2026 Federal Low Income Housing Tax Credit Program for Virginia

Application For Reservation

Deadline for Submission

9% Competitive Credits
Applications and Fees Must Be Received
No Later Than 12:00 PM Richmond, VA Time On March 12, 2026

Tax Exempt Bonds
Applications and Fees Must Be Received
No Later Than 12:00 PM Richmond, VA Time for one of the available
4% credit rounds- January 15, 2026, July 1, 2026 or October 1, 2026.

Virginia Housing
601 South Belvidere Street
Richmond, Virginia 23220-6500

INSTRUCTIONS FOR THE
VIRGINIA 2026 LIHTC APPLICATION FOR RESERVATION

This application was prepared using Excel, Microsoft Office 365. Please note that using the active Excel workbook does not eliminate the need to submit the required PDF of the signed hardcopy of the application and related documentation. A more detailed explanation of application submission requirements is provided below and in the Application Manual.

An electronic copy of your completed application is a mandatory submission item.

Applications For all credits:

Applicants should submit the application package via Procorem prior to the application deadline, which is 12:00 PM Richmond Virginia time for each round. Failure to submit an electronic copy of the application by the deadline will cause the application to be disqualified.

Please Note:

Applicants should submit all application materials in electronic format only via your specific Procorem workcenter.

There should be distinct files which should include the following:

1. **Application For Reservation – the active Microsoft Excel workbook**
2. **A PDF file which includes the following:**
   - **Application For Reservation – Signed version of hardcopy**
   - **All application attachments (i.e. tab documents, excluding market study and plans & specs)**
3. **Market Study – PDF or Microsoft Word format**
4. **Plans - PDF or other readable electronic format**
5. **Specifications - PDF or other readable electronic format (may be combined into the same file as the plans if necessary)**
6. **Unit-By-Unit work write up (rehab only) - PDF or other readable electronic format**

IMPORTANT:

Virginia Housing only accepts files via our work center sites on Procorem. Contact TaxCreditApps@virginiahousing.com for access to Procorem or for the creation of a new deal workcenter. Do not submit any application materials to any email address unless specifically requested by the Virginia Housing LIHTC Allocation Department staff.

Disclaimer:

Virginia Housing assumes no responsibility for any problems incurred in using this spreadsheet or for the accuracy of calculations. Check your application for correctness and completeness before submitting the application to Virginia Housing.

Entering Data:

Enter numbers or text as appropriate in the blank spaces highlighted in yellow. Cells have been formatted as appropriate for the data expected. All other cells are protected and will not allow changes.

Please Note:

►**VERY IMPORTANT! : Do not** use the copy/cut/paste functions within this document. Pasting fields will corrupt the application and may result in penalties. You may use links to other cells or other documents but do not paste data from one document or field to another. You may also use the drag function.

► Some fields provide a dropdown of options to select from, indicated by a down arrow that appears when the cell is selected. Click on the arrow to select a value within the dropdown for these fields.

► The spreadsheet contains multiple error checks to assist in identifying potential mistakes in the application. These may appear as data is entered but are dependent on values entered later in the application. Do not be concerned with these messages until all data within the application has been entered.

► Also note that some cells contain error messages such as "#DIV/0!" as you begin. These warnings will disappear as the numbers necessary for the calculation are entered.

Assistance:

If you have any questions, please contact the Virginia Housing LIHTC Allocation Department. Please note that we cannot release the copy protection password.

Virginia Housing LIHTC Allocation Staff Contact Information

Name	Email	Phone Number
Stephanie Flanders	stephanie.flanders@virginiahousing.com	(804) 343-5939
Phil Cunningham	phillip.cunningham@virginiahousing.com	(804) 343-5514
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Hadia Ali	hadia.ali@virginiahousing.com	(804) 343-5873

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2026 Low-Income Housing Tax Credit Application For Reservation

Please indicate if the following items are included with your application by putting an '**X**' in the appropriate boxes. Your assistance in organizing the submission in the following order, and actually using tabs to mark them as shown, will facilitate review of your application. Please note that all mandatory items must be included for the application to be processed. The inclusion of other items may increase the number of points for which you are eligible under Virginia Housing's point system of ranking applications, and may assist Virginia Housing in its determination of the appropriate amount of credits that may be reserved for the development.

X		$1,000 Application Fee **(MANDATORY)** - Invoice information will be provided in your Procorem Workcenter
X		Electronic Copy of the Microsoft Excel Based Application **(MANDATORY)**
X		PDF Copy of the **Signed** Tax Credit Application with Attachments (Tabs A-AB) **(MANDATORY)**
X		Electronic Copy of the Market Study **(MANDATORY - Application will be disqualified if study is not submitted with application)**
X		Electronic Copy of the Plans **(MANDATORY)**
X		Electronic Copy of the Specifications **(MANDATORY)**
		Electronic Copy of the Existing Condition questionnaire **(MANDATORY if Rehab)**
		Electronic Copy of Unit by Unit Matrix and Scope of Work narrative **(MANDATORY if Rehab)**
		Electronic Copy of the Physical Needs Assessment (**MANDATORY at reservation for a 4% rehab request**)
		Electronic Copy of Appraisal (**MANDATORY** if acquisition credits requested)
X		Electronic Copy of Environmental Site Assessment (Phase I) (**MANDATORY if 4% credits requested**)
X		Electronic Copy of List of LIHTC Developments (Schedule A) and Signed Previous Participation Agreement
X	Tab A:	Partnership or Operating Agreement, including chart of ownership structure with percentage of interests (see manual for details) **(MANDATORY)**
X	Tab B:	Virginia State Corporation Commission Certification **(MANDATORY)**
X	Tab C:	Syndicator's or Investor's Letter of Intent **(MANDATORY)**
	Tab D:	*Any supporting documentation related to List of LIHTC Developments or Previous Participation Agreement*
X	Tab E:	Site Control Documentation & Most Recent Real Estate Tax Assessment **(MANDATORY)**
X	Tab F:	Third Party RESNET Rater Certification and Sample HERS certificates **(MANDATORY)**
X	Tab G:	Zoning Certification Letter **(MANDATORY)**
X	Tab H:	Attorney's Opinion using Virgina Housing template **(MANDATORY)**
	Tab I:	Nonprofit Questionnaire **(MANDATORY for points or pool)**
		The following documents **need not be submitted unless requested** by Virginia Housing:
		-Nonprofit Articles of Incorporation -IRS Documentation of Nonprofit Status
		-Joint Venture Agreement (if applicable) -For-profit Consulting Agreement (if applicable)
	Tab J:	Relocation Plan and Unit Delivery Schedule **(MANDATORY if Rehab)**
	Tab K:	Documentation of Development Location:
X	K.1	Revitalization Area Certification
	K.2	Surveyor's Certification of Proximity To Public Transportation using Virginia Housing template
X	Tab L:	PHA / Section 8 Notification Letter
	Tab M:	*(left intentionally blank)*
	Tab N:	Homeownership Plan
	Tab O:	Plan of Development Certification Letter
	Tab P:	Zero Energy or Passive House documentation for prior allocation by this developer
	Tab Q:	Documentation of Rental Assistance, Tax Abatement and/or existing RD or HUD Property
X	Tab R:	Documentation of Utility Allowance Calculation
	Tab S:	Supportive Housing Certification
	Tab T:	Funding Documentation
X	Tab U:	Acknowledgement by Tenant of the availability of Renter Education provided by Virginia Housing
	Tab V:	Nonprofit or LHA Purchase Option or Right of First Refusal
X	Tab W:	Internet Safety Plan and Resident Information Form
X	Tab X:	Marketing Plan for units meeting accessibility requirements of HUD section 504
	Tab Y:	Inducement Resolution for Tax Exempt Bonds
	Tab Z:	Documentation of team member's Veteran Owned Small Business certification
	Tab AA:	Priority Letter from Rural Development
	Tab AB:	Ownership's Veteran Owned Small Business Certification

2026 Low-Income Housing Tax Credit Application For Reservation v.2026.1

VHDA TRACKING NUMBER **2026-TEB-09**

A. GENERAL INFORMATION ABOUT PROPOSED DEVELOPMENT Application Date: 1/15/26

1. Development Name: Clear Springs Apartments Phase I

2. Address (line 1): 41350 Springfield Lane
   Address (line 2):
   City: Leesburg State: VA Zip: 20175

3. If complete address is not available, provide longitude and latitude coordinates (x,y) from a location on site that your surveyor deems appropriate. Longitude: 00.00000 Latitude: 00.00000
   (Only necessary if street address or street intersections are not available.)

4. The Circuit Court Clerk's office in which the deed to the development is or will be recorded:
   City/County of Loudoun County

5. The site overlaps one or more jurisdictional boundaries. FALSE
   If true, what other City/County is the site located in besides response to #4?

6. Development is located in the census tract of: 6106.02

7. Development is located in a **Qualified Census Tract**. FALSE *ote regarding DDA and QC*

8. Development is located in a **Difficult Development Are** FALSE

9. Development is located in a **Revitalization Area based on QCT.** FALSE

10. Development is located in a **Revitalization Area designated by resolution** or **by the locality**. TRUE

11. Development is located in an **Opportunity Zone** (with a binding commitment for funding). FALSE

    (If 9, 10 or 11 are True, **Action**: Provide required form in **TAB K1**)

12. Development is located in a census tract with a household poverty rate

3%	10%	12%
TRUE	FALSE	FALSE

13. Development is located in a medium or high-level economic development jurisdiction based TRUE

14. Development is located on land owned by federally or Virginia recognized Triba FALSE

Enter only Numeric Values below:

15. Congressional District: 10
    Planning District: 8
    State Senate District: 31
    State House District: 29

16. Development Description: In the space provided below, give a brief description of the proposed development

Clear Springs Apartments Phase I is a proposed 97 unit new construction attainable community located in Loudoun County. The project will include a community center with kitchenette, business center, fitness center, and an

automated package delivery center. Outdoor amenities include a picnic area, BBQ terrace, and two age-appropriate playgrounds located within a central courtyard. The development is proposed to be financed through 4% LIHTC, Tax-Exempt Bonds from Virginia Housing, Loudoun DHCD, and Virginia DHCD ASNH.

VHDA TRACKING NUMBER **2026-TEB-09**

A. GENERAL INFORMATION ABOUT PROPOSED DEVELOPMENT Application Date: 1/15/26

17. **Local Needs and Support**

a. Provide the name and the address of the chief executive officer (City Manager, Town Manager, or County Administrator of the political jurisdiction in which the development will be located:

Chief Executive Officer's Name: Mr. Tim Hemstreet
Chief Executive Officer's Title: County Administrator Phone: 703-777-0200
Street Address: 1 Harrison Street, PO Box 7000
City: Leesburg State: VA Zip: 20177

Name and title of local official you have discussed this project with who could answer questions for the local CEO: Travis Perlman, Housing Finance and Development Administrator

b. If the development overlaps another jurisdiction, please fill in the following:

Chief Executive Officer's Name:
Chief Executive Officer's Title: Phone:
Street Address:
City: State: Zip:

Name and title of local official you have discussed this project with who could answer questions for the local CEO:

B. RESERVATION REQUEST INFORMATION

1. **Requesting Credits From:**

   a. If requesting 9% Credits, select credit pool:

   or

   b. If requesting Tax Exempt Bond credits, select the round. ROUND 1

   For Tax Exempt Bonds, where are bonds being issued? Virginia Housing

   ACTION: Provide Inducement Resolution at **TAB Y** (if available)

2. **Type(s) of Allocation/Allocation Year (skip for TE Credits)**

   Definitions of types:

   a. **Regular Allocation** means all of the buildings in the development are expected to be placed in service this calendar year, 2026.

   b. **Carryforward Allocation** means all of the buildings in the development are expected to be placed in service within two years after the end of this calendar year, 2026, but the owner will have more than 10% basis in development before the end of twelve months following allocation of credits. For those buildings, the owner requests a carryforward allocation of 2026 credits pursuant to Section 42(h)(1)(E).

3. **Select Building Allocation type:** New Construction

   Note regarding Type = Acquisition and Rehabilitation: Even if you acquired a building this year and "placed it in service" for the purpose of the acquisition credit, you cannot receive its acquisition 8609 form until the rehab 8609 is issued for that building.

4. Is this an additional allocation for a development that has buildings not yet placed in service? FALSE

5. **Planned Combined 9% and 4% Developments**

a. A site plan has been submitted with this application indicating two developments on the same or contiguous site. One developm
to this 9% allocation request and the remaining development will be a 4% tax exempt bond ap FALSE

If true, provide name of companion developm

a. Has the developer met with Virginia Housing regarding the 4% tax exempt bon FALSE

b. List below the number of units planned for each allocation request. **This stated split of units cannot be changed or 9% Credits will**

Total Units within 9% allocation request?	0
Total Units within 4% Tax Exempt allocation Request?	0
Total Units:	**0**

% of units in 4% Tax Exempt Allocation Request: 0.00%

6. **Extended Use Restriction**

Note: Each recipient of an allocation of credits will be required to record an **Extended Use Agreement** as required by the IRC governing the use of the development for low-income housing for at least 30 years. Applicant waives the right to pursue a Qualified Contract.

Must Select One: 40

Definition of selection:

Development will be subject to an extended use agreement of 25 additional years after the 15-year compliance period for a total of 40 years.

7. Virginia Housing would like to encourage the efficiency of electronic payments. Indicate if developer commits to submitting any p
due the Authority, including reservation fees and monitoring fees, by electronic payment. TRUE

Virginia Housing offers the Rental Housing Invoicing Portal to allow easy payments via secure ACH transactions. See Login at top rig
An invoice for your application fee along with access information was provided in your development's assigned Procorem w

C. OWNERSHIP INFORMATION

NOTE: Virginia Housing may allocate credits only to the tax-paying entity which owns the development at the time of the allocation. The term "Owner" herein refers to that entity. Please fill in the legal name of the owner. The ownership entity must be formed prior to submitting this application. Any transfer, direct or indirect, of partnership interests (except those involving the admission of limited partners) prior to the placed-in-service date of the proposed development shall be prohibited, unless the transfer is consented to by Virginia Housing in its sole discretion. **IMPORTANT: The Owner name listed on this page must exactly match the owner name listed on the Virginia State Corporation Commission Certification.**

1. Owner Information: *Must be an individual or legally formed entity.*

a. Owner Name: Clear Springs Apartments I, LLC

Developer Name: Green Street Housing, LLC & Good Housing VA, LLC

Contact: M/M ▶ Mr. First: Chase MI: H Last: Powell

Address: 212 East Main Street, Suite 200

City: Salisbury St. ▶ MD Zip: 21801

Phone: (443) 783-8010 Ext. Fax:

Email address: chase@greenstreethousing.com

Federal I.D. No. 393311188 (If not available, obtain prior to Carryover Allocation.)

Select type of entity: ▶ limited liability company Formation State: ▶ Virginia

Additional Contact: Please Provide Name, Email and Phone number.
G. Kimball Hart, Kim.Hart@goodhousingva.com, 703-850-3980

ACTION: a. Provide Owner's organizational documents (e.g. Partnership agreements and chart of ownership structure (Org Chart) **(Mandatory TAB A)**
b. Provide Certification from Virginia State Corporation Commission **(Mandatory TAB B)**
c. Complete the Principals' Previous Participation Certification tabs within this spreadsheet. Include signed in Application PDF.
d. Complete the list LIHTC Developments (Schedule A) tabs within this spreadsheet. in Application PDF.

b. FALSE Indicate if at least one principal listed within Org Chart has a Veteran-Owned Small Business Certifica at least 25% ownership interest in the controlling general partner or managing member as defined in

ACTION: If true, provide Virginia Housing Veteran Owned Small Business Certification **(TAB AB)**

c. FALSE Indicate True if the owner meets the following statement:

An applicant with a principal that, within three years prior to the current application, received an IRS Form 8609 for placing a separate development in service without returning credits to or requesting additional credits from the issuing housing finance agency, will be permitted to increase the amount of developer's fee included in the development's eligible basis by 10%.

C. OWNERSHIP INFORMATION

If True above, what property placed in servic

D. SITE CONTROL

NOTE: Site control by the Owner identified herein is a mandatory precondition of review of this application. Documentary evidence in the form of either a deed, option, purchase contract or lease for a term longer than the period of time the property will be subject to occupancy restrictions must be included herewith. (For 9% Competitive Credits - An option or contract must extend beyond the application deadline by a minimum of four months.)

Warning: Site control by an entity other than the Owner, even if it is a closely related party, is not sufficient. Anticipated future transfers to the Owner are not sufficient. The Owner, as identified previously, must have site control at the time this Application is submitted.

NOTE: If the Owner receives a reservation of credits, the property must be titled in the name of or leased by (pursuant to a long-term lease) the Owner before the allocation of credits is made.

Contact Virginia Housing before submitting this application if there are any questions about this requirement.

1. Type of Site Control by Owner:

Applicant controls site by (select one):

Select Type: Purchase Contract

Expiration Date: 4/30/27

In the Option or Purchase contract - Any contract for the acquisition of a site with an existing residential property may not require an empty building as a condition of such contract, unless relocation assistance is provided to displaced households, if any, at such level required by Virginia Housing. See QAP for further details.

ACTION: Provide documentation and most recent real estate tax assessment - **Mandatory TAB E**

FALSE There is more than one site for development and more than one form of site control.

(If **True**, provide documentation for each site specifying number of existing buildings on the site (if any) type of control of each site, and applicable expiration date of stated site control. A site control document is required for each site **(Tab E)**.)

2. Timing of Acquisition by Owner:
Only one of the following statement should be True.

a. FALSE Owner already controls site by either deed or long-term lease.

b. TRUE Owner is to acquire property by deed (or lease for period no shorter than period property will be subject to occupancy restrictions) no later than 4/30/27 .

c. FALSE There is more than one site for development and more than one expected date of acquisition by Owner

(If c is **True**, provide documentation for each site specifying number of existing buildings on the site, if any, and expected date of acquisition of each site by Owner **(Tab E).**)

D. SITE CONTROL

3. Seller Information:

Name: Clear Springs Development Group, LP

Address: 555 13th Street, NW, Suite 400 West

City: Washington St.: DC Zip: 20004

Contact Person: Brian Schmid Phone: (202) 942-7854

There is an identity of interest between the seller and the owner/applicant FALSE

If above statement is **TRUE**, complete the following:

Principal(s) involved (e.g. general partners, controlling shareholders, etc.)

Names	Phone	Type Ownership	% Ownership
			0.00%
			0.00%
			0.00%
			0.00%
			0.00%
			0.00%
			0.00%

E DEVELOPMENT TEAM INFORMATION

Complete the following as applicable to your development team.

▶Indicate Veteran Owned Small Business designation (as defined in the manual)to each team member (if applicable). You can mark True for 3 members to receive the full 10 points.

ACTION: Provide copy of certification from Commonwealth of Virginia, if applicable - **TAB Z**

1.	Tax Attorney:	Allison Domson, Esq.	This is a Related Entity.	FALSE
	Firm Name:	Williams Mullen		
	Address:	200 South 10th Street, Suite 1600	Veteran Owned Small B	FALSE
	City, State, Zip	Richmond, VA 23218		
	Email:	adomson@williamsmullen.com	Phone:	(804) 420-6915
2.	Tax Accountant:	Todd Fentress	This is a Related Entity.	FALSE
	Firm Name:	Eisner Advisory Group, LLC		
	Address:	4249 Easton Way, Suite 210	Veteran Owned Small B	FALSE
	City, State, Zip	Columbus, OH 43219		
	Email:	todd.fentress@eisneramper.com	Phone:	(614) 306-7824
3.	Consultant:	Ryne Johnson	This is a Related Entity.	FALSE
	Firm Name:	Astoria, LLC		
	Address:	3450 Lady Marian Ct.	Veteran Owned Small B	FALSE
	City, State, Zip	Midlothian, VA 23113	Role:	LIHTC
	Email:	Rynejohnson@AstoriaLLC.com	Phone:	804-339-7205
4.	Management Entity:	Ari Severe, President	This is a Related Entity.	FALSE
	Firm Name:	TM Associates Management, Inc.		
	Address:	1375 Piccard Drive, Suite 150	Veteran Owned Small B	FALSE
	City, State, Zip	Rockville, MD 20850		
	Email:	asevere@tmamgroup.com	Phone:	(240) 683-0300
5.	Contractor:	Josh Buck, Vice President	This is a Related Entity.	FALSE
	Firm Name:	L.F. Jennings		
	Address:	407 N. Washington Street, Suite 200	Veteran Owned Small B	FALSE
	City, State, Zip	Fallsh Church, VA 22046		
	Email:	jbuck@lfjennings.com	Phone:	(703) 531-2341
6.	Architect:	Fred LeGates, Senior Associate	This is a Related Entity.	FALSE
	Firm Name:	Poole & Poole Architecture		
	Address:	4240 Park Place Court	Veteran Owned Small B	FALSE
	City, State, Zip	Glen Allen, VA 23060		
	Email:	flegates@2pa.net	Phone:	(804) 225-0215

E DEVELOPMENT TEAM INFORMATION

7.	Real Estate Attorney	Allison Domson, Esq.	This is a Related Entity.	FALSE
	Firm Name:	Williams Mullen		
	Address:	200 South 10th Street, Suite 1600	Veteran Owned Small B	FALSE
	City, State, Zip	Richmond, VA 23218		
	Email:	adomson@williamsmullen.com	Phone:	(804) 420-6915
8.	Mortgage Banker:	Ryne Johnson	This is a Related Entity.	FALSE
	Firm Name:	Astoria, LLC		
	Address:	3450 Lady Marian Ct.	Veteran Owned Small B	FALSE
	City, State, Zip	Midlothian, VA 23113		
	Email:	Rynejohnson@AstoriaLLC.com	Phone:	804-339-7205
9.	Other 1:		This is a Related Entity.	FALSE
	Firm Name:			
	Address:		Veteran Owned Small B	FALSE
	City, State, Zip		Role:	
	Email:		Phone:	
10.	Other 2:		This is a Related Entity.	FALSE
	Firm Name:			
	Address:		Veteran Owned Small B	FALSE
	City, State, Zip		Role:	
	Email:		Phone:	
11.	Other 3:		This is a Related Entity.	FALSE
	Firm Name:			
	Address:		Veteran Owned Small B	FALSE
	City, State, Zip		Role:	
	Email:		Phone:	
12.	Other 4:		This is a Related Entity.	FALSE
	Firm Name:			
	Address:		Veteran Owned Small B	FALSE
	City, State, Zip		Role:	
	Email:		Phone:	
13.	Other 5:	Jordan Tawney	This is a Related Entity.	FALSE
	Firm Name:	Bellera, LLC		
	Address:	4354 Kidsgrove Rd	Veteran Owned Small B	FALSE
	City, State, Zip	Henrico, VA 23231	Role:	Tax Credit App
	Email:	Jordan.Tawney@BelleraLLC.com	Phone:	(540) 588-8449

F. REHAB INFORMATION

1. **Acquisition Credit Information**

a. Credits are being requested for existing buildings being acquired for development FALSE

Action: If true, provide an electronic copy of the Existing Condition Questionnaire, Unit by Unit Matrix and Appraisal.

b. This development has received a previous allocation of cre FALSE
If so, when was the most recent year that this development received credits?
If this is a preservation deal,
what date did this development enter its Extended Use Agreement period?

c. The development has been provided an acknowledgement letter from Rural Development regarding its preservation priority? FALSE

d. This development is an existing RD or HUD S8/236 develop FALSE
Action: (If True, provide required form in **TAB Q**)

Note: If there is an identity of interest between the applicant and the seller in this proposal, and the applicant is seeking points in this category, then the applicant must either waive their rights to the developer's fee or other fees associated with acquisition, or obtain a waiver of this requirement from Virginia Housing prior to application submission to receive these points

i. Applicant agrees to waive all rights to any developer's fee or other fees associated with acquisition. FALSE

ii. Applicant has obtained a waiver of this requirement from Virginia Housing prior to the application submission deadline. FALSE

2. **Ten-Year Rule For Acquisition Credits**

a. All buildings satisfy the 10-year look-back rule of IRC Section 42 (d)(2)(B), including the 10% basis $15,000 rehab costs ($10,000 for Tax Exempt Bonds) per unit requirem FALSE

b. All buildings qualify for an exception to the 10-year rule under IRC Section 42(d)(2)(D)(i), FALSE

i Subsection (I) FALSE

ii. Subsection (II) FALSE

iii. Subsection (III) FALSE

iv. Subsection (IV) FALSE

v. Subsection (V) FALSE

c. The 10-year rule in IRC Section 42 (d)(2)(B) for all buildings does not apply pursuant to IRC Section 42(d)(6). FALSE

d. There are different circumstances for different buildings. FALSE
Action: (If True, provide an explanation for each building in Tab K)

F. REHAB INFORMATION

3. **Rehabilitation Credit Information**

   a. Credits are being requested for rehabilitation expenditures. FALSE

   b. **Minimum Expenditure Requirements**

      i. All buildings in the development satisfy the rehab costs per unit requirement of IRS Section 42(e)(3)(A)(ii). FALSE

      ii. All buildings in the development qualify for the IRC Section 42(e)(3)(B) exception to the 10% basis requirement (4% credit only) FALSE

      iii. All buildings in the development qualify for the IRC Section 42(f)(5)(B)(ii)(II) exception. FALSE

      iv. There are different circumstances for different buildi FALSE
      Action: (If True, provide an explanation for each building in Tab K)

G. NONPROFIT INVOLVEMENT

Applications for 9% Credits - Section 1 must be completed in order to compete in the Non Profit tax credit pool.
All Applicants - Section 2 must be completed to obtain points for nonprofit involvement.

1. Tax Credit Nonprofit Pool Applicants: To qualify for the nonprofit pool, an organization (described in IRC Section 501(c)(3) or 501(c)(4) and exempt from taxation under IRC Section 501(a)) should answer the following questions as TRUE:

FALSE	a.	Be authorized to do business in Virginia.
FALSE	b.	Be substantially based or active in the community of the development.
FALSE	c.	Materially participate in the development and operation of the development throughou compliance period (i.e., regular, continuous and substantial involvement) in the operati development throughout the Compliance Period.
FALSE	d.	Own, either directly or through a partnership or limited liability company, 100% of the partnership or managing member interest.
FALSE	e.	Not be affiliated with or controlled by a for-profit organization.
FALSE	f.	Not have been formed for the principal purpose of competition in the Non Profit Pool.
FALSE	g.	Not have any staff member, officer or member of the board of directors materially participate, directly or indirectly, in the proposed development as a for profit entity.

2. All Applicants: To qualify for points under the ranking system, the nonprofit's involvement need not necessarily satisfy all of the requirements for participation in the nonprofit tax credit pool.

A. Nonprofit Involvement (All Applicants)

FALSE There is nonprofit involvement in this development. (If false, skip to #3.)

Action: If there is nonprofit involvement, provide completed Non Profit Questionnaire **(Mandatory TAB**

B. Type of involvement:

FALSE Nonprofit meets eligibility requirement for points only, not pool.

or

FALSE Nonprofit meets eligibility requirements for nonprofit pool and points.

C. Identity of Nonprofit (All nonprofit applicants):

The nonprofit organization involved in this development is: ▶

Name:

Contact Person:

Street Address:

City: State: ▶ Zip:

Phone: Contact Email:

D. Percentage of Nonprofit Ownership (All nonprofit applicants):

Specify the nonprofit entity's percentage ownership of the general partnershi 0.0%

G. NONPROFIT INVOLVEMENT

G. NONPROFIT INVOLVEMENT

3. Nonprofit/Local Housing Authority Purchase Option/Right of First Refusal

A. FALSE After the mandatory 15-year compliance period, a qualified nonprofit or local housing authority will have the option to purchase or the right of first refusal to acquire the development for a price not to exceed the outstanding debt and exit taxes. Such debt must be limited to the original mortgage(s) unless any refinancing is approved by the nonprofit. See manual for more specifics.

Action: Provide Option or Right of First Refusal in recordable form using Virginia Housing's template. **(TAB V)**
Provide Nonprofit Questionnaire (if applicable) **(TAB I)**

Name of qualified nonprofit:

or indicate true if Local Housing Authority FALSE
Name of Local Housing Authority

B. FALSE A qualified nonprofit or local housing authority submits a homeownership plan committin to sell the units in the development after the mandatory 15-year compliance period to tenants whose incomes shall not exceed the applicable income limit at the time of their initial occupancy.
Do not select if extended compliance is selected on Request Info Tab
Action: Provide Homeownership Plan **(TAB N)** and contact Virginia Housing for a Pre-Ap

NOTE: Applicant is required to waive the right to pursue a Qualified Contract.

H. STRUCTURE AND UNITS INFORMATION

General Information

a. Total number of **all** units in development	97	bedrooms	170	
Total number of **rental** units in development	97	bedrooms	170	
Number of low-income rental units	97	bedrooms	170	
Percentage of rental units designated low-income	100.00%			

b. Number of new units:	97	bedrooms	170
Number of adaptive reuse units:	0	bedrooms	0
Number of rehab units:	0	bedrooms	0

c. If any, indicate number of planned exempt units (included in total of all units in development) 0

d. Total Floor Area For The Entire Development 109,833.00 (Sq. ft.)

e. Unheated Floor Area (i.e. Breezeways, Balconies, Storage) 20,832.00 (Sq. ft.)

f. Nonresidential Commercial Floor Area (Not eligible for funding) 0.00

g. Total Usable Residential Heated Area 89,001.00 (Sq. ft.)

h. Percentage of Net Rentable Square Feet Deemed To Be **New Rental Space** 100.00%

i. Exact area of site in acres 3.640

j. Locality has approved a final site plan or plan of developn FALSE
If **True**, Provide required documentation (**TAB O**).

k. Requirement as of 2016: Site must be properly zoned for proposed development.
ACTION: Provide required zoning documentation **(MANDATORY TAB G)**

l. Development is eligible for Historic Rehab credits FALSE
Definition:

The structure is historic, by virtue of being listed individually in the National Register of Historic Places, or due to its location in a registered historic district and certified by the Secretary of the Interior as being of historical significance to the district, and the rehabilitation will be completed in such a manner as to be eligible for historic rehabilitation tax credits.

H. STRUCTURE AND UNITS INFORMATION

UNIT MIX

a. Specify the **average size and number per unit type:**

LIHTC Units can not be greater than Total Rent

Note: Average sq foot should include the prorata of common space.

Unit Type	Average Sq Foot		# of LIHTC Units	Total Rental Units
1 Story Eff - Elderly	0.00	SF	0	0
1 Story 1BR - Elderly	0.00	SF	0	0
1 Story 2BR - Elderly	0.00	SF	0	0
Eff - Elderly	0.00	SF	0	0
1BR Elderly	0.00	SF	0	0
2BR Elderly	0.00	SF	0	0
Eff - Garden	0.00	SF	0	0
1BR Garden	718.00	SF	36	36
2BR Garden	997.00	SF	49	49
3BR Garden	1186.00	SF	12	12
4BR Garden	0.00	SF	0	0
2+ Story 2BR Townhouse	0.00	SF	0	0
2+ Story 3BR Townhouse	0.00	SF	0	0
2+ Story 4BR Townhouse	0.00	SF	0	0
			97	97

Note: Please be sure to enter the values in the appropriate unit category. If not, errors will occur on the self scoresheet.

