 $V_s = (V_s/V_t)(Q_t)(A)$

(2.1.17)

(2.1.16)

Where: Vs and V, are defined above

Q_d = the post-developed runoff for the design storm (inches) A = total drainage area (acres)

STORMWATER MANAGEMENT NARRATIVE:

STORMWATER MANAGEMENT FOR THIS SITE WILL BE PROVIDED VIA ROOFTOP DISCONNECTION TO STORMWATER PLANTERS AND VEGETATIVE ROOF. SEE SHEETS C-17 & C-18 FOR STORMWATER QUALITY COMPUTATIONS. STORMWATER DETENTION AND WATER QUANTITY IS PROVIDED VIA THE ADDITIONAL VOLUME PROVIDED WITH THE FACILITIES LISTED ABOVE (APPROXIMATELY 1450 CF) AND ADDITIONAL STORAGE PROVIDED WILL BE PROVIDED WITHIN A PROPOSED STORMWATER VAULT. SEE SHEET C-16 FOR VAULT LOCATION. THIS VAULT WILL PROVIDED APPROXIMATELY 1400 CF OF STORAGE.

AS SHOWN IN THE ENERGY BALANCE COMPUTATIONS PROVIDED ABOVE, 2,837 CUBIC FEET OF STORAGE IS REQUIRED TO MEET THE FLOOD CONTROL DETENTION REQUIREMENT (IT SHOULD BE NOTED THAT THIS VOLUME ALSO MEETS THE CHANNEL PROTECTION REQUIREMENT).

WATER QUANTITY - PROPOSED CONDITIONS

Drainage Area Curve Numbers and Runoff Depths*

Curve numbers (CN, CNadj) and runoff depths (RV Developed) are computed with and without reduction practices.

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 turf	Area (acres)	0.0000	0.0000	0.0000	0.1900
to be mowed/managed	CN	39	61	74	80
Impervious Cover	Area (acres)	0.0000	0.0000	0.0000	1.8700
impervious cover	CN	98	98	98	98

2.0600 Total Area (acres): **Runoff Reduction** Volume (ft³): 1,506.8425

CN_(D.A. A)

	1-year storm	2-year storm	10-year storm
RV _{Developed} (watershed-inch) with no Runoff Reduction	2.2474	2.6604	4.3736
RV _{Developed} (watershed-inch) with Runoff Reduction	2.0459	2.4589	4.1721
Adjusted CN*	94	94	94

kmo

3130 LANGSTON Proposed Arlington County, Virginia

Sub-Area Land Use and Curve Number Details

Sub-Area		Hydrologic Soil	Sub-Area Area	Curve
Identifie	r band ose	Group	(ac)	Number
Proposed	CN directly entered by user	-	2.06	94
	Total Area / Weighted Curve Number		2.06	94

smo

3130 LANGSTON Proposed Arlington County, Virginia

Watershed Peak Table

Sub-Area	Peak	Flow by Rainfall Return Period	
or Reach	10-Yr	1-Yr	
Identifier	(cfs)	(cfs)	
SUBAREAS			
Proposed	10.37	5.37	

PROPOSED CONDITIONS COMPUTATION NOTE: (CN=94 PER VRRM COMPS ABOVE) ALL PROPOSED CONDITIONS WERE MODELED USING WINTR-55 SOFTWARE. TR-55 WAS USED TO DETERMINE THE PROPOSED CONDITION CURVE NUMBER AND PEAK RUNOFF FLOW RATE FOR BOTH THE 1 YEAR 24 HOUR STORM AND THE 10 YEAR 24 HOUR STORM.

PROPOSED 1-YEAR PEAK = 5.37 CFS PROPOSED 10-YEAR PEAK = 10.37 CFS



Our Site Set on the Future.

703.442.7800 | vika.com

PLAN STATUS 4.1 SITE PLAN SUBMISSION 08/09/2024 POST-APPROVAL

SHEET STATUS

DATE

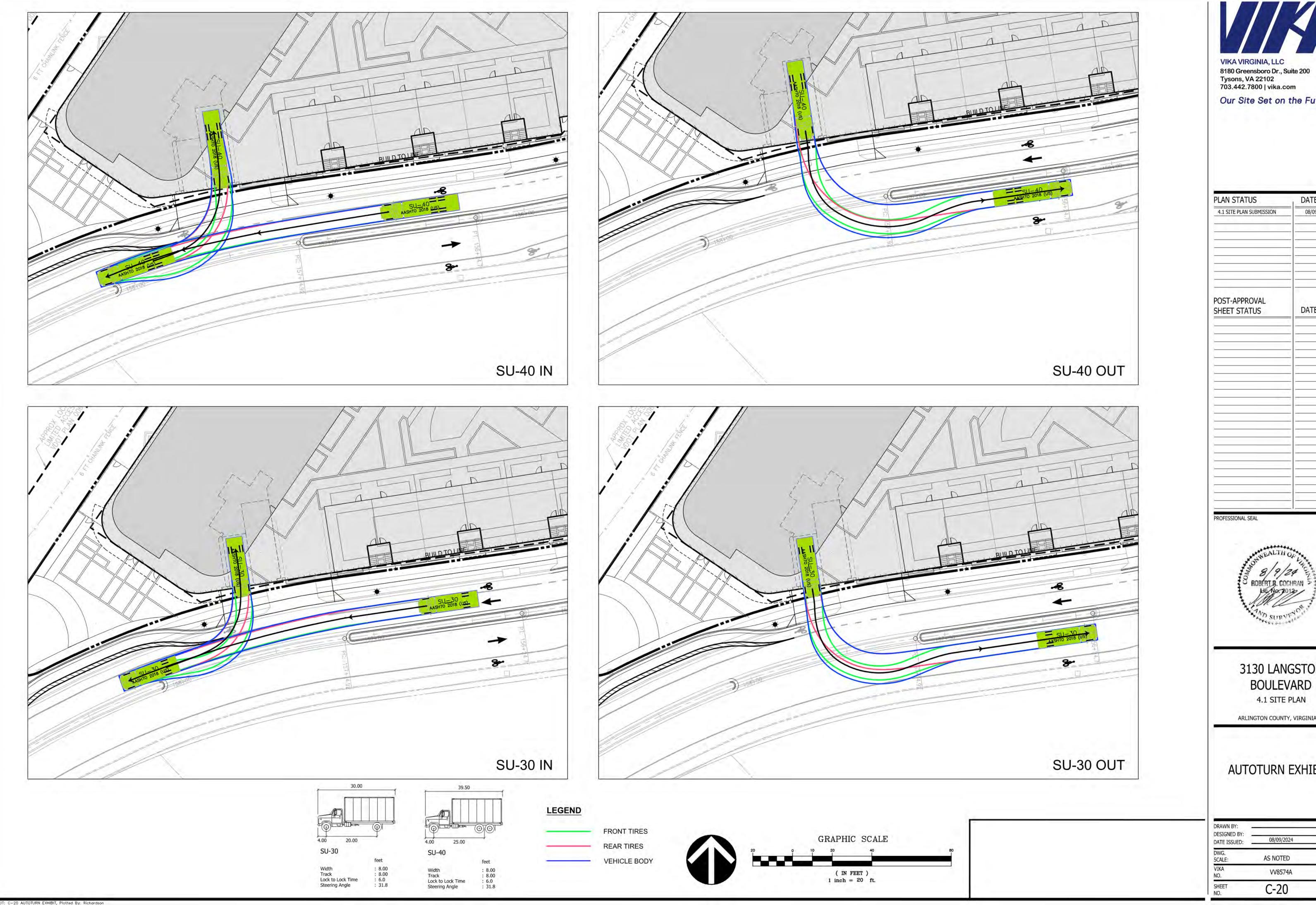
PROFESSIONAL SEAL

3130 LANGSTON **BOULEVARD** 4.1 SITE PLAN

ARLINGTON COUNTY, VIRGINIA

SWM COMPUTATIONS

DRAWN BY: 08/09/2024 DATE ISSUED: DWG. SCALE; VIKA AS NOTED VV8574A C-19



Our Site Set on the Future.

PLAN STATUS	DATE
4.1 SITE PLAN SUBMISSION	08/09/2024
POST-APPROVAL SHEET STATUS	DATE



3130 LANGSTON BOULEVARD 4.1 SITE PLAN

ARLINGTON COUNTY, VIRGINIA

AUTOTURN EXHIBIT

DRAWN BY: - DESIGNED BY: - DATE ISSUED: -	08/09/2024
DWG. SCALE:	AS NOTED
VIKA NO.	VV8574A
SHEET NO.	C-20

PLANTING NOTES:

- ALL QUANTITIES LISTED IN THE DRAWINGS ARE FOR INFORMATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL QUANTITIES AND TO PROVIDE ALL MATERIALS NECESSARY FOR FULL COVERAGE IN ALL PLANTING AREAS AS SPECIFIED ON THE DRAWINGS. ANY DISCREPANCY SHOULD BE
- 2. ALL PLANTS SHOULD BE IN ACCORDANCE WITH ANSI Z60.1 -2014, AMERICAN STANDARD FOR NURSERY STOCK PUBLICATION, APPROVED APRIL 14, 2014.
- 4. ALL PLANT MATERIAL SHALL CONFORM TO THE SIZE SPECIFICATIONS (CALIPER, HEIGHT AND SPREAD) GIVEN IN THE PLANT SCHEDULE AND SHALL BE NURSERY GROWN UNLESS SPECIFIED OTHERWISE.
- 5. ANY PLANT SUBSTITUTION SHALL BE APPROVED BY LANDDESIGN PRIOR TO PURCHASE.

CALIPER SIZE OF CANOPY TREES ARE TO BE MEASURED PER LOCAL CITY LANDSCAPE ORDINANCE.

- SIZES LISTED ARE MIN. AND REFER TO HEIGHT, UNLESS OTHERWISE SPECIFIED.
- 7. LANDSCAPE CONTRACTOR SHALL STAKE OUT LOCATIONS OF ALL TREES TO BE PLANTED FOR REVIEW BY LANDDESIGN PRIOR TO INSTALLING. LANDDESIGN RESERVES THE RIGHT TO ADJUST TREE LOCATIONS IN THE FIELD AS NECESSARY.
- 8. SHRUB/GROUNDCOVER BEDS SHALL BE STAKED FOR REVIEW BY LANDDESIGN/OWNER'S REPRESENTATIVE PRIOR TO EXCAVATION AND OR BED PREPARATION
- 9. LANDSCAPE CONTRACTOR SHALL INSTALL STEEL EDGING BETWEEN PLANTING BEDS AND LAWNS, OR AS SHOWN IN DETAILS.
- 10. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UNDERGROUND UTILITIES. PIPES, STRUCTURES, AND LINE RUNS IN THE FIELD PRIOR TO THE INSTALLATION OF ANY PLANT MATERIAL.
- 11. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ADVISE LANDDESIGN OF ANY CONDITION FOUND ON THE SITE WHICH PROHIBITS INSTALLATION AS
- SHOWN ON THE DRAWINGS. 12. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION WITH OTHER CONTRACTORS ON SITE AS REQUIRED TO ACCOMPLISH ALL PLANTING
- OPERATIONS. 13. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY GROWING CONDITION AND MUST BE REPLACED WITH PLANT OF SAME VARIETY AND SIZE IF
- DAMAGED, DESTROYED, DEAD AND /OR REMOVED.
- 14. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR FINE GRADING AND REMOVAL OF DEBRIS PRIOR TO PLANTING IN ALL AREAS
- 15. FINAL FINISHED GRADING SHALL BE REVIEWED BY LANDDESIGN. CONTRACTOR IS RESPONSIBLE FOR ANY ADDITIONAL TOPSOIL REQUIRED TO CREATE A SMOOTH CONDITION SUITABLE FOR PLANTING.
- 16. TREES OVERHANGING INTO THE PUBLIC R.O.W. SHALL HAVE A MINIMUM CLEAR TRUNK HEIGHT OF FOURTEEN(14) FEET OVER STREETS, DRIVE AISLES, ALLEYS AND FIRE LANES. TREES OVERHANGING PRIVATE STREETS, WALKS, AND /OR PARKING LOTS SHALL HAVE A MINIMUM CLEAR TRUNK HEIGHT OF
- 17. LANDSCAPE CONTRACTOR IS REQUIRED TO PERFORM A TREE PIT PERCOLATION TEST FOR EACH TREE PIT PRIOR TO INSTALLATION. IF TREE PIT DOES NOT DRAIN WITHIN A 24-HOUR PERIOD, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE A GRAVEL SUMP, FILTER FABRIC AND STAND PIPE. ALL TREE PIT SUMPS SHALL BE INCLUDED IN IN THE CONTRACTOR'S BASE BID AS A UNIT PRICE AND PROVIDE AS A DEDUCT ALTERNATE PER TREE PIT SUMPS NOT
- 18. LANDSCAPE CONTRACTOR IS RESPONSIBLE TO REVIEW SITE ENVIRONMENTAL CONDITIONS PRIOR TO AND DURING INSTALLATION OF PLANT MATERIAL. ANY DISCREPANCIES OR CONCERNS BETWEEN THE ENVIRONMENTAL SITE CONDITIONS (I.E., SOIL TYPE, WATER, CLIMATE, WIND, SUN EXPOSURE ETC.) AND THE PLANT MATERIAL SPECIFIED WITHIN THE DRAWING SHALL BE BROUGHT TO THE ATTENTION OF LANDDESIGN AND/OR OWNER, AND SHALL BE DONE SO IN WRITING. CONTRACTOR SHALL PROVIDE SUGGESTED SOLUTIONS FOR ALTERNATIVE PLANT MATERIAL PROPOSED FOR SUBSTITUTION. LANDDESIGN TO REVIEW CONDITIONS AND INFORMATION SUBMITTED BY CONTRACTOR AND WILL ISSUE DIRECTIVE. SHOULD PLANT MATERIAL DIE BECAUSE OF ENVIRONMENTAL CONDITIONS DESCRIBED ABOVE, THE LANDSCAPE CONTRACTOR ASSUMES ALL WARRANTY AND GUARANTEE OF THE PLANT MATERIAL
- 19. ALL NEW PLANTING AREAS SHALL BE BACKFILLED WITH PLANTING SOIL THAT IS A MIXTURE OF 40-50% IMPORTED UNSCREENED TOPSOIL, 40-45% COARSE SAND, AND 10% COMPOST. FINAL TESTED ORGANIC MATTER SHALL BE BETWEEN 2.75 AND 4% (BY DRY WEIGHT). BACKFILL SHALL BE TO A DEPTH OF 18" FOR SHRUB AND GROUNDCOVER ZONES AND 36" FOR TREE PITS.
- 20. AFTER PLANTING SOIL MIXES ARE INSTALLED IN PLANTING BED AREAS AND JUST PRIOR TO THE INSTALLATION OF SHRUB OR GROUNDCOVER PLANTINGS, SPREAD 3-4 INCHES OF COMPOST OVER THE BEDS AND ROTO TILL INTO THE TOP 8 INCHES OF THE PLANTING SOIL. THIS WILL RAISE GRADES SLIGHTLY ABOVE THE FINISHED GRADES, IN ANTICIPATION GRADES WILL SETTLE WITHIN A FEW MONTHS AFTER INSTALLATION AS COMPOST BREAKS DOWN.
- 21. IN ALL EXISTING PLANTING AREAS DESIGNATED TO RECEIVE NEW PLANTINGS, SPREAD 3-4 INCHES OF COMPOST OVER THE BEDS AND ROTO TILL INTO THE TOP 8 INCHES OF THE PLANTING SOIL. THIS WILL RAISE THE GRADES SLIGHTLY ABOVE THE FINISHED GRADES, IN ANTICIPATION GRADES WILL SETTLE WITHIN A FEW MONTHS AFTER INSTALLATION AS COMPOST BREAKS DOWN. IN NO CASE WILL THIS BE PERFORMED WHERE IT MAY NEGATIVELY IMPACT THE HEALTH OF ADJACENT, EXISTING PLANT MATERIALS WHICH ARE DESIGNATED TO REMAIN.
- 22. LANDSCAPE CONTRACTOR TO WARRANTY ALL PLANT MATERIALS FOR A PERIOD OF ONE YEAR. THE CONTRACTOR AGREES TO REPLACE DEFECTIVE WORK AND DEFECTIVE PLANTS, AND THAT THE OWNER'S REPRESENTATIVE SHALL MAKE THE FINAL DETERMINATION IF PLANTS MEET THE REQUIRED SPECIFICATIONS OR THAT PLANTS ARE DEFECTIVE. PLANTS DETERMINED TO BE DEFECTIVE SHALL BE REMOVED IMMEDIATELY UPON NOTIFICATION BY THE OWNER'S REPRESENTATIVE AND REPLACED WITHOUT COST TO THE OWNER, AS SOON AS WEATHER CONDITIONS PERMIT AND WITHIN THE SPECIFIED PLANTING PERIOD. THE REPLACED MATERIALS SHALL ALSO RECEIVE A WARRANTY PERIOD OF ONE YEAR WHICH STARTS AT THE DATE OF INSTALLATION. BULBS, ANNUAL FLOWERS, AND SEASONAL COLOR PLANTS SHALL ONLY BE WARRANTED FOR THE PERIOD OF THE EXPECTED BLOOM OR PRIMARY DISPLAY.

PLANTERS/POTS/SEASONAL PLANTING NOTES:

- SOIL SHOULD BE NUTRIENT-RICH, MOISTURE CONTAINING PLANTING MEDIUM AND BE A MINIMUM 18" DEPTH FOR SEASONALS, PERENNIALS AND SMALL SHRUBS; MINIMUM 36" DEPTH FOR ALL TREES.
- A LAYER OF RIVER ROCK SHALL BE PLACED IN THE BASE OF EACH PLANTER POT TO A MINIMUM 6" DEPTH OR AS ALLOWABLE BY REQUIRED SOIL DEPTH. PLACE FILTER FABRIC BETWEEN SOIL MEDIUM AND RIVER ROCK AND SOIL MEDIUM AND PLANTER EDGES, OVERLAP FABRIC 6" MINIMUM TO MINIMIZE SOIL
- PLANTERS POTS WHICH DO NOT RECEIVE IRRIGATION SHALL BE HAND-WATERED. HAND WATERING SHOULD OCCUR MINIMUM 2 TIMES PER WEEK DURING COOLER AND RAINY SEASONS AND INCREASED TO EVERY 2-3 DAYS DURING HOT/DRY WEATHER. ALWAYS CHECK SOIL 6" BELOW SURFACE FOR SATURATION PRIOR TO WATERING TO PREVENT OVERWATERING/DROWNING OF PLANT MATERIAL.
- 4. WHEN APPLICABLE, PLANTS TO REMAIN IN CONTAINERS FOR DURATION OF SEASON ARE SHOWN IN THE "PERMANENT" LAYOUT, EACH SEASON WILL HAVE ITS OWN PLANT MATERIAL, SOME OF WHICH MAY LAST ALL YEAR. ROTATE IN THE PLANTS NOTED FOR EACH SEASON.
- 5. IF PLANT MATERIAL DIES DURING A SEASON AND IS EXPECTED TO REMAIN FOR AN ADDITIONAL SEASON, CONTRACTOR IS TO REPLACE AT TIME OF NEXT
- SEASONAL ROTATION. 6. CONTACT LANDDESIGN FOR ANY REQUIRED SUBSTITUTIONS.
- 7. ALL PLANTS SHOULD BE FULL AT TIME OF INSTALLATION AND COVER 75% OF POT SURFACE AREA.
- 8. AVOID PLANTING IN THE ROOT ZONE OF ANY PERMANENT TREES, SHRUBS, OR PERENNIALS.
- 9. SEASONAL PLANTS SHOULD BE REMOVED FOLLOWING THE FIRST MAJOR FROST DIEBACK AND REPLACED WITH EVERGREEN BOUGHS OR OTHER OWNER APPROVED WINTER DECOR. TREES, SHRUBS AND PERENNIALS SHOULD REMAIN IN THE CONTAINERS YEAR ROUND AND REPLACED ONLY AS NECESSARY.

IRRIGATION NOTES:

- 1. A FULLY AUTOMATED IRRIGATION SYSTEM PROVIDING 100% COVERAGE SHALL BE PROVIDED FOR ALL PLANTING AREAS, UNLESS NOTED OTHERWISE. SYSTEM SHALL BE IN OPERATION PRIOR TO INSTALLATION OF ANY PLANT MATERIAL OTHER THAN CANOPY TREES.
- 2. ALL PLANTING BEDS/ SHRUB AND GROUNDCOVER AREAS TO BE IRRIGATED WITH EITHER 12" SPRAY POP-UPS AND/OR A LANDSCAPE DRIP-LINE SYSTEM, UNLESS NOTED OTHERWISE.
- 3. ALL PLANTER POTS AND RAISED PLANTERS TO BE IRRIGATED WITH MICRO SPRAY SPRINKLER HEADS.
- IRRIGATION SYSTEM IS DESIGN/BUILD. CONTRACTOR TO PROVIDE DRAWINGS AND CUT SHEETS OF ALL COMPONENTS.
- 5. PROVIDE AS-BUILT DRAWINGS OF IRRIGATION AFTER INSTALLATION

MATERIALS + PAVING NOTES:

- 1. ALL MATERIALS, CONSTRUCTION METHODS, WORKMANSHIP, EQUIPMENT SERVICES AND TESTING FOR ALL IMPROVEMENTS SHALL BE IN ACCORDANCE WITH THE PROJECT DOCUMENTS AND THE GOVERNING AUTHORITIES' REQUIREMENTS. IN THE EVENT OF A CONFLICT BETWEEN THE PROJECT DOCUMENTS AND THE GOVERNING AUTHORITIES' REQUIREMENTS, THE MORE STRINGENT SHALL APPLY.
- 2. SUBGRADE PREPARATION, PAVEMENT STRENGTH AND THICKNESS SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED FOR THIS
- 2.1. PROOF-ROLL SUBGRADE: PRIOR TO PREPARATION OF THE SUBBASE, THE SUBGRADE SHALL BE PROOF-ROLLED WITH HEAVY PNEUMATIC EQUIPMENT. ANY SOFT OR PUMPING AREAS SHALL BE EXCAVATED TO FIRM SUBGRADE AND BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT
- 2.2. PAVEMENT SUBGRADE SHALL BE GRADED TO PREVENT PONDING AND INFILTRATION OF EXCESSIVE MOISTURE ON OR ADJACENT TO THE PAVEMENT SUBGRADE.
- THE USE OF "LEVEL UP" SAND UNDER PAVEMENT WILL NOT BE ACCEPTED, UNLESS NOTED OTHERWISE.
- 4. CONCRETE SHALL NOT BE PLACED WHEN THE TEMPERATURE IS BELOW 40 DEGREES FAHRENHEIT AND FALLING, BUT MAY BE PLACED WHEN THE TEMPERATURE IS ABOVE 35 DEGREES FAHRENHEIT AND RISING. THE TEMPERATURE READING SHALL BE TAKEN IN THE SHADE AWAY FROM ARTIFICIAL
- 4.1. DO NOT PLACE CONCRETE WHILE IT IS RAINING OR WHEN RAIN IS IMMINENT.
- 5. CAST IN PLACE CONCRETE SHALL MEET THE FOLLOWING REQUIREMENTS:
- 5.1. MINIMUM 3,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS, UNLESS NOTED OTHERWISE
- 5.2. AGGREGATES: ASTM C33 MAX 3/4" IN SIZE, UNLESS NOTED OTHERWISE 5.3. SLUMP: 3 TO 5 INCHES
- 5.4. AIR CONTENT: 4 TO 6 PERCENT BY VOLUME
- CONCRETE THICKNESS:
- 6.1. PEDESTRIAN AREA: 4" THICK, UNLESS NOTED OTHERWISE.
- 6.2. ALL OTHER CONCRETE COMPONENTS INSTALL PER SIZE SPECIFIED IN DRAWINGS
- CONCRETE REINFORCING:
- 7.1. 4" THICK PAVING: #3's AT 24" SPACING UNLESS NOTED OTHERWISE IN DRAWINGS
- 7.2. 6" THICK PAVING: #4s AT 24" SPACING UNLESS NOTED OTHERWISE IN DRAWINGS 7.3. 8" THICK PAVING: #5's AT 24" SPACING UNLESS NOTED OTHERWISE IN DRAWINGS
- 7.4. ALL PAVEMENT REINFORCING BARS SHALL BE GRADE 60 KSI DEFORMED BILLET STEEL BARS, UNCOATED FINISH. SIZE AND SPACING SHALL BE IN ACCORDANCE WITH THE PAVING PLAN AND DETAILS.
- 7.5. ALL REINFORCING STEEL AND DOWEL BARS IN PAVEMENT SHALL BE SUPPORTED AND MAINTAINED AT THE CORRECT CLEARANCES BY THE USE OF
- CONTROL JOINTS (TROWEL OR SAW CUT)
- 8.1. TO BE PLACED AS INDICATED ON PLANS AND DETAILS TO A MINIMUM DEPTH OF 1/8 OF CONCRETE THICKNESS.
- 8.2. SAW CUT JOINTS TO BE EXECUTED WITHIN 12 HOURS OF CONCRETE PLACEMENT.
- 8.3. SAWN JOINTS ARE TO BE TRUE IN ALIGNMENT AND SHALL CONTINUE THROUGH ADJACENT CURBS. RADIAL JOINTS SHALL BE NO SHORTER THAN 18". 8.4. SAWN JOINTS TO BE CLEANED OF DEBRIS, DIRT, DUST, SCALE, CURING COMPOUND AND CONCRETE, BLOWN DRY AND IMMEDIATELY SEALED. SEALANT MATERIAL SHALL BE SONNEBORN SONOLASTIC SL2 MULTI-COMPONENT, SELF-LEVELING, ELASTOMERIC POLYURETHANE OR EQUIVALENT. SEALANT COLOR SHALL MATCH PAVEMENT.
- EXPANSION JOINTS
- 9.1. PLACE AT A MAXIMUM SPACING OF 30' O.C. AND COORDINATE WITH OVERALL PAVING PATTERN AND COLOR.
- PROVIDE DOWELS AS SPECIFIED IN DRAWING DETAILS.
- 9.3. CONTRACTOR SHALL PREPARE A JOINT LAYOUT AND PROVIDE IT TO THE ENGINEER FOR REVIEW. THE JOINT LAYOUT SHALL BE PROVIDED A MINIMUM OF ONE WEEK PRIOR TO PLACING CONCRETE. PATTERN SHALL BE CAREFULLY DESIGNED BY THE CONTRACTOR TO AVOID IRREGULAR SHAPES. EXPANSION JOINTS SHALL NOT BE LOCATED ALONG VALLEYS IN PAVEMENT.
- 10. ALL CONSTRUCTION JOINTS SHALL BE SAWN, CONCRETE FINISHES TO BE PER DRAWING DETAILS AND SPECIFICATIONS.
- 11. CONCRETE SHALL BE BROOM FINISHED AND CURED FOR A MINIMUM OF 72 HOURS UNLESS NOTED OTHERWISE.
- 12. BREAKOUTS FOR REMOVAL OF EXISTING PAVEMENT AND CURBS SHALL BE MADE BY FULL DEPTH SAW CUT WHEN ADJACENT TO PROPOSED PAVEMENT
- 13. PROPOSED PAVEMENT AND/OR CURBS INTENDED TO TIE INTO EXISTING SHALL MATCH SHALL MATCH THE ELEVATION OF EXISTING PAVEMENT AND/OR

ACCESSIBILITY NOTES:

- MAX CROSS SLOPE ON PAVED SURFACES SHALL BE 2% MAXIMUM, UNLESS NOTED OTHERWISE
- 2. MAX RUNNING SLOPE ON PAVED SURFACES SHALL BE 5% MAXIMUM, UNLESS NOTED OTHERWISE.
- ACCESSIBLE PATH OF TRAVEL SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80" MINIMUM, AND PROTRUDING OBJECTS GREATER THAN 4" PROJECTION FROM WALL AND ABOVE 27" AND LESS THAN 80". CONTRACTOR SHALL VERIFY THAT THERE ARE NO BARRIERS IN THE PATH OF
- 4. ALL CURB RAMPS SHALL BE BROOM FINISHED PERPENDICULAR TO SLOPE.
- 5. ALL CURB RAMPS SHALL HAVE A 1:12 MAX SLOPE IN THE DIRECTION OF TRAVEL, 2% MAX CROSS SLOPE.
- 6. IT IS THE INTENT OF THE CONTRACT DOCUMENTS TO COMPLY WITH ALL APPROPRIATE FAIR HOUSING ACCESSIBILITY GUIDELINES AND GENERAL NOTES FOR PUBLIC AND COMMON USE FACILITIES. REPORT ANY DISCREPANCIES TO LANDDESIGN.

GENERAL NOTES:

- I. BASE INFORMATION, INCLUDING EXISTING CONDITIONS, TOPOGRAPHY, EXISTING UTILITIES, AND BOUNDARY INFORMATION IS FROM PLANS BY: VIKA VIRGINIA, LLC
- 2. ARCHITECTURAL INFORMATION IS FROM PLANS BY: DCS DESIGN.
- WRITTEN DIMENSIONS PREVAIL OVER SCALED DIMENSIONS. NOTIFY LANDDESIGN OF ANY DISCREPANCIES.
- DIMENSIONS ARE TO FACE OF OBJECT, UNLESS NOTED OTHERWISE.
- 5. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL UNDERGROUND UTILITIES, PIPES, STRUCTURES, AND LINE RUNS IN THE FIELD PRIOR TO CONSTRUCTION. ANY DAMAGE TO NEW AND EXISTING UTILITIES ARE TO BE REPAIRED IMMEDIATELY AT NO
- ADDITIONAL EXPENSE TO THE OWNER. LANDDESIGN ASSUMES NO RESPONSIBILITY FOR ANY UTILITIES NOT SHOWN ON PLANS. 6. ALL PROPOSED FINISHED GRADES ARE BASED ON INFORMATION PROVIDED BY THE OWNER'S SURVEY AND OR CIVIL ENGINEER. ANY
- DISCREPANCIES IN ACTUAL FIELD MEASUREMENTS ARE TO BE REPORTED TO LANDDESIGN IMMEDIATELY. PRIOR TO COMMENCEMENT OF HARDSCAPE CONSTRUCTION, ALL PIERS, FOOTINGS, AND WALLS ARE TO BE SURVEYED, LAID OUT,
- AND STAKED IN THE FIELD FOR REVIEW BY LANDDESIGN. CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY DEMOLITION, ADJUSTMENTS, OR RECONSTRUCTION OF HARDSCAPE CONSTRUCTION RESULTING FROM UNAUTHORIZED CONSTRUCTION.
- 8. CONTRACTOR IS RESPONSIBLE TO PROVIDE AND INSTALL ALL ITEMS PER DRAWINGS AND SPECIFICATION. NOTIFY LANDDESIGN OF ANY MAJOR DISCREPANCIES BETWEEN CONTRACTOR'S VERIFIED QUANTITIES, BID BOOK, AND INTENT OF DRAWING.
- 9. CONTRACTOR IS RESPONSIBLE FOR ALL FINAL QUANTITIES PER DRAWINGS AND SPECIFICATIONS ANY QUANTITIES PROVIDE BY LANDDESIGN ARE PROVIDED FOR CONVENIENCE ONLY AND SHALL NOT BE CONSIDERED ABSOLUTE. LANDDESIGN SHOULD BE NOTIFIED OF ANY GRADING DISCREPANCIES.
- 10. THE CONTRACTOR SHALL EXAMINE AND BECOME FAMILIAR WITH ALL CONTRACT DOCUMENTS IN THEIR ENTIRETY. SURVEY THE PROJECT AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND SCOPE OF WORK. ALL COSTS SUBMITTED SHALL BE BASED ON THOROUGH KNOWLEDGE OF ALL WORK AND MATERIALS REQUIRED ANY DISCREPANCY AND/ OR UNCERTAINTY AS TO WHAT MATERIAL OR PRODUCT IS TO BE USED, SHALL BE VERIFIED WITH THE OWNER OR LANDDESIGN PRIOR TO BIDDING.
- 11. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES REQUIRED FOR SAFE EXECUTION AND COMPLETION OF WORK, AND FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.
- 12. IN THE EVENT A DISCREPANCY IS FOUND IN THE CONTRACT DOCUMENTS, THE OWNER & LANDDESIGN SHALL BE NOTIFIED IMMEDIATELY.
- 13. CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND NOTIFY LANDDESIGN OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- 14. CONTRACTOR SHALL VERIFY ALL MEASUREMENTS AT THIS SITE AND AND BE RESPONSIBLE FOR ACCURACY AND CORRECTNESS OF
- 15. CONTRACTOR SHALL COORDINATE WORK WITH ALL OTHER TRADES AND NOTIFY OWNER & LANDDESIGN OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- 16. THE CONTRACTOR SHALL EMPLOY, AS REQUIRED BY GOVERNING AUTHORITIES, AN APPROVED TESTING LABORATORY TO MAKE ALL TESTS FROM CONCRETE, SOIL COMPACTION AND WELDING TO INSURE COMPLIANCE WITH PLANS, STANDARDS AND CODES. COST SHALL BE INCLUDED AS INCIDENTAL TO THE CONTRACT.
- 17. ALL EXISTING WORK OR LANDSCAPING NOT SHOWN TO BE ALTERED OR REMOVED SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION. THE CONTRACTOR(S) SHALL BEAR THE TOTAL EXPENSE FOR, AND SHALL REPAIR ANY DAMAGE TO EXISTING CONDITIONS, OR IMPROVEMENTS NOT INDICATED IN THE DRAWINGS OR SPECIFICATIONS TO RECEIVE ALTERATION, ADDITIONS OR

LAYOUT NOTES:

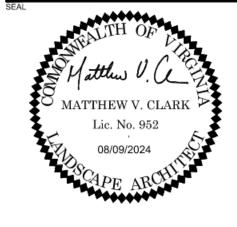
- 1. ALL MATERIALS AND CONSTRUCTION WITHIN RIGHT OF WAYS SHALL BE IN ACCORDANCE WITH THE ARLINGTON COUNTY STANDARD SPECIFICATIONS AND CONSTRUCTION STANDARDS, AND STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
- 2. EXISTING UTILITIES ARE SHOWN SCHEMATICALLY AND ARE FOR THE CONTRACTOR'S GUIDANCE ONLY. THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING IMPROVEMENTS IN THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRS OF DAMAGE TO ANY EXISTING IMPROVEMENTS DURING CONSTRUCTION. REPAIRS SHALL BE EQUAL TO OR BETTER THAN CONDITION PRIOR TO CONSTRUCTION.
- 4. ALL ONSITE PAVING DIMENSIONS ARE TO THE FACE OF CURB, WHERE APPLICABLE, UNLESS NOTED OTHERWISE.
- 5. ALL CURB RADII AND SIDEWALK RETURNS ARE 2' UNLESS NOTED OTHERWISE.
- 6. ALL PAVING AND EARTHWORK OPERATIONS SHALL CONFORM TO THE PROJECT GEOTECHNICAL REPORT.
- 7. BOUNDARY SURVEY: BOUNDARY SURVEY INFORMATION IS BASED ON THE BOUNDARY SURVEY PREPARED BY VIKA VIRGINIA. REFER TO THE BOUNDARY SURVEY AND PLAT TO VERIFY PROPERTY LINES AND EASEMENT LOCATIONS.
- 8. BUILDING DIMENSIONS: THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS TO VERIFY THE EXACT BUILDING
- LAY PAVERS IN PATTERN(S) SHOWN ON DRAWINGS. PLACE UNITS HAND TIGHT WITHOUT USING HAMMERS. MAKE HORIZONTAL ADJUSTMENTS TO PLACEMENT OF LAID PAVERS WITH RUBBER HAMMERS AS REQUIRED.
- 10. PROVIDE JOINTS BETWEEN PAVERS BETWEEN 1/16 IN. AND 3/16 IN. (2 AND 5 MM) WIDE. NO MORE THAN 5% OF THE JOINTS SHALL EXCEED 1/4" WIDE TO ACHIEVE STRAIGHT BOND LINES.
- 11. JOINT (BOND) LINES SHALL NOT DEVIATE MORE THAN ±1/2 IN. (±15 MM) OVER 50 FT. (15 M) FROM STRING LINES.
- 12. FILL GAPS AT THE EDGES OF THE PAVED AREA WITH CUT PAVERS OR EDGE UNITS.
- 13. CUT PAVERS TO BE PLACED ALONG THE EDGE WITH A MASONRY SAW. 14. ADJUST BOND PATTERN AT PAVEMENT EDGES SUCH THAT CUTTING OF EDGE PAVERS IS MINIMIZED.
- 15. IN NO CASE SHALL A CUT PAVER BE LESS THAN 1/3 FULL PAVER SIZE.
- 16. PAVER DIMENSIONS ARE NOMINAL. PRIOR TO POURING SLABS, BANDING, OR OTHERWISE SETTING PAVER FIELDS, VERIFY ACTUAL PAVER SIZES AND LAYOUT OF THE PAVER FIELDS. MAKE MINOR ADJUSTMENTS TO EDGE CONSTRAINTS AS REQUIRED TO ACCOMMODATE ACTUAL PAVER SIZES. NOTIFY LANDDESIGN IMMEDIATELY OF DISCREPANCIES AND/OR ADJUSTMENTS.

GRADING NOTES:

- 1. STAKE PER SPOT ELEVATIONS AND NOTED SLOPES. CONTOURS ARE PROVIDED FOR MASS GRADING/INTENT ONLY.
- WRITTEN DIMENSIONS AND GRADES PREVAIL OVER SCALED DIMENSIONS. NOTIFY LANDDESIGN OF ANY DISCREPANCIES.
- 3. ALL SPOT ELEVATIONS SHOWN ON GRADING PLAN ARE TO BOTTOM OF CURB/TOP OF PAVEMENT UNLESS OTHERWISE NOTED. ALL RIM ELEVATIONS ARE TO EDGE OF PAVEMENT.
- REFER TO GEOTECHNICAL ENGINEER AND GEOTECH REPORT FOR INFORMATION ON SUBSURFACE MATERIALS, TOPSOIL. STRUCTURAL MATERIAL, DEEP FILLS, EXCAVATION, AND FOUNDATIONS.
- 5. APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS.
- 6. IN ORDER TO ASSURE PROPER DRAINAGE, KEEP A MINIMUM OF .5% SLOPE ON THE CURB.
- ALL PLANTING ISLANDS SHALL BE GRADED TO MOUND TO PROVIDE POSITIVE DRAINAGE.
- CONTRACTOR TO VERIFY 2% MAX. CROSS-SLOPE ON ALL SIDEWALKS.
- 9. CONTRACTOR TO VERIFY THAT ALL SIDEWALK SLOPES, HANDICAP RAMPS, AND HANDICAP PARKING SPACES MEET ADA
- 10. CONCRETE SIDEWALKS ADJACENT TO TREE SAVE LOCATIONS SHOULD BE POURED ON TOP OF EXISTING GRADE.
- 11. REFER TO LANDSCAPE PLAN FOR ALL TREE PROTECTION FENCE LOCATIONS AND INSTALLATION PROCEDURES. BEFORE GRADING/CONSTRUCTION BEGINS, CALL FOR INSPECTION OF TREE PROTECTION BARRICADES. NO SOIL DISTURBANCE OR COMPACTION, CONSTRUCTION MATERIALS, TRAFFIC, BURIAL PITS, TRENCHING, OR OTHER LAND DISTURBING ACTIVITY ALLOWED IN THE TREE PROTECTION ZONE.
- 12. DIMENSIONS ON BUILDINGS ARE FOR GRADING PURPOSES ONLY AND ARE NOT TO BE USED TO LAYOUT FOOTINGS.
- 13. GRADING CONTRACTORS SHALL NOTIFY AND COOPERATE WITH ALL UTILITY COMPANIES OR FIRMS HAVING FACILITIES ON OR ADJACENT TO THE SITE BEFORE DISTURBING, ALTERING, REMOVING, RELOCATING, ADJUSTING OR CONNECTING TO SAID FACILITIES. CONTRACTORS SHALL PAY ALL COSTS IN CONNECTION WITH THE ALTERATION OF OR RELOCATION OF THE FACILITIES. CONTRACTORS SHALL RAISE OR LOWER TOPS OF EXISTING MANHOLES AS REQUIRED TO MATCH FINISHED GRADES.
- 14. GRADING CONTRACTOR SHALL COOPERATE AND WORK WITH ALL OTHER CONTRACTORS PERFORMING WORK ON THIS PROJECT TO INSURE PROPER AND TIMELY COMPLETION OF THIS PROJECT.