Structures

a. Number of Buildings (containing rental units) 1

b. Age of Structure: 0 years

c. Maximum Number of stories: 3

d. The development is a scattered site development. FALSE

e. Commercial Area Intended Use:

f. Development consists primarily of : (Only One Option Below Can Be True)

i. Low Rise Building(s) - (1-5 stories with any structural elements made of wood) TRUE

ii. Mid Rise Building(s) - (5-7 stories with no structural elements made of wood) FALSE

iii. High Rise Building(s) - (8 or more stories with no structural elements made of wood) FALSE

g. Indicate **True** for all development's structural features that apply:

i. Row House/Townhouse	FALSE	v. Detached Single-family	FALSE
ii. Garden Apartments	TRUE	vi. Detached Two-family	FALSE
iii. Slab on Grade	TRUE	vii. Basement	FALSE
iv. Crawl space	FALSE		

h. Development contains an elevator(s). TRUE

If true, # of Elevators. 2

Elevator Type (if known)

H. STRUCTURE AND UNITS INFORMATION

i. Roof Type: Flat
j. Construction Type: Frame
k. Primary Exterior Finish: Combination

 # Site Amenities (indicate all proposed)

a. Business Center	TRUE	f. Limited Access	FALSE
b. Covered Parking	FALSE	g. Playground	TRUE
c. Exercise Room	TRUE	h. Pool	FALSE
d. Gated access to Site	FALSE	i. Rental Office	TRUE
e. Laundry facilities	FALSE	j. Sports Activity Ct.	FALSE
		k. Other:	

l. Describe Community Facilities:

m. Number of Proposed Parking Spaces: 125
Parking is shared with another entity: FALSE

n. Development located within 1/2 mile of an existing commuter rail, light rail or subway station or 1/4 mile from existing or proffered public bus stop. FALSE
If **True**, Provide required documentation (**TAB K2**).

 # Plans and Specifications

a. **Minimum submission requirements for all properties (new construction, rehabilitation and adaptive reuse):**
   i. A location map with development clearly defined.
   ii. Sketch plan of the site showing overall dimensions of all building(s), major site elements (e.g., parking lots and location of existing utilities, and water, sewer, electric, gas in the streets adjacent to the site). Contour lines and elevations are not required.
   iii. Sketch plans of all building(s) reflecting overall dimensions of:
      a. Typical floor plan(s) showing apartment types and placement
      b. Ground floor plan(s) showing common areas
      c. Sketch floor plan(s) of typical dwelling unit(s)
      d. Typical wall section(s) showing footing, foundation, wall and floor structure
      Notes must indicate basic materials in structure, floor and exterior finish.

b. The following are due at reservation for Tax Exempt 4% Applications and at allocation for 9% Applicatio
   i. Phase I environmental assessment.
   ii. Physical needs assessment for any rehab only development.

c. **All Tax Exempt 4% Applications must submit plans and specifications complete at least through Design Development (DD) phase for all design disciplines.** Reference the separate Minimum Design and Construction Requirements document for a full list of submission requirements for New Construction an Rehabilitation projects.

NOTE: All developments must meet Virginia Housing's **Minimum Design and Construction Requirements**. By signing and submitting the Application for Reservation of LIHTC, the applicant certifies that the proposed project budget, plans & specifications and work write-ups incorporate all necessary elements to fulfill these requirements.

J. ENHANCEMENTS

Each development must meet the following baseline energy performance standard applicable to the development's construction category.

a. **New Construction:** must obtain EnergyStar certification.
b. **Rehabilitation:** renovation must result in at least a 30% performance increase or score an 80 or lower on the HERS Inc
c. **Adaptive Reuse:** must score a 95 or lower on the HERS Index.

Certification and HERS Index score must be verified by a third-party, independent, non-affiliated, certified RESNET home energy rater. The HERS re[prt should be completed for the whole development and not an individual unit.

Indicate **True** for the following items that apply to the proposed development:

ACTION: Provide RESNET rater certification of Development Plans **(TAB F)**
ACTION: Provide Internet Safety Plan and Resident Information Form **(Tab W)** if corresponding options selected

REQUIRED:

1. **For any development, upon completion of construction/rehabilitation:**

TRUE a. A community/meeting room with a minimum of 749 square feet is provided with free WIFI access rest to residents only.

25.00% b1. Percentage of brick covering the exterior walls.
75.00% b2. Percentage of Fiber Cement Board or other similar low-maintenance material approved by the Authorit exterior walls. Community buildings are to be included in percentage calculations.

TRUE c. All kitchen light fixtures are LED and meet MDCR lighting guidelines.

TRUE d. Cooking surfaces are equipped with fire suppression features as defined in the manual

TRUE e. Full bath fans are wired to primary light with delayed timer or has continuous exhaust by ERV/DOAS.

or

FALSE f. Full bath fans are equipped with a humidistat.

TRUE g. All faucets, toilets and showerheads in each bathroom are WaterSense labeled products.

FALSE h. Rehab Only: Each unit is provided with the necessary infrastructure for high-speed internet/broadband where it does not already exist.

FALSE i. Each unit is provided free individual high-speed internet access.
(Must have a minimum 20Mbps upload/ 100Mbps download speed per manual.)

TRUE j. Every kitchen, living room and bedroom contains, at minimum, one USB charging port.

FALSE k. Rehab only: Each unit has dedicated space, drain and electrical hook-ups to accept a permanently installed dehumidification system.

or

TRUE l. All Construction types: each unit is equipped with a permanent dehumidification system.

FALSE m. All interior doors within units are solid core.

FALSE n. Installation of a renewable energy electric system in accordance with manufactorer's specifications and applicable provisions of the National Electrical Code - Provide documentation at **Tab F**.

FALSE o. New construction only: Each unit to have balcony or patio with a minimum depth of 5 feet clear from face of building and a minimum size of 30 square feet.

J. ENHANCEMENTS

For all developments exclusively serving elderly tenants upon completion of construction/rehabilitation:

FALSE a. All cooking ranges have front controls.

FALSE b. Bathrooms have an independent or supplemental heat source.

FALSE c. All entrance doors have two eye viewers, one at 42" inches and the other at standard height.

FALSE d. Each unit has a shelf or ledge outside the primary entry door located in an interior hallway.

2. **Green Certification**

a. Applicant agrees to meet the base line energy performance standard applicable to the development's construction category as listed above.

The applicant will also obtain one of the following:

FALSE Earthcraft Gold or higher certification

TRUE National Green Building Standard (NGBS) certification of Silver or higher.

FALSE LEED Certification

FALSE Enterprise Green Communities (EGC) Certification

If Green Certification is selected, no points will be awarded for g. Watersense Bathroom fixtures above

Action: If seeking any points associated Green certification, provide appropriate documentation at **TAB F.**

b. Applicant will pursue one of the following certifications to be awarded points on a future development application. (Failure to reach this goal will not result in a penalty.)

TRUE Zero Energy Ready Home Requirements

FALSE Passive House Standards

FALSE Applicant wishes to claim points from a prior allocation that has received certification for Zero Energy Rea or Passive House Standards. Provide certification at **Tab P**. See Manual for details and requirements.

3. **Universal Design** - Units Meeting Universal Design Standards (units must be shown on Plans)

TRUE a. Architect of record certifies that units will be constructed to meet Virginia Housing's Universal Design Standards.

97 b. Number of Rental Units constructed to meet Virginia Housing's Universal Design standards:

100% of Total Rental Units

No Market Units listed on Structure 1a.

4. FALSE Market-rate units' amenities are substantially equivalent to those of the low income units.

If not, please explain:

Architect of Record initial here that the above information is accurate per certification statement within this application.

I. UTILITIES

1. Utilities Types:

a. Heating Type	Heat Pump
b. Cooking Type	Electric
c. AC Type	Central Air
d. Hot Water Type	Electric

2. Indicate True if the following services will be included in Rent:

Water?	TRUE	Heat?	FALSE
Hot Water?	FALSE	AC?	FALSE
Lighting/ Electric?	FALSE	Sewer?	TRUE
Cooking?	FALSE	Trash Removal?	TRUE

Utilities	Enter Allowances by Bedroom Size				
	0-BR	1-BR	2-BR	3-BR	4-BR
Heating	0	19	24	27	0
Air Conditioning	0	5	7	9	0
Cooking	0	4	5	6	0
Lighting	0	34	42	51	0
Hot Water	0	18	24	35	0
Water	0	0	0	0	0
Sewer	0	0	0	0	0
Trash	0	0	0	0	0
Total utility allowance for costs paid by tenant	$0	$80	$102	$128	$0

3. The following sources were used for Utility Allowance Calculation (Provide documentation **TAB R).**

a.	FALSE	HUD	d.	FALSE	Local PHA
b.	FALSE	Utility Company (Estimate)	e.	TRUE	Other D3G UA Report
c.	FALSE	Utility Company (Actual Survey)			

Warning: The Virginia Housing housing choice voucher program utility schedule shown on VirginiaHousing.com should not be used unless directed to do so by the local housing authority.

K. SPECIAL HOUSING NEEDS

NOTE: Any Applicant commits to providing first preference to members of targeted populations having state rental assistance and will not impose any eligibility requirements or lease terms for such individuals that are more restrictive than its standard requirements and terms, the terms of the MOU establishing the target population, or the eligibility requirements for the state rental assistance.

Accessibility: Indicate **True** for the following point category, as appropriate.
Action: Provide appropriate documentation (**Tab X**)

TRUE — Any development in which ten percent (10%) of the total units (i) conform to HUD regulations interpreting the accessibility requirements of section 504 of the Rehabilitation Act and (ii) are actively marketed to persons with disabilities as defined in the Fair Housing Act in accordance with a plan submitted as part of the application for credits.

All common space must also conform to HUD regulations interpreting the accessibility requirements of section 504 of the Rehabilitation Act.

Architect of Record initial here that the above information is accurate per certification statement within this application.

Special Housing Needs/Leasing Preference:

a. If not general population, select applicable special population:

— Elderly (as defined by the United States Fair Housing Act.)

— Persons with Disabilities (must meet the requirements of the Federal Americans with Disabilities Act) - Accessible Supportive Housing Pool only

— Supportive Housing (as described in the Tax Credit Manual)

If Supportive Housing is True: Will the supportive housing consist of units

— designated for tenants that are homeless or at risk of homelessness?

Action: Provide Permanent Supportive Housing Certification (**Tab S**)

b. The development has existing tenants and a relocation plan has been developed. FALSE
(If **True**, Virginia Housing policy requires that the impact of economic and/or physical displacement on those tenants be minimized, in which Owners agree to abide by the Authority's Relocation Guidelines for LIHTC properties as described

Action: Provide Relocation Plan, Budget and Unit Delivery Schedule **(Mandatory if tenants are displ**

K. SPECIAL HOUSING NEEDS

 # Leasing Preferences

a. Will leasing preference be given to applicants on a public housing waiting list and/or Section 8 waiting list? select Yes

Organization which holds waiting list: Loudoun County DHCD

Contact person: Eric Keeler

Title: Director - Loudoun DHCD

Phone Number: (571) 627-6450

Action: Provide required notification documentation **(TAB L)**

b. Leasing preference will be given to individuals and families with childr FALSE
(Less than or equal to 20% of the units must have of 1 or less bedrooms).

c. Specify the number of low-income units that will serve individuals and families with children by providing three or more bedrooms 12
% of total Low Income Units 12%

NOTE: Development must utilize a **Virginia Housing Certified Management Agent**. Proof of management certification must be provided before 8609s are issued.

Download Current CMA List from VirginiaHousing.com

Action: Provide documentation of tenant disclosure regarding Virginia Housing Rental Education **(Mandatory - Tab U)**

 # Target Population Leasing Preference

Unless prohibited by an applicable federal subsidy program, each applicant shall commit to provide a leasing preference to individuals (i) in a target population identified in a memorandum of understanding between the Authority and one or more participating agencies of the Commonwealth, (ii) having a voucher or other binding commitment for rental assistance from the Commonwealth, and (iii) referred to the development by a referring agent approved by the Authority. The leasing preference shall not be applied to more than ten percent (10%) of the total units in the development at any given time. The applicant may not impose tenant selection criteria or leasing terms with respect to individuals receiving this preference that are more restrictive than the applicant's tenant selection criteria or leasing terms applicable to prospective tenants in the development that do not receive this preference, the eligibility criteria for the rental assistance from the Commonwealth, or any eligibility criteria contained in a memorandum of understanding between the Authority and one or more participating agencies of the Commonwealth.

Primary Contact for Target Population leasing preference. The agency will contact as needed.

First Name: Denise
Last Name: Craft

Phone Number: (240) 683-0300 Email: dcraft@tmamgroup.com

K. SPECIAL HOUSING NEEDS

 # Rental Assistance

a. Some of the low-income units do or will receive rental assistance..... FALSE

b. Indicate True if rental assistance will be available from the following

####	Rental Assistance Demonstration (RAD) or other PHA conversion to project based rental assistance.
####	Section 8 New Construction Substantial Rehabilitation
####	Section 8 Moderate Rehabilitation
####	Section 811 Certificates
####	Section 8 Project Based Assistance
####	RD 515 Rental Assistance
####	Section 8 Vouchers *Administering Organization
####	State Assistance *Administering Organization
####	Other:

c. The Project Based vouchers above are applicable to the 30% units seeking points. FALSE

i. If True above, how many of the 30% units will not have project based vouchers? 0

d. Number of units receiving assistance: 0
How many years in rental assistance contract?
Expiration date of contract:
There is an Option to Renew. FALSE

Action: Contract or other agreement provided **(TAB Q).**

 # Public Housing Revitalization

Is this development replacing or revitalizing Public Housing Units? FALSE
If so, how many existing Public Housing units? 0

L. UNIT DETAILS

1. Set-Aside Election: UNITS SELECTED IN INCOME AND RENT DETERMINE POINTS FOR THE BONUS POINT CATEG

Note: In order to qualify for any tax credits, a development must meet one of three minimum threshold occupancy tests. Either (i) at least 20% of the units must be rent-restricted and occupied by persons whose incomes are 50% or less of the area median income adjusted for family size (this is called the 20/50 test), (ii) at least 40% of the units must be rent-restricted and occupied by persons whose incomes are 60% or less of the area median income adjusted for family size (this is called the 40/60 test), or (iii) 40% or more of the units are both rent-restricted and occupied by persons whose income does not exceed the imputed income limitation designated in 10% increments between 20% to 80% of the AMI, and the average of the imputed income limitations collectively does not exceed 60% of the AMI (this is called the Average Income Test (AIT)). All occupancy tests are described in Section 42 of the IRC. Rent-and income-restricted units are known as low-income units. If you have more low-income units than required, you qualify for more credits. If you serve lower incomes than required, you receive more points under the ranking system.

a. Units Provided Per Household Type:

Income Levels		
# of Units	% of Units	
0	0.00%	20% Area Median
10	10.31%	30% Area Median
0	0.00%	40% Area Median
0	0.00%	50% Area Median
77	79.38%	60% Area Median
10	10.31%	70% Area Median
0	0.00%	80% Area Median
0	0.00%	Market Units
97	100.00%	**Total**

Rent Levels		
# of Units	% of Units	
0	0.00%	20% Area Median
10	10.31%	30% Area Median
0	0.00%	40% Area Median
0	0.00%	50% Area Median
77	79.38%	60% Area Median
10	10.31%	70% Area Median
0	0.00%	80% Area Median
0	0.00%	Market Units
97	100.00%	**Total**

b. Indicate that you are electing to receive points for the following deeper targets shown in the chart above and those targets will be reflected in the set-aside requirements within the Extended Use Agreement.

20-30% Levels: FALSE 40% Levels: FALSE 50% levels: FALSE

c. The development plans to utilize average income testi: TRUE

2. Unit Mix Grid FOR YOUR CONVENIENCE, COPY AND PASTE IS ALLOWED WITHIN UNIT MIX GRID

In the following grid, add a row for each unique unit type planned within the development. Enter the appropriate data for both tax credit and market rate units.

Architect of Record initial here that the information below is accurate per certification statement within this application.

	Unit Type (Select One)	Rent Target (Select One)	Number of Units	# of Units 504 compliant	Net Rentable Square Feet	Monthly Rent Per Unit	Total Monthly Rent
Mix 1	1 BR - 1 Bath	30% AMI	3		705.00	$820.00	$2,460
Mix 2	1 BR - 1 Bath	60% AMI	3		705.00	$1,755.00	$5,265
Mix 3	1 BR - 1 Bath	60% AMI	5		705.00	$1,755.00	$8,775
Mix 4	1 BR - 1 Bath	60% AMI	4	4	703.00	$1,755.00	$7,020
Mix 5	1 BR - 1 Bath	60% AMI	3		743.00	$1,755.00	$5,265
Mix 6	1 BR - 1 Bath	60% AMI	7		645.00	$1,755.00	$12,285
Mix 7	1 BR - 1 Bath	60% AMI	4		698.00	$1,755.00	$7,020
Mix 8	1 BR - 1 Bath	60% AMI	3		740.00	$1,755.00	$5,265
Mix 9	1 BR - 1 Bath	60% AMI	1		707.00	$1,755.00	$1,755
Mix 10	1 BR - 1 Bath	70% AMI	3		836.00	$1,960.00	$5,880

L. UNIT DETAILS

Mix 11	2 BR - 2 Bath	30% AMI	4		991.00	$1,000.00	$4,000
Mix 12	2 BR - 2 Bath	60% AMI	3		991.00	$2,100.00	$6,300
Mix 13	2 BR - 2 Bath	60% AMI	3	3	949.00	$2,100.00	$6,300
Mix 14	2 BR - 2 Bath	60% AMI	6		948.00	$2,100.00	$12,600
Mix 15	2 BR - 2 Bath	60% AMI	2		948.00	$2,100.00	$4,200
Mix 16	2 BR - 2 Bath	60% AMI	2		971.00	$2,100.00	$4,200
Mix 17	2 BR - 2 Bath	60% AMI	3		956.00	$2,100.00	$6,300
Mix 18	2 BR - 2 Bath	60% AMI	2		933.00	$2,100.00	$4,200
Mix 19	2 BR - 2 Bath	60% AMI	2		933.00	$2,100.00	$4,200
Mix 20	2 BR - 2 Bath	60% AMI	3		1198.00	$2,100.00	$6,300
Mix 21	2 BR - 2 Bath	60% AMI	3		1024.00	$2,100.00	$6,300
Mix 22	2 BR - 2 Bath	60% AMI	6		1103.00	$2,100.00	$12,600
Mix 23	2 BR - 2 Bath	60% AMI	3		930.00	$2,100.00	$6,300
Mix 24	2 BR - 2 Bath	60% AMI	3		1117.00	$2,100.00	$6,300
Mix 25	2 BR - 2 Bath	70% AMI	4		971.00	$2,350.00	$9,400
Mix 26	3 BR - 2 Bath	30% AMI	3		1191.00	$1,150.00	$3,450
Mix 27	3 BR - 2 Bath	60% AMI	2		1183.00	$2,429.00	$4,858
Mix 28	3 BR - 2 Bath	60% AMI	1		1183.00	$2,429.00	$2,429
Mix 29	3 BR - 2 Bath	60% AMI	3	3	1183.00	$2,429.00	$7,287
Mix 30	3 BR - 2 Bath	70% AMI	3		1191.00	$2,720.00	$8,160
Mix 31							$0
Mix 32							$0
Mix 33							$0
Mix 34							$0
Mix 35							$0
Mix 36							$0
Mix 37							$0
Mix 38							$0
Mix 39							$0
Mix 40							$0
Mix 41							$0
Mix 42							$0
Mix 43							$0
Mix 44							$0
Mix 45							$0
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Mix 66							$0

L. UNIT DETAILS

Mix 67							$0
Mix 68							$0
Mix 69							$0
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Mix 88							$0
Mix 89							$0
Mix 90							$0
Mix 91							$0
Mix 92							$0
Mix 93							$0
Mix 94							$0
Mix 95							$0
Mix 96							$0
Mix 97							$0
Mix 98							$0
Mix 99							$0
Mix 100							$0
TOTALS			97	10			$186,674

Total Units	**97**	**Net Rentable SF:**	**TC Units**	**89,001.00**
			MKT Units	**0.00**
			Total NR SF:	**89,001.00**

Floor Space Fraction (to 7 decimals)	**100.00000%**

M. OPERATING EXPENSES

Administrative:			Use Whole Numbers Only!
1.	Advertising/Marketing		$3,000
2.	Office Salaries		$0
3.	Office Supplies		$3,500
4.	Office/Model Apartment	(type)	$0
5.	Management Fee		$106,800
	5.00% of EGI	$1,101.03 Per Unit	
6.	Manager Salaries		$80,000
7.	Staff Unit (s)	(type)	$0
8.	Legal		$7,500
9.	Auditing		$7,500
##	Bookkeeping/Accounting Fees		$0
##	Telephone & Answering Service		$12,125
##	Tax Credit Monitoring Fee		$3,395
##	Miscellaneous Administrative		$10,185
	Total Administrative		$234,005
Utilities			
##	Fuel Oil		$0
##	Electricity		$17,000
##	Water		$36,380
##	Gas		$0
##	Sewer		$26,000
	Total Utility		$79,380
Operating:			
##	Janitor/Cleaning Payroll		$0
##	Janitor/Cleaning Supplies		$500
##	Janitor/Cleaning Contract		$25,000
##	Exterminating		$2,560
##	Trash Removal		$12,000
##	Security Payroll/Contract		$5,600
##	Grounds Payroll		$0
##	Grounds Supplies		$0
##	Grounds Contract		$12,000
##	Maintenance/Repairs Payroll		$75,000
##	Repairs/Material		$15,000
##	Repairs Contract		$8,000
##	Elevator Maintenance/Contract		$13,500
##	Heating/Cooling Repairs & Maintenance		$3,000
##	Pool Maintenance/Contract/Staff		$0
##	Snow Removal		$2,000
##	Decorating/Payroll/Contract		$7,500
##	Decorating Supplies		$0
##	Miscellaneous		$19,400
	Totals Operating & Maintenance		$201,060

M. OPERATING EXPENSES

Taxes & Insurance

##	Real Estate Taxes			$186,000
##	Payroll Taxes			$18,600
##	Miscellaneous Taxes/Licenses/Permits			$3,000
##	Property & Liability Insurance	*$1,000*	*per unit*	$97,000
##	Fidelity Bond			$250
##	Workman's Compensation			$3,488
##	Health Insurance & Employee Benefits			$22,475
##	Other Insurance			$0
	Total Taxes & Insurance			$330,813
	Total Operating Expense			$845,258

Total Operating Expenses Per Unit $8,714 **C. Total Operating Expenses as % of** 39.59%

Replacement Reserves (Total # Units X $300 or $250 New Const./Elderly Mir $29,100

Total Expenses	$874,358

N. PROJECT BUDGET - HARD COSTS

Cost/Basis/Maximum Allowable Credit

Complete cost column and basis column(s) as appropriate

To select exclusion of allowable line items from Total Development Costs used in Cost limit calculations, select X in yellow box to

Note: Attorney must opine, among other things, as to correctness of the inclusion of each cost item in eligible basis, type of credit and numerical calculations included in Project Budget.

Must Use Whole Numbers Only! Item	(A) Cost	Amount of Cost up to 100% Includable in Eligible Basis--Use Applicable Column(s): "30% Present Value Credit" (B) Acquisition	"30% Present Value Credit" (C) Rehab/ New Construction	(D) "70 % Present Value Credit"
1. Contractor Cost				
a. Unit Structures (New)	22,333,066	0	22,333,066	0
b. Unit Structures (Rehab)	0	0	0	0
c. Non Residential Structures	0	0	0	0
d. Commercial Space Costs	0	0	0	0
e. Structured Parking Garage	0	0	0	0
Total Structure	22,333,066	0	22,333,066	0
f. Earthwork	0	0	0	0
g. Site Utilities	0	0	0	0
h. Renewable Energy	0	0	0	0
i. Roads & Walks	0	0	0	0
j. Site Improvements	0	0	0	0
k. Lawns & Planting	0	0	0	0
l. Engineering	0	0	0	0
m. Off-Site Improvements	0	0	0	0
n. Site Environmental Mitigation	0	0	0	0
o. Demolition	0	0	0	0
p. Site Work	0	0	0	0
q. Hard Cost Contingency	0	0	0	0
Total Land Improvements	0	0	0	0
Total Structure and Land	22,333,066	0	22,333,066	0
r. General Requirements	1,339,984	0	1,339,984	0
s. Builder's Overhead (2.0% Contract)	446,660	0	446,660	0
t. Builder's Profit (6.0% Contract)	1,339,982	0	1,339,982	0
u. Bonds	0	0	0	0
v. Building Permits	0	0	0	0
w. Special Construction	0	0	0	0
x. Special Equipment	0	0	0	0
y. Other 1: Hard Contingency	1,272,985	0	1,272,985	0
z. Other 2:	0	0	0	0

aa.	Other 3: Site Work Reimburser	2,425,000	0	2,425,000	0
	Contractor Costs	$29,157,677	$0	$29,157,677	$0

Construction cost per unit: ***$300,594.60***

MAXIMUM COMBINED GR, OVERHEAD & PROFIT = **$3,126,629**

ACTUAL COMBINED GR, OVERHEAD & PROFIT = **$3,126,626**

O. PROJECT BUDGET - OWNER COSTS

To select exclusion of allowable line items from Total Development Costs used in Cost limit calculations, select X in yellow box to the left.

MUST USE WHOLE NUMBERS ONLY! Item	(A) Cost	Amount of Cost up to 100% Includable in Eligible Basis--Use Applicable Column(s): "30% Present Value Credit" (B) Acquisition	"30% Present Value Credit" (C) Rehab/ New Construction	(D) "70 % Present Value Credit"
2. Owner Costs				
a. Building Permit	165,000	0	65,000	0
b. Architecture/Engineering Design Fee $4,320 /Unit)	419,000	0	419,000	0
c. Architecture Supervision Fee $1,149 /Unit)	111,500	0	111,500	0
d. Tap Fees	1,500,000	0	1,500,000	0
e. Environmental	10,000	0	10,000	0
f. Soil Borings	30,000	0	30,000	0
g. Green Building (Earthcraft, LEED, etc.)	50,000	0	50,000	0
h. Appraisal	10,000	0	10,000	0
i. Market Study	10,000	0	10,000	0
j. Site Engineering / Survey	300,000	0	300,000	0
k. Construction/Development Mgt	0	0	0	0
l. Structural/Mechanical Study	75,000	0	75,000	0
m. Construction Loan Origination Fee	315,000	0	66,200	0
n. Construction Interest (0.0% fo 0 months)	1,750,000	0	1,050,000	0
o. Taxes During Construction	186,000	0	0	0
p. Insurance During Construction	97,000	0	0	0
q. Permanent Loan Fee (0.0%)	0			
r. Other Permanent Loan Fees	0			
s. Letter of Credit	0	0	0	0
t. Cost Certification Fee	21,000	0	15,000	0
u. Accounting	10,000	0	10,000	0
v. Title and Recording	100,000	0	50,000	0
w. Legal Fees for Closing	180,000	0	90,000	0
x. Mortgage Banker	191,000	0	0	0
y. Tax Credit Fee	104,000			
z. Tenant Relocation	0			
aa. Fixtures, Furnitures and Equipment	75,000	0	75,000	0
ab. Organization Costs	0			
ac. Operating Reserve	983,217			
ad. Soft Costs Contingency	100,000			
ae. Security	25,000	0	25,000	0
af. Utilities	25,000	0	25,000	0
ag. Supportive Service Reserves	0			

O. PROJECT BUDGET - OWNER COSTS

(1) Other* specify	Marketing	28,000	0	0	0
(2) Other* specify	Construction Inspection	50,000	0	50,000	0
(3) Other* specify	Syndication Fee	50,000	0	0	0
(4) Other* specify	Lease Up Reserve	97,000	0	0	0
(5) Other * specify	VHDA Out of Balance	100,000	0	0	0
(6) Other* specify	Tenant Services Reserve	100,000	0	0	0
(7) Other* specify	Unsecured GAP Loan Fe	28,000	0	0	0
(8) Other* specify	EBL Fees	50,000	0	0	0
(9) Other* specify		0	0	0	0
Owner Costs Subtotal (Sum 2A..2(10))		$7,345,717	$0	$4,036,700	$0
Subtotal 1 + 2 (Owner + Contractor Costs)		$36,503,394	$0	$33,194,377	$0
3. Developer's Fees		3,466,672	0	3,466,672	0
4. Owner's Acquisition Costs					
Land		1,455,000			
Existing Improvements		0	0		
Subtotal 4:		$1,455,000	$0		
5. Total Development Costs					
Subtotal 1+2+3+4:		$41,425,066	$0	$36,661,049	$0

If this application seeks rehab credits only, in which there is no acquisition and no change in ownership, enter the greater of appraised value or tax assessment value here:

	$0	**Land**
(Provide documentation at **Tab E**)	$0	**Building**

Maximum Developer Fee: **$3,466,672**

Proposed Development's Cost per Sq Foot	$364	**Meets Limits**
Applicable Cost Limit by Square Foot:	$556	
Proposed Development's Cost per Unit	$412,063	**Meets Limits**
Applicable Cost Limit per Unit:	$589,015	

P. ELIGIBLE BASIS CALCULATION

Item	(A) Cost	Amount of Cost up to 100% Includable in Eligible Basis--Use Applicable Column(s): "30 % Present Value Credit" (B) Acquisition	(C) Rehab/ New Construction	(D) "70 % Present Value Credit"
1. Total Development Costs	41,425,066	0	36,661,049	0
2. Reductions in Eligible Basis				
a. Amount of federal grant(s) used to finance qualifying development costs		0	0	0
b. Amount of nonqualified, nonrecourse financing		0	0	0
c. Costs of nonqualifying units of higher quality (or excess portion thereof)		0	0	0
d. Historic Tax Credit (residential portion)		0	0	0
3. Total Eligible Basis (1 - 2 above)		0	36,661,049	0
4. Adjustment(s) to Eligible Basis (For non-acquisition costs in eligible basis)				
a. For QCT or DDA (Eligible Basis x 30%)			0	0
State Designated Basis Boosts:				
b. For Revitalization or Supportive Housing (Eligible Basis x 30%)			0	0
c. For Green Certification (Eligible Basis x 10%)				0
Total Adjusted Eligible basis			36,661,049	0
5. Applicable Fraction		100.00000%	100.00000%	100.00000%
6. Total Qualified Basis (Eligible Basis x Applicable Fraction)		0	36,661,049	0
7. Applicable Percentage		4.00%	4.00%	9.00%
8. Maximum Allowable Credit under IRC §42 (Qualified Basis x Applicable Percentage)		$0	$1,466,442	$0
(Must be same as BIN total and equal to or less than credit amount allowed)		$1,466,442 Combined 30% & 70% P. V. Credit		

Q. SOURCES OF FUNDS

Action: Provide Documentation for all Funding Sources at **Tab T**

1. **Construction Financing:** List individually the sources of construction financing, including any such loans financed through grant sources:

	Source of Funds	Date of Application	Date of Commitment	Amount of Funds	Name of Contact Person
1.	VHDA Long Term Bond			$19,100,000	
2.					
3.					
	Total Construction Funding:			$19,100,000	

2. **Permanent Financing:** List individually the sources of all permanent financing in order of lien position:

	Source of Funds	Date of Application	Date of Commitment	*(Whole Numbers only)* Amount of Funds	Annual Debt Service Cost	Interest Rate of Loan	Amortization Period IN YEARS	Term of Loan (years)
1.	VH Tax Exempt	1/15/27		$9,400,000	$604,209	5.79%	40	40
2.	VH Tax Exempt REACH	1/15/27		$1,900,000	$94,582	3.95%	40	40
3.	VH Taxable REACH	1/15/27		$4,800,000	$238,944	3.95%	40	40
4.	VH Taxable REACH+	1/15/27		$3,000,000	$149,340	3.95%	40	40
5.	Loudoun DHCD	10/29/25	2/13/26	$3,380,000			40	40
6.	VA DHCD ASNH VHTF	8/1/26		$2,000,000			40	40
7.	VA DHCD ASNH NHTF	8/1/26		$1,000,000	$5,000	-6.62%	40	40
8.	VA DHCD ASNH HIEE	8/1/26		$2,000,000			40	40
9.								
10.								
11.								
12.								
13.								
14.								
15.								
16.								
17.								
18.								
19.								
20.								
	Total Permanent Funding:			$27,480,000	$1,092,075			

3. **Grants**: List all grants provided for the development:

Source of Funds	Date of Application	Date of Commitment	Amount of Funds	Name of Contact Person

Q. SOURCES OF FUNDS

1.	Loudoun County Fee Waiver			$100,000	
2.					
3.					
4.					
5.					
6.					
	Total Permanent Grants:			$100,000	

4. Subsidized Funding

	Source of Funds	Date of Commitment	Amount of Funds
1.			
2.			
3.			
4.			
5.			
	Total Subsidized Funding		$0

5. Recap of Federal, State, and Local Funds

Portions of the sources of funds described above for the development are financed directly or indirectly with Federal, State, or Local Government Funds TRUE

If above is **True**, then list the amount of money involved by all appropriate types.