703.549.7784

WWW.LANDDESIGN.COM ENG. FIRM LICENSE # 0405002187



3130 LANGSTON

ROONEY PROPERTIES, LLC 3130 LANGSTON BOULEVARD

ARLINGTON, VA 22201

2024074 REVISION / ISSUANCE DESCRIPTION 4.1 SITE PLAN 08/09/2024 SUBMISSION

> DESIGNED BY: XX DRAWN BY: XX

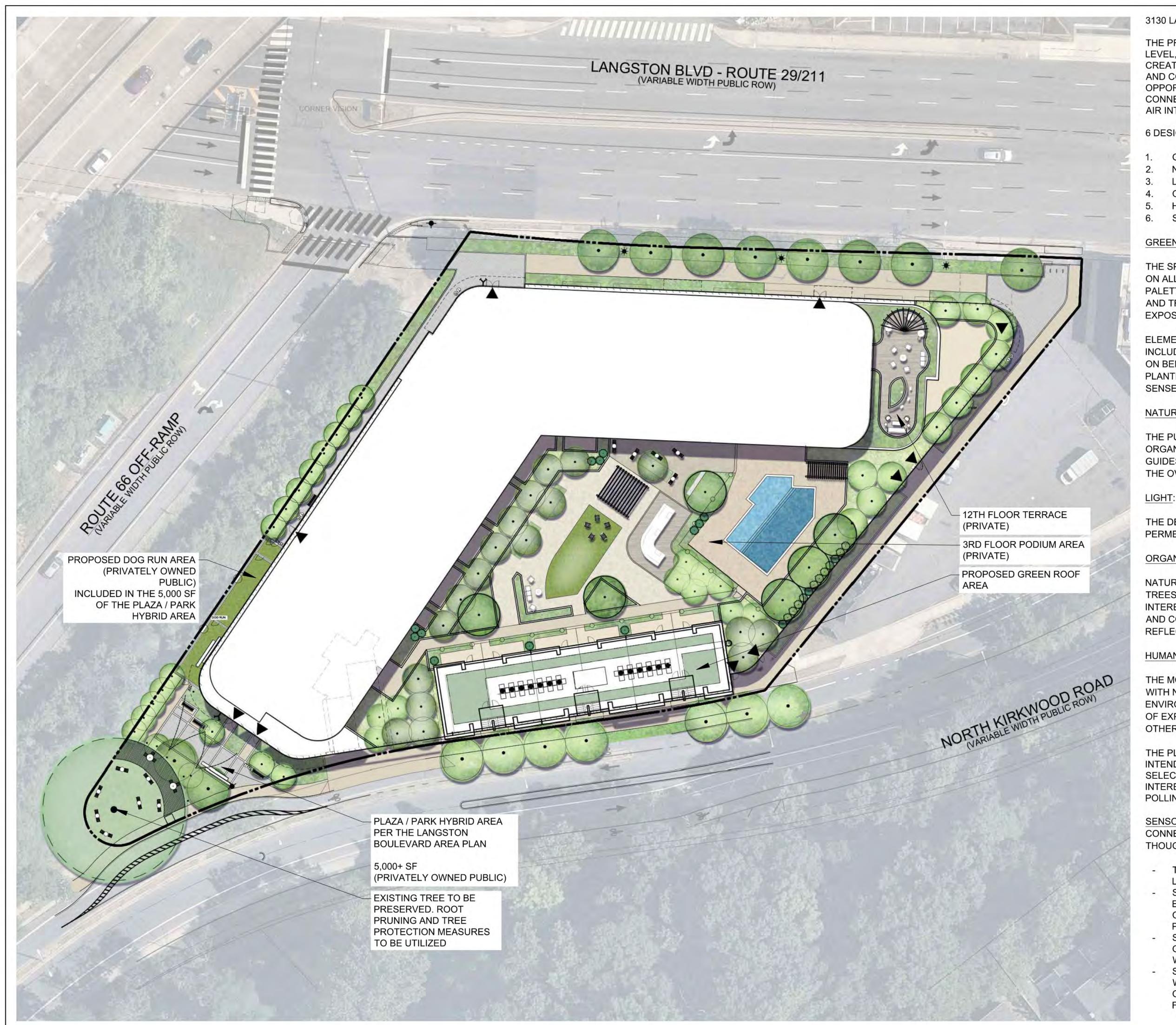
CHECKED BY: XX

VERT: N/A

GENERAL NOTES

8/9/2024 2:11 PM DAPHNE BRICE Z:\TEMPLATES\SHEETS\CD SHEETS\LA\SHEET-24X36.DW

ORIGINAL SHEET SIZE: 24" X 36"



3130 LANGSTON BOULEVARD

THE PROJECT CONSISTS OF A SERIES OF STREET LEVEL, PODIUM AND ROOF LEVEL SPACES, WHICH CREATE AMENITY ZONES FOR BUILDING RESIDENTS AND COMMUNITY MEMBERS. THESE AREAS PROVIDE OPPORTUNITIES FOR BIOPHILIC DESIGNS THAT CONNECT PEOPLE TO NATURE AND ALLOW LIGHT AND AIR INTO DWELLINGS.

6 DESIGN PRINCIPLES OF BIOPHILIA:

- GREEN ENVELOPE
- NATURE-INSPIRED FORMS & SHAPES
- LIGHT
- **ORGANIC PATTERNS & PROCESSES**
- **HUMAN RELATIONSHIPS TO NATURE**
- SENSORY EXPERIENCES

GREEN ENVELOPE:

THE SPACE DESIGN PROVIDES A "GREEN ENVELOPE" ON ALL SIDES THAT BENEFITS FROM A LANDSCAPE PALETTE THAT INCLUDES GROUNDCOVERS, SHRUBS, AND TREES TO MAXIMIZE VERTICAL GREEN EXPOSURE AND VISUAL / TACTILE ACCESSIBILITY.

ELEMENTS OF URBAN AND STREETSCAPE DESIGN INCLUDE ALL NATURAL MATERIALS SUCH AS WOOD ON BENCHES (HIGH CONTACT, SENSE OF TOUCH) AND PLANTER WALLS WITH SEATING (HIGH CONTACT, SENSE OF SMELL).

NATURE-INSPIRED FORMS & SHAPES:

THE PUBLIC SPACE GEOMETRY REFLECTS AN ORGANIC ORGANIZATIONAL APPROACH, THAT GENTLY GUIDES PEDESTRIAN ACCESS AND WALKABILITY OF THE OVERALL SPACE.

THE DESIGN AND LAYOUT ALLOW NATURAL LIGHT TO PERMEATE THROUGHOUT.

ORGANIC PATTERNS & PROCESSES:

NATURAL COMPONENTS OF THE DESIGN, SUCH AS TREES, WILL CONTRIBUTE TEXTURAL RICHNESS WITH INTERESTING BARK, LEAF AND BRANCH PATTERNS. AND COLORS DURING VARIOUS SEASONS REFLECTING CYCLICAL NATURAL PROCESSES.

HUMAN RELATIONSHIPS TO NATURE:

THE MOST BASIC CONNECTION THAT HUMANS HAVE WITH NATURE IS WITH THE VEGETATIVE ENVIRONMENT. DIVERSE PLANT PALETTES REMIND US OF EXPANSIVE OPEN FIELDS, WOODED AREAS, AND OTHER DESIRABLE NATURE SETTINGS.

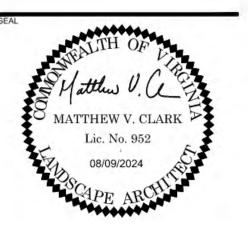
THE PLANT PALETTE ENVISIONED FOR THE PROJECT INTENDS TO BRING A TRUE CONNECTION VIA PLANT SELECTIONS THAT ARE NATIVE, HAVE SEASONAL INTEREST, AND SUPPORT URBAN HABITAT SUCH AS POLLINATORS.

SENSORY EXPERIENCES: CONNECTIONS TO OUR LIVING ENVIRONMENTS ARE THOUGH SENSORY EXPERIENCES

- TOUCH: TEXTURAL DESIGN VIA HARDSCAPE / LANDSCAPE ELEMENTS.
- SIGHT: VIEWS ARE INTERNALLY AND EXTERNALLY FOCUSED, DELIBERATELY ORCHESTRATED BY THE LOCATION AND PLACEMENT OF BENCHES.
- SMELL: BREEZY SPACES CARRIES SCENTS FROM GRASSES AND OTHER PLANTS MOVING IN THE WIND.
- SOUND: THE RUSTLING OF TREE LEAVES IN THE WIND, AS WELL AS THE TREE CANOPY, AND OTHER DESIGN FEATURES MITIGATING NOISE FROM THE OVERALL NEIGHBORING ACTIVITY.



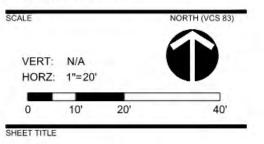
200 S. PEYTON STREET ALEXANDRIA, VA 22314 703.549.7784 WWW.LANDDESIGN.COM ENG. FIRM LICENSE # 0405002187



3130 LANGSTON **BOULEVARD**

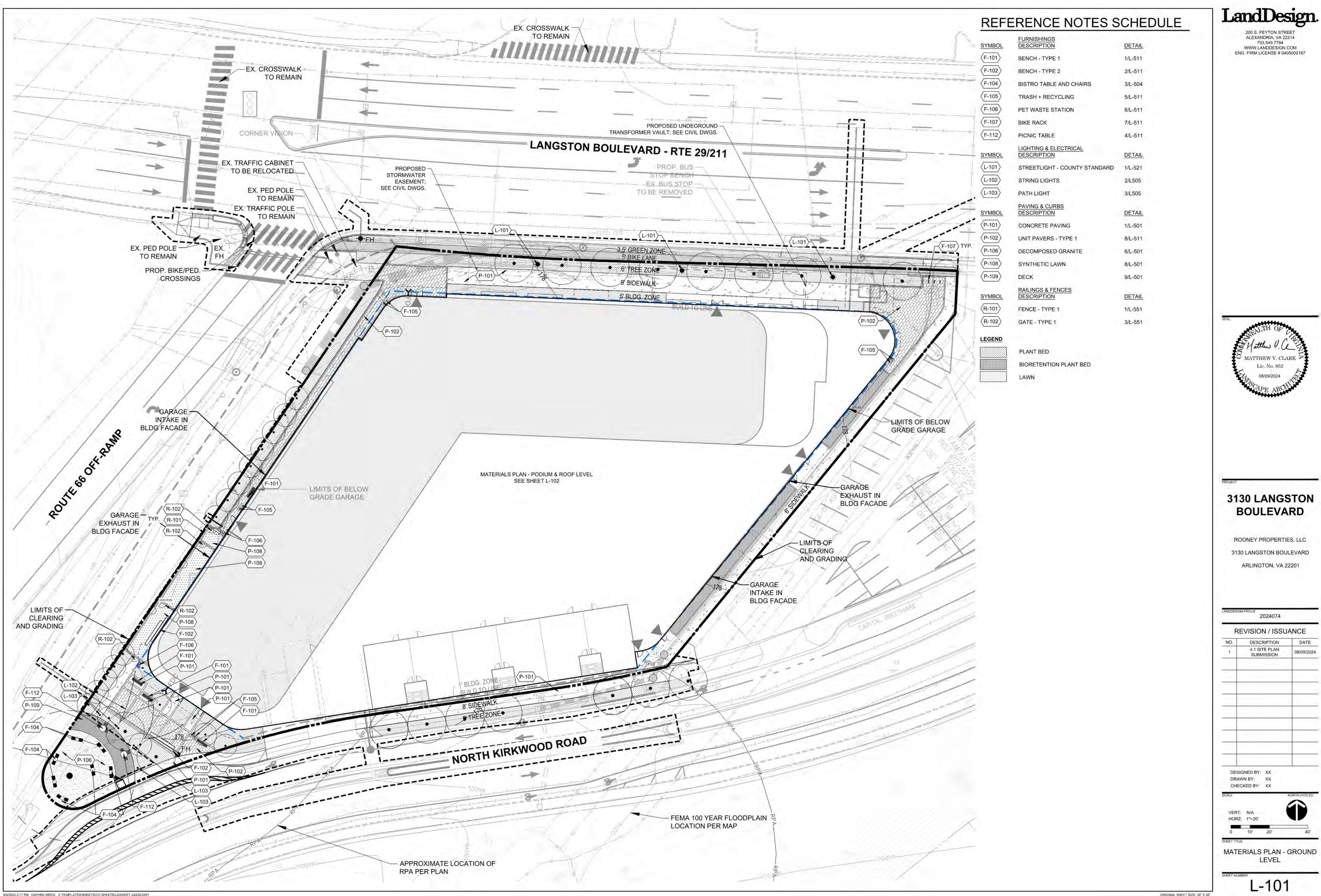
ROONEY PROPERTIES, LLC 3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

NO.	DESCRIPTION	DATE
1.	4.1 SITE PLAN SUBMISSION	08/09/2024
4		
4		



CHECKED BY: AC

ILLUSTRATIVE PLAN



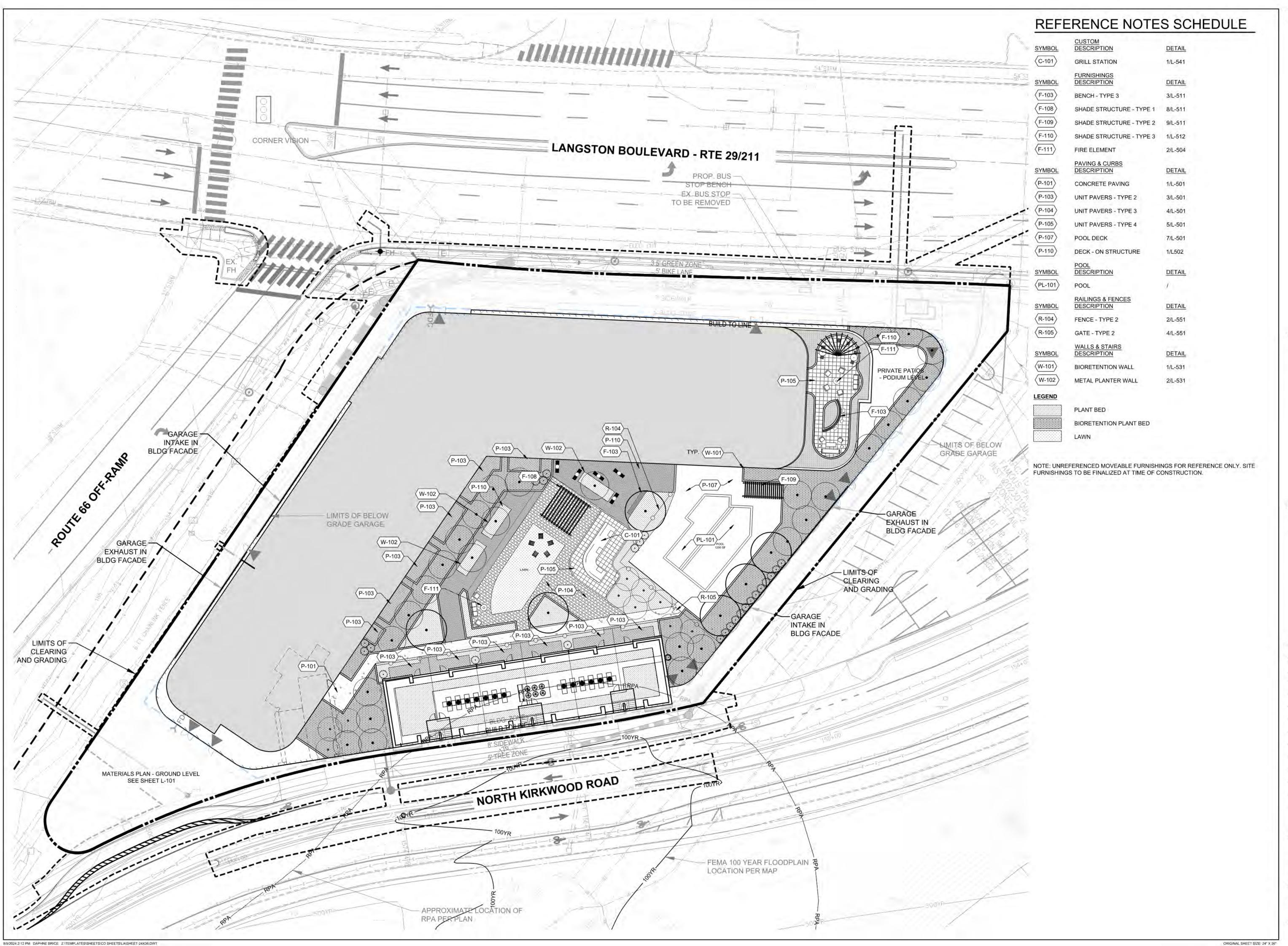
200 S. PEYTON STREET ALEXANDRIA, VA 22314 703,549,7784 WWW.LANDDESIGN.COM ENG. FIRM LICENSE # 0405002187



3130 LANGSTON BOULEVARD

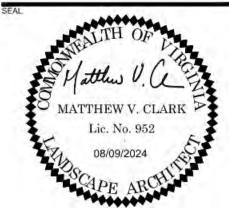
3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

NO.	DESC	CRIPTION	DATE
1		ITE PLAN MISSION	08/09/2024
-			
-			
PEG	OUED DV	××	
	GNED BY: WN BY:	XX XX	
	CKED BY:	xx	
CALE			NORTH (VCS 83)
VERT	N/A 1"=20"		P
0	10'	20'	40'



LandDesign.