Below-Market Loans

TE: See Below For 50% Test Status

a.	Tax Exempt Bonds	#########
b.	RD 515	$0
c.	Section 221(d)(3)	$0
d.	Section 312	$0
e.	Section 236	$0
f.	Virginia Housing REACH Funds	$7,800,000
g.	HOME Funds	$0
h.	Choice Neighborhood	$0
i	National Housing Trust Fund	$1,000,000
j	Virginia Housing Trust Fund	$2,000,000
k	Other:	$3,380,000
	Loudoun DHCD	
l	Other:	$0

Market-Rate Loans

a.	Taxable Bonds	$0
b.	Section 220	$0
c.	Section 221(d)(3)	$0
d.	Section 221(d)(4)	$0
e.	Section 236	$0
f.	Section 223(f)	$0
g.	Other:	$0

Grants*

a.	CDBG	$0

Grants

c.	State	

Q. SOURCES OF FUNDS

b.	UDAG	$0	d.	Local	
			e.	Other:	

*This means grants to the partnership. If you received a loan financed by a locality which received one of the listed grants, please list it in the appropriate loan column as "other" and describe the applicable grant program which funded it.

6. For Transactions Using Tax-Exempt Bonds Seeking 4% Credits:

For purposes of the Bond Cliff Test, and based only on the data entered to this application, the portion of the aggregate basis of buildings and land financed with tax-exempt funds is: **29.65%**

7. Some of the development's financing has credit enhancements. FALSE

If **True**, list which financing and describe the credit enhancement:

8. Other Subsidies **Action:** Provide documentation **(Tab Q)**

a. FALSE Real Estate Tax Abatement on the increase in the value of the development.

b. FALSE **New** project based subsidy from HUD or Rural Development **or** any other binding federal project based subsidy

0 Number of New PBV Vouchers

c. FALSE Other

9. A HUD approval for transfer of physical asset is requ FALSE

R. EQUITY

1. Equity

a. Portion of Syndication Proceeds Attributable to Historic Tax Credit

Amount of Federal historic credits	$0	x Equity $	$0.000	=	$0
Amount of Virginia historic credits	$0	x Equity $	$0.000	=	$0

b. Housing Opportunity Tax Credit Request (paired with 4% credit requests only)

i.	Requested Annual HOTC Credits	$0
ii.	10 Year HOTC Credit Amount	$0
iii.	Equity Dollars Per Credit	$0.000
iv.	Percent of ownership entity (repeated from	99.99000%
v.	HOTC Credit Net	$0

c. Equity that Sponsor will Fund:

i.	Cash Investment	$0	
ii.	Contributed Land/Building	$0	
iii.	Deferred Developer Fee	$1,673,600	(Note: Deferred Developer Fee cannot be negative.)
v.	Other:	$0	

ACTION: If Deferred Developer Fee is greater than 50% of overall Developer Fee, provide a cash flow statement showing payoff within 15 years at **TAB A.**

Equity Total $1,673,600

2. Equity Gap Calculation

a.	Total Development Cost		$41,425,066
b.	Total of Permanent Funding, Grants and Equity	-	$29,253,600
c.	Equity Gap		$12,171,466
d.	Developer Equity	-	$1,217
e.	Equity gap to be funded with low-income tax credit proceeds		$12,170,249

3. Syndication Information (If Applicable)

a. Actual or Anticipated Name of Syndicator: ▶ CAHEC/ Community Affordable Housing Equity Corporation

Contact Person: Greg Mayo Phone: (919) 788-1810

Street Address: 7700 Falls of Neuse Road, Suite 200

City: Raleigh State: North Carolina Zip: 27615

b. Syndication Equity

i.	Anticipated Annual Credits	$1,466,442.00
ii.	Equity Dollars Per Credit (e.g., $0.85 per dollar of credit)	$0.830
iii.	Percent of ownership entity (e.g., 99% or 99.9%)	99.99000%
iv.	Syndication costs not included in Total Development Costs (e.g., advisory fees)	$0
v.	Net credit amount anticipated by user of credits	$1,466,295
vi.	Total to be paid by anticipated users of credit (e.g., limited partners)	$12,170,249

Action: Provide Syndicator's or Investor's signed Letter of Intent **(Mandatory at Tab C)**

4. Net Syndication Amount $12,170,249

Which will be used to pay for Total Development Costs

5. Net Equity Factor 82.9999832698%

S. DETERMINATION OF RESERVATION AMOUNT NEEDED

The following calculation of the amount of credits needed is substantially the same as the calculation which will be made by Virginia Housing to determine, as required by the IRC, the amount of credits which may be allocated for the development. However, Virginia Housing at all times retains the right to substitute such information and assumptions as are determined by Virginia Housing to be reasonable for the information and assumptions provided herein as to costs (including development fees, profits, etc.), sources for funding, expected equity, etc. Accordingly, if the development is selected by Virginia Housing for a reservation of credits, the amount of such reservation may differ significantly from the amount you compute below.

1.	Total Development Costs		$41,425,066
2.	Less Total of Permanent Funding, Grants and Equity	-	$29,253,600
3.	Equals Equity Gap		$12,171,466
4.	Divided by Net Equity Factor (Percent of 10-year credit expected to be raised as equity investment)		82.9999832698%
5.	Equals Ten-Year Credit Amount Needed to Fund Gap		$14,664,420
	Divided by ten years		10
6.	Equals Annual Tax Credit Required to Fund the Equity Gap		$1,466,442
7.	Maximum Allowable Credit Amount (from Eligible Basis Calculation)		$1,466,442

8. Requested Credit Amount

		For 30% PV Credit:	$1,466,442
		For 70% PV Credit:	$0
Credit per LI Units	$15,117.9588	**Combined 30% & 70% PV Credit Requested**	**$1,466,442**
Credit per LI Bedroom	$8,626.1294		

9. **Action:** Provide Attorney's Opinion using Virginia Housing template **(Mandatory Tab H)**

T. CASH FLOW

1. **Revenue**

Indicate the estimated monthly income for the **Low-Income Units** (based on Unit Details tab):

Total Monthly Rental Income for LIHTC Units		$186,674
Plus Other Income Source (list)		$588
Equals Total Monthly Income:		$187,262
Twelve Months		x12
Equals Annual Gross Potential Income		$2,247,144
Less Vacancy Allowance	5.0%	$112,357
Equals Annual Effective Gross Income (EGI) - Low Income Units		$2,134,787

Warning: Documentation must be submitted to support vacancy rate of less than 7%.

2. Indicate the estimated monthly income for the **Market Rate Units** (based on Unit Details tab):

Total Monthly Income for Market Rate Units:		$0
Plus Other Income Source (list)		$0
Equals Total Monthly Income:		$0
Twelve Months		x12
Equals Annual Gross Potential Income		$0
Less Vacancy Allowance	7.0%	$0
Equals Annual Effective Gross Income (EGI) - Market Rate Units		$0

Action: Provide documentation in support of Operating Budget **(TAB R)**

3. **Cash Flow (First Year)**

a.	Annual EGI Low-Income Units	$2,134,787
b.	Annual EGI Market Units	$0
c.	Total Effective Gross Income	$2,134,787
d.	Total Expenses	$874,358
e.	Net Operating Income	$1,260,429
f.	Total Annual Debt Service	$1,092,075
g.	Cash Flow Available for Distribution	$168,354

T. CASH FLOW

4. **Projections for Financial Feasibility - 15 Year Projections of Cash Flow**

	Stabilized Year 1	Year 2	Year 3	Year 4	Year 5
Eff. Gross Income	2,134,787	2,177,483	2,221,032	2,265,453	2,310,762
Less Oper. Expenses	874,358	900,589	927,606	955,435	984,098
Net Income	1,260,429	1,276,894	1,293,426	1,310,018	1,326,664
Less Debt Service	1,092,075	1,092,075	1,092,075	1,092,075	1,092,075
Cash Flow	168,354	184,819	201,351	217,943	234,589
Debt Coverage Ratio	1.15	1.17	1.18	1.20	1.21

	Year 6	Year 7	Year 8	Year 9	Year 10
Eff. Gross Income	2,356,977	2,404,117	2,452,199	2,501,243	2,551,268
Less Oper. Expenses	1,013,621	1,044,029	1,075,350	1,107,611	1,140,839
Net Income	1,343,357	1,360,087	1,376,849	1,393,632	1,410,429
Less Debt Service	1,092,075	1,092,075	1,092,075	1,092,075	1,092,075
Cash Flow	251,282	268,012	284,774	301,557	318,354
Debt Coverage Ratio	1.23	1.25	1.26	1.28	1.29

	Year 11	Year 12	Year 13	Year 14	Year 15
Eff. Gross Income	2,602,293	2,654,339	2,707,426	2,761,574	2,816,806
Less Oper. Expenses	1,175,064	1,210,316	1,246,625	1,284,024	1,322,545
Net Income	1,427,229	1,444,023	1,460,800	1,477,550	1,494,261
Less Debt Service	1,092,075	1,092,075	1,092,075	1,092,075	1,092,075
Cash Flow	335,154	351,948	368,725	385,475	402,186
Debt Coverage Ratio	1.31	1.32	1.34	1.35	1.37

Estimated Annual Percentage Increase in Revenue	2.00%	(Must be ≤ 2%)
Estimated Annual Percentage Increase in Expenses	3.00%	(Must be ≥ 3%)

U. Building-by-Building Information

Must Complete

Qualified basis must be determined on a building-by building basis. Complete the section below. Building street addresses are required by the IRS (must have them by the time of allocation request).

Number of BINS: 1

Total Qualified Basis should equal total on Elig Basis Tab

FOR YOUR CONVENIENCE, COPY AND PASTE IS ALLOWED WITHIN BUILDING GRID

Bldg #	BIN if known	NUMBER OF TAX CREDIT UNITS	NUMBER OF MARKET RATE UNITS	Please help us with the process: DO NOT use the CUT feature DO NOT SKIP LINES BETWEEN BUILDINGS Street Address 1	Street Address 2	City	State	Zip	30% Present Value Credit for Acquisition: Estimate Qualified Basis	Actual or Anticipated In-Service Date	Applicable Percentage	Credit Amount	30% Present Value Credit for Rehab / New Construction: Estimate Qualified Basis	Actual or Anticipated In-Service Date	Applicable Percentage	Credit Amount	70% Present Value Credit: Estimate Qualified Basis	Actual or Anticipated In-Service Date	Applicable Percentage	Credit Amount
1.		97		41350 Springfield Lane		Leesburg	VA	20175	$0	03/01/29		$0	$1,466,442	03/01/29	100.00%	$1,466,442				$0
2.												$0				$0				$0
3.												$0				$0				$0
4.												$0				$0				$0
5.												$0				$0				$0
6.												$0				$0				$0
7.												$0				$0				$0
8.												$0				$0				$0
9.												$0				$0				$0
10.												$0				$0				$0
11.												$0				$0				$0
12.												$0				$0				$0
13.												$0				$0				$0
14.												$0				$0				$0
15.												$0				$0				$0
16.												$0				$0				$0
17.												$0				$0				$0
18.												$0				$0				$0
19.												$0				$0				$0
20.												$0				$0				$0
21.												$0				$0				$0
22.												$0				$0				$0
23.												$0				$0				$0
24.												$0				$0				$0
25.												$0				$0				$0
26.												$0				$0				$0
27.												$0				$0				$0
28.												$0				$0				$0
29.												$0				$0				$0
30.												$0				$0				$0
31.												$0				$0				$0
32.												$0				$0				$0
33.												$0				$0				$0
34.												$0				$0				$0
35.												$0				$0				$0
		97	0	If development has more than 35 buildings, contact Virginia Housing.																
				Totals from all buildings					$0			$0	$1,466,442			$1,466,442	$0			$0

Number of BINS: 1

V. STATEMENT OF OWNER

The undersigned hereby acknowledges the following:

1. that, to the best of its knowledge and belief, all factual information provided herein or in connection herewith is true and correct, and all estimates are reasonable.

2. that it will at all times indemnify and hold harmless Virginia Housing and its assigns against all losses, cost damages, Virginia Housing's expenses, and liabilities of any nature directly or indirectly resulting from, arisi of, or relating to Virginia Housing's acceptance, consideration, approval, or disapproval of this reservation re and the issuance or nonissuance of an allocation of credits, grants and/or loan funds in connection herewith

3. that points will be assigned only for representations made herein for which satisfactory documentation is submitted herewith and that no revised representations may be made in connection with this application once the deadline for applications has passed.

4. that this application form, provided by Virginia Housing to applicants for tax credits, including all sections he relative to basis, credit calculations, and determination of the amount of the credit necessary to make the development financially feasible, is provided only for the convenience of Virginia Housing in reviewing reser requests; that completion hereof in no way guarantees eligibility for the credits or ensures that the amount of credits applied for has been computed in accordance with IRC requirements; and that any notations herein describing IRC requirements are offered only as general guides and not as legal authority.

5. that the undersigned is responsible for ensuring that the proposed development will be comprised of qualified low-income buildings and that it will in all respects satisfy all applicable requirements of federal t law and any other requirements imposed upon it by Virginia Housing prior to allocation, should one be issue

6. that the undersigned commits to providing first preference to members of targeted populations having state rental assistance and will not impose any eligibility requirements or lease terms terms for such individuals that are more restrictive than its standard requirements and terms, the terms of the MOU establishing the target population, or the eligibility requirements for the state rental assistance.

7. that, for the purposes of reviewing this application, Virginia Housing is entitled to rely upon representations the undersigned as to the inclusion of costs in eligible basis and as to all of the figures and calculations rela to the determination of qualified basis for the development as a whole and/or each building therein individually as well as the amounts and types of credit applicable thereof, but that the issuance of a reservation based on such representation in no way warrants their correctness or compliance with IRC requirements.

8. that Virginia Housing may request or require changes in the information submitted herewith, may substitut its own figures which it deems reasonable for any or all figures provided herein by the undersigned and may reserve credits, if any, in an amount significantly different from the amount requested.

9. that reservations of credits are not transferable without prior written approval by Virginia Housing at its sol discretion.

10. that the requirements for applying for the credits and the terms of any reservation or allocation thereof are

V. STATEMENT OF OWNER

subject to change at any time by federal or state law, federal, state or Virginia Housing regulations, or other binding authority.

11. that reservations may be made subject to certain conditions to be satisfied prior to allocation and shall in all cases be contingent upon the receipt of a nonrefundable application fee of $1000 and a nonrefundable reservation fee equal to 7% of the annual credit amount reserved.

12. that a true, exact, and complete copy of this application, including all the supporting documentation enclosed herewith, has been provided to the tax attorney who has provided the required attorney's opinion accompanying this submission.

13. that the undersigned has provided a complete list of all residential real estate developments in which the general partner(s) has (have) or had a controlling ownership interest and, in the case of those projects allocated credits under Section 42 of the IRC, complete information on the status of compliance with Section 42 and an explanation of any noncompliance. The undersigned hereby authorizes the Housing Credi Agencies of states in which these projects are located to share compliance information with the Authority.

14. that any principal of undersigned has not participated in a planned foreclosure or Qualified Contract request in Virginia after January 1, 2019.

15. that undersigned agrees to provide disclosure to all tenants of the availability of Renter Education provided by Virginia Housing.

16. that undersigned waives the right to pursue a Qualified Contract on this development.

17. that the information in this application may be disseminated to others for purposes of verification or other purposes consistent with the Virginia Freedom of Information Act. However, all information will be maintained, used or disseminated in accordance with the Government Data Collection and Dissemination Practices Act. The undersigned may refuse to supply the information requested, however, such refusal will result in Virginia Housing's inability to process the application. The original or copy of this application may retained by Virginia Housing, even if tax credits are not allocated to the undersigned.

In Witness Whereof, the undersigned, being authorized, has caused this document to be executed in its name on the date of this application set forth in DEV Info tab hereof.

Legal Name of Owner: Clear Springs Apartments I, LLC

By: _____

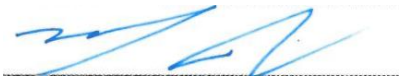
Its: Authorized Person
(Title)

V. STATEMENT OF ARCHITECT

The architect signing this document is certifying that the development plans and specifications incorporate all Virginia Housing Minimum Design and Construction Requirements (MDCR), selected LIHTC enhancements and amenities, applicable building codes and accessibility requirements.

In Witness Whereof, the undersigned, being authorized, has caused this document to be executed in its name on the date of this application set forth in DEV Info tab hereof.

Legal Name of Architect:	Michael R. Poole
Virginia License#:	0401011493
Architecture Firm or Company:	Poole & Poole Architecture, LLC

By: 

Its: Principal
(Title)

Initials by Architect are also required on the following Tabs: Enhancement, Special Housing Needs and Unit Details

V. Previous Participation Certification

Development Name: Clear Springs Apartments Phase I

Name of Applicant (entit Clear Springs Apartments I, LLC

The undersigned, being duly authorized to sign on behalf of the Applicant, provide this Certification with the understanding that Virginia Housing intends to rely upon the statements made herein for the purpose of awarding and allocating federal low-income housing tax credits.

The following terms shall be defined as follows *for the purpose of this Certification only*:

- "Principal" has the same meaning as defined within the QAP, but as applied to each specific property referenced within this Certification, it excludes individuals and entities whose ownership interest is solely vested in limited partnership interests of the ownership entity.

- "Participant" means all Principals of the Owner who are required to be individually listed within **the organizational chart attached hereto**.

1. All the statements made within this Certification are true, complete and correct to the best of my knowledge and belief and are made in good faith, including the data contained within the organizational charts and any statements attached to this Certification, and I will immediately alert Virginia Housing should I become aware of any information prior to the application deadline which may render my statements herein false or misleading.

2. During any time within the past ten (10) years that any of the Participants were Principals in any multifamily rental property, no mortgagee of any such property declared a default under its mortgage loan or assigned it to the mortgage insurer (governmental or private); no such property was foreclosed upon or dispossessed pursuant to a deed-in-lieu of foreclosure; and no such property received mortgage relief from the mortgagee. For purposes of this statement, "declared a default" refers only to final notices of default issued after the exhaustion of all applicable notice and cure rights.

3. During any time within the last ten (10) years that any of the Participants were a Principal in an owner of multifamily rental property, no such owner was determined to have breached any agreement related to the construction or rehabilitation, use, operation, management or disposition of the property, including removal from a partnership or limited liability company. For the purposes of this statement, "determined to have breached" refers only to determinations made by an independent third-party arbiter or court of law following the expiration of all applicable notice and cure periods and excludes default judgments that have been fully satisfied.

4. No Participant listed in this Certification has been required to turn control of a property over to an investor or been otherwise involuntarily removed as a general partner from the ownership of a multifamily rental property within the past ten (10) years.

5. There are no unresolved material findings of noncompliance resulting from any audits, management reviews, or other governmental investigations performed by (or on behalf of) any state or federal entity, concerning any multifamily rental property in which any of the Participants were Principals at the time of such finding. For the purposes of this statement, a finding is considered resolved if either (a) the state or federal entity issuing the finding has determined that no further action is required to remedy the finding; or (b) the Participant (or entity in which it is a Principal) has entered into a binding agreement with the applicable state or federal entity to address such finding(s) and the Applicant has included with this Certification a copy of such agreement accompanied by a written statement from the state or federal entity verifying that such agreement is not in default and is reasonably expected to be satisfied within (90) days. Any such statement must be addressed to Virginia Housing and dated no more than thirty (30) days prior to submission of the Application.

6. During the past ten (10) years, no Participants were Principals in any multifamily rental property for which payments under any state or federal assistance contract were suspended or terminated. For the purposes of this statement, suspensions and terminations do not include those caused solely by actions or inactions of the state or federal agency, like funding shortages, technical issues, or administrative delays, where the Principals were not at fault.

7. None of the Participants have been convicted of a felony and none are presently the subject of a complaint of indictment charging a felony. A felony is defined as any offense punishable by imprisonment for a term exceeding one year, but does not include any offense classified as a misdemeanor under the laws of a state and punishable by imprisonment of two years or less.

8. No Participant has been suspended, debarred, or otherwise restricted by any federal or state entity from participating in housing programs administered by such entity due to programmatic noncompliance on the part of either the Participant or an entity in which the Participant was a Principal.

9. During the past ten (10) years, (a) no Participant has been the subject of a claim under an employee fidelity bond; and (b) while any Participant was a Principal in an owner of multifamily rental property, no Participant or such related owner defaulted on any obligation secured by a letter of credit or surety or performance bond. For the purposes of this statement, "defaulted" refers only to events where funds were paid by the issuer of a letter of credit or surety or performance bond.

10. No Participant is a Virginia Housing employee or a member of the immediate household of any Virginia Housing employee.

11. No Participant currently holds an ownership interest in a multifamily rental property where construction has stopped for more than 20 consecutive days, unless the stoppage:

(a) resulted from events beyond the reasonable control of the property owner that also caused similar delays in comparable projects in the surrounding area (e.g. natural disasters, labor strikes, pandemics, or government-imposed work stoppages); or
(b) solely involves work neither contractually required as a condition of tax credit allocation nor required prior to placing in service all residential buildings within such project.

Additionally, no Participant currently holds an ownership interest in a multifamily rental property assisted by a federal or state governmental entity and that has been substantially complete for more than 90 days without the required closing documents (such as the final cost certification) being filed, unless the delay is solely attributable to the governmental entity and not to the property owner or its agents.

12. No court of competent jurisdiction or other federal or state governmental entity has found any Participant to be in violation of any applicable civil rights, fair housing, or equal employment opportunity laws or regulations.

13. During the past ten (10) years, no Participant was a Principal in any multifamily rental property found by a court of competent jurisdiction or other federal or state governmental entity to have failed to comply with Section 42 of the Internal Revenue Code of 1986, as amended (this statement does not refer to 8823s deemed corrected by the issuing agency).

14. No Participants are currently named as a defendant in a civil lawsuit arising out of their ownership or other participation in a multi-family housing development where the amount of damages sought by plaintiffs (i.e., the ad damnum clause) exceeds One Million Dollars ($1,000,000).

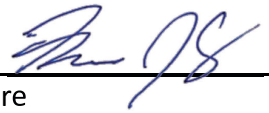
15. No Participant has pursued a Qualified Contract or planned foreclosure in Virginia after January 1, 2019.

Statements above (if any) to which I cannot certify have been deleted by striking through the words. In the case of any such deletion and failure to certify, I have attached the following, which if not provided will automatically disqualify this Application from consideration:

A. Supporting documentation sufficient to both outline the relevant facts and circumstances that necessitated each deletion and to explain why such deletion(s) should not result in disqualification; and

B. A draft of Virginia Housing's form Right of First Refusal, which the Applicant commits to properly execute and record as a condition of any reservation or allocation of low-income housing tax credits made with regard to the Development named above.

Any material misrepresentations or omissions made on this form are grounds for rejection of this Application, forfeiture of any credits awarded with connection with this Application, and prohibition against the submission of future applications.



Signature

Thomas J. Ayd, Jr.

Printed Name

January 9th, 2026

Date (no more than 30 days prior to submission of the Application)

w. # LIHTC SELF SCORE SHEET

Self Scoring Process

This Self Scoring Process is intended to provide you with an estimate of your application's score based on the information included within t reservation application. Other items, denoted below in the yellow shaded cells, are typically evaluated by Virginia Housing's staff during th application review and feasibility process. For purposes of self scoring, we have made certain assumptions about your application. Edit the appropriate responses (Y or N) in the yellow shaded cells, if applicable. Items 5f and 5g require a numeric value to be entered.

Please remember that this score is only an estimate. Virginia Housing reserves the right to change application data and/or score sheet respo where appropriate, which may change the final score.

MANDATORY ITEMS:	Included		Score
a. Signed, completed application with attached tabs in PDF format	Y	Y or N	0
b. Active Excel copy of application	Y	Y or N	0
c. Partnership agreement	Y	Y or N	0
d. SCC Certification	Y	Y or N	0
e. Previous participation form	Y	Y or N	0
f. Site control document	Y	Y or N	0
g. RESNET Certification	Y	Y or N	0
h. Attorney's opinion	Y	Y or N	0
i. Nonprofit questionnaire (if applicable)	Y	Y, N, N/A	0
j. Appraisal	Y	Y or N	0
k. Zoning document	Y	Y or N	0
l. Universal Design Plans	Y	Y or N	0
m. List of LIHTC Developments (Schedule A)	Y	Y or N	0
Total:			0.00

1. READINESS:			
a. Virginia Housing notification letter to CEO (via Locality Notification Information App)	Y	0 or -50	0.00
b. Local CEO Opposition Letter	N	0 or -25	0.00
c. Plan of development	N	0 to 10	0.00
d. Location in a revitalization area based on Qualified Census Tract	N	0 or 10	0.00
or e. Location in a revitalization area with resolution or by locality	Y	0 or 15	15.00
or f. Location in a Opportunity Zone	N	0 or 15	0.00
g. Location in a Medium to High level Economic Development Jurisdiction	Y	0 or 5	5.00
h. Location on land owned by Tribal Nation	N	0 or 15	0.00
Total:			20.00

2. HOUSING NEEDS CHARACTERISTICS:			
a. Sec 8 or PHA waiting list preference	Y	0 or up to 5	5.00
b. Existing RD, HUD Section 8 or 236 program	N	0 or 20	0.00
c. Subsidized funding commitments	0.00%	Up to 60	0.00
d. Tax abatement on increase of property's value	N	0 or 5	0.00
e. New project based rental subsidy) in Northern Virginia or New Construction pool	N	up to 40	0.00
f. Census tract with <12% poverty rate	3%	0, 20, 25 or 30	30.00
g. Development provided priority letter from Rural Development	N	0 or 15	0.00
h. Dev. located in area with increasing rent burdened population	Y	Up to 20	20.00
Total:			55.00

3. DEVELOPMENT CHARACTERISTICS:

a.	Enhancements (See calculations below)			48.00
b.	<removed for 2026>			0.00
c.	HUD 504 accessibility for 10% of units	Y	0 or 20	20.00
d.	Proximity to public transportation	N	0, 10 or 20	0.00
e.	Development will be Green Certified	Y	0 or 10	10.00
f.	Units constructed to meet Virginia Housing's Universal Design standards	100%	Up to 15	15.00
g.	Developments with less than 100 low income units	Y	up to 20	1.20
h.	Historic Structure eligible for Historic Rehab Credits	N	0 or 5	0.00
i.	Meets Target Population Development Characteristics	Y	0 or 10	10.00
	Total:			104.20

4. TENANT POPULATION CHARACTERISTICS:

Locality AMI	State AMI
$163,900	$78,100

a.	Less than or equal to 20% of units having 1 or less bedrooms	N	0 or 15	0.00
b.	<plus> Percent of Low Income units with 3 or more bedrooms	12.37%	Up to 15	0.00
c.	Units with rent and income at or below 30% of AMI and are not subsidized (up to	0.00%	Up to 10	0.00
d.	Units with rents at or below 40% of AMI (up to 10% of LI units)	0.00%	Up to 10	0.00
e.	Units in Higher Income Jurisdictions with rent and income at or below 50% of AMI	0.00%	Up to 50	0.00
f.	Units in Higher Income Jurisdictions with rents <= 50% rented to tenants with <= 60%	0.00%	Up to 25	0.00
or g.	Units in LI Jurisdictions with rents <= 50% rented to tenants with <= 60% of AMI	0.00%	Up to 50	0.00
	Total:			0.00

5. SPONSOR CHARACTERISTICS:

a.	<QAP change - removed for 2026 cycle>	N		0.00
b.	Veteran Small Business Principal owner 25% or greater	N	0 or 30	0.00
c.	Developer experience - uncorrected life threatening hazard	N	0 or -50	0.00
d.	Developer experience - noncompliance	N	0 or -15	0.00
e.	Developer experience - did not build as represented (per occurrence)	0	0 or -2x	0.00
f.	Developer experience - failure to provide minimum building requirements (per occure	0	0 or -50 per ite	0.00
g.	Developer experience - termination of credits by Virginia Housing	N	0 or -10	0.00
h.	Developer experience - exceeds cost limits at certification	N	0 or -50	0.00
i.	Developer experience - more than 2 requests for Final Inspection	0	0 or -5 per iten	0.00
j.	Management company rated unsatisfactory	N	0 or -25	0.00
	Total:			0.00

6. EFFICIENT USE OF RESOURCES:

a.	Credit per unit		Up to 100	44.50
	Total:			44.50

7. BONUS POINTS:

a.	Extended Use Restriction beyond 15 year compliance period	25 Years	40 or 70	40.00
or b.	Nonprofit or LHA purchase option/ ROFR	N	0 or 60	0.00
or c.	Nonprofit or LHA Home Ownership option	N	0 or 5	0.00
d.	Combined 9% and 4% Tax Exempt Bond Site Plan	N	10 or 15	0.00
e.	RAD or PHA Conversion participation and competing in Local Housing Authority pool	N	0 or 10	0.00
f.	Team member with Veteran Owned Small Business Certification	N	up to 10	0.00

g. Commitment to electronic payment of fees		Y	0 or 5	5.00
h. Zero Ready or Passive House certification from prior allocation		N	0 or 20	0.00
	Total:			45.00

300 Point Threshold - all 9% Tax Credits
200 Point Threshold - Tax Exempt Bonds

TOTAL SCORE: **268.70**

Enhancements:

All units have:	Max Pts	Score
a. Community Room	5	5.00
b. Exterior walls constructed with brick and other low maintenance material	40	30.00
c. LED Kitchen Light Fixtures	2	2.00
d. Cooking surfaces equipped with fire suppression features	2	2.00
e. Bath Fan - Delayed timer or continuous exhaust	3	3.00
f. Baths equipped with humidistat	3	0.00
g. Watersense labeled faucets, toilets and showerheads (without Green Cer	3	0.00
h. Rehab only: new infrastructure for high speed internet/broadband	5	0.00
i. Each unit provided free individual high speed internet access	15	0.00
j. USB in kitchen, living room and all bedrooms	1	1.00
k. Rehab only: dedicated space to accept permanent dehumidification system	2	0.00
l. Provides Permanently installed dehumidification system	5	5.00
m. All interior doors within units are solid core	3	0.00
n. Installation of Renewable Energy Electric system	10	0.00
o. New Construction: Balcony or patio	4	0.00
		48.00
All elderly units have:		
p. Front-control ranges	1	0.00
q. Independent/suppl. heat source	1	0.00
r. Two eye viewers	1	0.00
s. Shelf or Ledge at entrance within interior hallway	2	0.00
		0.00
	Total amenities:	**48.00**

X. Development Summary

Summary Information **2026 Low-Income Housing Tax Credit Application For Reservation**

Deal Name:	**Clear Springs Apartments Phase I**

Cycle Type:	4% Tax Exempt Bonds Credits	**Requested Credit Amount:**	$1,466,442
Allocation Type:	New Construction	**Jurisdiction:**	Loudoun County
Total Units	97	**Population Target:**	General
Total LI Units	97		
Project Gross Sq Ft:	109,833.00	**Owner Contact:**	Chase Powell
Green Certified?	TRUE		

Total Score
268.70

Source of Funds	Amount	Per Unit	Per Sq Ft	Annual Debt Service
Permanent Financing	$27,480,000	$283,299	$250	$1,092,075
Grants	$100,000	$1,031		
Subsidized Funding	$0	$0		

Uses of Funds - Actual Costs				
Type of Uses	**Amount**	**Per Unit**	**Sq Ft**	**% of TDC**
Improvements	$22,333,066	$230,238	$203	53.91%
General Req/Overhead/Profit	$3,126,626	$32,233	$28	7.55%
Other Contract Costs	$3,697,985	$38,124	$34	8.93%
Owner Costs	$7,345,717	$75,729	$67	17.73%
Acquisition	$1,455,000	$15,000	$13	3.51%
Developer Fee	$3,466,672	$35,739	$32	8.37%
Total Uses	**$41,425,066**	$427,063		

Total Development Costs	
Total Improvements	$36,503,394
Land Acquisition	$1,455,000
Developer Fee	$3,466,672
Total Development Costs	**$41,425,066**

Proposed Cost Limit/Sq Ft:	$364
Applicable Cost Limit/Sq Ft:	$556
Proposed Cost Limit/Unit:	$412,063
Applicable Cost Limit/Unit:	$589,015

Income		
Gross Potential Income - LI Units		$2,247,144
Gross Potential Income - Mkt Units		$0
	Subtotal	$2,247,144
Less Vacancy %	5.00%	$112,357
Effective Gross Income		$2,134,787

Rental Assistance? FALSE

Unit Breakdown	
# of Eff	0
# of 1BR	36
# of 2BR	49
# of 3BR	12
# of 4+ BR	0
Total Units	97

Expenses		
Category	**Total**	**Per Unit**
Administrative	$234,005	$2,412
Utilities	$79,380	$818
Operating & Maintenance	$201,060	$2,073
Taxes & Insurance	$330,813	$3,410
Total Operating Expenses	$845,258	$8,714
Replacement Reserves	$29,100	$300
Total Expenses	$874,358	$9,014

	Income Levels	Rent Levels
	# of Units	# of Units
<=30% AMI	10	10
40% AMI	0	0
50% AMI	0	0
60% AMI	77	77
>60% AMI	10	10
Market	0	0

Cash Flow	
EGI	$2,134,787
Total Expenses	$874,358
Net Income	$1,260,429
Debt Service	$1,092,075
Debt Coverage Ratio (YR1):	1.15

Income Averaging? TRUE

Extended Use Restriction? 40

Y. Efficient Use of Resources

If the Combined Max Allowable Credits is $500,000 and the annual credit requested is $200,000, you are providing a 60% savings for the program. This deal would receive all 100 credit points.

For another example, the annual credit requested is $300,000 or a 40% savings for the program. Using a sliding scale, the credit points would be calculated by the difference between your savings and the desired 60% savings. Your savings divided by the goal of 60% times the max points of 100. In this example, (40%/60%) x 100 or 66.67 points.

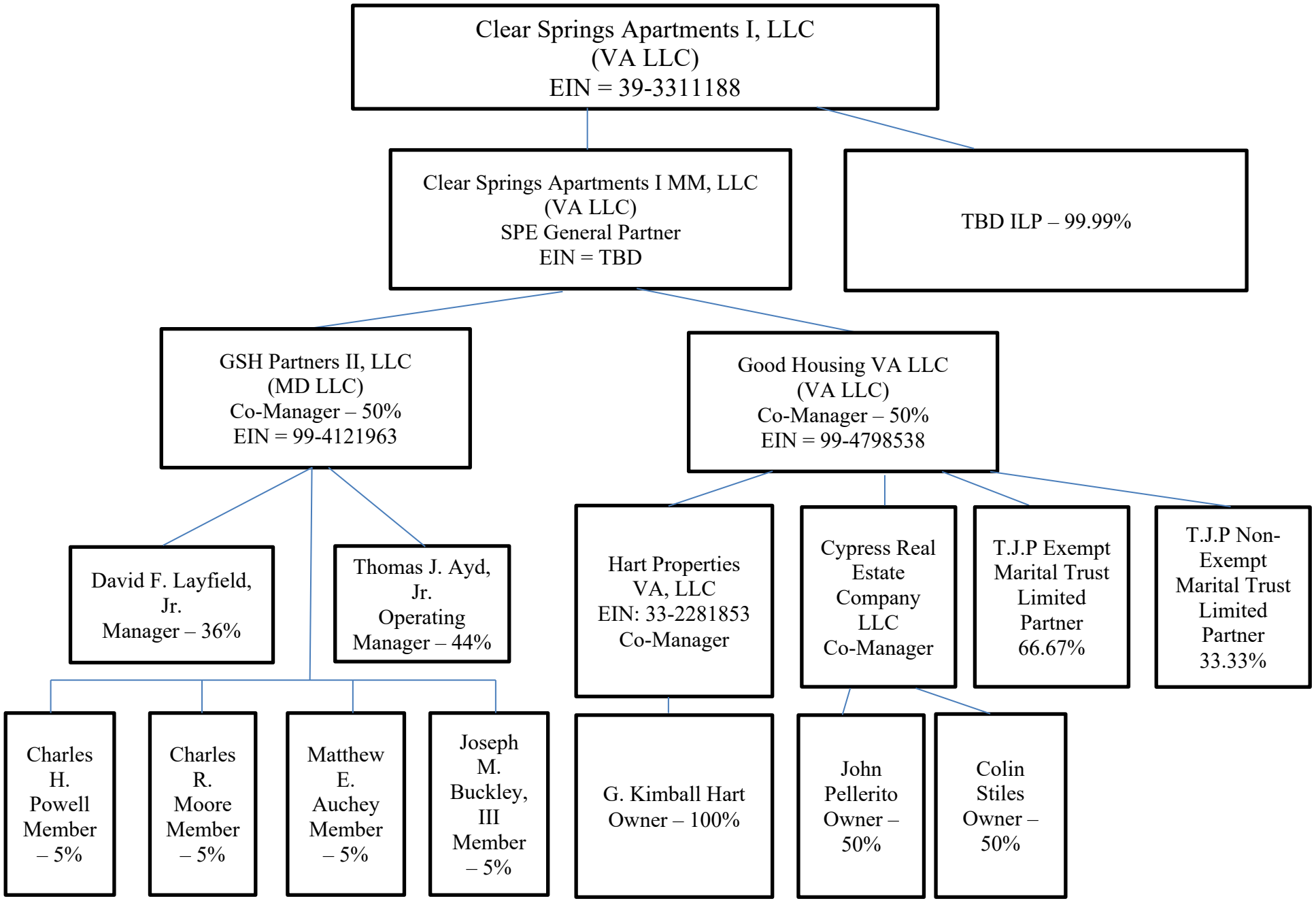
Tax Exempt Deals are granted a starting point value greater than zero to allow for the nature of these deals

Combined Max	$1,466,442
Credit Requested	$1,466,442
% of Savings	0.00%
Sliding Scale Points	44.5

Tab A:

Partnership or Operating Agreement, including
Org Chart with percentages of ownership interest

ORGANIZATIONAL CHART FOR CLEAR SPRINGS APARTMENTS I, LLC



Tab B:

Virginia State Corporation Commission Certification
(MANDATORY)

Commonwealth of Virginia

State Corporation Commission

CERTIFICATE OF FACT

I Certify the Following from the Records of the Commission:

That Clear Springs Apartments 1, LLC is duly organized as a Limited Liability Company under the law of the Commonwealth of Virginia;

That the Limited Liability Company was formed on November 7, 2024; and

That the Limited Liability Company is in existence in the Commonwealth of Virginia as of the date set forth below.

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:

January 12, 2026

Bernard J. Logan, Clerk of the Commission

CERTIFICATE NUMBER : 20260112227915 28

Tab C:

Syndicator's or Investor's Letter of Intent
(MANDATORY)

CAHEC
Strengthening Communities

January 9, 2026

Chase Powell
Green Street Housing
212 E. Main St. Suite 200
Salisbury, MD 21801

RE: Clear Springs Apartments Phase I
Leesburg, VA

Dear Mr. Powell:

The purpose of this letter is to express the interest and willingness of the Community Affordable Housing Equity Corporation ("CAHEC") to provide an equity investment in the above-referenced project through Community Equity Fund XXVII Limited Partnership ("CEF XXVII") or another CAHEC-affiliated fund.

This letter of interest is based on a preliminary evaluation of the information you have provided to us. We anticipate that a total contribution of $12,170,249 could be made for a 99.99% ownership interest. The estimated contribution is based on a reservation and allocation of $14,664,420 for the federal low-income housing tax credits ("LIHTC"). The net equity pricing for credits delivered to a CAHEC fund is $0.83 per LIHTC. The net equity pricing for the LIHTC will be computed using the following formula: net equity from the sale of the LIHTCs divided by the ten-year LIHTC allocation request multiplied by the proposed investor ownership interest. For this project, the formula works as follows:

$$\$12,170,249 \div (\$1,466,442 \times 99.99\% \times 10) = \$0.83$$

Should the tax credits allocated to the project be different than what is assumed herein, the net equity contribution will be adjusted based on the above formula and pricing and subject to verification that there are sufficient funding sources to develop the project.

Our typical pay-in of equity contributions will provide up to 20% during construction; 55% at project completion; and 25% upon achievement of 100% qualified occupancy, 3 months stabilized occupancy and receipt of 8609's. Equity contributions during construction will be based on actual costs incurred. Equity installments and installment conditions will be identified during the closing process.

Our current requirements include an operating reserve equivalent to six months operating expenses, replacement reserves, and debt service. A minimum debt service coverage ratio of 1.15 on must-pay debt will be required. Any deferred developer fees must be reasonably expected to be repaid on a schedule approved by the Investor Member's tax counsel and generally should not be projected to exceed 50% of the total fee due. The general partner and/or approved guarantors

will be required to guarantee: construction completion/lease-up; operating deficits for a period of 5 years; and, delivery of projected tax credits.

CAHEC may assess a Syndication fee in an amount up to $40,000. CAHEC will absorb all attorney's fees for its counsel's preparation of the Entity Agreement, associated exhibits, and provision of a tax opinion, provided that no unforeseen circumstances arise that result in excessive legal expenses. Equity investment by CAHEC is subject to documentation showing that the project will obtain an eligible basis to support a reservation and allocation of the projected tax credits. The ability to invest in the Project is contingent upon standard due diligence review, project underwriting, a satisfactory environmental report, approval by CAHEC's investment committee, and the receipt, review, and approval of all financing and organizational documents.

Thank you for the opportunity to review and express our interest in your project. CAHEC wishes you continued success and hopes that we will have the opportunity to continue to work with you as the equity investor in this project.

Sincerely,

Jennifer McCabe

Jennifer McCabe
Acquisitions Manager

Tab D:

Any Supporting Documentation related to List of LIHTC Developments (Schedule A)

This deal does not require information behind this tab.

Tab E:

Site Control Documentation & Most Recent Real Estate Tax Assessment (MANDATORY)

Purchase Price Description

The gross purchase price for the land to be developed as Clear Springs Apartments Phases I and II totals $7,200,000. As set forth in the Purchase and Sale Agreement (PSA), the final purchase price at each closing is calculated by multiplying the number of units acquired at that closing by $40,000 per unit. Accordingly, the Phase I purchase price is calculated as $40,000 multiplied by 97 units, resulting in a total of $3,880,000.

The allocation of a portion of the purchase price to site work is an ongoing conversation between Hines, Green Street Housing, and Good Housing, reflecting site improvements to be completed on Hines' behalf in their role as master developer. Our contracted development accountant has reviewed and confirmed that the portion of the purchase price allocated to site work is eligible and appropriately treated. This purchase price is allocated between land acquisition and reimbursable site work costs, as detailed below.

Clear Springs Apartments Phase I Purchase Price Allocation

Units-		97
Per Unit Cost per PSA-	$	40,000
Phase I Gross Purchase Price-	$	3,880,000
Portion of Purchase Price Classified as Site Work Reimbursables-	$	2,425,000
Portion of Purchase Price Classified as Land Acquisition-	$	1,455,000
Phase I Gross Purchase Price-	$	3,880,000

PURCHASE AND SALE AGREEMENT

THIS PURCHASE AND SALE AGREEMENT (this "**Agreement**") is made and entered into as of the Effective Date (defined below) by and between CLEAR SPRINGS DEVELOPMENT GROUP LP, a Delaware limited partnership ("**Seller**"), and GOOD HOUSING VA LLC, a Virginia limited liability company ("**Purchaser**").

R E C I T A L S :

A. Reference is made to that certain real property located in Loudoun County (the "**County**"), Virginia depicted on **Exhibit A** attached hereto and made a part hereof (the "**Property**").

B. Purchaser desires to purchase the Property from Seller, and Seller desires to sell to the Property to Purchaser upon and subject to the terms and conditions of this Agreement.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Seller and Purchaser agree as follows:

ARTICLE 1
PURCHASE PRICE AND EARNEST MONEY

Section 1.1 Agreement to Sell and Purchase.

For the consideration and upon the terms and conditions set forth in this Agreement, Seller hereby agrees to sell and convey to Purchaser and Purchaser hereby agrees to purchase from Seller, the Property, subject to the Permitted Exceptions (defined below).

Section 1.2 Purchase Price.

Subject to adjustment as provided below, the "**Purchase Price**" shall be $3,680,000.00 at the First Closing (defined below) and $3,520,000.00 at the Second Closing (defined below), payable in immediately available federal funds. It is expressly understood and agreed that the Purchase Price at the First Closing and the Second Closing set forth above was calculated on the assumption that the Phase 1 Property will be approved by the County to consist of not fewer than 92 residential units (the "**Units**") and the Phase 2 Property will be approved by the County to consist of not fewer than 88 Units, in each case at a purchase price of $40,000.00 per Unit. The final Purchase Price at each Closing shall be calculated by multiplying the number of Units purchased by Purchaser at such Closing by $40,000.00 per Unit.

Section 1.3 Earnest Money.

(a) Within five (5) business days after the Effective Date, Purchaser shall deposit with Safe Harbor Title Company, LLC (the "**Title Company**"), at 4900 Augusta Avenue, Suite 150, Richmond, Virginia 23230, immediately available federal funds in the amount of $50,000.00 (the "**Initial Earnest Money Deposit**"). The Initial Earnest Money Deposit shall be non-refundable upon the expiration of the Inspection Period, unless specifically provided for herein. Within five (5) days after the date Purchaser receives written confirmation of the reservation of Low-Income Housing Tax Credits ("**LIHTCs**") by Virginia Housing in connection with Purchaser's intended development of the Property (the "**Credit Confirmation Date**"), Purchaser shall deposit an additional $100,000.00 with the Title Company (the "**Second Earnest Money Deposit**"), which Second Earnest Money Deposit shall be non-refundable upon deposit, unless specifically provided for

herein. Within five (5) days of Purchaser's receipt of written confirmation that Virginia Housing has set the "Bond Inclusion Date", Purchaser shall deposit an additional $500,000.00 with the Title Company (the "**Third Earnest Money Deposit**", and collectively with the Initial Earnest Money Deposit and the Second Earnest Money Deposit, the "**Earnest Money**"). The Third Earnest Money Deposit shall be non-refundable upon deposit, unless specifically provided for herein.

(b) $500,000.00 of the Earnest Money will be applied to the Purchase Price and released to Seller at the First Closing, and the remainder of the Earnest Money will be applied to the Purchase Price and released to Seller at the Second Closing (defined below). If this Agreement does not close for any reason, the Earnest Money will be paid or refunded as provided in this Agreement. The Title Company shall, promptly upon receipt, place the Earnest Money in a federally insured, interest bearing account. All interest on the Earnest Money becomes part of the Earnest Money. All interest on the Earnest Money will be reported to the Internal Revenue Service as income of Purchaser. Purchaser shall promptly execute and deliver to the Title Company all forms reasonably requested by the Title Company with respect to the Earnest Money.

(c) The Title Company is authorized and directed to pay the Earnest Money to the party entitled to receive the Earnest Money under the terms of this Agreement. Seller or Purchaser, as appropriate, shall deliver a letter of instruction to the Title Company directing the disbursement of the Earnest Money to the party entitled to receive the Earnest Money pursuant to the terms of this Agreement promptly upon receipt of a demand from that party.

Section 1.4 Independent Consideration.

Upon the full execution hereof, a portion of the Initial Earnest Money in the amount of $100 (the "**Independent Consideration**"), shall be released to Seller, which amount Seller and Purchaser hereby acknowledge and agree has been bargained for and agreed to as consideration for Seller's execution and delivery of this Agreement. The Independent Consideration is in addition to and independent of any other consideration or payment provided for in this Agreement, is non-refundable in all events, and shall be credited to the Purchase Price at the First Closing.

ARTICLE 2
TITLE AND SURVEY

Section 2.1 Title Insurance.

(a) Purchaser shall cause the Title Company to agree to issue to Purchaser as soon as practicable after each Closing, a standard form of Owner Policy of Title Insurance used in the Commonwealth of Virginia for the applicable portion of the Property (each, an "**Owner Policy**"), dated as of the applicable Closing Date (defined below).

(b) Purchaser is responsible for payment of the premium for the Owner Policies and all premiums charged for and costs associated with obtaining any endorsements or modifications to any Owner Policy and for any loan policy or endorsements required by Purchaser's lender.

(c) Promptly after the Effective Date, Title Company shall furnish to Purchaser a title insurance commitment or commitments, as applicable, covering the Property issued by

the Title Company (collectively, the "**Commitment**"), together with copies of all documents referenced as title exceptions in the Commitment.

Section 2.2 Survey.

Within ten (10) days after the Effective Date, Seller shall deliver to Purchaser any existing surveys (the "**Existing Surveys**") Seller may have of the Property. Purchaser shall, at Purchaser's expense, order within ten (10) days after the Effective Date current surveys of the Phase 1 Property and the Phase 2 Property (collectively, the "**Survey**"), based upon the depiction of the Phase 1 Property and Phase 2 Property set forth in Exhibit A, and deliver the initial draft Survey to Seller promptly following receipt. Following Purchaser's preliminary approval of the as-surveyed legal descriptions of the Property appearing on the Survey, Purchaser shall deliver drafts of such legal descriptions to Seller. Seller shall inform Purchaser within ten (10) days of receipt of such descriptions whether Seller approves or disapproves of such descriptions, Seller's approval not to be unreasonably withheld, conditioned, or delayed. Seller's failure to respond within such period shall be deemed an approval of the submitted descriptions. If Seller disapproves all or any portion of such legal descriptions, Seller shall provide the basis for such disapproval, Purchaser and Seller shall work in good faith to address Seller's comments, and Purchaser shall resubmit draft legal descriptions to Seller. This process shall repeat until Purchaser and Seller have approved the draft legal descriptions for the Property (the "**Approved Descriptions**"). Subject to Purchaser's rights under Section 2.3 and Article 3 below, the Approved Descriptions shall be used in the Deeds (defined below).

Section 2.3 Subdivision.

Purchaser and Seller hereby acknowledge that as of the Effective Date, the parcel(s) of land comprising the Property are not oriented as depicted in Exhibit A. Seller shall, at Seller's sole cost and expense, (i) prepare a subdivision plat (the "**Subdivision Plat**") that consolidates and/or subdivides the Property in substantial conformity with the Survey and the Approved Descriptions; (ii) obtain all permits, consents and approvals required under applicable law, ordinances and regulations to effectuate such subdivision; and (iii) record the Subdivision Plat. In the event that Seller fails to complete the foregoing items (i), (ii), and (iii) on or before June 30, 2026, subject to extension for Force Majeure Events (as hereinafter defined) Purchaser shall be entitled to terminate this Agreement and receive a refund of the Earnest Money. Seller shall not record the Subdivision Plat without Purchaser's prior written consent to the final form of such Subdivision Plat, which shall not be unreasonably withheld, conditioned, or delayed. Purchaser's failure object to a form of the Subdivision Plat within five (5) days of Seller's delivery thereof to Purchaser shall be deemed Purchaser's consent to such form. Following the recordation of the Subdivision Plat, Purchaser may elect to add reference to the Subdivision Plat to the Approved Descriptions, and in such event, such updated legal descriptions shall be used in the Deeds.

After execution of this Agreement, subject to Section 3.1(f) below, Seller may take any of the following actions affecting title to the Property not yet acquired by Purchaser (and each of the following shall be an additional Permitted Exception (as defined below) hereunder), to each of which Purchaser hereby expressly consents: (i) create, modify, or release easements, rights-of-way, covenants, conditions or restrictions, including recording any plat (but excluding the Subdivision Plat, which shall be governed by the first paragraph of this Section 2.3), which Seller determines are necessary or appropriate for development or use of the Property, provided that no such instruments or encumbrances shall have a material adverse impact on Purchaser's intended development of the Property and Seller provides Purchaser reasonable advance notice prior to recording any such instruments or encumbrances; and (ii) place new financing liens against the Property and modify existing financing liens, provided that the financing liens encumbering the Property shall be released, at the applicable Closing, by payment to the lender(s) of the amount required to cause such release. For purposes of this Section 2.3, "material adverse

impact" shall include, but not be limited to, any condition that would be reasonably expected to prohibit, interfere with, delay, increase the cost of, or necessitate material additional action by Purchaser in connection with (i) Purchaser's satisfaction of the Conditions to Closing (as defined below) applicable to Purchaser; (ii) Purchaser's efforts to secure governmental approvals, permits, or licenses in connection with its intended development and use of the Property; (iii) Purchaser's construction of the intended improvements on the Property; or (iv) Purchaser's use of the Property as a multifamily low income housing development.

ARTICLE 3
TITLE REVIEW AND INSPECTION

Section 3.1 Title Review.

(a) Purchaser has until the date that is fifteen (15) days prior to the expiration of the Inspection Period ("**Title Review Period**"), to give Seller a detailed notice objecting to any exception or condition contained in or revealed by the Commitment, exception documents, Existing Surveys or the Surveys; provided, however, that any standard printed exceptions to title that are promulgated in the state of Virginia and any liens and other encumbrances to be released or bonded at the applicable Closing may not form the basis for objection by Purchaser. If Purchaser does not give notice of any objections to Seller within the Title Review Period, Purchaser is deemed to approve the title as shown in the Commitment, the title exceptions, and matters shown on the Survey.

(b) If Purchaser provides timely objections, Seller may, within three (3) days after receipt of Purchaser's notice, notify Purchaser of Seller's intention to cure or not cure Purchaser's objections; provided, however, that Seller has no obligation to cure any of Purchaser's objections. Seller's failure to timely deliver a response to Purchaser's notice shall be deemed an election to not cure Purchaser's objections. If Seller elects to cure any of Purchaser's objections, Seller shall have a period of thirty (30) days from the date of Seller's response (the "**Title Cure Period**") in which it may cure or attempt to cure Purchaser's objections.

(c) If Purchaser provides timely objections and Seller does not cure all of Purchaser's objections within the Title Cure Period for any reason, then, within five (5) days after the last day of the Title Cure Period, Purchaser shall, as its sole and exclusive remedy, waiving all other remedies, either:

(i) terminate this Agreement by giving a termination notice to Seller (but in no event later than the expiration of the Inspection Period; provided however, that if Seller agrees to cure any title objections pursuant to subsection (b) above and fails to cure such objections within the Title Cure Period, then Purchaser shall be entitled to terminate this Agreement notwithstanding the expiration of the Inspection Period), then the Title Company shall return the Earnest Money to Purchaser and the parties have no further rights, liabilities, or obligations under this Agreement (other than those that expressly survive termination); or

(ii) waive the uncured objections by proceeding to the Closings and be deemed to approve Seller's title as shown in the Commitment, the title exception documents, and the Survey.

If Seller does not timely receive notice of Purchaser's election to terminate under this **Section 3.1(c)**, Purchaser is deemed to waive the uncured objections, other than the Mandatory Cure Items (as defined below), and to approve Seller's title as shown in the Commitment, the title exception documents, and the Survey.

(d) All exceptions appearing in the Commitment or on the Survey to which Purchaser does not object or which are deemed waived and accepted by Purchaser as set forth herein are herein referred to as the "**Permitted Exceptions**"; provided, however, that as to those exceptions to which Purchaser does object, if Seller modifies any such exception to Purchaser's satisfaction, then such exception, as so modified, shall be deemed included in the term "Permitted Exceptions".

(e) Notwithstanding anything to the contrary contained elsewhere in this Agreement, Seller shall be obligated to cure or satisfy all Mandatory Cure Items with respect to the Phase 1 Property at or prior to the First Closing, and all Mandatory Cure Items with respect to the Phase 2 Property at or prior to the Second Closing and Seller may use the proceeds of the Purchase Price at the applicable Closing for such purpose. For purposes of this Agreement, "**Mandatory Cure Items**" shall mean (a) any mortgage, deed to secure debt, deed of trust or similar security instrument arising by, through or under Seller encumbering all or any part of the Property, (b) any mechanic's, materialman's or similar lien (unless resulting from any act or omission of Purchaser or any of its agents, contractors, representatives, or employees) arising by, through or under Seller (c) the lien of ad valorem real or personal property taxes, assessments and governmental charges affecting all or any portion of the Property which are delinquent, and (d) any judgment of record against Seller in the County.

(f) Further, Purchaser acknowledges that Seller and its Affiliates (defined below) have developed or are in the process of developing one or more sets of covenants, conditions and restrictions to govern property adjacent to the Property owned by Seller and such Affiliates (the "**CC&Rs**"). Seller hereby acknowledges and agrees that the Property shall not be directly subject to the CC&Rs or the governance of a homeowners association. On and after the Effective Date, Seller shall not subject the Property to any recorded covenants, conditions, or restrictions, without the prior written consent of Purchaser such consent not to be unreasonably withheld, conditioned or delayed; provided, however, that the Property shall be subject to the Amenity Access Agreement (as defined below), which may grant the Property certain rights in amenities otherwise governed by the CC&Rs.

Section 3.2 Inspection Period.

(a) This Agreement shall terminate immediately at 5:00 p.m., Loudoun County, Virginia time on that certain date that is ninety (90) days after the Effective Date (the period from the Effective Date through such date and time being the "**Inspection Period**"), unless, prior to such time, Purchaser has elected, in its sole and absolute discretion, to proceed with the transaction described herein by delivering written notice thereof to Seller (the "**Notice to Proceed**"). If Purchaser determines that it is not satisfied with the Property for any reason whatsoever, or for no reason at all, Purchaser may also, in its sole discretion, affirmatively terminate this Agreement by giving written notice to Seller at any time prior to the expiration of the Inspection Period. If this Agreement automatically terminates or Purchaser terminates this Agreement by giving written notice in accordance with this **Section 3.2(a)**, the Title Company shall return the Earnest Money then on deposit to Purchaser, and the parties have no further rights, liabilities, or obligations under this

Agreement (other than those that expressly survive termination). If Purchaser delivers the Notice to Proceed prior to the expiration of the Inspection Period, (i) the Earnest Money then on deposit with the Title Company shall be non-refundable, except as otherwise provided in this Agreement, and (ii) this Agreement remains in full force and effect and Purchaser's right to terminate this Agreement under this **Section 3.2(a)** is waived. If this Agreement is not terminated pursuant to this **Section 3.2(a)**, Purchaser is deemed to waive any defaults of Seller known to Purchaser as of the expiration of the Inspection Period that arose prior to or during the Inspection Period.

(b) Purchaser will (i) maintain and cause those entering the Property on Purchaser's behalf to maintain commercial general liability (occurrence) insurance, with such policies to have a combined single limit of at least $1,000,000.00, and $2,000,000.00 in the aggregate, covering any accident arising in connection with the presence or activities of Purchaser or its agents, employees, contractors or consultants on the Property, and deliver to Seller a certificate of insurance verifying such coverage and Seller being named as an additional insured on such coverage prior to entry upon the Property; and (ii) promptly pay when due the costs of all inspections, entries, samplings and tests and examinations done by or on behalf of Purchaser with regard to the Property. Purchaser's General Liability policy will contain a waiver of subrogation in favor of Seller and shall be primary and not require contribution from Seller's insurance policies.

(c) Purchaser shall perform, and shall cause its agents, employees, and contractors to perform, all inspections and reviews of the Property so as not to cause any damage, loss, cost, or expense to, or claims against Seller or the Property. Purchaser shall, at its expense, promptly repair any damage to the Property caused by or directly attributable to Purchaser's inspections or testing to the condition existing prior to the inspection or testing. Purchaser shall indemnify, defend, and hold Seller and its respective agents and employees harmless from any damage, loss, cost, expense (including, without limitation, reasonable legal fees, court costs, and expenses), or claims caused by, directly attributable to, or directly resulting from the entry onto the Property by Purchaser, its agents, employees, contractors, or consultants; provided, however, in no event shall Purchaser be required to indemnify or defend Seller with respect to Purchaser's discovery of any matter on or with respect to the Property existing prior to Purchaser's inspection of the Property and not caused or exacerbated by Purchaser or Purchaser's agents, employees, contractors or consultants. Purchaser shall cause any lien filed against the Property by a consultant, contractor, subcontractor, or other person or entity arising by, through, or under Purchaser or otherwise attributable to Purchaser's inspection, testing, and review of the Property to be released of record (whether through payment or bonding) within twenty (20) days after receipt of notice from Seller of the filing of any lien. The terms of **Sections 3.2(b) and 3.2(c)** survive the Closing or any termination of this Agreement.

(d) If Purchaser terminates this Agreement for any reason (including without limitation pursuant to this Section 3.2), Purchaser shall convey or assign all of its right, title and interest in and to any and all engineering plans and permits (including without limitation permits and other items issued by governmental authorities).