200 S. PEYTON STREET ALEXANDRIA, VA 22314 703.549.7784 WWW.LANDDESIGN.COM ENG. FIRM LICENSE # 0405002187



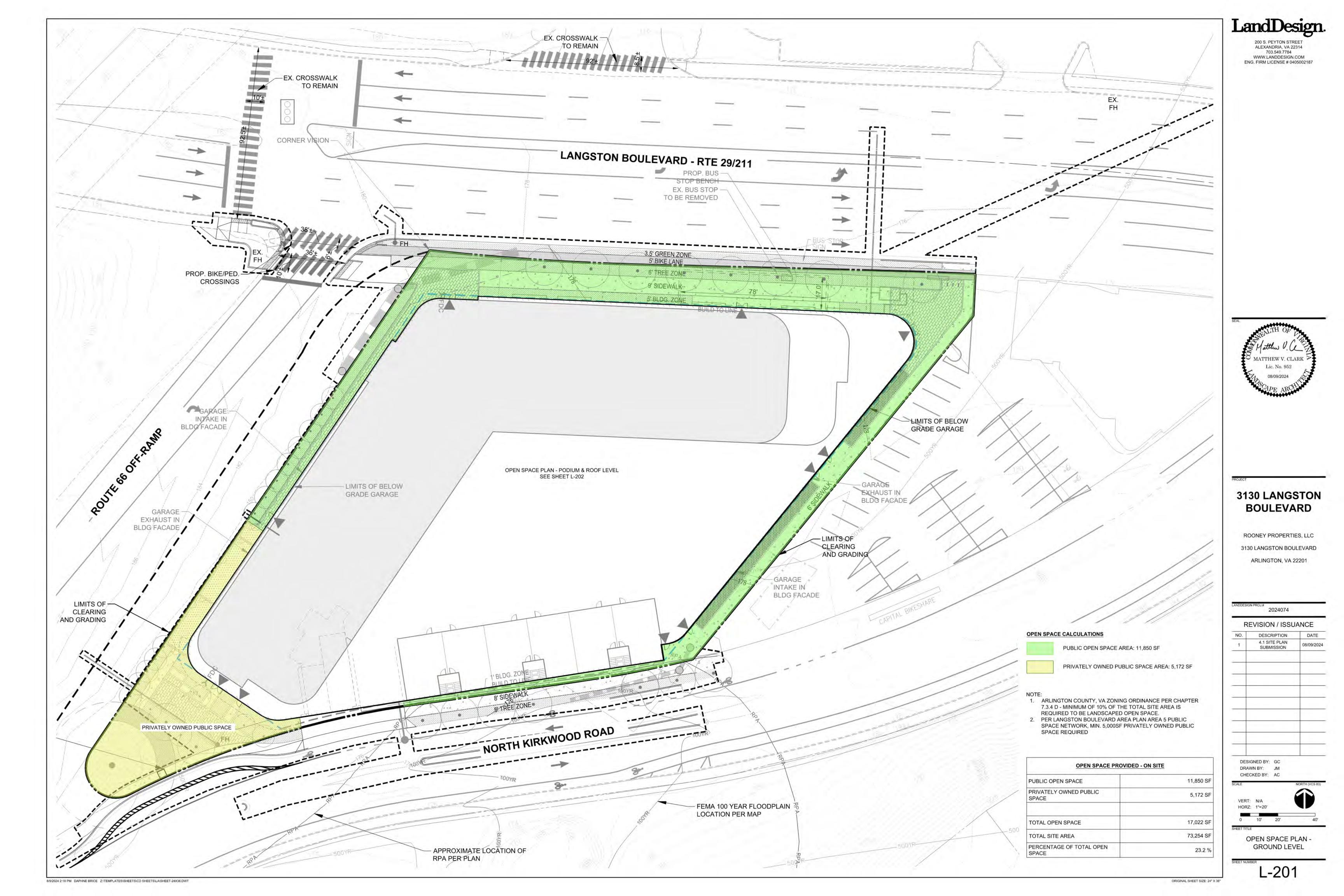
3130 LANGSTON BOULEVARD

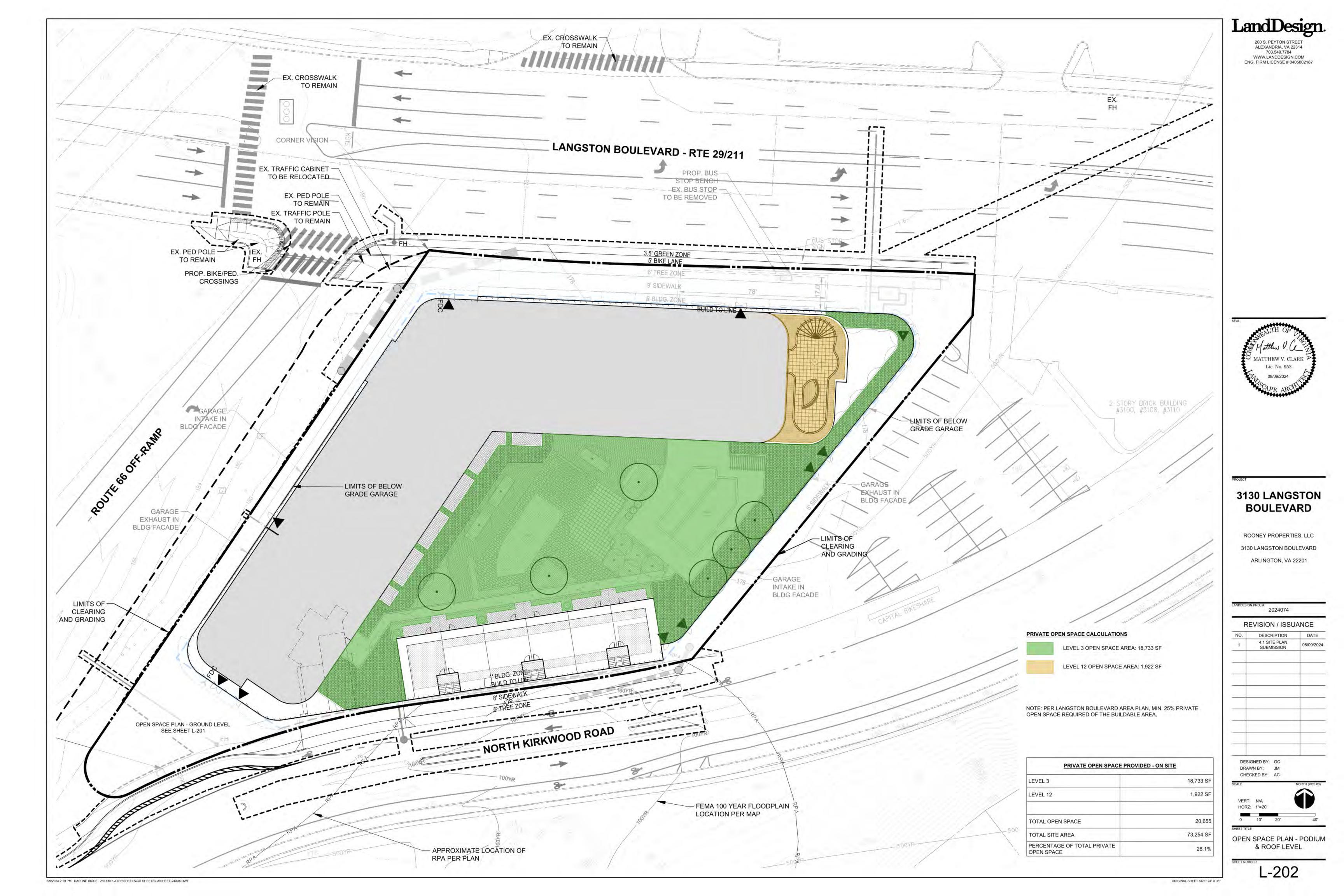
ROONEY PROPERTIES, LLC 3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

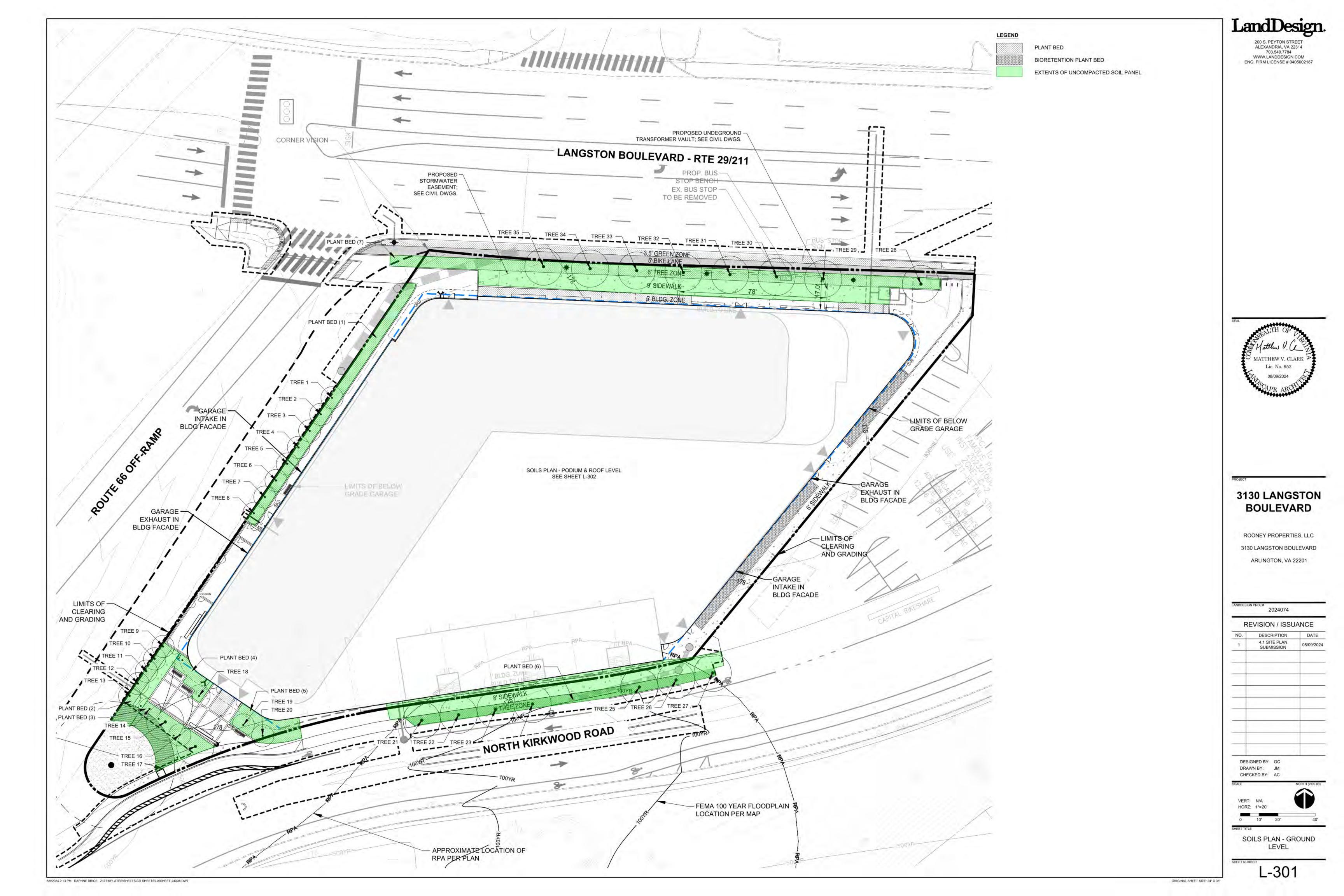
2024074

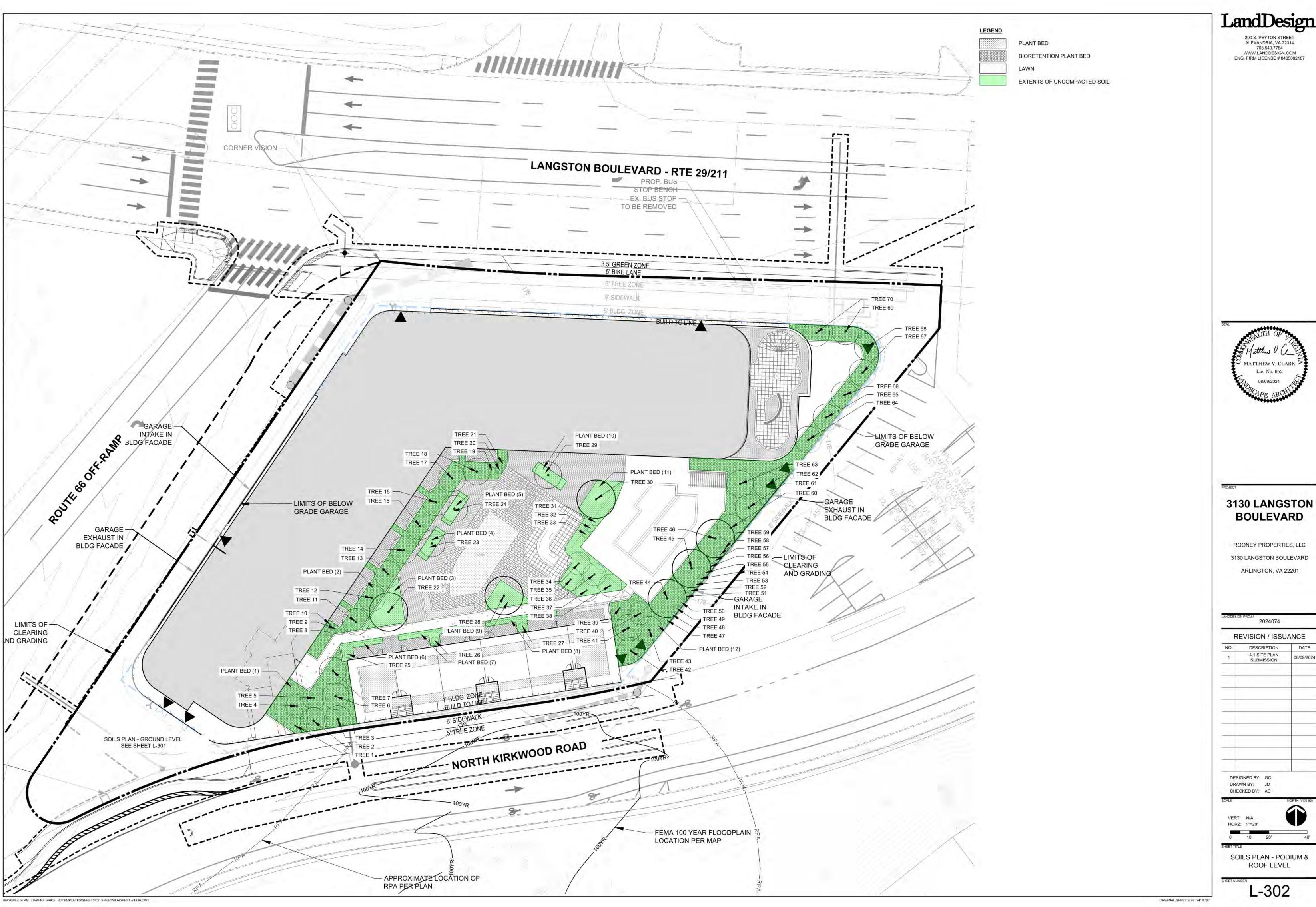
1	DESCRIPTION	DATE
	4.1 SITE PLAN SUBMISSION	11870072022
		- 11 + ===
		- 11
0.5	SIGNED BY: GC	
	AWN BY: JM	
47.6	ECKED BY: AC	
ALE		NORTH (VCS 83)
VEE	RT: N/A	
	RZ: 1"=20"	
0	10' 20'	40'

MATERIALS PLAN - PODIUM & ROOF LEVEL









R	EVISIO	N/ISSU	JANCE
NO.	DESC	RIPTION	DATE
1		ITE PLAN MISSION	08/09/2024
DES	IGNED BY:	GC	
	WN BY:	JM AC	
CHE	CKED BT:	AC	NORTH (VCS 83)
	I: N/A Z: 1"=20"		
0	10'	20'	40'

SOIL VOLUME TABULATION - GROUND LEVEL

LOCATION	PIT SOIL AREA (SF)	TREE	TREE SOIL AREA (SF)	TREESOIL VOLUME PROVIDED (3 FT DEPTH)	VOLUME REQUIREMENT (CU FT/TREE)	SIZE
PLANT BED 1	861	TREE 1	107.5	322.5	300	SMALL
		TREE 2	107.5	322	300	SMALL
		TREE 3	107.5	322	300	SMALL
		TREE 4	107.5	322	300	SMALL
		TREE 5	107.5	322	300	SMALL
		TREE 6	107.5	322	300	SMALL
		TREE 7	107.5	322	300	SMALL
		TREE 8	107.5	322	300	SMALL
PLANT BED 2	508*	TREE 9	101.5	304.5	300	MEDIUM
		TREE 10	101.5	304.5	300	MEDIUM
		TREE 11	101.5	304.5	300	MEDIUM
		TREE 12	101.5	304.5	300	MEDIUM
		TREE 13	101.5	304.5	300	MEDIUM
PLANT BED 3	725*	TREE 14	181.25	543.75	300	MEDIUM
		TREE 15	181.25	543.75	300	LARGE
		TREE 16	181.25	543.75	300	MEDIUM
		TREE 17	181.25	543.75	300	LARGE
PLANT BED 4	220	TREE 18	220	660	300	SMALL
PLANT BED 5	465	TREE 19	232.5	697.5	300	SMALL
		TREE 20	232.5	697.5	300	SMALL
PLANT BED 6	2529*◊	TREE 21	361	1083	1000	LARGE
		TREE 22	361	1083	1000	LARGE
		TREE 23	361	1083	1000	LARGE
		TREE 24	361	1083	1000	LARGE
		TREE 25	361	1083	1000	LARGE
		TREE 26	361	1083	1000	LARGE
		TREE 27	361	1083	1000	LARGE
PLANT BED 7	3716*	TREE 28	464.5	1393.5	1000	LARGE
		TREE 29	464.5	1393.5	1000	LARGE
		TREE 30	464.5	1393.5	1000	LARGE
		TREE 31	464.5	1393.5	1000	LARGE
		TREE 32	464.5	1393.5	1000	LARGE
		TREE 33	464.5	1393.5	1000	LARGE
		TREE 34	464.5	1393.5	1000	LARGE
		TREE 35	464.5	1393.5	1000	LARGE

*NOTE: SOIL AREAS NOTED ON THIS PLAN WITH A * SYMBOL INCLUDE CONTINUOUS UNCOMPACTED SOIL PANEL UNDER SUSPENDED HARDSCAPE

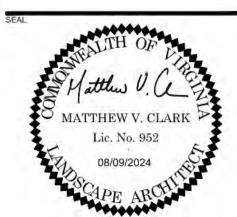
**NOTE: SOIL AREAS NOTED ON THIS PLAN WITH A ◊ SYMBOL INCLUDE STRUCTURAL CELLS

SOIL VOLUME TABULATION - PODIUM AND ROOF LEVEL

LOCATION	PIT SOIL AREA (SF)	TREE	TREE SOIL AREA (SF)	TREE SOIL VOLUME PROVIDED (3 FT DEPTH)	(CU FT/TREE)	SIZE
PLANT BED 1	1130	TREE 1	161	483	300	SMALL
		TREE 2	161	483	300	MEDIUN
		TREE 3	161	483	300	MEDIUN
		TREE 4	161	483	300	SMALL
		TREE 5	161	483	300	SMALL
		TREE 6	161	483	300	MEDIUN
		TREE 7	161	483	300	MEDIUN
PLANT BED 2	1440	TREE 8	102	308	300	SMALL
		TREE 9	102	308	300	SMALL
		TREE 10	102	308	300	SMALL
		TREE 11	102	308	300	MEDIUN
		TREE 12	102	308	300	MEDIUN
		TREE 13	102	308	300	MEDIUN
		TREE 14	102	308	300	MEDIUN
		TREE 15	102	308	300	MEDIUN
		TREE 16	102	308	300	LARGE
		TREE 17	102	308	300	MEDIUM
	t =	TREE 18	102	308	300	MEDIUN
	+					
-		TREE 19	102 102	308 308	300 300	SMALL
		TREE 20				SMALL
DI ANT DED 3	201	TREE 21	102	308	300	SMALL
PLANT BED 3	281	TREE 22	281	848	300	LARGE
PLANT BED 4	100	TREE 23	100	300	300	MEDIUN
PLANT BED 5	100	TREE 24	100	300	300	MEDIUN
PLANT BED 6	100	TREE 25	100	300	300	SMALL
PLANT BED 7	141	TREE 26	141	423	300	SMALL
PLANT BED 8	144	TREE 27	144	432	300	SMALL
PLANT BED 9	194	TREE 28	194	582	300	LARGE
PLANT BED 10	100	TREE 29	100	300	300	MEDIUN
PLANT BED 11	951	TREE 30	118	354	300	LARGE
	_ ~ ~	TREE 31	118	354	300	SMALL
		TREE 32	118	354	300	SMALL
		TREE 33	118	354	300	SMALL
-	1	TREE 34	118	354	300	SMALL
		TREE 35	118	354	300	SMALL
		TREE 36	118	354	300	SMALL
		TREE 37	118	354	300	SMALL
		TREE 38	118	354	300	SMALL
PLANT BED 12	3491	TREE 39	112	336	300	SMALL
FLANT DED 12	3431	TREE 40	112	336	300	SMALL
		TREE 41	112	336	300	MEDIUM
			112	336		
		TREE 42			300	MEDIUN
		TREE 43	112	336	300	MEDIUN
		TREE 44	112	336	300	LARGE
	1	TREE 45	112	336	300	LARGE
		TREE 46	112	336	300	LARGE
		TREE 47	112	336	300	SMALL
		TREE 48	112	336	300	SMALL
= = = 11	7	TREE 49	112	336	300	SMALL
	11 =	TREE 50	112	336	300	SMALL
		TREE 51	112	336	300	SMALL
		TREE 52	112	336	300	SMALL
		TREE 53	112	336	300	SMALL
		TREE 54	112	336	300	SMALL
	J =	TREE 55	112	336	300	SMALL
		TREE 56	112	336	300	SMALL
		TREE 57	112	336	300	SMALL
		TREE 58	112	336	300	SMALL
		TREE 59	112	336	300	SMALL
		TREE 60	112	336	300	MEDIUM
		TREE 61	112	336	300	MEDIUM
		TREE 62	112	336	300	MEDIUN
		TREE 63	112	336	300	MEDIUN
-						
		TREE 64	112	336	300	MEDIUM
		TREE 65	112	336	300	MEDIUM
		TREE 66	112	336	300	MEDIUN
1		TREE 67	112	336	300	MEDIUM
		TREE 68	112	336	300	MEDIUN
		TREE 69	112	336	300	MEDIUN
		TREE 70	112	336	300	MEDIUN