ARTICLE 4
REPRESENTATIONS, WARRANTIES, AND COVENANTS

Section 4.1 Seller's Representations and Warranties.

As of the Effective Date and as of each Closing Date, Seller represents and warrants to Purchaser:

(a) Seller is a Delaware limited partnership, validly existing under the laws of the State of Delaware.

(b) Seller has the authority to execute this Agreement and to perform its obligations under this Agreement. The person executing this Agreement on behalf of Seller is duly authorized to do so.

(c) Neither Seller nor any person or entity that directly owns ten percent (10%) or greater equity interest in Seller or any of Seller's officers, directors, or managing members is a person or entity (each a "**Prohibited Person**") with whom U.S. persons or entities are restricted from doing business under regulations of the Office of Foreign Asset Control ("**OFAC**") of the Department of the Treasury, including those named on OFAC's Specially Designated and Blocked Persons List (the "**List**") or under Executive Order 13224 (the "**Executive Order**") signed on September 24, 2001, and entitled "Blocking Property and Prohibiting Transactions with Persons Who Commit, Threaten to Commit, or Support Terrorism" or any other governmental action; and throughout the term of this Agreement, Seller shall comply with the Executive Order.

(d) Seller's execution of this Agreement and consummation of the transaction contemplated hereby does not and will not (a) result in a breach of or default under any indenture, agreement, instrument or obligation to which Seller is a party and which affects all or any portion of the Property, or (b) violate any applicable law.

(e) There are no attachments, executions, assignments for the benefit of creditors, or voluntary or involuntary proceedings in bankruptcy or under other debtor relief laws pending against Seller.

(f) To Seller's knowledge, as of the Effective Date, the Property is subject to (i) that certain Post-Settlement Occupancy Agreement, dated June 7, 2024 by and between Robert M. Wilkins and Mary Lous Wilkins and Clear Springs Development Group, LLC and (ii) that certain Post-Settlement Occupancy Agreement dated June 7, 2024, by and between Syed Ishaq and Clear Springs Development Group, LLC, and no other tenancies or rights of occupancy arising under Seller. As of each Closing Date, except as may be specifically set forth on the Commitment (it being understood that the standard exception for parties in possession shall not be deemed sufficiently specific), there will be no tenancies with respect to the Property.

(g) To Seller's knowledge, as of the date hereof there are no claims or proceedings pending or threatened in writing, against or relating to Seller or the Property including, without limitation, any proceedings relating to condemnation or the exercise of the rights of eminent domain as to any part of the Property or purchase in lieu thereof or for the limiting or denying of any right of access thereto.

(h) To Seller's knowledge, other than as may have been disclosed in any environmental reports that have been delivered by Seller to Purchaser, (i) no underground storage tanks,

asbestos, items containing PCBs, tires, batteries, solid waste, or toxic or hazardous materials or substances, as defined in applicable state or federal law (collectively, "Hazardous Waste") are present upon or in the Property in violation of Hazardous Waste Laws (as hereinafter defined), and (ii) during Seller's period of ownership, there has been no release, discharge, storage, generation, treatment or disposal of any Hazardous Waste upon or in the Property in violation of Hazardous Waste Laws.

Section 4.2 Survival of Representations and Warranties.

(a) Seller shall promptly notify Purchaser of any change in circumstances or information received by Seller that renders any of Seller's representations or warranties inaccurate in any material respect. If prior to any Closing, Purchaser discovers that any representation or warranty of Seller set forth in **Section 4.1** is inaccurate in any material respect, and such discovery is not the result of Seller's notice as set forth in Section 4.6 and further subject to the cure period set forth in Section 6.1(b), Purchaser's sole and exclusive remedy is to either (i) terminate this Agreement by giving notice to Seller, in which event the parties shall have no further rights, liabilities or obligations under this Agreement (other than those that expressly survive termination), the Title Company or Seller, as applicable, shall return the Earnest Money to Purchaser, and Purchaser shall be entitled to recover from Seller Purchaser's actual out-of-pocket expenses incurred in connection with this Agreement, including engineering and design costs in connection with Purchaser's intended development of the Property, up to the maximum of $400,000.00 (the "**Recoverable Costs**") (which right shall survive the termination of this Agreement), or (ii) waive the representation or warranty as to the non-compliant matter identified by Purchaser and proceed to the Closing(s). Seller shall have no liability with respect to any of Seller's representations, warranties or covenants if, prior to any Closing, Purchaser has actual knowledge of any breach of a representation, warranty or covenant of Seller herein, or Purchaser obtains actual knowledge (from whatever source as a result of Purchaser's due diligence tests, investigations and inspections of the Property; or as a result of written disclosure by Seller or any of Seller's agents, representatives or employees) that contradicts any of Seller's representations, warranties or covenants herein (and the representations, warranties and covenants of Seller shall be deemed modified thereby to be accurate), and Purchaser nevertheless consummates any transaction contemplated by this Agreement (in which event any such breach or contradiction shall be deemed waived by Purchaser but all other express representations, warranties and covenants of Seller hereunder shall remain in effect and survive according to their terms).

(b) Unless waived pursuant to the preceding clause, Seller's representations and warranties shall survive each Closing for a period of nine (9) months, at which time they terminate as to such portion of Property unless Purchaser gives Seller notice within such 9-month period of the circumstances giving rise to a breach discovered by Purchaser after the applicable Closing. Any suit, claim or cause of action against Seller for damages for a breach of a representation or warranty discovered by Purchaser after a Closing and for which notice is timely given to Seller must be instituted two (2) years after such Closing or the damages are thereafter barred. Purchaser waives the right to collect special, consequential, punitive, or any other damages other than actual damages in connection with this transaction and this Agreement. Purchaser will not have the right to bring any suit, claim or cause of action against Seller as a result of any alleged inaccuracy or breach of such representations and warranties under **Section 4.1** unless and until the aggregate amount of all liability and losses arising out all such inaccuracies or breaches exceeds

$25,000 and then only to such extent of such excess. Purchaser agrees to first seek recovery under any insurance policies prior to seeking recovery from Seller, and Seller shall not be liable to Purchaser for such inaccuracies or breaches under **Section 4.1** if Purchaser's claims are satisfied from such insurance policies. Notwithstanding anything to the contrary contained in this Agreement, Seller's liability for all such inaccuracies or breaches under **Section 4.1** shall not exceed, in the aggregate, $400,000.00 (including Seller's attorneys' fees and other costs in connection with such inaccuracies or breaches).

Section 4.3 Purchaser's Representations and Warranties.

Purchaser represents and warrants to Seller, which representations and warranties are also deemed to be made on and as of each Closing Date:

(a) Purchaser is a limited liability company, qualified to do business in the Commonwealth of Virginia.

(b) Purchaser has the authority to execute this Agreement and to perform its obligations under this Agreement. The person executing this Agreement on behalf of Purchaser is duly authorized to do so.

(c) There are no attachments, executions, assignments for the benefit of creditors, or voluntary or involuntary proceedings in bankruptcy or under other debtor relief laws contemplated by, pending, or threatened against Purchaser.

(d) Neither Purchaser nor any person or entity that directly owns ten percent (10%) or greater equity interest in Purchaser or any of Purchaser's officers, directors, or managing members is a Prohibited Person with whom U.S. persons or entities are restricted from doing business under regulations of OFAC, including those named on OFAC's List or under the Executive Order or any other governmental action; and throughout the term of this Agreement, Purchaser shall comply with the Executive Order.

Section 4.4 OFAC Compliance.

Pursuant to the Executive Order, U.S. companies are required to ensure that they do not transact business with persons or entities determined to have committed, or to pose a risk of committing or supporting, terrorist acts and those identified on the List generated by OFAC. The names or aliases of these persons or entities (each a "**Blocked Person**") are updated from time to time. Purchaser hereby acknowledges and agrees that Purchaser's inclusion on the List at any time during the term of this Agreement shall result in a delay in the Closing contemplated by this Agreement. If it is determined that Purchaser is a Blocked Person, this Agreement shall be terminated, and the Earnest Money shall be paid to or retained by (as applicable) Seller. The provisions of this **Section 4.4** will survive the termination of this Agreement.

Section 4.5 Knowledge.

For purposes of this Agreement and any closing document, whenever the phrase "to Seller's actual knowledge" or "to Seller's knowledge", or the "knowledge of Seller" or words of similar import are used, they shall be deemed to refer to facts within the actual knowledge only of Andrew McGeorge, and no others, at the times indicated only, without independent inquiry, without any actual or implied duty of inquiry whatsoever and without the imputation to such person of the knowledge of any other person. The named individual is acting for and on behalf of Seller and in a capacity as an officer or representative of Seller and is in no manner expressly or impliedly making any representations or warranties in an individual capacity. Purchaser waives any right to sue or seek any personal judgment or claim against

such named individuals. For purposes of this Agreement and any closing document, whenever the phrase "to Purchaser's actual knowledge" or "to Purchaser's knowledge", or the "knowledge of Purchaser" or words of similar import are used, they shall be deemed to refer to facts within the actual knowledge only of John Pellerito and G. Kimball Hart, and no others, at the times indicated only, without independent inquiry, without any actual or implied duty of inquiry whatsoever and without the imputation to such person of the knowledge of any other person. The named individuals are acting for and on behalf of Purchaser and in a capacity as an officer or representative of Purchaser and are in no manner expressly or impliedly making any representations or warranties in an individual capacity. Seller waives any right to sue or seek any personal judgment or claim against such individuals.

Section 4.6 Notice of Change.

Seller shall notify Purchaser promptly of any change in the facts or circumstances which are contrary to the foregoing representations and warranties of Seller. If such change is material in nature, Purchaser shall have the right to either (i) terminate this Agreement, in which case the Earnest Money shall be refunded to Purchaser and neither party shall have any further rights or obligations hereunder except for those that expressly survive, and, if such change in circumstances is due to the sole gross negligence or bad faith of Seller, Purchaser shall be entitled to recover from Seller the Recoverable Costs (which right shall survive the termination of this Agreement) or (ii) proceed with the transaction described herein, waiving such inconsistent representation(s) and/or warranty(ies) with respect to the facts disclosed. Purchaser's failure to respond within five (5) days after notification from Seller of such change in facts or circumstance shall be deemed a decision by Purchaser to waive such inconsistent representation and/or warranty and proceed with the transaction. If such change is not material in nature, the parties acknowledge that Purchaser shall have no recourse against Seller.

Section 4.7 Proffer Allocation Agreement. During the Inspection Period, Seller shall provide to Purchaser a proposed proffer allocation agreement ("**PAA**") to govern the payment and allocation of proffer requirements following each Closing, by and among the Seller and Purchaser. Upon the Parties' agreement to the form of the PAA the Purchaser and Seller shall append the PAA as **Exhibit E**, whereupon the PAA shall be incorporated into this Agreement by reference, and shall be executed by Seller and Purchaser at the First Closing as part of the Seller's and Purchaser's deliveries, respectively. The Parties agree that the PAA will be recorded as part of the Closing documents at Seller's sole cost and expense, and shall run with the land. The Purchaser's acceptance of the PAA and incorporation thereof as an Exhibit to this Agreement shall be a condition to Purchaser's exit of the Inspection Period. If Purchaser has not agreed to the final form of the PAA on or before the expiration of the Inspection Period, the parties shall continue to negotiate the form of the PAA diligently and in good faith, and the Inspection Period shall be automatically extended to the day that is one (1) business day after Seller and Purchaser have approved a form of PAA in writing, but in no event more than sixty (60) days from the end of the originally scheduled Inspection Period.

Section 4.8 Purchaser's Post-Closing Covenants.

(a) Purchaser will repair promptly any and all damage caused by Purchaser, Purchaser's employees, agents, contractors and subcontractors to any utilities and water boxes on the Property or any other part of the Subdivision and to the streets that are shown on the final plat.

(b) For each portion of the Property that Purchaser purchases, Purchaser will comply with applicable rules and regulations of the Virginia Department of Environmental Quality ("**VDEQ**") and the County related to the Subdivision, including, without limitation, any

storm water management plan ("**SWM & BMP Plan**") filed with the VDEQ (including, without limitation, the SWM & BMP Plan attached hereto as **Exhibit J**).

ARTICLE 5
CLOSINGS AND PRORATIONS

Section 5.1 Closing Dates.

The closing of the purchase and sale of the Phase 1 Property (the "**First Closing**") shall occur on that certain date that is sixty (60) days after the Development Conditions Completion Date (but in no event later than April 30, 2027) (the "**First Closing Date**") through escrow in the Title Company's office. The closing of the purchase and sale of the Phase 2 Property (the "**Second Closing**" and collectively with the First Closing, the "**Closings**" and each, a "**Closing**") shall occur on or before the date that is twelve (12) months after the First Closing Date (the "**Second Closing Date**" and collectively with the First Closing Date, the "**Closing Dates**" and each, a "**Closing Date**") in the Title Company's office.

Section 5.2 Closing Matters.

(a) At each Closing, Seller shall deliver:

(i) a Special Warranty Deed conveying the Phase 1 Property or Phase 2 Property, as applicable (each, a "**Deed**"), duly executed and acknowledged by Seller, containing no exceptions or conditions except the Permitted Exceptions, substantially in the form attached to this Agreement as **Exhibit C**;

(ii) an IRC Section 1445 Certification to Purchaser, duly executed by Seller, substantially in the form attached to this Agreement as **Exhibit D**;

(iii) at least two (2) original counterparts of a duly executed and acknowledged PAA; and

(iv) an owner's affidavit on the Title Company's standard form in form and substance sufficient for the Title Company to issue the Owner Policy without any standard printed exceptions customarily removed with such owner's affidavit;

(v) a Virginia form R-5 or equivalent;

(vi) at least two (2) original counterparts of a duly executed and acknowledged Amenity Access Agreement in the form attached hereto as **Exhibit G** (the "**Amenity Access Agreement**"); and

(vii) possession of the Phase 1 Property or Phase 2 Property, as applicable, to Purchaser, subject to the Permitted Exceptions.

(b) At each Closing, Purchaser shall deliver:

(i) at least two (2) original counterparts of a duly executed and acknowledged PAA

(ii) at least two (2) original counterparts of a duly executed and acknowledged Amenity Access Agreement; and

(iii) the applicable portion of the Purchase Price, subject to applicable prorations and credits, by wire transfer or other immediately available federal funds to the Title Company.

(c) Seller and Purchaser shall execute and deliver to the appropriate parties any additional documents and instruments that, in the mutual opinion of Purchaser's counsel and Seller's counsel, are necessary to consummate this transaction.

Section 5.3 Prorations.

(a) Seller shall pay all ad valorem taxes, and annual installments of special assessments that are due and payable prior to each Closing, on the applicable portion of the Property for the year in which such Closing occurs and all prior years, except that all taxes and assessments will be prorated between Purchaser and Seller as of the date of each Closing. The proration will be computed and paid on the basis of the actual taxes and assessments for the year of such Closing. If Seller has not received the current year's statements prior to a Closing, the proration will be computed on the basis of the most recent prior statements, taking into account any known changes in the tax rate(s) for the current year, provided that, if the applicable portion of the Property was assessed in the immediately preceding year as part of a larger tract, the latest assessed valuation of such portion shall be calculated using the valuation per acre within the larger tract multiplied by the number of acres within such portion. All real estate taxes imposed with respect to periods prior to a Closing because of a transfer of the applicable portion of the Property or a change of use of such portion after such Closing (i.e., rollback taxes) shall be the responsibility and obligation of Seller. Any such taxes assessed with respect to periods after a Closing shall be the responsibility and obligation of Purchaser, which shall survive each Closing. If any proration under this **Section 5.3** is incorrect for any reason or the estimated proration amount does not reflect the actual taxes or assessments for the year of the applicable Closing, then either party may obtain an adjustment to correct the proration by making written demand upon the other party within one (1) year after such Closing.

(b) The Property shall be subdivided pursuant to Section 2.3 prior to the First Closing. If at any Closing any portion of the Property has not been reassessed to reflect the parcel orientation as of such Closing, the tax prorations specified in **Section 5.3(a)** shall be paid to the Title Company to be held in escrow pursuant to a commercially reasonable escrow agreement approved by the Title Company pending receipt of the reassessment of the Property.

(c) If any tax prorations for larger tax lot parcels made at any Closing are inaccurate, Seller and Purchaser shall pay any deficiencies for their respective pro rata portions to the Title Company or the Title Company shall make any appropriate pro rata refunds to Seller and Purchaser.

(d) The obligations of Seller and Purchaser under this **Section 5.3** survive each Closing.

Section 5.4 Closing Costs.

Costs of each Closing will be allocated between Seller and Purchaser as follows:

(a) Seller shall pay (i) 50% of any escrow fees or similar charges of the Title Company, (ii) the costs of recording the Deeds, including any recording tax and local fees imposed

by the County in connection therewith, and (iii) the costs, if any, incurred by Seller in connection with the performance of its obligations under this Agreement.

(b) Purchaser shall pay (i) the basic premium for each Owner Policy and any premiums related to extended coverage or any endorsements or modifications to such Owner Policy requested by Purchaser, (ii) the cost of providing the Commitment, (iii) 50% of any escrow fees or similar charges of the Title Company, (iv) the cost of the Surveys and (v) the costs, if any, incurred by Purchaser in connection with the performance of its obligations under this Agreement.

(c) All other expenses incurred by Seller or Purchaser with respect to each Closing, including, but not limited to, legal fees of Purchaser and Seller (except in the event of litigation), will be borne and paid exclusively by the party incurring same, without reimbursement, except to the extent otherwise specified in this Agreement.

Section 5.5 Conditions to Each Closing.

In addition to the performance by Seller hereunder, the obligation of Purchaser to purchase the Property is subject to the satisfaction as of the applicable Closing Date of the following conditions (the "**Conditions to Closing**"), any of which may be waived in whole or in part by Purchaser in writing at or before the applicable closing.

(a) No Moratorium. There will be no general moratorium or similar restriction imposed by any governmental authority or utility supplier with respect to the issuance of building permits for the property, or sanitary sewer, water or electricity connections with respect thereto, or any other item necessary for construction.

(b) Site Plan. The final site plan for the applicable portion of the Property to be conveyed at such Closing (the "**Site Plan**") has been conditionally approved by County, it being agreed and understood that the County's approval of the Site Plan is the sole responsibility of Purchaser, to be done at Purchaser's sole cost and expense; provided, however, that Seller shall reasonably cooperate with Purchaser's efforts to obtain approval of the Site Plan at no cost to Seller.

(c) Credits and Bond Inclusion. Purchaser has secured a reservation of LIHTCs and bond inclusion for Virginia Housing tax-exempt bonds in connection with Purchaser's intended development of the Property.

(d) Financing. The County has committed to "gap" funding for Purchaser's intended development of the Property or Purchaser has obtained a binding commitment for another suitable "soft loan" has been received by Purchaser.

(e) Building Permit. Purchaser shall have secured building permits as required under applicable laws of the County for Purchaser's plans and specifications for the applicable portion of the Property. Seller shall cooperate with Purchaser in the application for such building permits and cosign such applications.

(f) Development Conditions. Seller shall complete or cause to be completed all of the following conditions with respect to the applicable portion of the Property (collectively, the "**Development Conditions**"), at Seller's sole cost and expense, and give Purchaser written notice (a "**Completion Notice**") that all of the following matters have been accomplished and completed:

(i) Clearing, grading and necessary earthwork is completed, and building pad and parking areas are at grade in accordance with Purchaser's interim grading plan;

(ii) Seller has delivered notice to Purchaser that all dry utilities, including electrical, gas, cable, and telephone utility lines to serve the Property will be stubbed to the boundary line of the Property not later than (A) sixty (60) days after the First Closing Date with respect to electrical and gas, and (B) ninety (90) days after the First Closing Date with respect to cable and telephone utilities;

(iii) Seller shall have complied in all material respects with the Seller responsibilities set forth on the Development Responsibilities Checklist attached hereto and made part hereof as **Exhibit F**, and Purchaser shall have delivered a written certification to Seller that it shall comply with the Purchaser responsibilities set forth on the Development Responsibilities Checklist;

(iv) All wet utilities adjacent to the Property to be conveyed have been installed so that all such utilities have been stubbed to the boundary of the Property to be conveyed;

(v) Installation of stormwater management serving the Property has been completed, with adequate stormwater facilities, retention and/or treatment, including but not limited to necessary BMP facilities and/or offsite credits;

(vi) The Property to be conveyed shall have insurable access to a public (or private, as determined by Seller, subject to Purchaser's rights under Section 3 hereof) right of way (which access may be via streets in the the larger development that separately access such public right of way).

(vii) The Subdivision Plat shall have been approved and recorded in accordance with Section 2.3.

Seller shall perform the Development Conditions in a good and workmanlike manner and in accordance with applicable law, and shall satisfy and release any and all mechanics' liens affecting the Property arising by, through or under Seller at or before the First Closing. Purchaser may inspect the Property following receipt of the Completion Notice to confirm the satisfactory completion of the Development Conditions. Unless Purchaser makes written objection to the Completion Notice within ten (10) days following delivery of the Completion Notice, the "**Development Conditions Completion Date**" will be deemed to occur on the date of delivery of the Completion Notice.

The Conditions to Closing are solely for the benefit of Purchaser, and the failure of any such Conditions to Closing applicable to Purchaser shall not be deemed a default by Purchaser. If, subject to extension for Force Majeure Events, any of the Conditions to Closing have not been satisfied or waived in writing by Purchaser on or before the applicable Closing Date, then Purchaser shall have the right to (i) extend the applicable Closing Date in order to satisfy the Conditions to Closing, (ii) terminate this Agreement by delivering written notice thereof to Seller and the Title Company, or (iii) waive in writing the unsatisfied condition (s) and proceed with the applicable Closing. If Purchaser terminates this Agreement pursuant to clause (ii) above, then the Title Company shall refund the Earnest Money then on deposit with the Title Company (less the Independent Consideration) to Purchaser. If such termination is the result of a failure of a Development Condition and Seller has not used commercially reasonable efforts to achieve the completion of the applicable Development Condition on or before the applicable Closing Date, Purchaser shall be entitled to recover from Seller the Recoverable Costs (which right shall survive the termination of

this Agreement). Following the refund of the Earnest Money (and, payment of the Recoverable Costs by Seller, but only to the extent applicable), thereafter, neither party will have any further obligations hereunder other than any obligations herein that expressly survive termination. If the applicable Closing does not occur because of a default by either party, the non-defaulting party will have the right to exercise the remedies described below in **Article 6**. As used herein, the term "**Force Majeure Events**" means actual delays caused by fire, flooding, inclement weather, earthquake, hurricane, action of the elements, epidemic or other acts of God, strike, lockout, freight embargo, acts of public enemy, riot, insurrection, war, terrorism, invasion, insurrection, mob violence, malicious mischief, sabotage, inability to procure, or general shortage of, labor, equipment, facilities, materials or supplies in the open market, failure of transportation, condemnation laws, litigation, governmental restrictions, requisition or order of government, civil or military authorities, governmental regulation of the sale or transportation of materials, supplies or labor, governmental delay, inability to obtain governmental permits or approvals or any other similar cause not within Seller's reasonable control

ARTICLE 6
DEFAULTS AND REMEDIES

Section 6.1 Purchaser's Remedies.

(a) If Seller is unable to convey title to Purchaser at a Closing subject only to the Permitted Exceptions (excluding an election by Seller not to cure any objection by Purchaser under **Section 3.1**) for any reason other than an affirmative act by Purchaser that prevents Seller from conveying title as required and either Seller does not remedy the failure within five (5) business days thereafter or Purchaser does not waive any defect in title and accept Seller's title as Seller is able to convey it, then Purchaser shall, as its sole and exclusive remedy, waiving all other remedies, terminate this Agreement by giving notice to Seller within ten (10) days after the event occurs. Upon such termination, the Title Company or Seller, as applicable, shall return the Earnest Money to Purchaser, and the parties have no further rights, liabilities, or obligations under this Agreement (other than those that expressly survive termination); provided, however ,that if Seller is unable to convey title to Purchaser at a Closing as set forth in the first sentence of this **Section 6.1(a)**, and such failure is due to the affirmative act of Seller with the intent to defraud or otherwise hinder Purchaser's ability to complete a Closing, Purchaser shall be entitled to recover from Seller the Recoverable Costs (which right to recovery shall survive the termination of this Agreement).

(b) Other Seller Defaults. If (A) Seller does not timely perform its obligations under **Section 5.2(a)** for any reason other than (i) Purchaser's failure to timely perform its obligations under **Section 5.2(b)** or (ii) an act that falls under **Section 6.1(a)** (or the termination of this Agreement under any applicable provision of this Agreement) or (B) Seller does not timely perform any of its material obligations under this Agreement other than its obligations under **Section 5.2(a)** (for any reason other than the termination of this Agreement under any applicable provision of this Agreement) and does not cure the default within ten (10) business days after receipt of notice of the default from Purchaser, then Purchaser shall, as its sole and exclusive remedy, waiving all other remedies, either:

(i) enforce specific performance of Seller's obligation to convey the applicable portion of the Property to Purchaser in accordance with this Agreement; or

(ii) terminate this Agreement by giving notice to Seller within five (5) business days thereafter, in which event the Title Company or Seller, as applicable, shall return

the Earnest Money to Purchaser, and the parties have no further rights, liabilities, or obligations under this Agreement (other than those that expressly survive termination).

Purchaser is deemed to elect to terminate this Agreement, receive a return of the Earnest Money as liquidated damages, and waive any right to enforce specific performance against Seller unless Purchaser complies with its obligations under **Section 5.2(b)** on the applicable Closing Date, gives Seller notice of its intent to enforce specific performance within ninety (90) days after the applicable Closing Date, and files an action to enforce specific performance against Seller in an appropriate State court having jurisdiction over the applicable portion of the Property within two (2) years after the applicable Closing Date; provided, however, that if specific performance against Seller is unavailable as a remedy due to the affirmative action of Seller, Purchaser shall have the right to recover from Seller the Recoverable Costs (which right to recovery shall survive the termination of this Agreement).

Section 6.2 Seller's Remedies.

If:

(a) Purchaser does not timely perform in accordance with **Section 5.2(b)** for any reason, except (i) Seller's failure to timely perform its obligations under Section 5.2(a), (ii) a condition that falls under Section 6.1(a), (iii) the termination of this Agreement under any applicable provision of this Agreement, or (iv) an act or omission by Seller in violation of this Agreement which prevents Purchaser from timely performance of such obligation; or

(b) Purchaser is otherwise in default in the performance of its obligations under this Agreement and does not cure the default within ten (10) business days after receipt of notice of the default from Seller (but Seller is not required to give Purchaser notice of default in the performance of Purchaser's obligations under **Section 5.2(b)** or any other obligation involving the payment of money);

then Seller may, as its sole and exclusive remedy, waiving all other remedies, terminate this Agreement by giving notice to Purchaser, the Title Company shall pay the Earnest Money to Seller (unless the Earnest Money has previously been released to Seller) and Seller will retain all Earnest Money as liquidated damages, and the parties have no further rights, liabilities, or obligations under this Agreement (except for those that expressly survive termination). The parties agree that Seller's damages are difficult to ascertain, and that the Earnest Money is a fair approximation of Seller's damages and no other damages, rights or remedies shall in any case be collectable, enforceable or available to Seller other than as provided herein and Seller agrees to accept the Earnest Money as its total damages and relief hereunder in such event.

Notwithstanding the foregoing, if Purchaser defaults in its obligations to perform or complete any of the post-closing agreements or conditions set forth in Section 4.8 of this Agreement, then Seller's sole remedy for such breach, shall be an action to recover actual damages and not consequential, punitive or indirect damages caused by Purchaser's failure to comply with such post-Closing obligations as set forth in Section 4.8.

Section 6.3 **CONSEQUENTIAL AND PUNITIVE DAMAGES.**

EACH OF SELLER AND PURCHASER WAIVES ANY RIGHT TO SUE THE OTHER FOR ANY CONSEQUENTIAL OR PUNITIVE DAMAGES FOR MATTERS ARISING UNDER THIS AGREEMENT. THIS SECTION 6.3 SHALL SURVIVE EACH CLOSING AND/OR TERMINATION OF THIS AGREEMENT.

Section 6.4 Limitation on Recourse.

Except to the extent otherwise set forth in this Agreement and/or the documents to be delivered by Seller at Closing, Purchaser's recourse against Seller with respect to any obligation, responsibility, undertaking, duty or liability of any kind or nature under or in connection with this Agreement or any other related agreement or transaction, whether liquidated, unliquidated, claimed, or adjudged, is limited to the Property, and no general or limited partner comprising the Seller, or member or manager of Purchaser or any other person or entity whatsoever other than Seller and Purchaser has any liability whatsoever, direct, indirect, contingent, or otherwise, in connection with this Agreement. This Section 6.4 shall survive the Closings.

ARTICLE 7
CASUALTY AND CONDEMNATION

Section 7.1 Risk of Loss; Condemnation.

Seller bears the risk of loss or damage to the Phase 1 Property prior to the First Closing and the risk of loss or damage to the Phase 2 Property prior to the Second Closing, unless the damage is caused solely by the acts of Purchaser, its agents, contractors, or employees. If, prior to a Closing (i) any portion of the portion of the Property to be conveyed at such Closing is damaged due to causes other than the sole negligence of Purchaser, its agents, contractors, or employees; or (ii) eminent domain proceedings are filed against such portion of the Property or such portion of the Property is condemned prior to such Closing; then, Purchaser may, at its sole option, terminate this Agreement with respect to such portion of the Property by giving notice of termination to Seller within twenty (20) days after Purchaser receives notice of the damage or condemnation. If Purchaser terminates this Agreement under this Section, the Title Company or Seller (as applicable) shall promptly return to Purchaser all of the Earnest Money previously deposited by Purchaser and the parties thereafter have no further rights, liabilities, or obligations under this Agreement other than those which specifically survive termination. If Purchaser is entitled to terminate this Agreement under this Section and elects not to do so, Seller shall assign to Purchaser at the applicable Closing Seller's interest in any insurance proceeds or condemnation proceeds relating to the damage or condemnation.

ARTICLE 8
MISCELLANEOUS

Section 8.1 Notices.

All notices, requests, approvals, consents, and other communications required or permitted under this Agreement ("**Notices**") must be in writing and are effective:

(a) on the business day sent if (i) sent by email prior to 5:00 p.m. Loudoun County, Virginia time, and (ii) a confirming copy is sent on the same business day by one of the other methods specified below;

(b) on the next business day after delivery, on a business day, to a nationally recognized overnight courier service for prepaid overnight delivery;

(c) three (3) days after being deposited on a business day in the United States mail, certified, return receipt requested, postage prepaid, or

(d) upon receipt if delivered by any method other than the methods specified above;

in each instance addressed to Purchaser or Seller, as the case may be, at the following addresses, or to any other address either party may designate by ten (10) days' prior notice to the other party:

Seller:

c/o Hines Acquisitions LLC
555 13th Street, NW, Suite 400W
Washington, DC 20004
Attn: Andrew McGeorge
E-mail: andrew.mcgeorge@hines.com

With copies to:

c/o Hines Acquisitions LLC
555 13th Street, NW, Suite 400W
Washington, DC 20004
Attn: Zachary Barker
E-mail: zachary.barker@hines.com

c/o Hines Acquisitions LLC
555 13th Street, NW, Suite 400W
Washington, DC 20004
Attn: Brian Schmid
E-mail: brian.schmid@hines.com

Holland & Knight LLP
1722 Routh Street, Suite 1500
Dallas, Texas 75201
Attention: Ted M. Benn & Jacob Dow
Telephone: (214) 969-1423 (Ted) & (214) 969-1193 (Jacob)
E-Mail: ted.benn@hklaw.com & jacob.dow@hklaw.com

Purchaser:

Good Housing VA LLC
1818 Library Street, Suite 500
Reston, Virginia 20190
Attn: John Pellerito
Email: john.pellerito@goodhousingva.com

Alexander C. Graham, Jr., Esq.
Williams Mullen
200 South 10th Street, Suite 1600
Richmond, Virginia 23219
Email: sgraham@williamsmullen.com

Each party shall use commercially reasonable efforts to send a copy of any notice of termination under this Agreement to the Title Company on the same date and by the same method(s) as it is sent to the other party. The failure to send a copy of any termination notice to the Title Company does not invalidate an otherwise valid termination notice.