200 S. PEYTON STREET ALEXANDRIA, VA 22314 703,549.7784 WWW.LANDDESIGN.COM ENG. FIRM LICENSE # 0405002187



3130 LANGSTON BOULEVARD

ROONEY PROPERTIES, LLC 3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

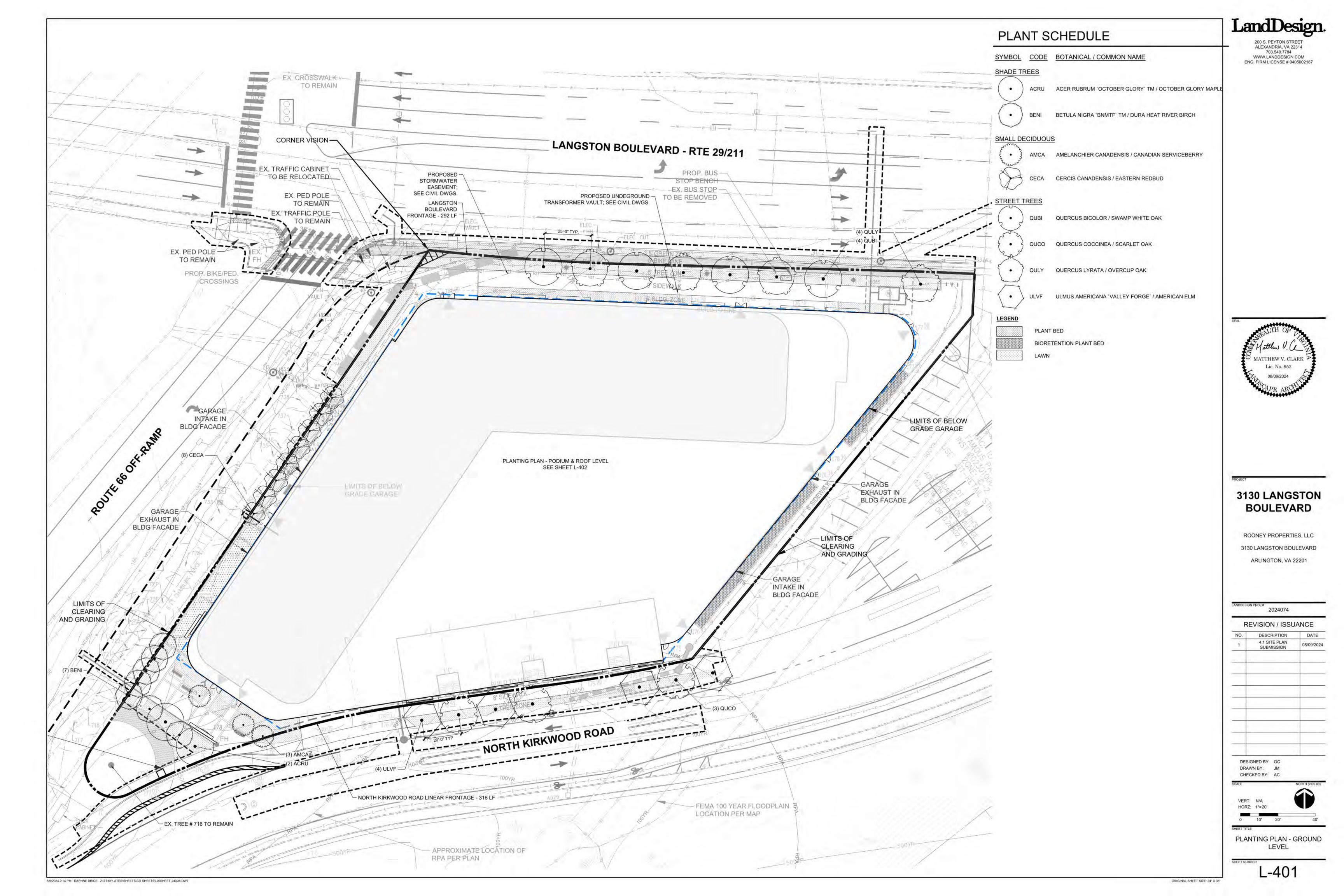
RE	EVISION / ISSU	ANCE
NO.	DESCRIPTION	DATE
1	4.1 SITE PLAN SUBMISSION	08/09/2024
		1
_		
		1

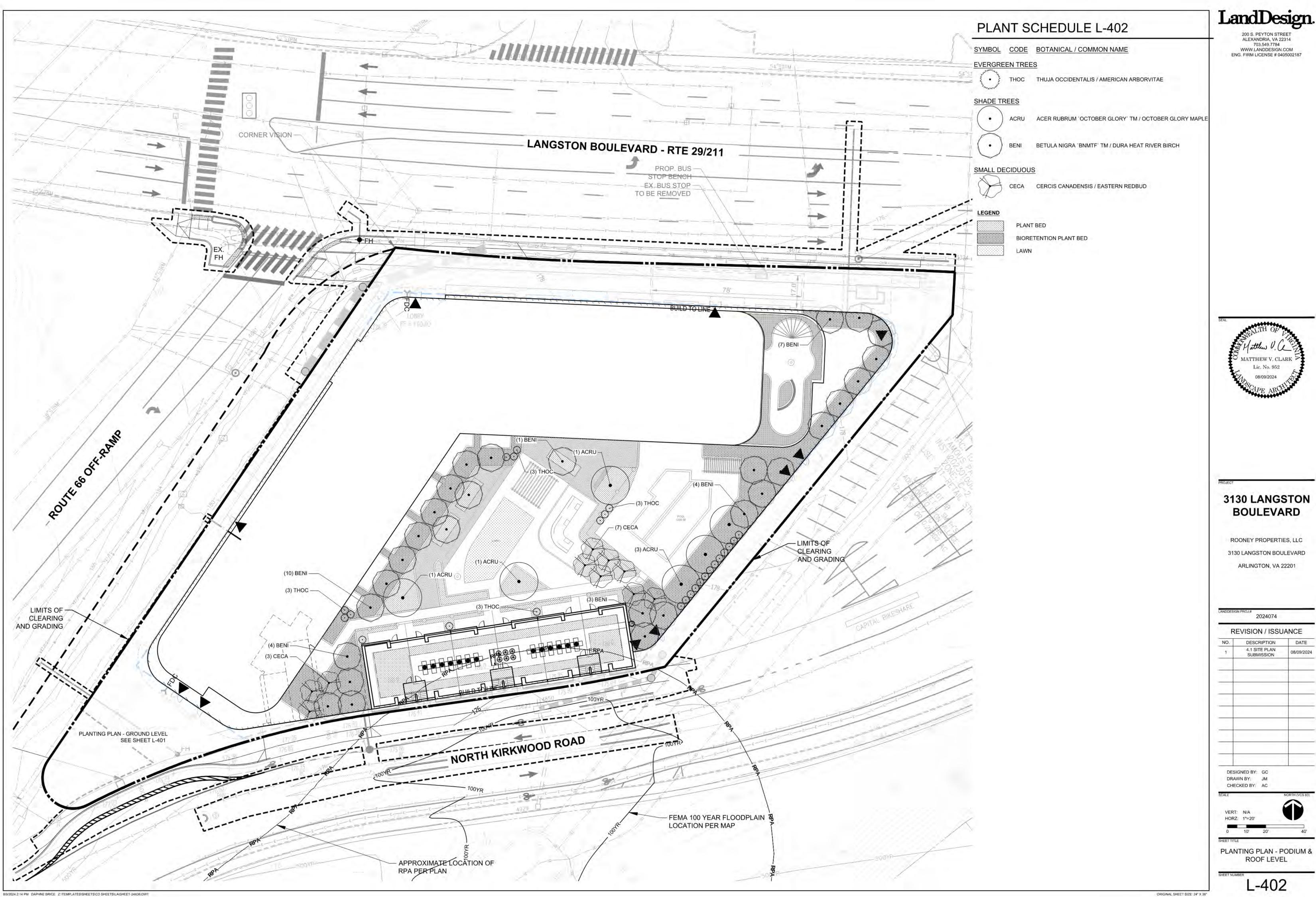
DESIGNED BY: GC DRAWN BY: JM CHECKED BY: AC

VERT: N/A HORZ: N/A

SOIL VOLUME TABULATIONS

Sheer of the tree of the tree of the





PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONTAINER	CAL	HT.	SPD.
VERGRE	EN TREE	S					
And the same of th	THOC	25	THUJA OCCIDENTALIS / AMERICAN ARBORVITAE 600 CF SOIL VOLUME; 62.5 TREE CANOPY COVERAGE	2		6' - 7'	
SHADE TE	REES						
(\cdot)	ACRU	8	ACER RUBRUM 'OCTOBER GLORY' TM / OCTOBER GLORY MAPLE 1200 CF SOIL REQUIRED; 393.75 CANOPY COVERAGE	B & B	2"-2 1/2"		
\odot	BENI	36	BETULA NIGRA 'BNMTF' TM / DURA HEAT RIVER BIRCH 900 CF SOIL REQUIRED; 218.75 CANOPY COVERAGE	B & B	3.5"CAL	8' - 10'	5' - 7'
SMALL DE	CIDUOU	S					
(·)	AMCA	3	AMELANCHIER CANADENSIS / CANADIAN SERVICEBERRY 600 CF SOIL REQUIRED; 137.5 CANOPY COVERAGE; SINGLE TRUNK.	B & B		6' - 7'	
	CECA	18	CERCIS CANADENSIS / EASTERN REDBUD 600 CF SOIL REQUIRED; 137.5 CANOPY COVERAGE	B & B	1" MIN.		
TREET T	REES						
(\cdot)	QUBI	4	QUERCUS BICOLOR / SWAMP WHITE OAK 1200 CF SOIL REQUIRED; 393.75 CANOPY COVERAGE	B & B	1 3/4" - 2"		
8 . 3 . 3 . 3 . 3 . 3 . 3 . 3 . 3 . 3 .	QUCO	3	QUERCUS COCCINEA / SCARLET OAK 1200 SF SOIL VOLUME; 393.75 TREE CANOPY CREDIT	B & B	1 3/4" - 2"		
(\cdot)	QULY	4	QUERCUS LYRATA / OVERCUP OAK 1200 SF SOIL VOLUME; 393.75 TREE CANOPY CREDIT	B & B	1 3/4" - 2"		
$\widetilde{\langle \cdot \rangle}$	ULVF	4	ULMUS AMERICANA 'VALLEY FORGE' / AMERICAN ELM 1200 CF SOIL REQUIRED; 393,75 CANOPY COVERAGE	B & B	1 3/4" - 2"		

TREE REPLACEMENT AND 20-YEAR CANOPY CALCULATIONS PER ARLINGTON COUNTY CODE AND CHESAPEAKE BAY PRESERVATION ORDINANCE

		20-YEAR	TREE CANOPY: TREE PRESERVATION CREDITS		
ree No.	SPECIES	COMMON NAME	EXISTING CALIPER (IN)	SIZE	20-YR COVERAGE (SF
716	Zelkova serrata	Zelkova	34.7	LARGE	3402.00
		A conversion		TOTAL 20-YR COVERAGE PRESERVED (SF)	3402.00
		20-YR TREE CANOPY REQ	UIREMENT		

20-YR TREE CANOPY REQUIREMENT	
PROPERTY BOUNDRY AREA	73,254.00 SF
REQUIRED 20-YR TREE CANOPY (35%):	25638.9 SF
20-YR TREE CANOPY PRESERVED (SF):	3402.00 SF
20-YEAR TREE CANOPY TO BE MET THROUGH PLANTING (SF):	22,236.90 SF

QTY	SPECIES	COMMON NAME	SIZE AT PLANTING (FT)	CALIPER AT PLANTING (IN)	SPREAD AT PLANTING (FT)	SIZE	20-YR COVERAGE (SF
25	Thuja occidentalis	American arborvitae	6-7	-	3	SMALL	62.50
8	Acer rubrum 'October Glory'	October Glory maple		2-2.5	3	LARGE	393.75
36	Betula nigra 'BNMTF'	Dura Heat river birch	8-10	+-	5-7	MEDIUM	218.75
3	Amelanchier canadensis	Canadian serviceberry	6-7		3	SMALL	137.95
18	Cercis canadensis	eastern redbud	4	1 MIN	3	SMALL	137.50
4	Quercus bicolor	swamp white oak	- W.	1.75-2	3	LARGE	393.75
3	Quercus coccinea	scarlet oak		1.75-2	3	LARGE	393.75
4	Quercus lyrata	overcup oak	35	1.75-2	3	LARGE	393.75
4	Ulmus americana 'Valley Forge'	American elm		1.75-2	3	LARGE	393.75
			4			TOTAL 20-YR COVERAGE PROPOSED (SF)	21382.60

		(105 PROPOSED 1
REQUIRED TREE CANOPY	25638.90 SF	
PRESERVED TREE CANOPY	3402.00 SF	
ROPOSED TREE CANCPY	21382.60 SF	
TOTAL TREE CANOPY	24784.60 SF	

SHRUB COVERAGE CALCULATION

NOTE: ARUNGTON COUNTY ZONING PER CHAPTER 14 2 2 14

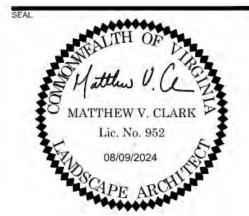
NOTE: ARLINGTON COUNTY ZONING PER CHAPTER 14.2.2 LANDSCAPING REQUIRES MINIMUM TWENTY-FIVE PERCENT (25%) SHRUB COVERAGE AT MATURITY.

7,487 SQ FT LANDSCAPE AREA X 25% = 1,872 SQ FT MINIMUM SHRUB COVERAGE

TOTAL SHRUB COVERAGE PROVIDED: 3,676 SF TOTAL LANDSCAPE AREA: 7,487 SF PERCENT OF SHRUB COVERAGE PROVIDED: 49%



200 S. PEYTON STREET ALEXANDRIA, VA 22314 703.549.7784 WWW.LANDDESIGN.COM ENG. FIRM LICENSE # 0405002187



3130 LANGSTON BOULEVARD

ROONEY PROPERTIES, LLC 3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

RE	EVISION / ISSU	ANCE
NO.	DESCRIPTION	DATE
1	4.1 SITE PLAN SUBMISSION	08/09/2
-		
-		-
-		1
		1
_1		

ERT: N/A

HORZ: N/A

CHECKED BY: AC

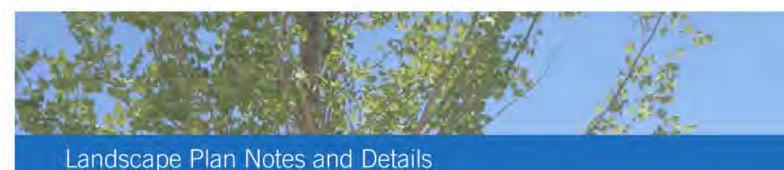
PLANT SCHEDULE AND 20
YEAR CANOPY WORKSHEET

Landscape Plan Notes and Details

LANDSCAPE AND PLANTING NOTES

- MATERIAL SHALL BE FURNISHED AND INSTALLED AS INDICATED ON PLANS, INCLUDING ALL LABOR, MATERIALS. PLANTS, EQUIPMENT, INCIDENTALS, AND CLEAN-UP.
- GRADING AND PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE, AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE AND STANDARDS. THE ACCEPTABLE PLANTING RANGE IS FROM MARCH-JUNE 15 AND SEPTEMBER-DECEMBER, FOR NON-TREE MATERIAL, AND OCTOBER - JUNE 15 FOR TREES. PLANTS SHALL NOT BE INSTALLED IN TOPSOIL THAT IS MUDDY OR FROZEN. CARE SHALL BE TAKEN TO PROVIDE PLANTS WITH ENOUGH WATER TO COMBAT HEAT STRESS DURING HOT/DRY WEATHER.
- ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN, AND UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE ARCHITECT OR REPRESENTATIVE. SOIL AREAS ADJACENT TO BUILDINGS SHALL SLOPE AWAY FROM BUILDING. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW FREE FLOW OF SURFACE WATER, CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITIONS CONSIDERED DETRIMENTAL TO GROWTH OF PLANT MATERIAL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLANTING AT CORRECT GRADES AND ALIGNMENT PER APPROVED PLANS, NO TREES SHALL BE PLANTED LESS THAN TWO FEET FROM EXISTING STRUCTURES AND SIDEWALKS. LAYOUT OF PLANTS SHALL BE APPROVED BY LANDSCAPE ARCHITECT OR REPRESENTATIVE PRIOR TO INSTALLATION.
- PLANTS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY, HAVE NORMAL GROWTH HABITS, WELL-DEVELOPED DENSELY FOLIATED BRANCHES, VIGOROUS ROOT SYSTEMS, AND BE FREE FROM DEFECTS AND INJURIES. QUALITY AND SIZE OF PLANTS, SPREAD OF ROOTS AND SIZE OF ROOTBALL SHALL BE IN ACCORDANCE WITH THE MOST RECENT VERSION OF ANSI "AMERICAN STANDARD FOR NURSERY STOCK" PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.
- ALL PLANT MATERIAL SHALL BE GUARANTEED BY THE INSTALLER TO BE IN VIGOROUS GROWING CONDITION. PROVISION SHALL BE MADE FOR A GROWTH GUARANTEE OF AT LEAST ONE YEAR FROM THE DATE OF ACCEPTANCE FOR ALL PLANT MATERIAL. REPLACEMENTS SHALL BE MADE AT THE BEGINNING OF THE FIRST SUCCEEDING PLANTING SEASON. ALL REPLACEMENTS SHALL HAVE A GUARANTEE EQUAL TO THAT STATED ABOVE.
- PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY IF PRACTICAL, IF 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 OTHERWISE DIRECTED BY THE ARLINGTON COUNTY LANDSCAPE ARCHITECT OR REPRESENTATIVE.
- ALL INJURED ROOTS SHALL BE PRUNED USING ANSI A300 STANDARDS.
- CONTRACTOR SHALL PROVIDE 4 IN. MINIMUM THICK TOPSOIL LAYER IN ALL PLANTING AREAS. TOPSOIL SHALL BE FREE OF WEEDS, DEBRIS, ROCKS LARGER THAN 2 IN , WOOD, ROOTS, VEGETABLE MATTER, AND CLAY CLODS. CLEAN, FERTILE TOPSOIL PRESENT AT THE SITE, IF ANY, MAY BE USED TO SUPPLEMENT TOTAL AMOUNT REQUIRED.

ARLINGTON COUNTY LANDSCAPE STANDARDS REFERENCE GUIDE | PG. 35



- PLANTING PITS SHALL BE DUG PER COUNTY DETAILS. SET PLANTS PLUMB AND STRAIGHT, WITH ROOT FLARES SLIGHTLY ABOVE GRADE. DO NOT COVER THE ROOT FLARE WITH SOIL OR MULCH, BACKFILL PLANTING PITS WITH AMENDED TOPSOIL, AND THOROUGHLY WATER AND TAMP AS BACK-FILLING PROGRESSES. WATER AGAIN TO ACHIEVE SOIL SATURATION IMMEDIATELY FOLLOWING PLANTING.
- 11. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME, SO AS NOT TO DAMAGE THE BARK OR BREAK BRANCHES, PLANTS SHALL BE HANDLED FROM THE BOTTOM OF THE ROOT BALL ONLY.
- 12. EACH TREE AND SHRUB SHALL BE PRUNED IN ACCORDANCE WITH ANSI A300: STANDARDS FOR TREE CARE PRACTICES, TO PRESERVE THE HEALTH AND APPEARANCE OF THE PLANT, PRUNING SHALL BE DONE WITH CLEAN, SHARP TOOLS.
- 13. TREES SHALL BE SUPPORTED AFTER PLANTING ONLY AS DIRECTED BY THE URBAN FORESTER. IF INSTALLED, THE LANDSCAPE CONTRACTOR SHALL REMOVE STAKING, GUYING AND TREE WRAP AT THE END OF THE ONE-YEAR MAINTENANCE AND WARRANTY PERIOD.
- 14. ALL PLANTING BEDS SHALL BE MULCHED WITH A 3 IN. LAYER OF WEED-FREE DOUBLE SHREDDED HARDWOOD BARK MULCH, OR OTHER EQUIVALENT AS APPROVED BY THE LANDSCAPE ARCHITECT OR REPRESENTATIVE. KEEP MULCH AWAY FROM TRUNKS OF TREES AND OTHER PLANT MATERIALS.
- NEW PLANTINGS AND TURF SHALL BE ADEQUATELY IRRIGATED OR WATERED THROUGHOUT ESTABLISHMENT.
- 16. UPON COMPLETION OF ALL PLANTING AND BEFORE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL MATERIAL, EQUIPMENT AND DEBRIS. ALL PAVED AREAS SHALL BE BROOM-SWEPT AND LEFT IN A NEAT CONDITION.
- 17. URBAN FORESTER NOTIFICATION: THE DEVELOPER AGREES TO NOTIFY THE URBAN FORESTER AT LEAST 72 HOURS IN ADVANCE OF THE INSTALLATION OF DRAINAGE, SPECIAL SOIL EXPANSION EQUIPMENT, TREE PIT CREATION, AND SCHEDULED PLANTING OF ANY TREES IN THE PUBLIC RIGHT OF WAY, AND TO BE AVAILABLE AT THE TIME OF PLANTING TO MEET WITH DPR STAFF TO INSPECT THE PLANT MATERIAL, TREE PIT AND PLANTING TECHNIQUES. SOIL USED IN THE TREE PIT MUST MEET THE SPECIFICATIONS FOR STREET TREE PLANTING IN THE "STANDARDS FOR PLANTING AND PRESERVATION OF TREES ON SITE PLAN PROJECTS" AVAILABLE FROM THE URBAN FORESTER.

Landscape Plan Notes and Details

LANDSCAPE MAINTENANCE MANAGEMENT PROGRAM

GENERAL;

A. ALL PLANTING AREAS, INCLUDING LAWNS, BUFFERS, AND PARKING LOTS, SHALL BE PERIODICALLY INSPECTED A MINIMUM OF ONCE PER MONTH. A FALL CLEAN-UP SHALL BE PERFORMED EACH YEAR. B. REMOVE ALL LITTER, DEBRIS AND WEEDS. C. MAINTAIN A MINIMUM OF A 2 INCH DEPTH OF ORGANIC HARDWOOD MULCH OR EQUIVALENT IN ALL

PLANTING BEDS.

IRRIGATION:

A. KEEP NEW TURF MOIST UNTIL ALL SEED GERMINATES AND BECOMES AN ESTABLISHED STAND OF TURF. B. AUTOMATIC SPRINKLERS SHALL BE CLEANED OUT AND TURNED OFF IN THE FALL PRIOR TO THE FIRST FROST, AND TESTED WHEN TURNED ON IN THE SPRING.

C. EVALUATE SUCCESS OF IRRIGATION SYSTEM AND MODIFY AS NECESSARY.

- PRUNING: ALL PRUNING SHALL BE DONE IN ACCORDANCE WITH ANSI PRUNING STANDARDS. REMOVAL OF DEAD, DISEASED, INSECT INFESTED OR WEAK WOOD SHALL TAKE PLACE WHEN APPROPRIATE FOR THE SPECIES. THE VIRGINIA TECH PRUNING CALENDAR SHALL BE USED FOR GUIDANCE ON APPROPRIATE TIMING. EXCESSIVE SHOOTS AND SUCKERS SHALL BE REMOVED.
- INSECT AND DISEASE CONTROL: THE CONTROL OF INSECTS AND DISEASE ASSOCIATED WITH ALL PLANTING AREAS SHALL BE A MAINTENANCE PRIORITY. ALL PLANTINGS, INCLUDING EXISTING MATURE TREES, SHALL BE PERIODICALLY INSPECTED FOR INSECT OR DISEASE INFESTATION. METHODS USED TO CONTROL INSECTS OR DISEASE MAY RANGE FROM SPRAYING AND PRUNING TO PLANT REMOVAL. SAFETY AND CONTROL SHALL BE OF PRIME CONCERN. TRAINED AND CERTIFIED PERSONNEL SHALL PERFORM THESE TASKS.

RENOVATION:

A. RENOVATION INCLUDES THE RESEEDING OR REPLANTING OF LANDSCAPE AREAS DAMAGED, DESTROYED OR FAILING DUE TO INSECTS, DISEASE, WEATHER OR PHYSICAL DAMAGE.

B. ALL LAWN AREAS WHERE SOIL HAS BEEN EXPOSED SHALL BE RENOVATED DURING THE NEXT PLANTING SEASON. PROPER HORTICULTURAL AND SOIL EROSION PREVENTION METHODS SHALL BE USED. IF SOIL EROSION HAS OCCURRED, THE AREA SHALL BE REPAIRED WITH A SEED MIXTURE COMPATIBLE WITH

C. ALL PLANTINGS WHICH ARE DAMAGED OR DESTROYED SHALL BE REPLACED DURING OR BEFORE THE NEXT

D. CARE SHALL BE TAKEN TO AVOID DAMAGE TO ESTABLISHED TREE ROOTS DURING RENOVATION OF LANDSCAPE

- SITE AMENITIES: BENCHES, PATHS, BICYCLE RACKS, TRASH RECEPTACLES, AND SIGNS SHALL BE INSPECTED AT LEAST TWICE A YEAR, ONCE IN SPRING AND ONCE IN AUTUMN, TO DETERMINE THEIR CONDITION. ANY DAMAGED, WORN, OR UNSAFE CONDITIONS SHALL BE RECTIFIED IMMEDIATELY.
- PAVED SURFACES:

A. ALL PAVED SURFACES SHALL BE INSPECTED ON A MONTHLY-BASIS FOR TRASH, STAINS, DAMAGE, CRACKS, POT HOLES, AND OBSTRUCTIONS, AND RETURNED TO THEIR ORIGINAL CONDITIONS. ANY UNSAFE CONDITIONS, SUCH AS UNEVEN SURFACES OR TRIPPING HAZZARDS, SHALL BE RECTIFIED IMMEDIATELY.

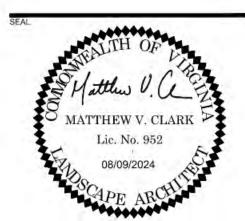
ARLINGTON COUNTY LANDSCAPE STANDARDS REFERENCE GUIDE | PG. 37

TREE PLANTING

- PLANTS SHALL BE FURNISHED AND INSTALLED AS INDICATED ON THE LANDSCAPE PLAN.
- 2. PLANTS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY, AND COMPLY WITH MOST RECENT ANSI Z60.1 STANDARDS.
- 3. PLANTS SHALL BE PLANTED ON THE DAY OF DELIVERY. IF 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. ALL PLANTS KEPT ON SITE FOR ANY PERIOD SHOULD BE WATERED AND CARED FOR USING ANSI A300 STANDARDS.
- 4. NO STAKES SHALL BE USED TO STABILIZE TREES, UNLESS DIRECTED BY THE ARLINGTON COUNTY URBAN FORESTER.
- 5. TREES PLANTED SHALL RECEIVE A 3 INCH THICK LAYER OF SHREDDED HARDWOOD MULCH, IN A 6 FOOT RING SURROUNDING THE TREE, WITH A 6 INCH CLEAR AREA NEAR THE TRUNK.
- 6. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME TO DAMAGE THE BARK OR BREAK BRANCHES. PLANTS SHALL BE HANDLED FROM THE BOTTOM OF THE ROOT BALL ONLY.
- 7. 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. TREES AND SHRUBS SHALL BE INSTALLED BETWEEN 09/15 AND 12/15 OR BETWEEN 03/15 AND 06/15. CONTACT THE ARLINGTON COUNTY URBAN FORESTER TO OBTAIN A DEFERRAL OR APPROVAL FOR PLANTING OUT OF SEASON.
- 8. NO PLANT, EXCEPT GROUNDCOVERS, SHALL BE PLANTED WITHIN TWO FEET OF A SIDEWALK, 5 FEET FROM A FENCE, 10 FEET FROM A BUILDING, OR 15 FEET FROM OVERHEAD UTILITY LINES.
- 9. TREES AND SHRUBS SHALL BE PLANTED IN HOLES TWO TO THREE TIMES AS WIDE AND TO THE DEPTH OF THE ROOT BALL.
- 10. PLANTS SHALL BE PLANTED IN HEALTHY, UNCOMPACTED SOIL. SEE THE PLANTING DETAIL FOR SOIL SPECIFICATIONS. 11. SET ALL PLANTS PLUMB AND STRAIGHT 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. 12. INJURED ROOTS SHALL BE PRUNED TO CLEAN ENDS BEFORE PLANTING WITH CLEAN, SHARP TOOLS. THE LEADER OF TREES SHALL NOT BE CUT BACK.
- 13. AT THE END OF THE PROJECT, CONSERVED AND PLANTED TREES MUST BE INSPECTED AND APPROVED BY AN ARLINGTON COUNTY URBAN FORESTER.



703.549.7784 WWW.LANDDESIGN.COM ENG. FIRM LICENSE # 0405002187



3130 LANGSTON **BOULEVARD**

ROONEY PROPERTIES, LLC 3130 LANGSTON BOULEVARD

ARLINGTON, VA 22201

RI	EVISION / ISSU	ANCE
NO.	DESCRIPTION	DATE
1	4.1 SITE PLAN SUBMISSION	08/09/2

DESIGNED BY: GC DRAWN BY: JM CHECKED BY: AC

COUNTY LANDSCAPE PLAN NOTES

ARLINGTON COUNTY LANDSCAPE STANDARDS REFERENCE GUIDE | PG. 36



CONCRETE PAVING

2 UNIT PAVERS - TYPE 1

L-501 PICTORIAL

L-501 PICTORIAL

L-501 PICTORIAL

8/9/2024 2:15 PM DAPHNE BRICE Z:\TEMPLATES\SHEETS\CD SHEETS\LA\SHEET-24X36.DWT

NOTE: OR CLIENT/COUNTY APPROVED EQUAL.

NTS

NOTE: OR CLIENT/COUNTY APPROVED EQUAL.



NOTE: OR CLIENT/COUNTY APPROVED EQUAL.

UNIT PAVERS - TYPE 3 L-501 PICTORIAL

POOL DECK

SYNTHETIC LAWN

L-501 PICTORIAL

NTS

200 S. PEYTON STREET ALEXANDRIA, VA 22314 703.549.7784 WWW.LANDDESIGN.COM ENG. FIRM LICENSE # 0405002187



NOTE: OR CLIENT/COUNTY APPROVED EQUAL.

NTS



NOTE: OR CLIENT/COUNTY APPROVED EQUAL.



NOTE: OR CLIENT/COUNTY APPROVED EQUAL.

3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

3130 LANGSTON

BOULEVARD

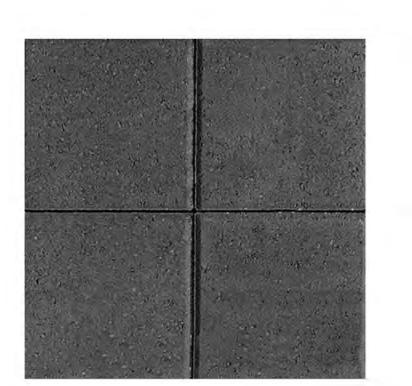
ROONEY PROPERTIES, LLC

2024074

REVISION / ISSUANCE

08/09/2024

DESCRIPTION 4.1 SITE PLAN SUBMISSION



NOTE: OR CLIENT/COUNTY APPROVED EQUAL.



NOTE: OR CLIENT/COUNTY APPROVED EQUAL.



NOTE: OR CLIENT/COUNTY APPROVED EQUAL.

DETAILS - HARDSCAPE

DESIGNED BY: XX DRAWN BY: XX CHECKED BY: XX



DECOMPOSED GRANITE L-501 PICTORIAL

UNIT PAVERS - TYPE 4

L-501 PICTORIAL

L-501

ORIGINAL SHEET SIZE: 24" X 36"

NTS



NOTE: OR CLIENT/COUNTY APPROVED EQUAL.

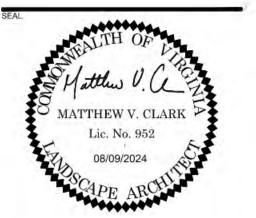
1 DECK - ON STRUCTURE

L502 PICTORIAL

NTS



200 S. PEYTON STREET ALEXANDRIA, VA 22314 703.549.7784 WWW.LANDDESIGN.COM ENG. FIRM LICENSE # 0405002187



3130 LANGSTON BOULEVARD

ROONEY PROPERTIES, LLC 3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

RE	EVISION / ISSU	ANCE
NO.	DESCRIPTION	DATE
1	4.1 SITE PLAN SUBMISSION	08/09/20
-		
		-
		1
-		

DESIGNED BY: GC DRAWN BY: JM CHECKED BY: AC

VERT: N/A

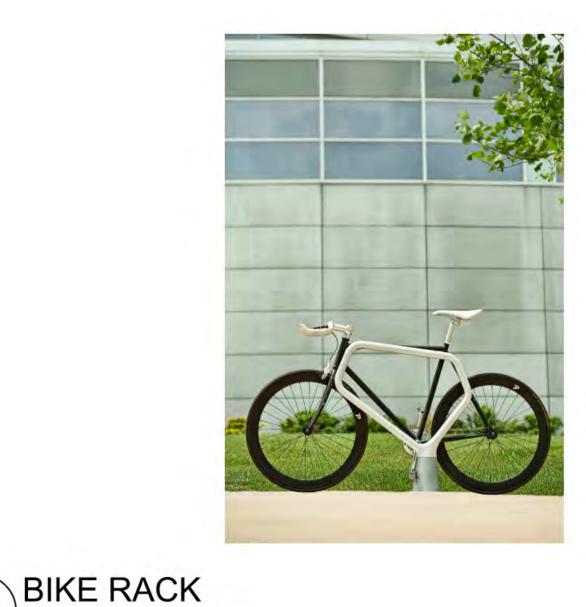
DETAILS - HARDSCAPE



NOTE: OR CLIENT/COUNTY APPROVED EQUAL.



NOTE: OR CLIENT/COUNTY APPROVED EQUAL.



NOTE: OR CLIENT/COUNTY APPROVED EQUAL.

BENCH - TYPE 1

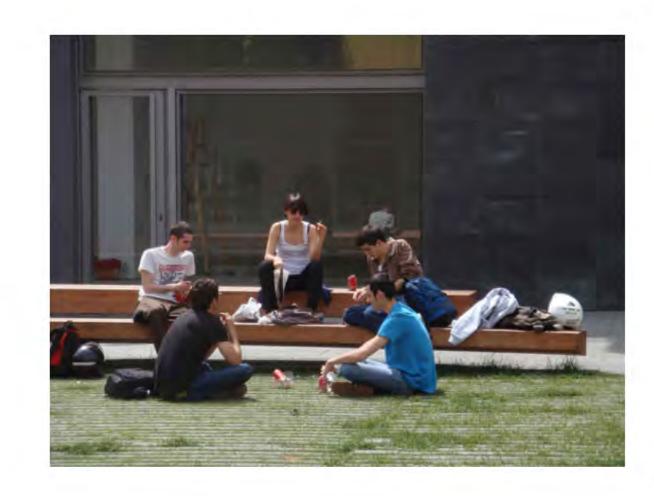
PICNIC TABLE

NTS

L-511 PICTORIAL

NTS

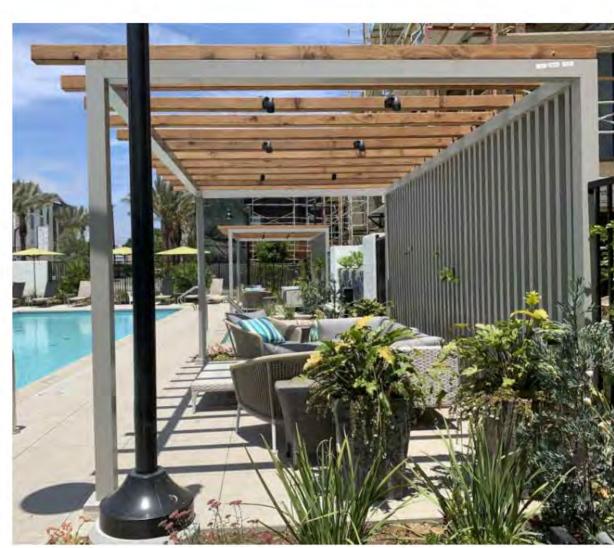
200 S. PEYTON STREET ALEXANDRIA, VA 22314 703.549.7784 WWW.LANDDESIGN.COM ENG. FIRM LICENSE # 0405002187



NOTE: OR CLIENT/COUNTY APPROVED EQUAL.



NOTE: OR CLIENT/COUNTY APPROVED EQUAL.



2 BENCH - TYPE 2

TRASH + RECYCLING

8 SHADE STRUCTURE - TYPE 1

L-511 PICTORIAL

ARLINGTON, VA 22201

3130 LANGSTON

BOULEVARD

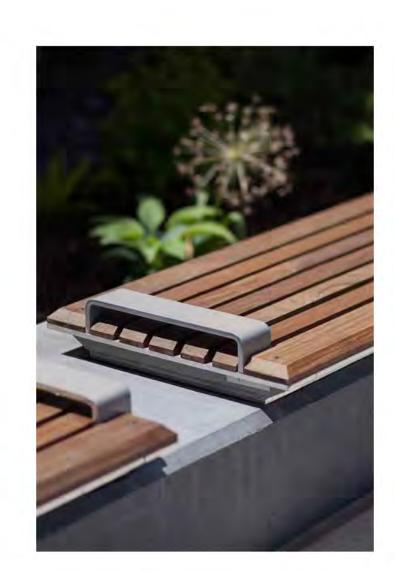
ROONEY PROPERTIES, LLC

3130 LANGSTON BOULEVARD

2024074

REVISION / ISSUANCE

DESCRIPTION 4.1 SITE PLAN SUBMISSION

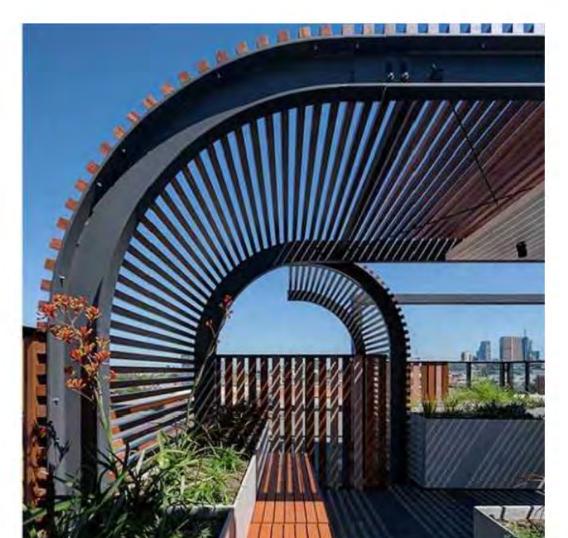


NOTE: OR CLIENT/COUNTY APPROVED EQUAL.