Section 8.2 Performance.

Time is of the essence in the performance of this Agreement.

Section 8.3 Binding Effect.

This Agreement is binding upon and inures to the benefit of the successors and assigns of the parties.

Section 8.4 Entire Agreement.

This Agreement embodies the complete agreement between the parties and cannot be varied except by written agreement of Seller and Purchaser.

Section 8.5 Assignment.

(a) This Agreement may not be assigned by Purchaser without the prior consent of Seller except to an Affiliate of Purchaser or Purchaser's co-development partner, GSH Partners, LLC. Any assignee of Purchaser's interest in this Agreement is bound by all approvals and waivers, actual and deemed, by Purchaser prior to the assignment, and must assume in writing all of Purchaser's obligations under this Agreement. Purchaser is not released from the obligations created under this Agreement as a result of any permitted assignment.

(b) Upon any assignment of this Agreement, Purchaser shall promptly deliver to Seller a fully executed original of the assignment of this Agreement and the assumption by the assignee of Purchaser's obligations under this Agreement, which assignment must include the federal tax identification number of the assignee.

(c) No consent given by Seller to any transfer or assignment of Purchaser's rights or obligations under this Agreement may be construed as a consent to any other transfer or assignment of Purchaser's rights or obligations. No transfer or assignment in violation of this **Section 8.5** is valid or enforceable.

(d) An "**Affiliate**" of an entity is any entity that controls, is controlled by, or is under common control with the entity in question. The term "**control**" means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of an entity, whether through the ownership of voting securities or otherwise.

Section 8.6 Commissions.

Each party hereby warrants to the other party that it has not dealt with any real estate broker or salesman in the negotiation of this Agreement. Each party shall indemnify, defend, and hold harmless the other party against any real estate commissions due by virtue of the execution of this Agreement or any Closing, the obligation or asserted claim for which arises from actions taken or claimed to be taken by or through the indemnifying party. The provisions of this **Section 8.6** survive the Closing or any earlier termination of this Agreement.

Section 8.7 Headings.

Section headings or captions are used in this Agreement for convenience only and do not limit or otherwise affect the meaning of any provision of this Agreement.

Section 8.8 Holidays, Etc.

Whenever any time limit or date provided herein falls on a Saturday, Sunday, or legal holiday under the laws of the the State of Texas or the State where the Property is located or on a day when federal banks are closed, then that date is extended to the next day that is not a Saturday, Sunday, or legal holiday or a day when federal banks are closed. The term "**business day**" as used in this Agreement means any day that is not a Saturday, Sunday, or legal holiday under the laws of the State of Texas or the State where the Property is located or a day when federal banks are closed.

Section 8.9 Recovery of Certain Fees.

In the event a party hereto files any action or suit against another party hereto by reason of any breach of any of the covenants, agreements or provisions contained in this Agreement, then in that event the prevailing party will be entitled to have and recover from the other party all reasonable attorneys' fees and costs resulting therefrom. For purposes of this Agreement, the term "**attorneys' fees**" or "**attorneys' fees and costs**" shall mean all court costs and the fees and expenses of counsel to the parties hereto, which may include printing, photocopying, duplicating and other expenses, air freight charges, and fees billed for law clerks, paralegals and other persons not admitted to the bar but performing services under the supervision of an attorney, and the costs and fees incurred in connection with the enforcement or collection of any judgment obtained in any such proceeding. The provisions of this **Section 8.9** survive each Closing and/or any earlier termination of this Agreement and the entry of any judgment.

Section 8.10 Governing Law.

This Agreement shall be governed by and construed, enforced and interpreted in accordance with the laws of the Commonwealth of Virginia.

Section 8.11 Severability.

If any provision in this Agreement is unenforceable in any respect, the remainder of this Agreement remains enforceable and, in lieu of the unenforceable provision, there will be added to this Agreement a provision as similar in terms to the unenforceable clause as may be possible and be enforceable.

Section 8.12 Disclaimers, Waivers, and Releases.

Purchaser acknowledges and agrees that:

(a) **EXCEPT AS MAY BE SPECIFICALLY STATED IN THE DEEDS OR IN SECTION 4.1, SELLER, FOR ITSELF AND ON BEHALF OF ALL SELLER AFFILIATES, SPECIFICALLY DISCLAIMS, AND PURCHASER EXPRESSLY WAIVES, ANY WARRANTY, GUARANTY, OR REPRESENTATION, ORAL OR WRITTEN, PAST, PRESENT, OR FUTURE, OF, AS, TO, OR CONCERNING: (I) THE NATURE AND CONDITION OF THE PROPERTY, INCLUDING, WITHOUT LIMITATION, THE WATER, SOIL, AND GEOLOGY, AND THE SUITABILITY OF THE PROPERTY FOR ANY AND ALL ACTIVITIES AND USES THAT PURCHASER MAY ELECT TO CONDUCT THEREON; (II) MATTERS OF TITLE; (III) THE NATURE, ENFORCEABILITY, AND EXTENT OF ANY RIGHT-OF-WAY, LEASE, LIEN, ENCUMBRANCE, LICENSE, RESERVATION, CONDITION, OR OTHERWISE RELATING TO THE PROPERTY; (IV) THE COMPLIANCE OF THE PROPERTY OR THE OPERATION THEREOF WITH ANY LAWS, RULES, ORDINANCES, OR REGULATIONS OF ANY GOVERNMENTAL AUTHORITY OR OTHER BODY, (V) ZONING TO WHICH THE PROPERTY OR ANY PORTION THEREOF MAY BE SUBJECT; (VI) THE AVAILABILITY OF ANY UTILITIES TO THE PROPERTY OR ANY PORTION THEREOF, INCLUDING, WITHOUT LIMITATION, WATER, SEWAGE, GAS, ELECTRIC, PHONE, AND CABLE; (VII) USAGES OF ADJOINING PROPERTY; (VIII) ACCESS TO THE PROPERTY OR ANY PORTION THEREOF; (IX) THE EXISTENCE OR NON-EXISTENCE OF UNDERGROUND STORAGE TANKS; (X) ANY OTHER MATTER AFFECTING THE STABILITY OR INTEGRITY OF THE PROPERTY; (XI) THE POTENTIAL FOR FURTHER DEVELOPMENT OF THE PROPERTY; (XII) THE EXISTENCE OF VESTED LAND USE, ZONING, OR BUILDING ENTITLEMENTS AFFECTING THE PROPERTY; (XIII) TAX CONSEQUENCES (INCLUDING, BUT NOT LIMITED TO, THE AMOUNT OF, USE OF, OR PROVISIONS RELATING TO ANY TAX CREDITS); (XIV) WARRANTIES (EXPRESS OR IMPLIED) OF CONDITION REGARDING THE FITNESS OF THE PROPERTY FOR A PARTICULAR PURPOSE, MERCHANTABILITY, TENANTABILITY, HABITABILITY, OR SUITABILITY FOR ANY INTENDED USE; (XV) ANY ENVIRONMENTAL CONDITIONS THAT MAY EXIST ON THE PROPERTY, INCLUDING, WITHOUT LIMITATION, THE EXISTENCE OR NON-EXISTENCE OF PETROLEUM PRODUCTS, PETROLEUM RELATED PRODUCTS, FUNGI OF ALL FORMS AND TYPES, "HAZARDOUS SUBSTANCES," "HAZARDOUS MATERIALS," "TOXIC SUBSTANCES," OR "SOLID WASTES" AS THOSE TERMS (WHICH ARE COLLECTIVELY REFERRED TO IN THIS AGREEMENT AS "HAZARDOUS MATERIALS") ARE DEFINED IN THE COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT OF 1980, AS AMENDED BY SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986, THE RESOURCE CONSERVATION AND RECOVERY ACT OF 1976 ("RCRA"), AND THE HAZARDOUS MATERIALS TRANSPORTATION ACT, AND STATE ENVIRONMENTAL LAWS, AND IN THE REGULATIONS PROMULGATED PURSUANT TO THOSE LAWS, ALL AS AMENDED (COLLECTIVELY, THE "HAZARDOUS WASTE LAWS") AND PURCHASER RELEASES AND WAIVES ANY CLAIMS OR CAUSES OF ACTION AGAINST SELLER, SELLER'S AGENTS AND SELLER'S AFFILIATES BASED IN WHOLE OR IN PART ON ANY VIOLATION OF, OR ARISING WITH RESPECT TO, ANY FEDERAL, STATE, OR LOCAL STATUTE, ORDINANCE, RULE, OR REGULATION RELATING THERETO; AND (XVI) THE FINANCIAL EARNING CAPACITY OR HISTORY OR EXPENSE HISTORY OF THE OPERATION OF THE PROPERTY.**

(b) **SUBJECT TO SELLER'S EXPRESS REPRESENTATIONS AND WARRANTIES UNDER THIS AGREEMENT, PURCHASER SHALL PERFORM ALL INVESTIGATIONS OF THE PROPERTY IT DEEMS NECESSARY DURING THE INSPECTION PERIOD AND WILL RELY SOLELY ON ITS OWN INVESTIGATIONS, AND PURCHASER IS NOT RELYING AND WILL NOT RELY ON ANY INFORMATION PROVIDED OR NOT PROVIDED TO PURCHASER BY SELLER TO MAKE A DECISION CONCERNING THE PURCHASE OR NON-PURCHASE OF THE**

PROPERTY. ALL SELLER INFORMATION (DEFINED BELOW) IS SUBJECT TO PURCHASER'S VERIFICATION AND, REGARDLESS OF PURCHASER'S FAILURE TO SO VERIFY THE SELLER INFORMATION, PURCHASER WILL NOT HOLD SELLER OR ANY SELLER AFFILIATE LIABLE FOR OR MAKE ANY CLAIMS AGAINST SELLER OR ANY SELLER AFFILIATE AS TO THE ACCURACY OR INACCURACY OF ANY SELLER INFORMATION.

(c) **PURCHASER REPRESENTS AND WARRANTS TO SELLER THAT PURCHASER'S OPPORTUNITY FOR INSPECTION AND INVESTIGATION OF THE PROPERTY (AND OTHER PARCELS IN PROXIMITY THERETO) WILL BE ADEQUATE TO ENABLE PURCHASER TO MAKE PURCHASER'S OWN DETERMINATION WITH RESPECT TO THE ACQUISITION OR NON-ACQUISITION OF THE PROPERTY AND THE PRESENCE OR DISPOSAL ON OR BENEATH THE PROPERTY (AND OTHER PARCELS IN PROXIMITY THERETO) OF HAZARDOUS MATERIALS. PURCHASER ACCEPTS THE RISK OF THE PRESENCE OR DISPOSAL OF HAZARDOUS MATERIALS ON OR NEAR THE PROPERTY.**

(d) **NO REPRESENTATIONS HAVE BEEN MADE BY SELLER, ANY SELLER AFFILIATE, OR THEIR AGENTS, BROKERS, OR EMPLOYEES, AND PURCHASER HAS NOT RELIED ON THE INFORMATION SUPPLIED BY SELLER IN ENTERING INTO, CONTINUING THE EFFECTIVENESS OF, OR ANY CLOSING UNDER THIS AGREEMENT OTHER THAN SELLER'S REPRESENTATIONS AND WARRANTIES SET FORTH IN THIS AGREEMENT. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, PURCHASER ACKNOWLEDGES, WARRANTS, AND REPRESENTS TO SELLER THAT NEITHER SELLER NOR ANY SELLER AFFILIATE, OR THEIR AGENTS, BROKERS, OR EMPLOYEES HAVE MADE ANY REPRESENTATION OR STATEMENT TO PURCHASER CONCERNING THE PROPERTY'S INVESTMENT POTENTIAL OR RESALE AT ANY FUTURE DATE, AT A PROFIT OR OTHERWISE, NOR HAS SELLER OR ANY SELLER AFFILIATE OR THEIR AGENTS, BROKERS, OR EMPLOYEES RENDERED ANY ADVICE OR EXPRESSED ANY OPINION TO PURCHASER REGARDING ANY INCOME TAX CONSEQUENCES OF OWNERSHIP OF THE PROPERTY.**

(e) **SUBJECT TO SELLER'S EXPRESS REPRESENTATIONS AND WARRANTIES UNDER THIS AGREEMENT, PURCHASER REPRESENTS AND WARRANTS TO SELLER THAT PURCHASER IS RELYING SOLELY ON PURCHASER'S INDEPENDENT ANALYSIS AND INVESTIGATION OF THE PROPERTY AND PURCHASER ASSUMES THE RISK THAT AN ADVERSE CONDITION OF THE PROPERTY MAY NOT HAVE BEEN REVEALED BY ITS OWN DUE DILIGENCE. SELLER HAS NO DUTY TO INFORM, ADVISE, OR OTHERWISE PROVIDE INFORMATION TO PURCHASER THAT SELLER MAY HAVE REGARDING THE PROPERTY EXCEPT AS EXPRESSLY REQUIRED IN THIS AGREEMENT. ANY INFORMATION, DOCUMENTS, OR REPORTS SUPPLIED OR MADE AVAILABLE BY SELLER, WHETHER WRITTEN OR ORAL, OR IN THE FORM OF MAPS, SURVEYS, PLATS, SOIL REPORTS, ENGINEERING STUDIES, ENVIRONMENTAL STUDIES, OR OTHER INSPECTION REPORTS PERTAINING TO THE PROPERTY (COLLECTIVELY "SELLER INFORMATION") ARE BEING DELIVERED TO PURCHASER ON AN "AS-IS", "WHERE IS", AND WITH ALL FAULTS BASIS, SOLELY AS A COURTESY. SELLER HAS NEITHER VERIFIED THE ACCURACY OF ANY STATEMENTS OR OTHER INFORMATION IN ANY OF THE SELLER INFORMATION, NOR ANY METHOD USED TO COMPILE THE SELLER INFORMATION, NOR THE QUALIFICATIONS OF THE PERSON(S) PREPARING THE SELLER INFORMATION. SELLER MAKES NO, AND PURCHASER WAIVES ANY, REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, OR ARISING BY OPERATION**

OF LAW AS TO THE ACCURACY, COMPLETENESS, OR ANY OTHER ASPECT OF THE SELLER INFORMATION.

(f) **SUBJECT TO SELLER'S EXPRESS REPRESENTATIONS AND WARRANTIES UNDER THIS AGREEMENT, NEITHER SELLER NOR ANY SELLER AFFILIATE IS RESPONSIBLE OR LIABLE TO PURCHASER OR ANY SUCCESSOR OR ASSIGNEE OF PURCHASER, AND PURCHASER, ON ITS OWN BEHALF AND ON BEHALF OF ITS SUCCESSORS AND ASSIGNS, RELEASES AND COVENANTS NOT TO SUE SELLER OR ANY SELLER AFFILIATE FOR ANY CONSTRUCTION DEFECTS, ERRORS, OR OMISSIONS, OR ON ACCOUNT OF ANY OTHER CONDITIONS AFFECTING THE PROPERTY, KNOWN OR UNKNOWN. PURCHASER IS PURCHASING THE PROPERTY "AS-IS", "WHERE IS", AND WITH ALL FAULTS. PURCHASER RELEASES SELLER AND ALL SELLER AFFILIATES AND THEIR EMPLOYEES, OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS FOR ANY COST, LOSS, LIABILITY, DAMAGE, EXPENSE, DEMAND, ACTION, OR CAUSE OF ACTION ARISING FROM OR RELATED TO ANY CONSTRUCTION DEFECTS, ERRORS, OMISSIONS, OR OTHER CONDITIONS AFFECTING THE PROPERTY, KNOWN OR UNKNOWN. THIS RELEASE WILL BE GIVEN FULL FORCE AND EFFECT ACCORDING TO EACH OF ITS EXPRESS TERMS AND PROVISIONS, INCLUDING, WITHOUT LIMITATION, THOSE RELATING TO UNKNOWN CLAIMS, DAMAGES, AND CAUSES OF ACTION. THIS COVENANT RELEASING SELLER AND ALL SELLER AFFILIATES IS A COVENANT RUNNING WITH THE PROPERTY AND IS BINDING UPON PURCHASER, ITS SUCCESSORS AND ASSIGNS.**

THE PROVISIONS OF THIS SECTION 8.12 SURVIVE EACH CLOSING OR ANY EARLIER TERMINATION OF THIS AGREEMENT.

Section 8.13 Rule of Construction.

Each party and its counsel have reviewed and revised this Agreement. The normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party may not be employed in the interpretation of this Agreement or any amendments, schedules, or exhibits to this Agreement.

Section 8.14 Effective Date.

The "**Effective Date**" of this Agreement is the date that both parties have executed, or initialed any changes to, the final version of this Agreement.

Section 8.15 Counterparts and Electronic Signatures.

This Agreement may be executed in one or more counterparts. Each counterpart is an original and proof of this Agreement may be made without more than one counterpart. Electronic signatures are binding on the party providing the electronic signatures.

Section 8.16 No Recording.

Purchaser covenants that neither it nor any successor or assign will record in any public records this Agreement or any memorandum or affidavit relating to this Agreement. In addition to Seller's remedies in **Section 6.2**, if Purchaser breaches this **Section 8.16**, Purchaser will record a release of any such memorandum or affidavit no later than five (5) days after request by Seller. This **Section 8.16** survives the Closing or earlier termination of this Agreement and Seller may enforce specific performance of Purchaser's obligations under this **Section 8.16.**

Section 8.17 Exclusivity.

From the Effective Date until the earlier of the termination of this Agreement or the Second Closing, Seller shall not solicit other offers for the Property or any portion thereof, market the Property for development of any type, and shall not accept any unsolicited offers to purchase, lease or develop the Property, including without limitation any offers that would serve as a "back up" purchase contract to this Agreement, and Seller shall discontinue all discussions with other parties expressing an interest in acquiring an interest in the Property.

Section 8.18 Waiver of Jury Trial.

TO THE MAXIMUM EXTENT PERMITTED BY LAW, EACH OF PURCHASER AND SELLER IRREVOCABLY WAIVES ALL RIGHT TO TRIAL BY JURY IN ANY ACTION, PROCEEDING, OR COUNTERCLAIM (WHETHER BASED ON CONTRACT, TORT, OR OTHERWISE) ARISING OUT OF OR RELATING TO ANY OF THE PROVISIONS OF THIS AGREEMENT OR ANY DOCUMENT DELIVERED IN CONNECTION WITH THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED THEREBY, WHETHER NOW EXISTING OR HEREAFTER ARISING. EACH OF PURCHASER AND SELLER AGREES AND CONSENTS THAT EITHER PARTY MAY FILE AN ORIGINAL COUNTERPART OR COPY OF THIS AGREEMENT WITH ANY COURT AS WRITTEN EVIDENCE OF THE CONSENT OF THE PARTIES TO THE WAIVER OF ITS RIGHT TO TRIAL BY JURY.

Section 8.19 Termination.

In the event this Agreement is terminated after the occurrence of the First Closing but prior to the occurrence of the Second Closing, such termination shall apply only to the Second Closing and the purchase and sale of the Phase 2 Property and shall in no way affect the First Closing or the purchase and sale of the Phase 1 Property.

[Signature page follows.]

EXECUTED by Seller on this the 24 day of FEBRUARY, 2025.

SELLER:

CLEAR SPRINGS DEVELOPMENT GROUP LP,
a Delaware limited partnership

By: CSD GP LLC,
a Delaware limited liability company, its General Partner

By: VILLAGE AT CLEAR SPRINGS OWNER LP,
a Delaware limited partnership, its sole member

By: VILLAGE AT CLEAR SPRINGS DEVELOPER LP,
a Delaware limited partnership, its general partner

By: HINES VILLAGE AT CLEAR SPRINGS MEMBER LLC,
a Delaware limited liability company, its general partner

By: HINES VILLAGE AT CLEAR SPRINGS ASSOCIATES LP,
a Delaware limited partnership, its sole member

By: HINES INTERESTS LIMITED PARTNERSHIP,
a Delaware limited partnership, its general partner

By: _____
Name: Andrew McGeorge
Title: Senior Managing Director

EXECUTED by Purchaser on this the 21st day of February, 2025.

PURCHASER:

GOOD HOUSING VA LLC,
a Virginia limited liability company

By: Hart Properties VA, LLC,
a Virginia limited liability company
Its Co-Manager

By: _____(SEAL)
Name: G. Kimball Hart
Title: Manager

By: Cypress Real Estate Company LLC,
a Virginia limited liability company
Its Co-Manager

By: _____(SEAL)
Name: John T. Pellerito
Title: Managing Member

The undersigned agrees to hold and disburse the Earnest Money in accordance with this Agreement.

Safe Harbor Title Company, LLC
4900 Augusta Avenue, Suite 150
Richmond, Virginia 23230

By: Candace Winston
Name: Candace Winston
Title: Commercial Settlement Officer

Date: February 24, 2025

EXHIBIT A

THE PROPERTY

[*Attached*]

EXHIBIT A

REQUIRED PARKING SUMMARY						
					2023 ZO	
Building	# of Units	Unit Type	Mix		Required Spaces per Unit	
A	102	1BR	30.4%	31	1.5	47
		2BR	54.9%	56	2	112
		3BR	14.7%	15	2.5	38
					SUBTOTAL	196
		15% Reduction for Attainable Housing				(29)
		Net Adjusted Required				167
B	78	1BR	30.8%	24	1.5	36
		2BR	57.7%	45	2	90
		3BR	11.5%	9	2.5	23
					SUBTOTAL	149
		15% Reduction for Attainable Housing				(22)
		Net Adjusted Required				126
	180	TOTAL UNITS			TOTAL	293

PARKING SUMMARY			
	Podium	Surface	Total
Building A	51	115	166
Building B	26	107	133
Total	77	222	299
Spaces per DU			1.66

VILLAGE AT CLEAR SPRINGS OVERALL TREE CONSERVATION TABULATIONS	
ZMAP Proposed Tree Conservation	16.5 Ac.
Allowable Reduction (20%)	3.3
STPL/ CPAP Minimum Required (80%)	13.2 Ac.

VCS 2C AFFORDABLE TABULATIONS	
Proposed Tree Conservation Removed	0.15 Ac.
Proposed Tree Conservation to Remain	0.16 Ac.
%of Allowable Reduction	4.55%

VCS - 2C AFFORDABLE

Loudoun County, Virginia

GOOD HOUSING VA LLC

CONCEPT LAYOUT
VERSION 3.1

Scale: 1"=50'
01.23.2025

X:\DRAWINGS\ACTIVE\Village of Clear Springs – Hitwe\Phase 2C Affordable\VCS 2C MFA Ver 3.0.dwg, Layout: Concept Layout Jan 23, 2025 ostoiner

EXHIBIT B

Intentionally Omitted.

EXHIBIT C

[*subject to title company review*]

Prepared by:
_____ (VSB #_____)
_____
_____
_____

Parcel ID No.: _____
Consideration: $_____
Assessment: $_____

SPECIAL WARRANTY DEED

THIS SPECIAL WARRANTY DEED (this "**Deed**") is made as of _____, 20___ by _____ _____, to be indexed as grantor ("**Grantor**"), to _____, a _____, to be indexed as grantee ("**Grantee**"), having an address of _____.

For and in consideration of the sum of Ten and No/100 Dollars and other valuable consideration to Grantor paid by the Grantee, the receipt and sufficiency of which are acknowledged, Grantor and Grantee agree as follows:

1. Conveyance and Warranty of Title.

Grantor GRANTS, SELLS, and CONVEYS to Grantee, subject to the Permitted Exceptions (defined below), all of the real property more particularly described on **Exhibit 1** attached hereto and made a part hereof for all purposes, together with the improvements thereon and all of Grantor's rights to appurtenances, easements, adjacent streets and alleys, strips, and gores (collectively, the "**Property**").

TO HAVE AND TO HOLD the Property, subject to the Permitted Exceptions, together with all and singular the rights and appurtenances thereto in anywise belonging, to Grantee, its successors and assigns, forever; and Grantor binds itself, its successors and assigns, to WARRANT AND FOREVER DEFEND all and singular the Property to Grantee, its successors and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof, by, through, or under Grantor, but not otherwise.

2. Permitted Exceptions.

This Deed is made, and is accepted by Grantee, subject to the restrictions, easements, covenants, encumbrances, and liens described on **Exhibit 2** attached hereto and incorporated herein by reference for all purposes (the "**Permitted Exceptions**"), but only to the extent same are valid, subsisting and, in fact, affect the Property.

3. Taxes and Assessments.

Grantee, by accepting delivery of this Deed, has assumed and agreed to pay the taxes and assessments for the current year. Grantee's acceptance of delivery of this Deed is evidenced by its recordation.

EXECUTED as of the date first written above.

[signature, acknowledgment and exhibits to be added]

EXHIBIT D

IRC SECTION 1445 CERTIFICATE

SUBJECT PROPERTY: See **Exhibit 1** attached to this Certificate

SELLER: _____

PURCHASER: _____

Section 1445 of the Internal Revenue Code provides that a transferee of a U.S. real property interest must withhold tax if the transferor is a foreign person. To inform Purchaser that the withholding of tax is not required upon the disposition of a U.S. real property interest by Seller, the undersigned hereby certifies the following on behalf of Seller:

1. Seller is not a foreign corporation, foreign partnership, foreign trust, or foreign estate (as those terms are defined in the Internal Revenue Code and Income Tax Regulations);

2. Seller is not a disregarded entity as defined in Income Tax Regulations Section 1.1445-2(b)(2)(iii);

3. Seller's U.S. employer identification number is _____; and

4. Seller's office address is: 555 13th Street, NW, Suite 400W, Washington, DC 20004.

Seller understands that this certification may be disclosed to the Internal Revenue Service by Purchaser and that any false statement contained herein could be punished by fine, imprisonment, or both.

Under penalties of perjury, I declare that I have examined this certification and to the best of my knowledge and belief, it is true, correct, and complete, and I further declare that I have authority to sign this document on behalf of Seller.

EXECUTED as of the _____ day of _____, 20__.

[signature, acknowledgment and exhibits to be added]

EXHIBIT E

PAA

[to be attached during the Inspection Period]

EXHIBIT F

Development Responsibilities Checklist

Task	Responsible Party		Note
	Purchaser	Seller	
Soils Testing			
Soil certification for fill installed by Seller as part of Seller's Work.		X	
Soil certification for fill installed by Purchaser as part of Purchaser's Work.	X		
Footing Inspections for Purchaser's Work.	X		
Testing for Sidewalks On-Property	X		
Testing for Off-Property Curb and Paving		X	
Testing for On-Property Curb and Paving	X		
Engineering			
Final Site Plan for the Property	X		
CPAP and Interim Grading Plan for the Property		X	Construction Plans and Profiles (CPAP) in order to accomplish Seller's Work, is Seller's responsibility. Rough grading specifications to be provided by Purchaser ("**GH**") for the Property (aka for the LIHTC pads). Seller shall perform clearing and rough grading of the Property along with any interim erosion & sediment control / stormwater BMPs as required by the Seller's CPAP. Seller shall cut, fill and grade the Property as necessary in accordance with the Intermediate Grading Plan (the "**IGP**") that has been approved by Purchaser and Seller in writing and in keeping with the

			requirements of the applicable governmental authorities. The Purchaser's proposed rough-grading specifications / proposed IGP is to be provided to Seller no later than 180 days prior to the Inside Closing Date for Phase 1 of the Property (with limited modification as required in Seller's reasonable opinion).
Master HOA Association		X	
Surveying			
LIHTC building stakeout	X		
LIHTC building location surveys	X		
Off-Property surveying for Seller's Work.		X	
On-Property surveying pre-closing / surveying for Seller's Work.		X	
On-Property surveying post-closing / surveying for Purchaser's Work.	X		
Property boundary corners		X	Installed by Seller at time of Phase 1 closing of the Property.
LIHTC Wall checks	X		
Horizontal & Vertical Control for LIHTC construction	X		
Telephone, Power, Cable control stakeout		X	For mainline / bulk feed only to property line or to transformer.
Stakeout for Seller's Rough Grading Work		X	
Stakeout grades for final grading on LIHTC lot	X		
Rough Grading check		X	One time at Phase 1 Property closing.
Temporary property corners for utility installations for backbone installation		X	

Retaining Walls			
Retaining walls (Off-lot)		X	If any
Retaining walls (On-lot or connected to building):			If any
If shown on site plan	X		
If not shown on site plan and <= 2vf	X		
If not shown on site plan and > 2vf	X		
If attached to LIHTC building	X		
Bond and Escrows			
VA/VH bonding	X		
Bonds / escrows for Seller's rough-grading work on-Property		X	
Bonds / escrows for Purchaser's work on-Property	X		
County Bonds, Wetlands Permits, VDOT Permits for Seller's Work		X	
County Bonds, Wetlands Permits, VDOT Permits for Purchaser's Work	X		No Wetlands Permits are anticipated for Purchaser's Work. No VDOT Permits are anticipated for Purchaser's Work, other than potentially a VDOT entrance permit if Purchaser's Work is not complete at the time in which the new Public Road (roundabout) fronting the Property is accepted by VDOT.
Permits			
Retaining Walls per approved site plans (off-lot)		X	
Retaining Walls per approved site plans (On-lot or attached to buildings)	X		If any

Proffers			
[UPDATE]			
[UPDATE]			
Noise attenuation requirements on LIHTC buildings on Property.	X		
Noise attenuation fences/walls off-Property.		N/A	Not any. None are required by the approved CDP / Proffers.
Review Fees			
Off-Property Record/Easement Plats for Seller's Work		X	
Seller's CPAP for Seller's Work on the Property		X	
Purchaser's Site Plan (STPL) for the Property	X		
Subdivision / Record Plat for creating the Property		X	
Inspection Fees			
Building/unit re-inspection fees	X		
VA/VH Inspections & Fees	X		
Clearing/Demolition			
Clearing per approved Grading per Seller's plans		X	
Demolition and Removal of Debris to complete Seller's scope of work		X	As necessary
Erosion Control			
Before any of Purchaser's Work begins:			
Overall site controls installation per Seller's plans		X	Per Seller's CPAP.
Maintenance of silt controls		X	
Maintenance and cleanout of sediment ponds		X	

After any of Purchaser's Work begins:			
Erosion controls / BMPs installation per Purchaser's Site Plan	X		
Maintenance of perimeter silt controls for the Property	X		
Maintenance of silt controls on-Property and for any off-Property areas affected by Purchaser's Work	X		
Maintenance and cleanout / cleanup of sediment ponds and access roads.	X	X	Purchaser responsible for impacts / damages caused by Purchaser's construction activity
Removal of overall site perimeter controls on-Property	X		
Removal of overall site perimeter controls off-Property		X	
Earthwork			
Rough grading of the Property		X	Construction Plans and Profiles (CPAP) in order to accomplish Seller's Work, is Seller's responsibility. Rough grading specifications to be provided by Purchaser ("GH") for the Property (aka for the LIHTC pads). Seller shall perform clearing and rough grading of the Property along with any interim erosion & sediment control / stormwater BMPs as required by the Seller's CPAP. Seller shall cut, fill and grade the Property as necessary in accordance with the Intermediate Grading Plan (the "IGP") that has been approved by Purchaser and Seller in writing and in keeping with the requirements of the applicable governmental authorities. The Purchaser's proposed rough-grading

			specifications / proposed IGP is to be provided to Seller no later than 180 days prior to the Inside Closing Date for Phase 1 of the Property (with limited modification as required in Seller's reasonable opinion).
Remove unsuitable materials on Property per Geotech report, and replace as-needed with suitable materials per Seller's geotechnical consultant.		X	If necessary, prior to Purchaser's possession of Property.
Supply stockpile of suitable fill dirt on Property.		X	If shown / requested by Purchaser on Purchaser's proposed IGP, and the agreed IGP, then Seller will provide prior to Property closing.
Blasting/Hoe Ram off-Property utilities		X	
Blasting/Hoe Ram for utilities on-Property.		X	If shown / requested by Purchaser on Purchaser's proposed IGP, and the agreed IGP, then Seller will provide prior to Property closing.
Removal of excess dirt from Property.	X		
Geotechnical certification for Seller's work		X	
Geotechnical certification for Purchaser's work	X		
Fine grading - and any other earthwork on-Property, beyond Seller's Work as shown in the agreed IGP.	X		
Removal of rock generated by work associated with IGP achievement		X	
Removal of rock generated by Purchaser's work	X		
Sanitary Sewer			
Sanitary sewer main off-Property and brought to Property-line.		X	Seller to provide the sanitary connection to the Property at the Southernmost most paved road access to the Property (the Southwest corner of the Property).