NOTE: OR CLIENT/COUNTY APPROVED EQUAL.

NTS



NOTE: OR CLIENT/COUNTY APPROVED EQUAL.

3 BENCH - TYPE 3

6 PET WASTE STATION

9 SHADE STRUCTURE - TYPE 2 L-511 PICTORIAL

DETAILS - FURNISHINGS

DESIGNED BY: GC DRAWN BY: JM CHECKED BY: AC

HORZ: N/A

L-511

8/9/2024 2:16 PM DAPHNE BRICE Z:\TEMPLATES\SHEETS\CD SHEETS\LA\SHEET-24X36.DWT

NTS



NOTE: OR CLIENT/COUNTY APPROVED EQUAL.

1 SHADE STRUCTURE - TYPE 3

.-512 PICTORIAL

NTS



NOTE: OR CLIENT/COUNTY APPROVED EQUAL.

2 FIRE ELEMENT

NTS



NOTE: OR CLIENT/COUNTY APPROVED EQUAL.

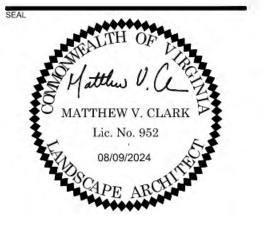
3 BISTRO TABLE + CHAIRS

L-512 PICTORIAL

NTS

LandDesign.

200 S. PEYTON STREET ALEXANDRIA, VA 22314 703.549.7784 WWW.LANDDESIGN.COM ENG. FIRM LICENSE # 0405002187



3130 LANGSTON BOULEVARD

ROONEY PROPERTIES, LLC 3130 LANGSTON BOULEVARD

ARLINGTON, VA 22201

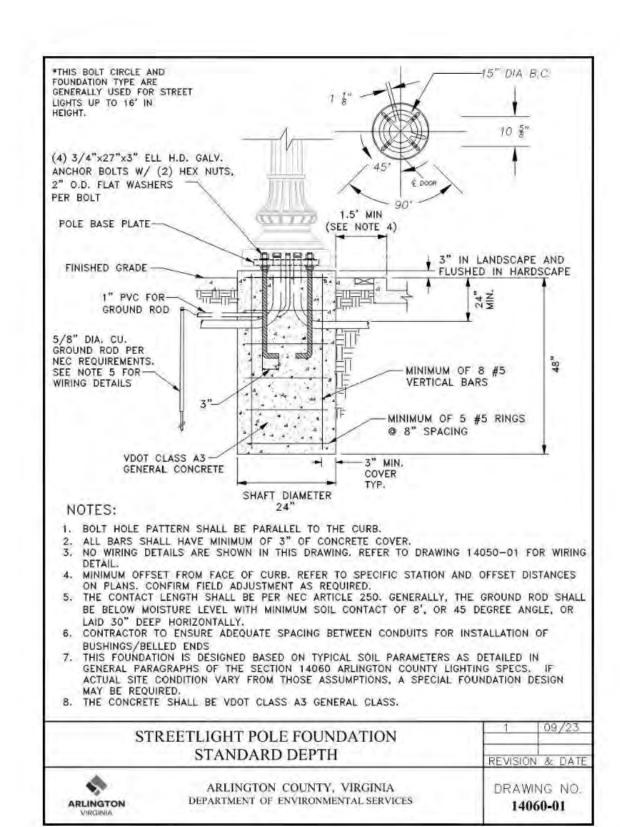
REVISION / ISSUANCE		
NO.	DESCRIPTION	DATE
1	4.1 SITE PLAN SUBMISSION	08/09/2024
-		
-		1
+		
+		+
+		+
+		
+		+
-		

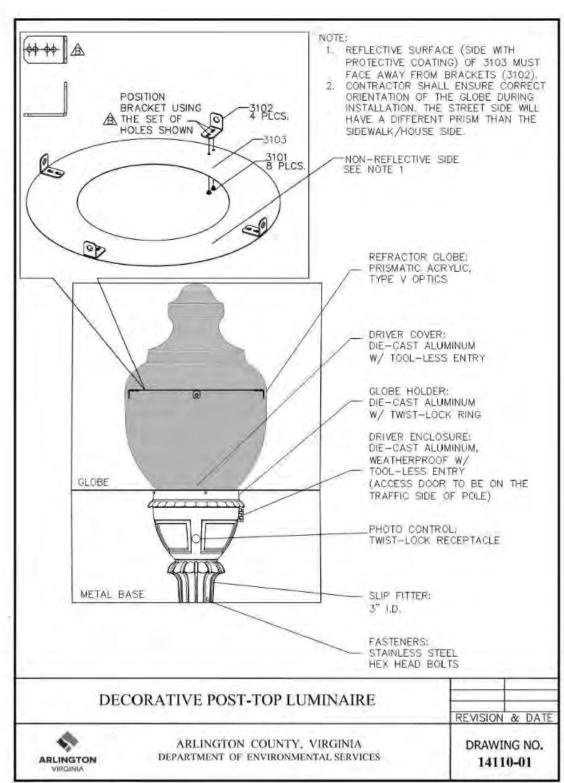
Ē

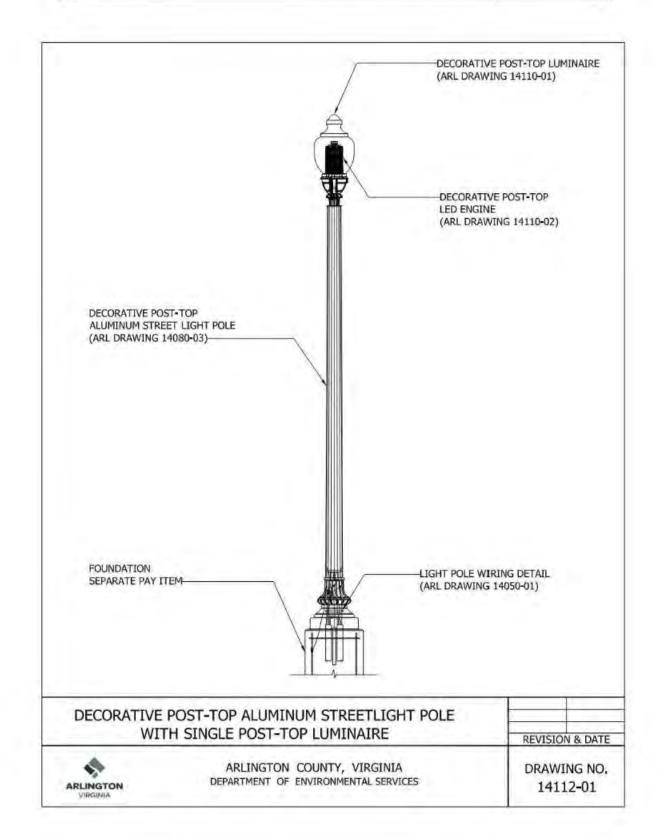
VERT: N/A HORZ: N/A

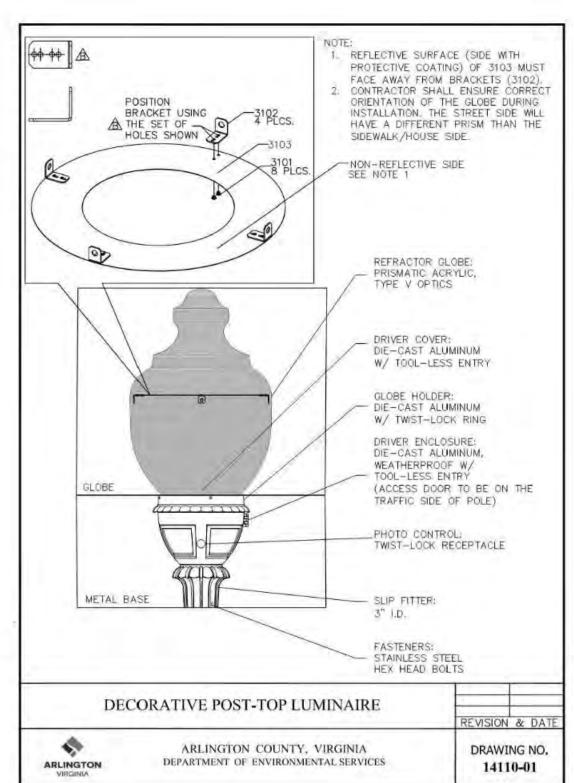
SHEET TITLE

DETAILS - FURNISHINGS











NOTE: OR CLIENT/COUNTY APPROVED EQUAL.

2 STRING LIGHTS L-521 PICTORIAL

NTS



NOTE: OR CLIENT/COUNTY APPROVED EQUAL.

NTS

3 PATH LIGHT

3130 LANGSTON BOULEVARD

200 S. PEYTON STREET ALEXANDRIA, VA 22314 703.549.7784 WWW.LANDDESIGN.COM ENG. FIRM LICENSE # 0405002187

ROONEY PROPERTIES, LLC 3130 LANGSTON BOULEVARD

ARLINGTON, VA 22201

2024074 REVISION / ISSUANCE DESCRIPTION 4.1 SITE PLAN 08/09/2024 SUBMISSION

> DESIGNED BY: GC DRAWN BY: JM CHECKED BY: AC

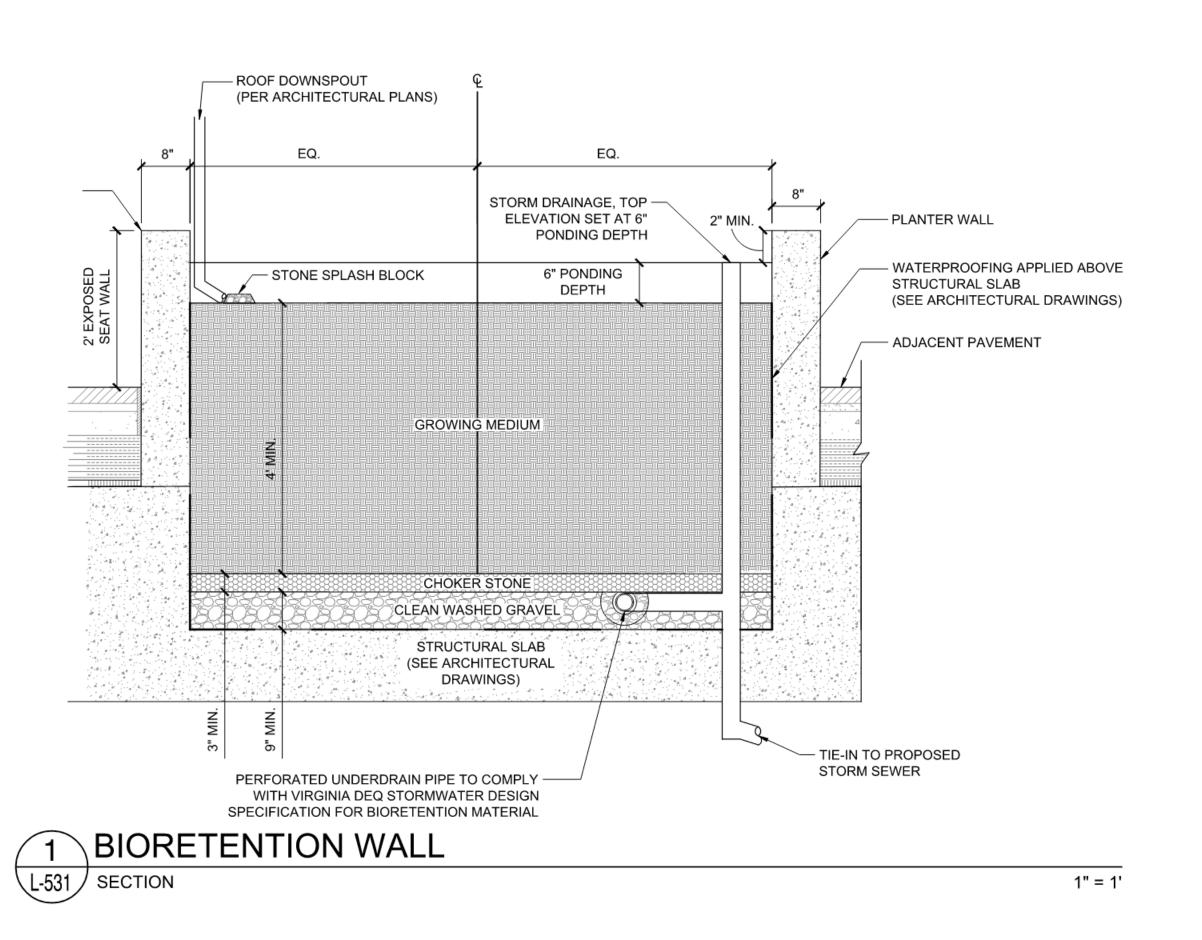
DETAILS - LIGHTING

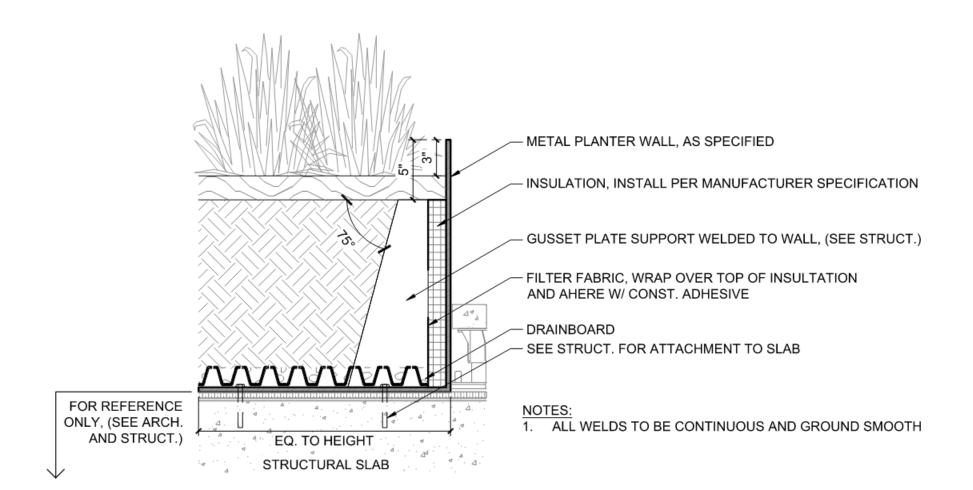
1 STREETLIGHT - COUNTY STANDARD

NTS

8/9/2024 2:16 PM DAPHNE BRICE Z:\TEMPLATES\SHEETS\CD SHEETS\LA\SHEET-24X36.DWT

ORIGINAL SHEET SIZE: 24" X 36"



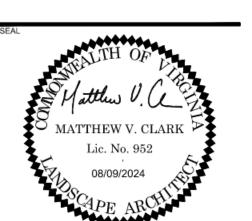


1 1/2" = 1'-0"



LandDesign.

200 S. PEYTON STREET ALEXANDRIA, VA 22314 703.549.7784 WWW.LANDDESIGN.COM ENG. FIRM LICENSE # 0405002187



3130 LANGSTON BOULEVARD

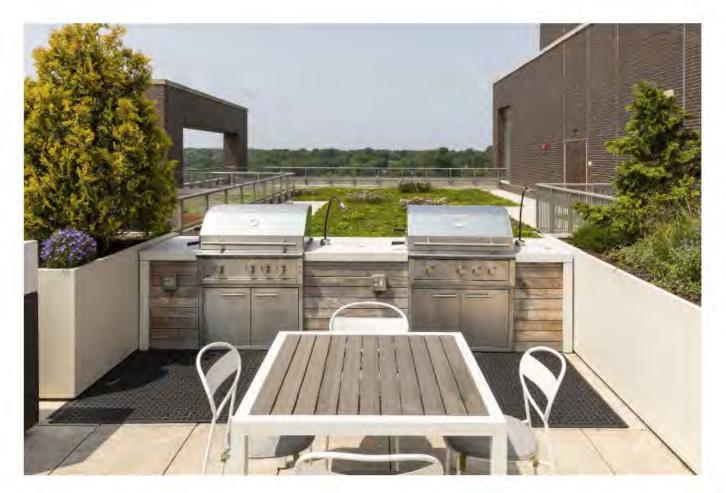
ROONEY PROPERTIES, LLC
3130 LANGSTON BOULEVARD

.ANDDES	ANDDESIGN PROJ.# 2024074			
REVISION / ISSUANCE				
NO.	DESCRIPTION	DATE		
1	4.1 SITE PLAN SUBMISSION	08/09/2024		
	SIGNED BY: GC			
	AWN BY: JM ECKED BY: AC			

ET TITLE

VERT: N/A HORZ: AS NOTED

DETAILS - WALLS



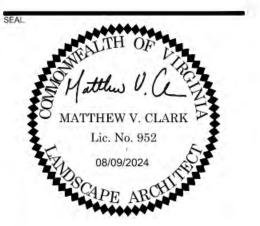
NOTE: OR CLIENT/COUNTY APPROVED EQUAL.

1 GRILL STATION

NTS



200 S. PEYTON STREET ALEXANDRIA, VA 22314 703.549.7784 WWW.LANDDESIGN.COM ENG. FIRM LICENSE # 0405002187



3130 LANGSTON BOULEVARD

ROONEY PROPERTIES, LLC 3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

REVISION / ISSUANCE		
NO.	DESCRIPTION	DATE
1	4.1 SITE PLAN SUBMISSION	08/09/2024
		1
_		
		1
- 1		

LE COST & S

DRAWN BY: JM CHECKED BY: AC

DETAILS - CUSTOM

5/1



NOTE: OR CLIENT/COUNTY APPROVED EQUAL.



NOTE: OR CLIENT/COUNTY APPROVED EQUAL.

1 FENCE - TYPE 1

L-551 PICTORIAL

GATE - TYPE 2

NTS



NOTE: OR CLIENT/COUNTY APPROVED EQUAL.

2 FENCE - TYPE 2

NTS

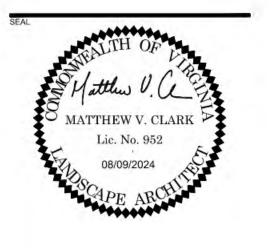


NOTE: OR CLIENT/COUNTY APPROVED EQUAL.