			Purchaser's CPAP plans as currently drafted show the sanitary sewer invert at the Property line being an elevation of 333.19'.
Sanitary sewer work on-Property.	X		
Plumbing permits	X		
Sewer tap fees	X		
Storm Sewer			
On-Property permanent storm sewer.	X		
Off-Property permanent storm sewer and connection to adjacent off-Property "regional" pond.		X	
Watermain			
Off-Property main water line , connections, and fire hydrants. Water-main brought to property line.		X	
On-Property main water line , connections, and fire hydrants.	X		
Water-line work on-Property.	X		
Plumbing permits	X		
Installation of laterals, water crocks, and meters.	X		
Fireline to LIHTC building and backflow devices.	X		
Water tap fees paid at building permit.	X		
Dry Utilities			
Preparation of load letters	X	X	GH to provide information as needed
Load letter to utility companies	X	X	
Coordination and installation of mainline feeds to Property		X	
Set Transformer on Property, and establishing correct grade for transformers	X	X	If transformer is proposed within ten (10) feet of Western Property line,

			and at a terminus of the mainline feed, then the installation of the transformer may be facilitated by Seller. But if Purchaser's desired location is requiring on-Property extension of mainline feed to enable the transformer closer to the Purchaser's Building(s), then coordinating the setting of the transformer by NOVEC would be the responsibility of the Purchaser - and if this is the case, Seller will still facilitate with NOVEC's overall plan for the Seller site of Village at Clear Springs.
Coordination of new utility easements off-Property		X	
Coordination of new utility easements on-Property	X		
Individual services/conduit system installation on-Property	X		
Conduit installation on-Property		X	
Blasting/Hoe Ram off-Property utilities.		X	
Blasting/hoe ram for utilities off-lot		X	
Blasting/Hoe Ram for utilities on-Property.		X	If shown / requested by Purchaser on Purchaser's proposed IGP, and the agreed IGP, then Seller will provide prior to Property closing.
Coordination of unit connections	X		
Scheduling of unit connections	X		
Unit connections fees	X		
Concrete Work			

Off-Property concrete work		X	
On-Property concrete work	X		
Paving			
Streets and parking On-Property.	X	X	Constructed by Purchaser. Cost to install 54 spaces to be reimbursed by Seller.
Paving and trails off-Property.		X	
Signage and Striping (including temp signs)			
Off-Property signage and striping.		X	
On-Property signage and striping.	X		
Streetlights			
On-Property streetlights	X		
Off-Property streetlights		X	
Seeding/Sodding, Landscaping & Irrigation			
Temp seeding prior to closing.		X	
Off-Property Seeding/Sodding, Landscaping & Irrigation (if any irrigation)		X	
On-Property Seeding/Sodding, Landscaping & Irrigation (if any irrigation)	X		
Fencing			
Tree protection fencing per Seller's CPAP.	X	X	
Tree protection fencing per Purchaser's Site Plan	X		
Off-Property Fencing / railings otherwise		X	If any required.
On-Property Fencing / railings otherwise	X		If any required.
Mowing and Maintenance			
Grass mowing of Property until closing.		X	
Grass mowing of Property after closing.	X		

Construction debris cleanup (on Property) - until closing		X	
Construction debris cleanup (on Property) - after closing	X		
Street cleaning prior to start of construction activities		X	
Off-Property street-cleaning	X	X	If any street cleaning is required by Purchaser's Work, then Purchaser is responsible.
On-Property street-cleaning	X		
Off-Property snow-removal		X	
On-Property snow-removal, pre-closing		X	
On-Property snow-removal, post-closing	X		
Site Amenities			
Off-Property entry features		X	If any
On-Property entry features		X	If any
Off-Property Recreation facilities (clubhouse/pool, tot lots, trails, benches, etc.)		X	Off-lot facilities only by Seller, consistent with the Proffer requirements.
Warranty Work & Bond Release/Repair			
Off-Property Bond Release / Warranty Items		X	Purchaser is responsible for any damage off-Property caused by Purchaser.
On-Property Bond Release / Warranty Items	X		

EXHIBIT G

Intentionally Omitted.

EXHIBIT H

Intentionally Omitted.

EXHIBIT I

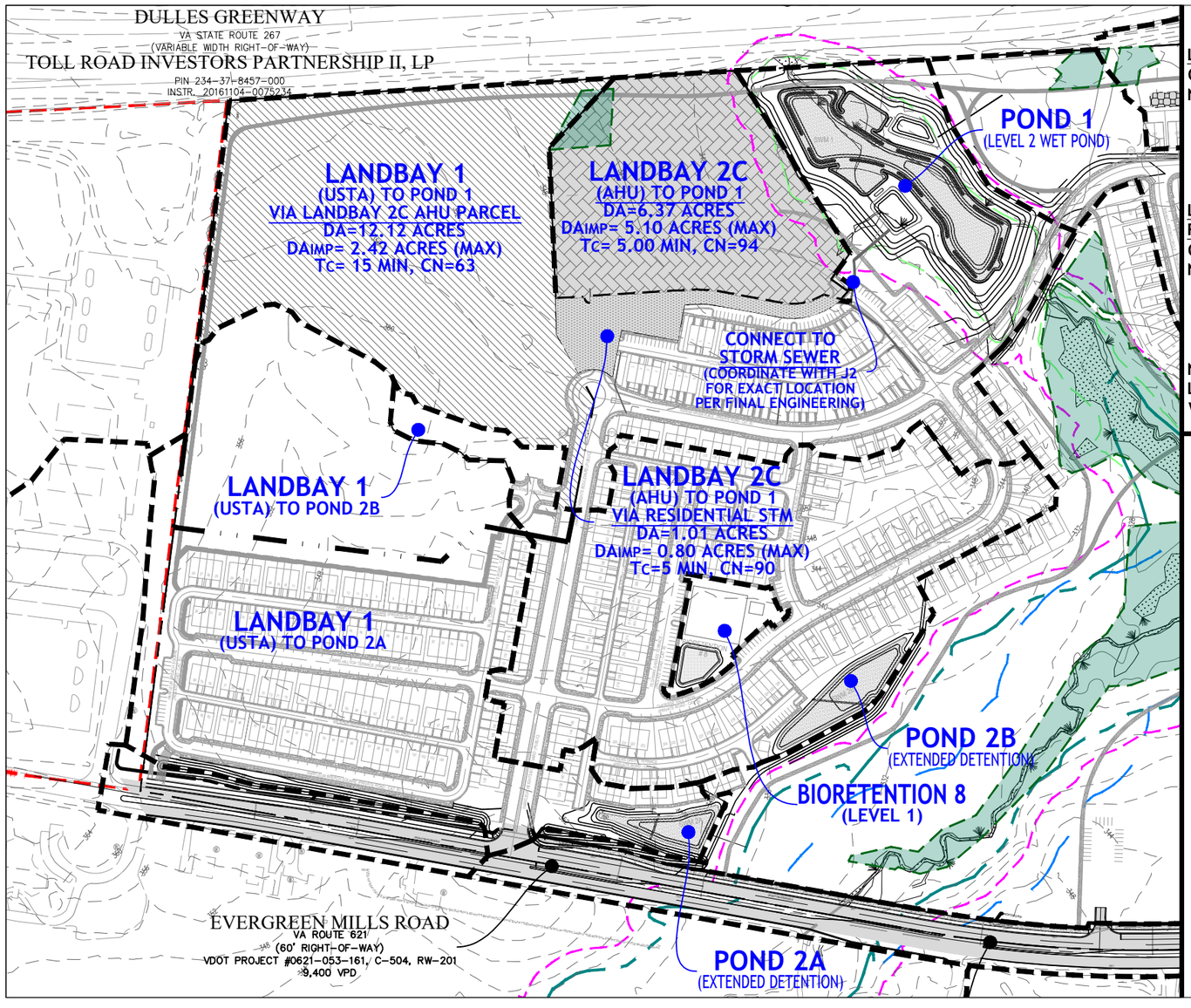
Amenity Access Agreement

[*to be attached*]

EXHIBIT J

SWM & BMP Plan

[Attached]



LANDBAY 2C - DRAINAGE AREAS

LANDBAY 2C MULTIFAMILY TO POND 1 (LEVEL 2 WET POND):
QUANTITY PROVIDED PER ASSUMPTIONS BELOW.
NO BMP (QUALITY) PROVIDED WITH POND 1.
- ASSUMED DA= 6.37 ACRES
- ASSUMED MAX IMP = 5.10 ACRES (80%)
- ASSUMED Tc=5 MIN
- ASSUMED CN = 94

LANDBAY 2C MULTIFAMILY TO POND 1 VIA LANDBAY 2C RESIDENTIAL STORM SEWER DESIGN:
QUANTITY PROVIDED PER ASSUMPTIONS BELOW.
NO BMP (QUALITY) PROVIDED WITH POND 1.
- ASSUMED DA= 1.01 ACRES
- ASSUMED MAX IMP = 0.80 ACRES (80%)
- ASSUMED Tc=5 MIN
- ASSUMED CN = 90

NOTE THAT THIS DOES NOT INCLUDE FLOW FROM LANDBAY 1A NOTED HERE THAT MUST BE ACCOUNTED FOR WITH STORM SEWER DESIGN TO POND.

LANDBAY 2C MF STORM SEWER MUST ALSO ACCOUNT FOR A PORTION OF LANDBAY 1 USTA TO POND 1 (LEVEL 2 WET POND):

QUANTITY REQUIREMENTS FOR EXISTING CONDITION ONLY PROVIDED PER ASSUMPTIONS BELOW. ALL QUANTITY & BMP FOR THIS AREA WILL BE ADDRESSED WITHIN LANDBAY 1 BEYOND THESE ASSUMPTIONS.

- ASSUMED DA= 12.12 ACRES
- ASSUMED MAX IMP = 2.42 ACRES (20%)
- ASSUMED CN=63
- ASSUMED Tc=15 MIN

NOTE: THIS FLOW IS NOT INCLUDED WITHIN LANDBAY 2C AHU SITE QUANTITY REQUIREMENTS THAT MUST BE ACCOUNTED FOR WITH MMULTIFAMILY STORM SEWER DESIGN TO POND.

NARRATIVE

LANDBAY 2C AHU DEVELOPMENT ASSUMES QUANTITY CONTROL ONLY IS PROVIDED VIA POND 1. BMP (QUALITY) TREATMENT SHALL BE PROVIDED ONSITE VIA STRUCTURAL FILTERS PRIOR TO DISCHARGING TO THE STORM SEWER SYSTEM PROVIDED WITH LANDBAY 2C RESIDENTIAL CPAP.

STORM SEWER STUBS SHALL BE PROVIDED WITH THE DESIGN OF SURROUNDING ROADWAYS TO ALLOW FOR DISCHARGE FROM THE SITE. STORM PIPES AND POND FACILITIES ARE SIZED UTILIZING DISCHARGE INFORMATION FOUND ABOVE. ANY INCREASE IN SITE RUNOFF FROM THE FLOWS NOTED WILL REQUIRE ONSITE DETENTION PRIOR TO DISCHARGE TO STORM SEWER SYSTEM TO POND. PROFFERS REQUIRE THAT ENERGY BALANCE CALCULATIONS UTILIZE AN IMPROVEMENT FACTOR (IF) OF 0.75.

IF ABOVE NOTED RELEASE RATES ARE MET TO APPLICABLE STORM SEWER SYSTEMS, THEN ALL ADEQUATE OUTFALL AND ENERGY BALANCE REQUIREMENTS SHOULD BE MET PER LOUDOUN COUNTY STANDARDS. IF RELEASE FLOW IS INCREASED, THEN DEVELOPMENT ANALYSIS MUST INCLUDE ALL CALCULATIONS TO VERIFY THAT EXISTING CONTROLS ARE ADEQUATE.

BMP HAS BEEN EVALUATED FOR THE OVERALL DEVELOPMENT PER VRRM VERSION 3.0. SEPARATE STRUCTURAL TREATMENT SHALL BE REQUIRED TO PROVIDE IN-SERIES TREATMENT WITH POND 1. NO TREATMENT IS PROVIDED WITH PONDS 2A OR 2B. SITE MUST PROVIDE STRUCTURAL FILTERS THAT PROVIDE A MINIMUM 50% PHOSPHORUS REMOVAL FOR 7.38 ACRES, (MAX. 5.90 ACRES IMPERVIOUS). ANY INCREASE TO THIS AREA WILL REQUIRE ADDITIONAL CONTROLS. PER PROFFERS, 80% OF BMP REQUIREMENTS MUST BE MET ONSITE PRIOR TO PURCHASE OF OFFSITE NUTRIENT CREDITS.

IN ADDITION TO FLOW FROM THE AHU SITE, A PORTION OF LANDBAY 1 (USTA) MUST DRAIN THROUGH THE AHU SITE TO REACH POND 1. ASSUMED RUNOFF VALUES ARE NOTED ABOVE & MUST BE ACCOUNTED FOR IN STORM SEWER DESIGN. NOTE THAT LANDBAY 1 IMPROVEMENTS SHALL PROVIDE QUANTITY & QUALITY MEASURES SEPARATELY WITHIN THE DEVELOPMENT AREA FOR THE USTA SITE AND MUST MEET THE PROFFERED REQUIREMENTS NOTED ABOVE.

THE AHU ENGINEER SHALL BE RESPONSIBLE FOR COORDINATION WITH J2 FOR ULTIMATE STORM SEWER LOCATIONS & PIPE DESIGN FOR OUTFALL CONNECTIONS.

13241 WOODLAND PARK RD.
SUITE 250
HERNDON, VA 20171

P: 703.361.1550
J2ATWORK.COM

VA-83 NORTH

0 150 600 300

1 INCH = 300 FEET

REVISION / ISSUANCE

NO.	DATE	DESCRIPTION
1	12/11/2024	EXHIBIT
2	01/21/2025	UPDATE DA INFO PER EPLAN DEVELOPMENT
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-

LANDBAY 2C - SWM & BMP MAP
(AHU)

VILLAGE AT CLEAR SPRINGS
SWM & BMP EXHIBIT

CATOCTIN ELECTION DISTRICT

LOUDOUN COUNTY, VIRGINIA

J2 PROJECT NO.
HIN 2405

DATE
DECEMBER 11, 2024

SCALE
1" = 300'

SHEET NUMBER
01 OF 01

X:\DRAWINGS\ACTIVE\Village at Clear Springs - Hines\~Exhibits\Overall SWM Exhibit\SWM-BMP Measures\EXHBIT - LAND BAY 2C\HIN2405-09-SWM-POST-EXHIBIT 2025-01-21.dwg

Docusign Envelope ID: C78871BD-D771-4F91-8304-D6DADF4C97F7

FIRST AMENDMENT TO PURCHASE AND SALE AGREEMENT

THIS FIRST AMENDMENT TO PURCHASE AND SALE AGREEMENT (this "Amendment") is made and entered into effective as of June 2, 2025, by and between **CLEAR SPRINGS DEVELOPMENT GROUP LP**, a Delaware limited partnership ("Seller"), and **GOOD HOUSING VA LLC**, a Virginia limited liability company ("Purchaser") (Seller and Purchaser are, collectively, referred to as the "Parties").

RECITALS

A. Seller and Purchaser are parties to that certain Purchase and Sale Agreement effective as of February 24, 2025 ("Agreement"), relating to the purchase of certain real property and other assets located in Loudoun County, Virginia, as more specifically described in the Agreement.

B. Seller and Purchaser now desire to amend the Agreement subject to the terms of this Amendment.

AGREEMENT

NOW, THEREFORE, in consideration of mutual promises and agreements herein contained and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Seller and Purchaser hereby agree as follows:

1. Recitals. The recitals set forth above are incorporated into this Amendment as if fully set forth herein.

2. Inspection Period. The first sentence of Section 3.2(a) of the Agreement is hereby deleted in its entirety and restated as follows:

> As such term is used herein, the "Inspection Period" shall mean the period commencing on the Effective Date and expiring at 5:00 p.m., Loudoun County, Virginia time on June 17, 2025. This Agreement shall terminate immediately upon the expiration of the Inspection Period unless, prior to such time, Purchaser has elected, in its sole and absolute discretion, to proceed with the transaction described herein by delivering written notice thereof to Seller (the "Notice to Proceed")

3. Approved Description. The Approved Description is set forth on Exhibit A attached hereto and incorporated herein for all purposes.

4. Effect. The Agreement is hereby amended to the extent necessary to give effect to this Amendment, and the terms of this Amendment shall supersede any contrary terms in the Agreement. All references in the Agreement to "this Agreement" shall be deemed to refer to the Agreement as amended hereby. In all other respects, the terms and conditions of the Agreement shall remain unmodified and are hereby ratified by the Parties. Capitalized terms not otherwise defined herein shall have the meanings ascribed to them in the Agreement.

5. Additional Provisions. The Agreement, including this Amendment, constitutes the entire agreement between Seller and Purchaser with respect to the subject matter hereof. This Amendment shall

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not be effective until it is executed and delivered by both Seller and Purchaser, which may be executed in counterparts and by electronic signature.

6. Ratification. Except as expressly modified herein, the terms and conditions of the Agreement shall remain unchanged and in full force and effect. The Agreement, as modified by this Amendment, is hereby ratified and affirmed in all respects. If anything contained in this Amendment conflicts with any terms of the Agreement, then the terms of this Amendment shall prevail.

7. Successors and Assigns. This Amendment shall be binding upon, and inure to the benefit of, the Parties hereto and their respective successors and assigns.

8. Counterparts. This Amendment may be executed in any number of counterparts, each of which shall be an original and all of which together shall constitute but one and the same instrument, and facsimile signatures shall be deemed to be original signatures and of the same force and effect. Signatures to this Amendment delivered electronically or in pdf format shall be deemed an original signature and fully effective as such for all purposes.

[*Signature Page Follows*]

Docusign Envelope ID: C78871BD-D771-4F91-8304-D6DADF4C97F7

[*Signature Page to First Amendment to Purchase and Sale Agreement*]

IN WITNESS WHEREOF, the Parties hereto have caused this Amendment to be executed, sealed and delivered as of the date first written above.

PURCHASER:

GOOD HOUSING VA LLC,
a Virginia limited liability company

By: Hart Properties VA, LLC,
a Virginia limited liability company,
its Co-Manager

By: _____ (SEAL)
Name: G. Kimball Hart
Title: Manager

By: Cypress Real Estate Company LLC,
a Virginia limited liability company,
its Co-Manager

By: _____ (SEAL)
Name: John T. Pellerito
Title: Managing Member

Docusign Envelope ID: C78871BD-D771-4F91-8304-D6DADF4C97F7

SELLER:

CLEAR SPRINGS DEVELOPMENT GROUP LP,
a Delaware limited partnership

By: CSD GP LLC,
a Delaware limited liability company, its General Partner

By: VILLAGE AT CLEAR SPRINGS OWNER LP,
a Delaware limited partnership, its sole member

By: VILLAGE AT CLEAR SPRINGS DEVELOPER LP,
a Delaware limited partnership, its general partner

By: HINES VILLAGE AT CLEAR SPRINGS MEMBER LLC,
a Delaware limited liability company, its general partner

By: HINES VILLAGE AT CLEAR SPRINGS ASSOCIATES LP,
a Delaware limited partnership, its sole member

By: HINES INTERESTS LIMITED PARTNERSHIP,
a Delaware limited partnership, its general partner

DocuSigned by:

By: Andrew McGeorge
FE42EBC609B5404...
Name: Andrew McGeorge
Title: Senior Managing Director

Docusign Envelope ID: C78871BD-D771-4F91-8304-D6DADF4C97F7

Exhibit A
Approved Description

Phase 1
On Lots 3 & 4
Dal-Shar Estates
Catoctin Election District
Loudoun County, Virginia

Commencing at a point in the western right-of-way line of Dulles Greenway – VA Route 267 (a variable width right-of-way), also being the northeastern corner of Phase 2; thence departing Dulles Greenway and running the following two (2) courses and distances:
N 46°59'34" W, a distance of 217.43' to a point; thence
S 87°29'40" W, a distance of 181.69' to a point to the point of Beginning, being the northeastern corner of the land herein described; thence

Running through Lots 3 & 4 the following seventeen (17) courses and distances:
S 03°22'22" E, a distance of 582.14' to a point; thence
S 28°53'11" W, a distance of 30.01' to a point; thence
S 86°52'22" W, a distance of 68.96' to a point; thence
S 35°57'04" W, a distance of 56.83' to a point; thence
N 53°46'18" W, a distance of 32.00' to a point; thence
S 35°57'04" W, a distance of 57.89' to a point; thence
N 50°02'56" W, a distance of 12.97' to a point; thence

181.65' along a curve to the right, with a radius of 170.00', with a chord bearing of N 20°08'16" W, with a chord length of 173.13' to a point; thence

N 10°28'25" E, a distance of 151.92' to a point; thence

36.25' along a curve to the left, with a radius of 150.00', with a chord bearing of N 03°33'02" E, with a chord length of 36.16' to a point; thence

N 03°22'22" W, a distance of 32.50' to a point; thence
N 79°29'20" W, a distance of 71.85' to a point; thence
N 10°28'34" E, a distance of 130.46' to a point; thence
N 79°31'26" W, a distance of 108.71' to a point; thence

83.04' along a curve to the left, with a radius of 64.46', with a chord bearing of N 06°38'47" E, with a chord length of 77.42' to a point; thence

N 60°51'41" E, a distance of 97.80' to a point; thence
N 87°29'40" W, a distance of 243.55' to the point of beginning.

Having an area of 158,682 Square Feet or 3.64284 Acres of land.

Docusign Envelope ID: C78871BD-D771-4F91-8304-D6DADF4C97F7

Phase 2
On Lots 3 & 4
Dal-Shar Estates
Catoctin Election District
Loudoun County, Virginia

Commencing at a point in the western right-of-way line of Dulles Greenway – VA Route 267 (a variable width right-of-way) being the eastern line of Lot 3, Dar-Shar Estates, S 03°22'22" E, a distance of 239.00' to the point of Beginning, being the northeastern corner of the land herein described; thence

Running with said eastern line of Lot 3 & Lot 4 the following course and distance: S 03°22'22" E, a distance of 218.58' to a point in the eastern line of Lot 4 herein described; thence running the following four (4) courses and distances:
S 65°00'00" W, a distance of 83.62' to a point; thence
S 45°00'00" W, a distance of 72.45' to a point; thence
S 65°00'00" W, a distance of 173.94' to a point; thence
S 28°53'11" W, a distance of 71.36' to a point, being a common corner with Proposed Phase 1; thence

Running with the eastern line of Phase 1 the following course and distance: N 03°22'22" W, a distance of 582.14' to a point, being a common corner with Phase 1; thence running through Lot 3 the following two (2) courses and distances:
N 87°29'40" E, a distance of 181.69' to a point; thence
S 46°59'34" E, a distance of 217.43' to the point of beginning.

Having an area of 141,865 Square Feet or 3.25677 Acres of land.

ASSIGNMENT AGREEMENT

THIS ASSIGNMENT AGREEMENT is made as of May 28, 2025, by and between Good Housing VA LLC, a Virginia limited liability company (the "Assignor") and Clear Springs Apartments I, LLC, a Virginia limited liability company ("Phase I Assignee"), and Clear Springs Apartments II, LLC, a Virginia limited liability company ("Phase II Assignee" and together with Phase I Assignee, the "Assignees").

WHEREAS, Assignor entered into a Purchase and Sale Agreement dated as of February 24, 2025 (the "Contract") with Clear Springs Development Group LP, as seller (the "Seller"), for the purchase of certain real property located in Loudoun County, Virginia, comprised of two distinct phases, one phase consisting of approximately 3.64284 acres, as described more particularly on Exhibit A attached hereto ("Phase I"), and the other consisting of approximately 3.25677 acres, as described more particularly on Exhibit B attached hereto ("Phase II" and together with Phase I, the "Property"), each described in separate legal descriptions attached hereto;

WHEREAS, Assignor formed Assignees for the purpose of purchasing the Property;

WHEREAS, Assignor desires to assign its right, title, and interest in and to the Contract as follows: (i) to Phase I Assignee with respect to Phase I; and (ii) to Phase II Assignee with respect to Phase II;

NOW, THEREFORE, in consideration of the foregoing, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. Assignor hereby assigns to (a) Phase I Assignee all rights, title, interest, and obligations under the Contract relating to Phase I and (b) Phase II Assignee all rights, title, interest, and obligations under the Contract relating to Phase II.

2. Each Assignee shall indemnify and hold Assignor harmless from any and all claims, costs, liabilities, and causes of action arising from its respective assigned phase.

3. The terms of this Assignment Agreement shall be interpreted and construed pursuant to the laws of the Commonwealth of Virginia.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties have set their hands and seals as of the date first written above.

ASSIGNOR:

Good Housing VA LLC,
a Virginia limited liability company

By: Hart Properties VA LLC,
Its Co-Manager

By: _____
Name: G. Kimball Hart
Title: Manager

By: Cypress Real Estate Company LLC,
Its Co-Manager

By: _____
Name: John F. Pellerito
Title: Managing Member

[Additional Signature Page Follows]

PHASE II ASSIGNEE:

Clear Springs Apartments II, LLC,
a Virginia limited liability company

By: Clear Springs Apartments II MM, LLC, Its Manager

By: GSH Partners II, LLC,
Its Co-Manager

By: _____
Name: Thomas J. Ayd
Title: Operating Manager

By: Good Housing VA LLC,
Its Co-Manager

By: Hart Properties VA LLC
Its Co-Manager

By: _____
G. Kimball Hart,
Manager

By: Cypress Real Estate Company LLC, its Co-Manager

By: _____
John Pellerito,
Managing Member

PHASE I ASSIGNEE:

Clear Springs Apartments I, LLC,
a Virginia limited liability company

By: Clear Springs Apartments I MM, LLC, Its Manager

By: GSH Partners II, LLC,
Its Co-Manager

By: _____
Name: Thomas J. Ayd
Title: Operating Manager

By: Good Housing VA LLC,
Its Co-Manager

By: Hart Properties VA LLC
Its Co-Manager

By: _____
G. Kimball Hart,
Manager

By: Cypress Real Estate Company LLC, its Co-Manager

By: _____
John Pellerito,
Managing Member

Exhibit A (Phase I Legal Description)

Proposed Phase 1
On Lots 3 & 4
Dal-Shar Estates
Catoctin Election District
Loudoun County, Virginia

Commencing at a point in the western right-of-way line of Dulles Greenway – VA Route 267 (a variable width right-of-way), also being the northeastern corner of Proposed Phase 2; thence departing Dulles Greenway and running the following two (2) courses and distances:
N 46°59'34" W, a distance of 217.43' to a point; thence
S 87°29'40" W, a distance of 181.69' to a point to the point of Beginning, being the northeastern corner of the land herein described; thence

Running through Lots 3 & 4 the following seventeen (17) courses and distances:
S 03°22'22" E, a distance of 582.14' to a point; thence
S 28°53'11" W, a distance of 30.01' to a point; thence
S 86°52'22" W, a distance of 68.96' to a point; thence
S 35°57'04" W, a distance of 56.83' to a point; thence
N 53°46'18" W, a distance of 32.00' to a point; thence
S 35°57'04" W, a distance of 57.89' to a point; thence
N 50°02'56" W, a distance of 12.97' to a point; thence

181.65' along a curve to the right, with a radius of 170.00', with a chord bearing of N 20°08'16" W, with a chord length of 173.13' to a point; thence

N 10°28'25" E, a distance of 151.92' to a point; thence

36.25' along a curve to the left, with a radius of 150.00', with a chord bearing of N 03°33'02" E, with a chord length of 36.16' to a point; thence

N 03°22'22" W, a distance of 32.50' to a point; thence
N 79°29'20" W, a distance of 71.85' to a point; thence
N 10°28'34" E, a distance of 130.46' to a point; thence
N 79°31'26" W, a distance of 108.71' to a point; thence

83.04' along a curve to the left, with a radius of 64.46', with a chord bearing of N 06°38'47" E, with a chord length of 77.42' to a point; thence

N 60°51'41" E, a distance of 97.80' to a point; thence
N 87°29'40" W, a distance of 243.55' to the point of beginning.

Having an area of 158,682 Square Feet or 3.64284 Acres of land.

Exhibit B (Phase II Legal Description)

Proposed Phase 2
On Lots 3 & 4
Dal-Shar Estates
Catoctin Election District
Loudoun County, Virginia

Commencing at a point in the western right-of-way line of Dulles Greenway – VA Route 267 (a variable width right-of-way) being the eastern line of Lot 3, Dar-Shar Estates, S 03°22'22" E, a distance of 239.00' to the point of Beginning, being the northeastern corner of the land herein described; thence

Running with said eastern line of Lot 3 & Lot 4 the following course and distance: S 03°22'22" E, a distance of 218.58' to a point in the eastern line of Lot 4 herein described; thence running the following four (4) courses and distances:
S 65°00'00" W, a distance of 83.62' to a point; thence
S 45°00'00" W, a distance of 72.45' to a point; thence
S 65°00'00" W, a distance of 173.94' to a point; thence
S 28°53'11" W, a distance of 71.36' to a point, being a common corner with Proposed Phase 1; thence

Running with the eastern line of Proposed Phase 1 the following course and distance: N 03°22'22" W, a distance of 582.14' to a point, being a common corner with Proposed Phase 1; thence running through Lot 3 the following two (2) courses and distances:
N 87°29'40" E, a distance of 181.69' to a point; thence
S 46°59'34" E, a distance of 217.43' to the point of beginning.