3 GATE - TYPE 1

L-551 PICTORIAL

NTS



200 S. PEYTON STREET ALEXANDRIA, VA 22314 703.549.7784 WWW.LANDDESIGN.COM ENG. FIRM LICENSE # 0405002187

3130 LANGSTON **BOULEVARD**

ROONEY PROPERTIES, LLC 3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

REVISION / ISSUANCE		
NO.	DESCRIPTION	DAT
1	4.1 SITE PLAN SUBMISSION	08/09/2
-		+
_		
+		
_		

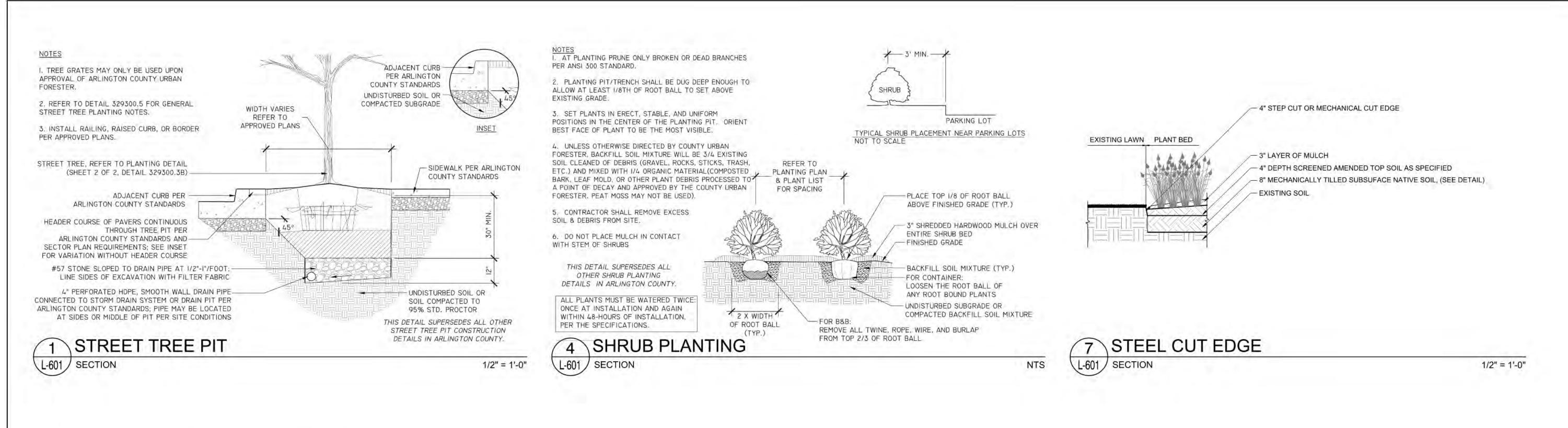
CHECKED BY: AC

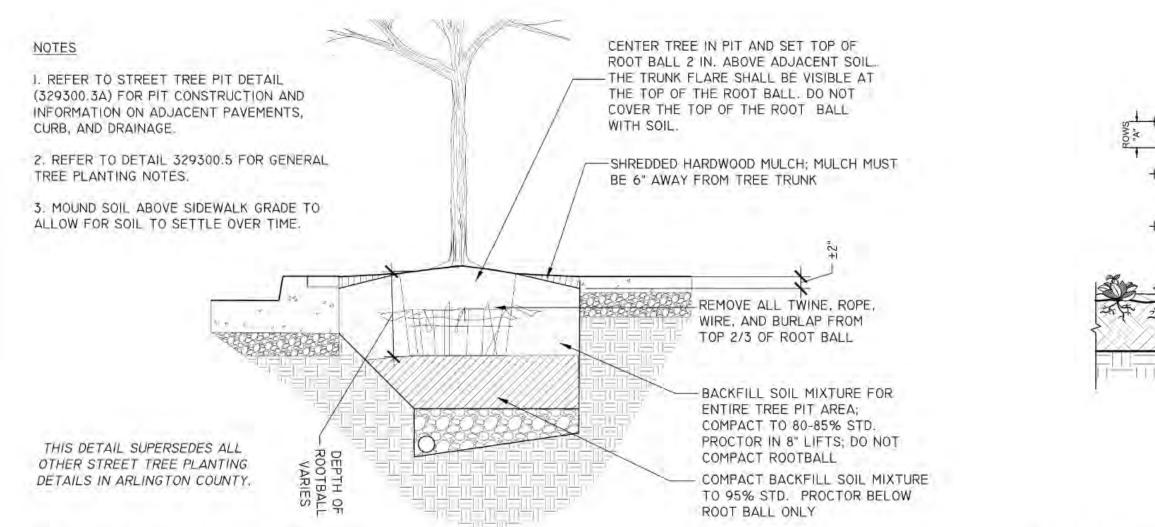
DESIGNED BY: GC DRAWN BY: JM

DETAILS - FENCES

L-551

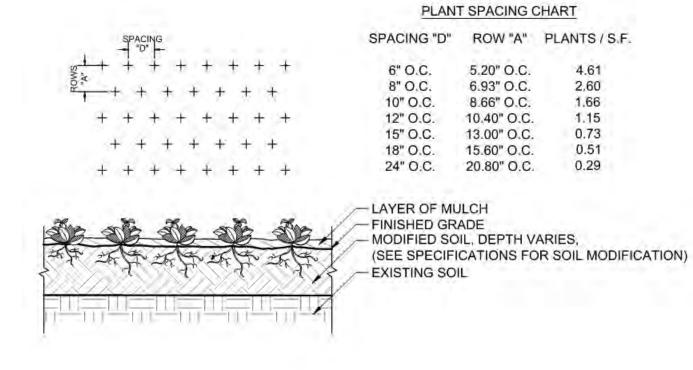
8/9/2024 2:16 PM DAPHNE BRICE Z:\TEMPLATES\SHEETS\CD SHEETS\LA\SHEET-24X36.DWT

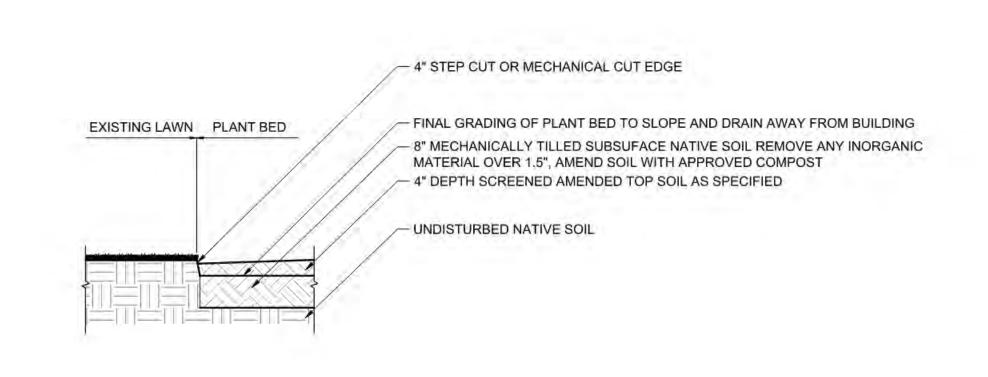




1/2" = 1'-0"

1/2" = 1'-0"







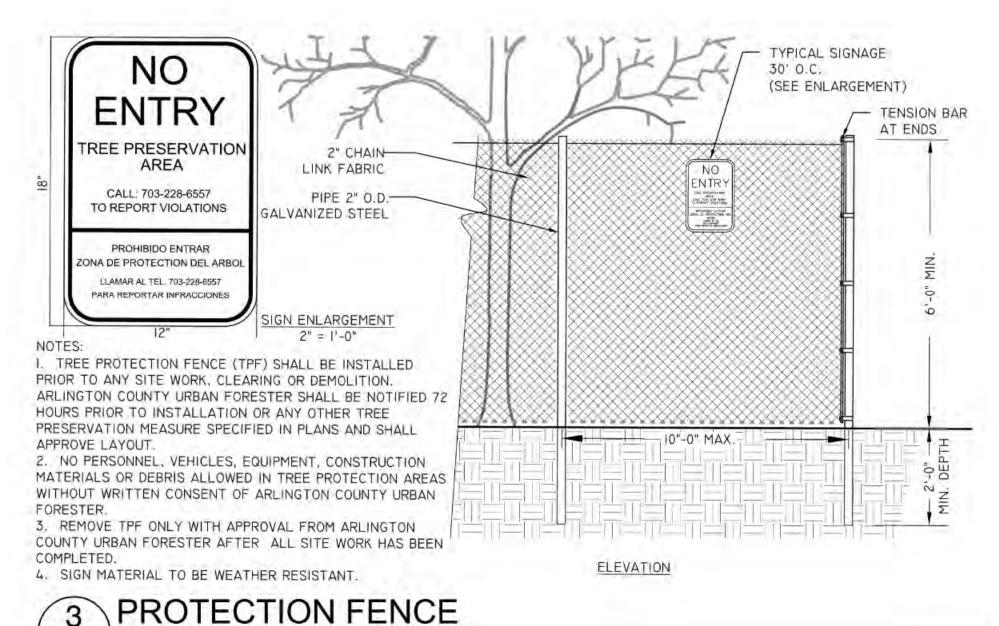
GROUNDCOVER SPACING - TRIANGULAR L-601 SECTION

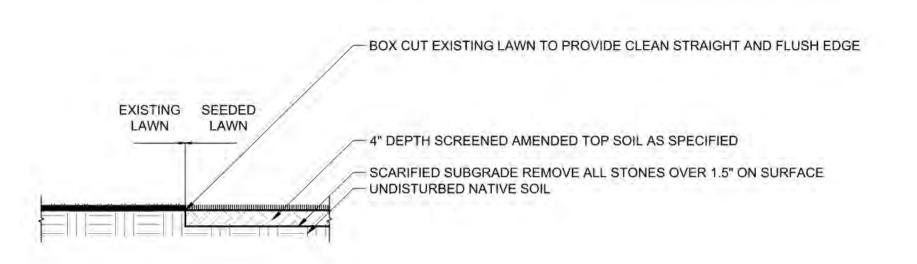


1/2" = 1'-0"

1/2" = 1'-0"

1/2" = 1'-0"







DESCRIPTION 4.1 SITE PLAN 08/09/2024 SUBMISSION DESIGNED BY: XX DRAWN BY: XX CHECKED BY: XX VERT: N/A HORZ; **DETAILS - PLANTING ON**

ALEXANDRIA, VA 22314 703.549.7784 WWW.LANDDESIGN.COM

ENG. FIRM LICENSE # 0405002187

MATTHEW V. CLARK

3130 LANGSTON

BOULEVARD

ROONEY PROPERTIES, LLC

3130 LANGSTON BOULEVARD

ARLINGTON, VA 22201

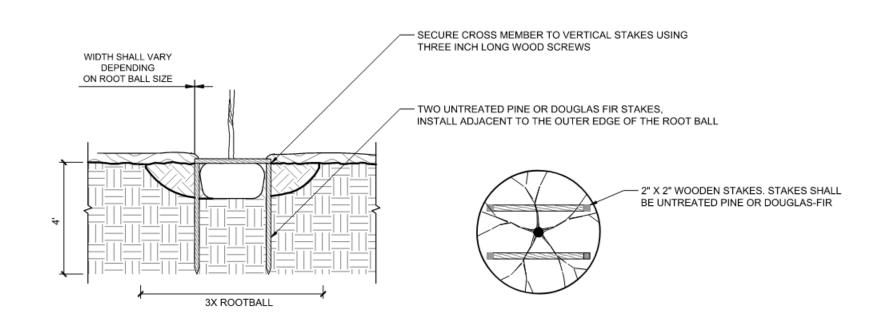
2024074

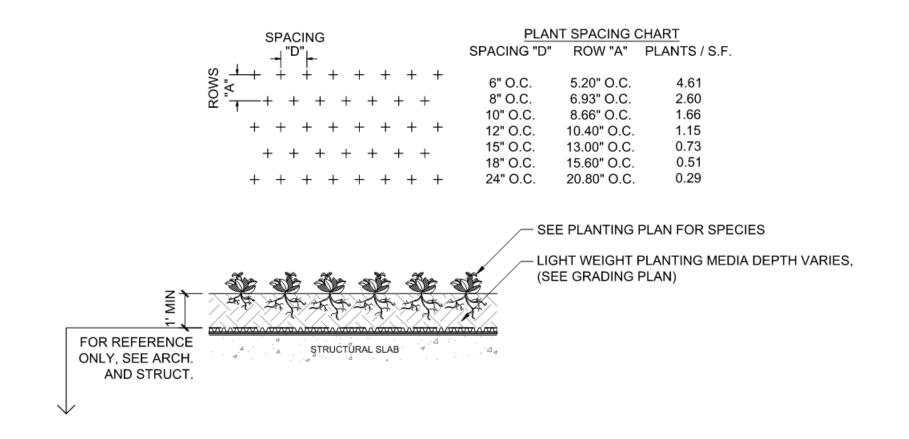
REVISION / ISSUANCE

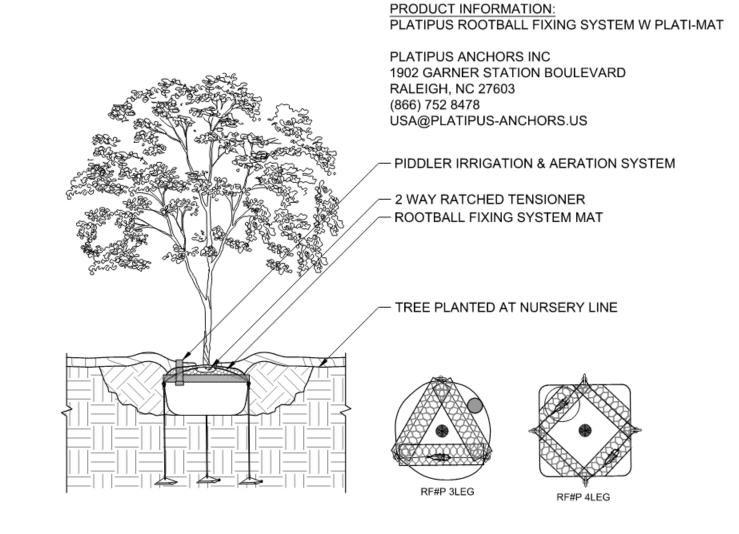
L-601

GRADE

L-601 SECTION









3/8" = 1'-0"

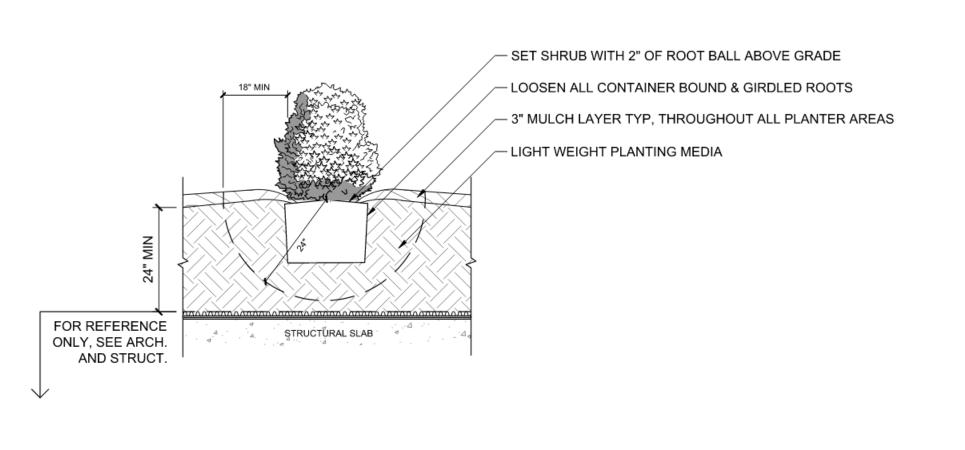
GROUNDCOVER ON STRUCTURE L-602 SECTION

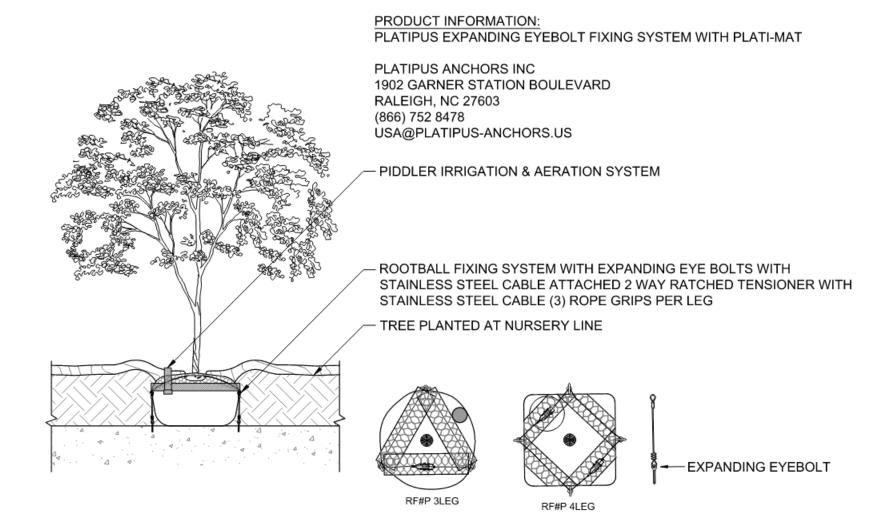
ROOTBALL FIXING SYSTEM W/MAT

L-602 SECTION

3/8" = 1'-0"

- CONTAINERS/PLANTERS AS SPECIFIED - FINISHED LEVEL TO BE 3" BELOW RIM — 3/4 OF OVERALL HEIGHT PROMIX CONTAINER MIX /-- 3-5 OZ/SY FILTER FABRIC NON-WOVEN FULLY WRAP STONE — 1/4 OF OVERALL HEIGHT FILLED WITH #57 WASHEDSTONE CONTRACTOR TO ENSURE DRAINAGE HOLES ARE FREE FROM OBSTRUCTION IF PROVIDED BY MANUFACTURE





2 PLANTING IN POT L-602 SECTION

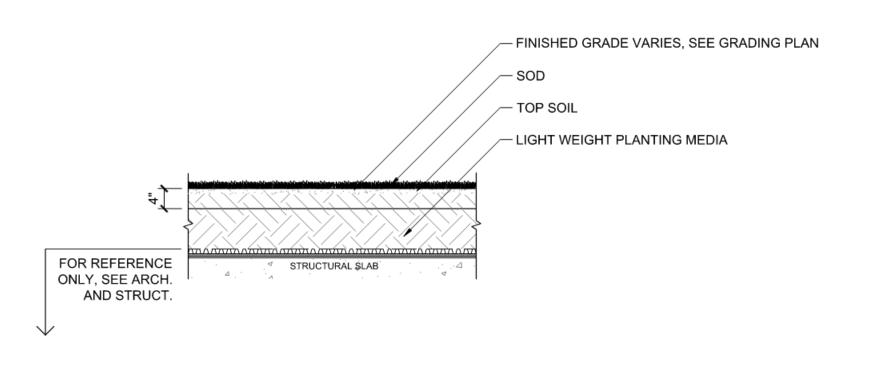
SHRUB PLANTING ON STRUCTURE L-602 SECTION

EXPANDING EYEBOLT FIXING SYSTEM W/MAT

L-602 SECTION

3/8" = 1'-0"

- SET TREE WITH 2" OF ROOTBALL ABOVE FINISHED PLANTING MEDIUM ELEVATION - CUT & REMOVE BURLAP FROM TOP 2/3 OF ROOT BALL - FINISH GRADE VARIES, 3" MULCH LAYER, TYPICAL IN ALL PLANTED AREAS - MOUND AND COMPACT STRUCTURAL SOIL TO FORM ROOT BALL PEDESTAL AS SHOWN LIGHT WEIGHT PLANTING MEDIUM - EYE BOLT WITH EXPANDING SHIELD ANCHOR (SUPPLIED BY TREE ANCHOR MANUFACTURER) CONCRETE 'DEADMAN', 3 PER TREE NOTE: SEE DETAIL FOR THIS SHEET IS LANDSCAPE WALLS ARE WITHIN 6' OF TREE FOR REFERENCE 4STRUCTURAL SLAB ONLY, SEE ARCH. AND STRUCT.



TREE PLANTING ON STRUCTURE

L-602 SECTION

1/4" = 1'-0"

6 LAWN ON STRUCTURE L-602 SECTION

1/2" = 1'-0"

1/2" = 1'-0"

1/2" = 1'-0"

703.549.7784 WWW.LANDDESIGN.COM

ENG. FIRM LICENSE # 0405002187

3130 LANGSTON **BOULEVARD**

ROONEY PROPERTIES, LLC 3130 LANGSTON BOULEVARD ARLINGTON, VA 22201

REVISION / ISSUANCE		
NO.	DESCRIPTION	DATE
1	4.1 SITE PLAN SUBMISSION	08/09/202
\dashv		
\dashv		
\rightarrow		
	NOVED BY OC	
	SIGNED BY: GC WN BY: JM	
	CKED BY: AC	

DETAILS - PLANTING ON

VERT: N/A

STRUCTURE L-602