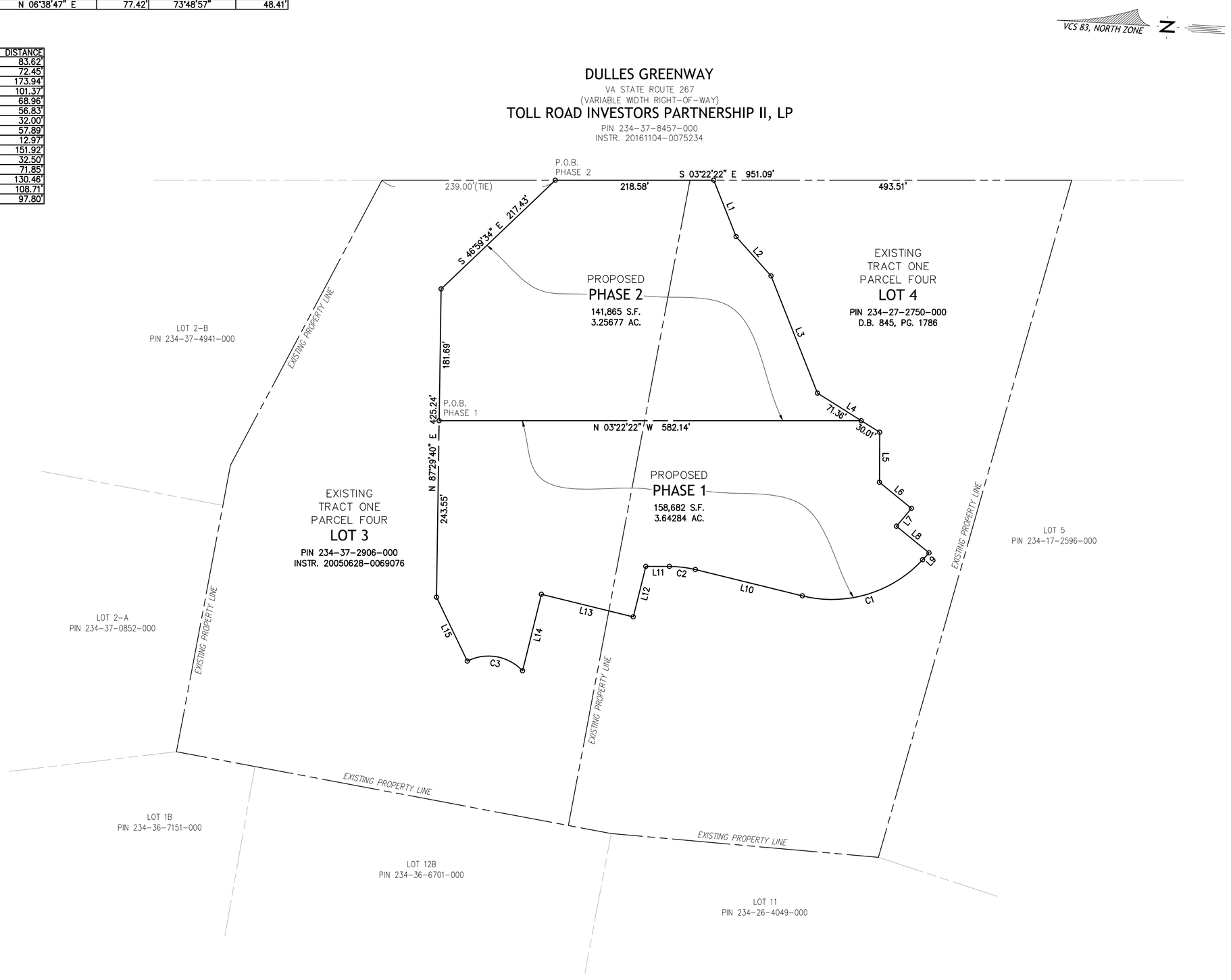
Having an area of 141,865 Square Feet or 3.25677 Acres of land.

LINE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA ANGLE	TANGENT
C1	170.00'	181.65'	N 20°08'16" W	173.13'	61°13'23"	100.58'
C2	150.00'	36.25'	N 03°33'02" E	36.16'	13°50'47"	18.21'
C3	64.46'	83.04'	N 06°38'47" E	77.42'	73°48'57"	48.41'

CURVE TABLE

LINE	BEARING	DISTANCE
L1	S 65°00'00" W	83.62'
L2	S 45°00'00" W	72.45'
L3	S 65°00'00" W	173.94'
L4	S 28°53'11" W	101.37'
L5	S 86°52'22" W	68.96'
L6	S 35°57'04" W	56.83'
L7	N 53°46'18" W	32.00'
L8	S 35°57'04" W	57.89'
L9	N 50°02'56" W	12.97'
L10	N 10°28'25" E	151.92'
L11	N 03°22'22" W	32.50'
L12	N 79°29'20" W	71.85'
L13	N 10°28'34" E	130.46'
L14	N 79°31'26" W	108.71'
L15	N 60°51'41" E	97.80'



602 SOUTH KING STREET
SUITE 100
LEESBURG, VA 20175
CHANTILLY
LEESBURG
DUMFRIES
WARRENTON
ARLINGTON
P: 703.361.1550
J2ATWORK.COM

EXHIBIT SHOWING
PROPOSED PHASE 1 & PHASE 2
ON THE LAND OF

CLEAR SPRINGS DEVELOPMENT GROUP LP

INSTRUMENT 20240711-0028832

CATOCTIN ELECTION DISTRICT

LOUDOUN COUNTY, VIRGINIA

NO.	DATE	DESCRIPTION	REVISION / ISSUANCE

J2 PROJECT NO.
(9436)

DATE
MARCH 24, 2025

SCALE
1" = 100'

BY: AV CHK: JCO

SHEET NUMBER
1 OF 1

X:\SURVEY\ACTIVE\Village at Clear Spring - HIN2402\Plats\HIN2407.3002 Exhibit Proposed Ph 1 & Ph 2 2025-4-10.dwg

PARID: 234272750000
CLEAR SPRINGS DEVELOPMENT GROUP LP **N/A**

2025 Values

Fair Market Land	$5,658,600
Fair Market Building	$0
Prorated Bldg	$0
Effective Date	
Fair Market Total	$5,658,600
Land Use Value	$0
Total Taxable Value	$5,658,600
*Deferred Land Use Value	$0
Tax Exempt Code	TAXABLE
Tax Exempt Land	$0
Tax Exempt Building	$0
Tax Exempt Total	$0
Revitalized Real Estate	
Solar Exemption	

2024 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$394,000				$394,000	$386,920	$7,080
Landbook	$394,000				$394,000	$386,920	$7,080

2023 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$349,200				$349,200	$343,030	$6,170
Landbook	$349,200				$349,200	$343,030	$6,170

2022 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$284,200				$284,200	$278,860	$5,340
Landbook	$284,200				$284,200	$278,860	$5,340

2021 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$274,700				$274,700	$269,720	$4,980
Landbook	$274,700				$274,700	$269,720	$4,980

2020 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Landbook	$250,900				$250,900	$245,200	$5,700
Notice	$250,900				$250,900	$245,200	$5,700

2019 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$241,400				$241,400	$237,020	$4,380
Landbook	$241,400				$241,400	$237,020	$4,380

2018 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$241,400				$241,400	$237,110	$4,290
Landbook	$241,400				$241,400	$237,110	$4,290

2017 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$241,400				$241,400	$237,820	$3,580
Landbook	$241,400				$241,400	$237,820	$3,580

2016 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$241,400				$241,400	$237,870	$3,530
Landbook	$241,400				$241,400	$237,870	$3,530

2015 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Landbook	$241,400				$241,400	$237,770	$3,630
Notice	$241,400				$241,400	$237,770	$3,630

2014 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$244,000				$244,000	$241,720	$2,280
Landbook	$244,000				$244,000	$241,720	$2,280

2013 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$244,000				$244,000	$242,260	$1,740
Landbook	$244,000				$244,000	$242,260	$1,740

2012 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$244,100				$244,100	$243,020	$1,080
Landbook	$244,100				$244,100	$243,020	$1,080

2011 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$250,300				$250,300	$249,330	$970
Landbook	$250,300				$250,300	$249,330	$970

2010 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$250,300				$250,300	$249,810	$490
Landbook	$250,300				$250,300	$249,810	$490

2009 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$395,300				$395,300	$394,110	$1,190
Landbook	$395,300				$395,300	$394,110	$1,190

2008 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$431,300				$431,300	$429,810	$1,490
Landbook	$431,300				$431,300	$429,810	$1,490

Note

FM (Fair Market) = All land/buildings if 100% complete as of January 1.
Prorated value = The building value added as of the effective date for any new construction.
Taxable value = For details select Tax History / Payment.

PARID: 234372906000

CLEAR SPRINGS DEVELOPMENT GROUP LP **41350 SPRINGFIELD LN**

2025 Values

Fair Market Land	$5,686,500
Fair Market Building	$0
Prorated Bldg	$0
Effective Date	
Fair Market Total	$5,686,500
Land Use Value	$0
Total Taxable Value	$5,686,500
*Deferred Land Use Value	$0
Tax Exempt Code	TAXABLE
Tax Exempt Land	$0
Tax Exempt Building	$0
Tax Exempt Total	$0
Revitalized Real Estate	
Solar Exemption	

2024 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$413,700	$647,670			$1,061,370	$136,350	$925,020
Landbook	$394,700	$647,670			$1,042,370	$117,350	$925,020
Supp/(Exon)			01/01/2024	-$19,000		$136,350	$906,020

2023 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$349,800	$683,840			$1,033,640	$130,380	$903,260
Landbook	$349,800	$627,430			$977,230	$130,380	$846,850

2022 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$284,600	$517,190			$801,790	$104,050	$697,740
Landbook	$284,600	$517,190			$801,790	$104,050	$697,740

2021 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$275,100	$432,670			$707,770	$104,420	$603,350
Landbook	$275,100	$432,670			$707,770	$104,420	$603,350

2020 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Landbook	$251,300	$429,860			$681,160	$103,560	$577,600
Notice	$251,300	$429,860			$681,160	$103,560	$577,600

2019 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$241,800	$415,090			$656,890	$104,530	$552,360
Landbook	$241,800	$415,090			$656,890	$104,530	$552,360

2018 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$241,800	$400,850			$642,650	$104,660	$537,990
Landbook	$241,800	$400,850			$642,650	$104,660	$537,990

2017 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$241,800	$378,510			$620,310	$105,250	$515,060
Landbook	$241,800	$378,510			$620,310	$105,250	$515,060

2016 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$241,800	$401,260			$643,060	$105,270	$537,790
Landbook	$241,800	$401,260			$643,060	$105,270	$537,790

2015 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Landbook	$241,800	$410,560			$652,360		$652,360
Notice	$241,800	$410,560			$652,360		$652,360

2014 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$244,500	$409,070			$653,570		$653,570
Landbook	$244,500	$409,070			$653,570		$653,570

2013 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$244,500	$379,780			$624,280		$624,280
Landbook	$244,500	$379,780			$624,280		$624,280

2012 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$244,600	$373,700			$618,300		$618,300
Landbook	$244,600	$373,700			$618,300		$618,300

2011 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$250,800	$352,800			$603,600		$603,600
Landbook	$250,800	$352,800			$603,600		$603,600

2010 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$250,800	$397,400			$648,200		$648,200
Landbook	$250,800	$397,400			$648,200		$648,200

2009 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$341,900	$302,600			$644,500		$644,500
Landbook	$341,900	$302,600			$644,500		$644,500

2008 Values

Process Type	FM Land	FM Building	Effective Date	Supp/(Exon)	FM Total	LU Deferred	Taxable Value
Notice	$431,900	$332,300			$764,200		$764,200
Landbook	$431,900	$332,300			$764,200		$764,200

Note

FM (Fair Market) = All land/buildings if 100% complete as of January 1.
Prorated value = The building value added as of the effective date for any new construction.
Taxable value = For details select Tax History / Payment.

Tab F:

RESNET Rater Certification (MANDATORY)

Appendix F
RESNET Rater Certification of Development Plans

I certify that the development's plans and specifications incorporate all items for the required baseline energy performance as indicated in Virginia's Qualified Allocation Plan (QAP).

If the plans and specifications do not include requirements to meet the QAP baseline energy performance, those requirements still must be met, even though the application is accepted for credits.

***Please note that this may make the Application ineligible for credits. The Requirements apply to any new, adaptive reuse, or rehabilitated development (including those serving elderly and/or physically disabled households).

In addition, provide HERS rating documentation as specified in the manual.

☑ **New Construction** – EnergyStar Certification
The development's design meets the criteria for the EnergyStar Certification. Rater understands that before issuance of IRS Form 8609, the applicant will obtain and provide EnergyStar Certification to Virginia Housing.

☐ **Rehabilitation** – 30% performance increase over existing, based on HERS index.
Or, it must provide evidence of a HERS Index of 80 or lower. The rater understands that before IRS Form 8609 is issued, the rater must provide Virginia Housing with energy performance certification.

☐ **Adaptive Reuse** – Must provide evidence of a HERS index of 95 or lower. The rater understands that before IRS Form 8609 is issued, the rater must provide Virginia Housing with energy performance certification.

Additional Optional Certification
I certify that the development's plans and specifications incorporate all items for the certification as indicated below, and I am an accredited verifier of said certification. If the plans and specifications do not include requirements to obtain the certification, those requirements must still be met, even though the application is accepted for credits. Rater understands that before issuance of IRS Form 8609, the applicant will obtain and provide Certification to Virginia Housing.

☐ **Earthcraft Certification** - The development's design meets the criteria to obtain Earthcraft Multifamily program gold certification or higher.

☐ **LEED Certification** - The development's design meets the criteria for the U.S. Green Building Council LEED green building certification.

☑ **National Green Building Standard (NGBS)** - The development's design meets the criteria for meeting the NGBS Silver or higher standards to obtain certification

☐ **Enterprise Green Communities**—The development's design meets the requirements stated in the Enterprise Green Communities Criteria for this development's construction type to obtain certification.

*****Please Note Raters must have completed 500+ ratings to certify this form*****

	Kevin Robicheau	12/16/2025
RESNET Rater Signature	**Printed Name**	**Date**

Green Building Consulting	Jason Alfandre
RESNET Provider Agency	**Provider Contact Name**

	resnetqa@greenbldgconsulting.com	(513) 427-8997
Contact Signature	**Email**	**Phone**

DOE ENH MF v2 & ENERGY STAR MFNC v1.2 Evaluation Report

Village at Clear Spring

Leesburg, VA

Submitted and prepared for:

Chase Powell
Green Street Housing
chase@greenstreethousing.com

Prepared by:

Dominion Due Diligence Group (D3G)

Kevin Robicheau, HERS Rater, NGBS Verifier
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Phone: 804.237.1892 (direct)
Email. s.evanko@d3g.com

Executive Summary of Scoring

January 7, 2026

D3G reviewed the provided property information, project specifications, and interviews with the client to score the project in the ERI Path of the Department of Energy's (DOE) Efficient New Homes (ENH – formerly ZERH) v2 Multifamily & ENERGY STAR Multifamily New Construction program v1.2.

All notes in the attached report and checklist items must be addressed in the project plan and specifications to meet the mandatory requirements. As with any ENH and ENERGY STAR project, D3G encourages the design and construction teams to maintain and monitor value-engineering activities to avoid missing mandatory checklist items.

The General Contractor must coordinate with the HERS Rater to ensure that all necessary inspections occur at the rough and final stages of all dwelling units. These inspections are required for the property to obtain the certification upon completion.

Notice to Builders / Developers:

DOE Efficient New Homes (formerly ZERH):

Getting started: Builders, developers, and architects must sign up and initiate a Partnership Agreement with the Department of Energy, acknowledging their roles and responsibilities as partners.

The website to initiate the partnership can be found here:
Partner Central | Department of Energy

Additional Documents:
Builders/Developers: https://www.energy.gov/sites/default/files/2024-03/bto-zerh-partner-agreement-builder-developer-032624.pdf
Architects:
https://www.energy.gov/sites/default/files/2014/10/f18/ZERH%20Arch%20Designer%20PA%20Final_0.pdf
Note: A Builder ID number will be required to complete and register all dwelling units on the property.

ENERGY STAR:

Getting started: Builders and developers must sign and initiate a Partnership Agreement with the EPA, acknowledging their roles and responsibilities as partners. In addition, they must agree to document their commitment to the MFNC Program Requirements.

The website to initiate the partnership can be found here:
https://www.energystar.gov/partner_resources/join_energy_star/new_home_construction

*For an overview of the Multifamily New Construction (MFNC) certification process, please visit the following link:
https://www.energystar.gov/partner_resources/residential_new/program_reqs/mfnc_cert_process

*The ERI Path was used to show compliance with program requirements.

Property Description	
Estimated Construction Year	2029
Primary function of property	Multifamily Housing
Other property usage types (i.e. retail, restaurants, etc.)	Amenity Spaces
Number of buildings	2
Number of dwelling units	180
Number of bedrooms	311
Number of units in a low-rise setting (1-4 stories)	180
Gross Floor Area – Total (incl. common spaces)	166,892

Energy Efficiency Threshold

ERI Targets for ENERGY STAR v1.2 & DOE ENH v2

Unique Unit Types	Current ERI (worst-case)	ENERGY STAR v1.2 ERI Target	DOE ENH v2 ERI Target	Target Met (Y/N)*
A1 LL - Inside	46	55	51	Y
A1 Alt1 - LL - Inside	47	51	50	Y
A1 TL - Inside	46	49	49	Y
A2 - LL	45	48	48	Y
A2 - TL	44	48	47	Y
B1 LL - Inside	48	53	50	Y
B1 TL - Inside	45	49	47	Y
B1-Alt LL - Inside	43	50	50	Y
B1-Alt TL - Inside	45	49	47	Y
B2 TL - Inside	41	51	51	Y
B3 LL - End	41	51	51	Y
B3 P-LL - End	46	49	49	Y
B3 TL - End	45	49	47	Y
C1 LL - End	46	53	51	Y
C1 TL - End	46	49	47	Y

*The project must still meet the minimum efficiencies listed in the National Program Requirements Exhibit 2.

If during the design phase, the target ERI score is not met in any worst-case dwelling unit type, improvements in the building thermal envelope or system efficiencies must be made to lower the score and meet the required Efficient New Homes threshold.

Energy Modeling Inputs				
Building Envelope				
Building Component	**Simulated Energy Model Design**	**Recommended efficiencies listed for ENERGY STAR v1.2 and DOE ENH v2 in CZ 4a**	**Practice Met (Y/N)**	**Notes**
Podium	R-15 perimeter insulation extended to 2' depth	None	**Y**	
Foundation Walls	R-10 continuous insulation on foundation walls	R-15 continuous insulation	**Y**	
Floors	Adiabatic assemblies – R-11 fiberglass batts for sound attenuation No exterior cantilevers are present in the current design	U-0.033 (R-30) for floors adjacent to unconditioned areas	**Y**	
Exterior Wall Assemblies	Planned: U-0.045 (R-21+3) wall, rim, and band	2021 IECC (Residential, wood-frame): U-.047 (R-20+3.8)	**Y**	
Windows	U-Values of .28 and SHGCs of .25	U-Values of .30 and SHGCs of .30	**Y**	
Doors	U-0.021 (opaque)	Opaque doors, U-0.17 Glass doors, U-.25, SHGC .25	**Y**	
Ceiling	U-0.021 – Trusses, 24" o.c. with R-30 continuous insulation on top of roof deck and an R-11 fiberglass batt pinned to the underside of the roof deck	U-0.024	**Y**	

Mechanical Systems, Appliances, Lighting, Infiltration, and Mechanical Ventilation (Dwelling Units)				
Building Component	**Simulated Energy Model Design**	**Recommended efficiencies listed for ENERGY STAR v1.2 and DOE ENH v2 in CZ 4a**	**Practice Met (Y/N)**	**Notes**
Dwelling Unit – Heating and Cooling	Dwelling units are heated by air source heat pumps – 14.3 SEER2, 7.8 & 7.5 HSPF2	None	**Y**	
Ductwork	All ductwork is modeled within the thermal envelope	100% within the thermal envelope	**Y**	
Thermostats	Smart thermostats – Ecobee or equivalent	Programmable with adaptive heat recovery	**Y**	
Dwelling Unit Ventilation	**ERV systems:** 70% Rec., 40 CFM, 23W, 18-21 hr/day intermittent operation The basis of design will be Panasonic FV-06VE1	≤ 2.9 CFM/W, required dwelling unit CFM measured as (0.01 x CFA) + (7.5 x (Nbr +1))	**Y**	
Dwelling Unit Water Heating	40 & 50-gallon electric storage tanks. .93 UEF	≥ 1.95 UEF for dwelling units	**Y**	
Hot Water Efficiency	Uninsulated pipes	Hot water distribution of 1.8 gallons or less (6.8 liters) In-dwelling unit, recirculation systems (if any) must use on-demand controls.	**Y**	Must be added to plumbing plans/specs
Dwelling Unit Kitchen Appliances & Fans	ENERGY STAR appliances Refrigerators – 400 kWh/yr Dishwashers – 270 kWh/yr	ENERGY STAR refrigerators, ceiling fans, and dishwashers	**TBD**	Confirm ceiling fans and appliances meet ENERGY STAR Certification

Mechanical Systems, Appliances, Lighting, Infiltration, and Mechanical Ventilation (Dwelling Units) Continued				
Building Component	**Simulated Energy Model Design**	**Recommended efficiencies listed for ENERGY STAR v1.2 and DOE ENH v2 in CZ 4a**	**Practice Met (Y/N)**	**Notes**
Dwelling Unit Laundry Appliances	ENERGY STAR washer/dryers Washers – 152 kWh/yr, 2.06 IMEF Dryers – 3.8 CEF, moisture sense	No requirement for ERI Path. See recommendation	**TBD**	Recommend supplying tenants with ENERGY STAR washers/dryers
Dwelling Unit Lighting	100% LED throughout	ENERGY STAR light bulbs or fixtures with Tier II efficiency in 100% of Qualifying Light Fixture Locations	**Y**	Confirm
Dwelling Unit Fixtures	EPA WaterSense modeled	Bathroom faucets, aerators, and showerheads must be EPA WaterSense Certified	**TBD**	Confirm WaterSense
Building Envelope Air Tightness	0.3 CFM50/ft2 of enclosure surface	0.3 CFM50/ft2 of enclosure surface, unit-by-unit	**TBD**	Advanced air sealing/compartmentalization of units must be added to the project scope
Duct leakage	TDL: ≤ 8 CFM25/100 CFA ft² DLTO: 0 CFM25/100 CFA ft²	TDL: ≤ 8 CFM25/100 CFA ft² DLTO: 0 CFM25/100 CFA ft²	**TBD**	Must be added to project plans/ specifications
HVAC Functional Testing (Track A)	Grade 1 total duct leakage, blower fan airflow, blower fan watt draw, and refrigerant charge modeled	Grade 1 total duct leakage, blower fan airflow (-7.5% dev.), blower fan watt draw (0.45 W/cfm), and grade 3 refrigerant charge	**TBD**	Must be added to project plans/ specifications – refrigerant charge weigh-in method required

Mechanical Systems, Appliances, Lighting, Infiltration, and Mechanical Ventilation (Common Areas)				
Building Component	**Simulated Energy Model Design**	**Recommended Efficiencies for ENERGY STAR v1.2 and DOE ENH v2 in CZ 4a**	**Practice Met (Y/N)**	**Notes**
Common Area – Heating and Cooling	Air source heat pumps with efficiencies of 14.3 SEER2, 7.5 HSPF2	N/A	**Y**	
Common Area Ventilation	TBD	See 6.6 of the National Rater Field Checklist & National HVAC Design Supplement to Std. 310 for Common Spaces	**TBD**	
Common Area DHW	WH-3 UEF .93	.95 EF (.93 UEF)	**Y**	
Common Area Appliances	ENERGY STAR	Same as dwelling units	**Y**	
Common Area Lighting	TBD	All common spaces (excluding the building lobby, mechanical equipment rooms, and areas where automatic shutoff would endanger occupant safety), have occupancy sensors, programmed timers, or automatic bi-level lighting controls installed, and their operation has been verified.	**Y**	
Exterior Site Lighting	100% LED with photometric control	Fixtures, including parking lot fixtures, must include automatic switching on timers or photocell controls, except for fixtures intended for 24-hour operation, those required for security, or those associated with the electric meter for an individual dwelling unit.	**TBD**	Confirm

Additional Requirements – DOE ENH v2 (formerly ZERH)

Under the ERI path, each dwelling unit must be at least equivalent in performance to the applicable minimum requirements of the ENH MF v2 Target Dwelling Design (Appendix B), as assessed through energy modeling table on page 3. Dwelling units and common spaces must also meet or exceed the ENH MF v2 National Rater Checklist (Appendix C), which includes meeting the applicable mandatory requirements as shown in Exhibit 1 (Appendix A). *On-site power generation may not be used to meet the ENH MF V2 ERI Target.*

D3G strongly encourages including the DOE ENH v2 requirements in the Project Manual and/or drawings and requires the General Contractor and Architect to review the Design and Field checklists.

Additional Requirements – ENERGY STAR v1.2

For buildings pursuing the ERI Path, the ENERGY STAR Multifamily Reference Design is the set of efficiency features modeled to determine the ENERGY STAR ERI Target for each unit pursuing certification. Therefore, while the features below are not mandatory in the units for buildings pursuing the ERI Path, other measures will be needed to achieve the ENERGY STAR ERI Target if they are not used. The features listed in Appendix D are mandatory within the common spaces as specified in the National Rater Design Review and Field Checklists and the Common Space Applicability list. In addition, note that the Mandatory Requirements for All Certified Multifamily Buildings, Exhibit 2 (Appendix E) of the National Program Requirements, contain additional requirements such as total duct leakage limits, minimum allowed insulation levels, and minimum allowed fenestration performance. Therefore, D3G recommends reviewing the documents in Exhibit 2 (Appendix E) before final product and equipment selection.

D3G strongly encourages the inclusion of the ENERGY STAR MFNC requirements in the Project Manual and requires the General Contractor and Architect to review the Rater Design and Field checklists. The attached findings summarize key program requirements and any modifications that will be necessary to achieve compliance and avoid potential issues.

Additional Requirements – Indoor airPLUS

All projects certifying to DOE ENH v2 and ENERGY STAR v1.2 must also follow the mandatory checklist and construction specifications under the EPA Indoor airPLUS version 1 (Rev. 04). For a complete list of measures and instructions, see Appendix G. A complete list of requirements by version can be found on the EPA website under: Indoor AirPlus Program Documents | US EPA.

Builder Responsibilities

a. It is the exclusive responsibility of builders to ensure that each certified home is constructed to meet the Indoor airPlus requirements identified as "Builder Responsibility."

b. While builders are not required to maintain documentation demonstrating compliance for each individual certified home, they are required to develop a process to ensure compliance for each certified home (e.g., incorporate these requirements into the Scope of Work for subcontractors, require a site supervisor to inspect each home for these requirements, and/or subcontract the verification of these requirements to a Verifier).

c. A Builder representative must review these Items with a representative of the Verification Organization and attest to their compliance at least once per development/community by signing using the IAP Builder Responsibilities form. The Verifier shall retain the signature page with IAP certification documentation for the home or the development/community. The form may be signed and retained either physically or electronically.

d. If the EPA determines that a certified home was constructed without meeting these requirements, the dwelling unit, sleeping unit, or building may be decertified.

Additional Requirements – DOE ENH PV Ready

The Photovoltaic Ready provisions of the DOE Zero Energy Ready Home program shall be met by any building eligible for certification under the Multifamily National Program Requirements Version 2 or the Multifamily California Program Requirements Version 2, unless one or more of the exceptions (noted below) apply.

a. The building already includes an on-site PV system with a capacity of at least 1 Watts per square foot of roof area. The Rater must retain system documentation.
b. The building receives renewable energy from a community solar system, and there is a legally binding agreement for providing this energy to the building for a duration of ≥ 15 years. This agreement is written to survive a full or partial transfer of ownership of the property. The Rater must retain documentation of this agreement.
c. A building with a solar-ready zone that is shaded for more than 70 percent of daylight hours annually. The rater must retain documentation of the analysis concluding that the 70 percent threshold is not met.
d. Buildings where 75% or more of the roof (by surface area) have a slope of 4:12 or greater, and no portion of the 4:12 or greater roof section is oriented between 110 degrees to 270 degrees of true north. The Rater must retain documentation.
e. A building where the licensed professional certifies that the solar zone area required by this checklist cannot be met because of extensive rooftop equipment, skylights, vegetated roof areas, or other obstructions. The rater must retain this documentation.

Additional Requirements – DOE ENH EV Ready

Electric Vehicle Ready provisions of the DOE Efficient New Homes program shall be met by any building eligible for certification under the Multifamily National Program Requirements Version 2.

Exceptions:

a. Where the local electric distribution entity has certified in writing that it is not able to provide 100% of the necessary distribution capacity that would be needed according to this checklist (assuming that all of the required EVSE, EV Ready, and EV Capable spaces are eventually energized) within 2 years after the estimated date of the certificate of occupancy, the required EV charging infrastructure shall be reduced based on the available existing electric distribution capacity. The Rater must include the utility's written explanation in the project records.

b. Where meeting the capacity requirements associated with eventually energizing all of the EVSE, EV Ready, and EV Capable spaces required by this checklist will alter the local utility infrastructure design requirements on the utility side of the meter to increase the utility side cost to the builder or developer by more than $450 per dwelling unit, the required EV charging infrastructure shall be reduced based on the available existing electric distribution capacity. The Rater must include documentation from the utility regarding added costs in the project records.

1. National Program Requirements – ENERGY STAR v1.2

Party Responsible	Mandatory Requirements
Requirements Applicable to Track A & B	
Rater	• Completion of MFNC National Rater Design Review Checklist, Version 1 / 1.1 / 1.2 • Completion of MFNC National Rater Field Checklist, Version 1 / 1.1 / 1.2
Builder or Developer	• Completion of MFNC National Water Management System Requirements, Version 1 / 1.1 / 1.2
Requirements Only Applicable to Track A – HVAC Grading by Rater [16]	
HVAC System Designer	• Completion of HVAC design report(s) compliant with ANSI / RESNET / ACCA 310, plus the SFNH / MFNC National HVAC Design Supplement(s) to Std. 310 for Dwellings & Units, All Versions • Completion of the MFNC National HVAC Design Supplement to Std. 310 for Common Spaces & Central Systems, All Versions, where applicable
Functional Testing Agent	• Completion of applicable sections of the National HVAC Functional Testing Checklist, Version 1 / 1.1 / 1.2. Exempt from Sections 2 and 3 for Dwelling Unit HVAC as the Rater is the party responsible for assessing these systems installation quality in accordance with ANSI / RESNET / ACCA 310
Requirements Only Applicable to Track B – HVAC Testing by FT Agent	
HVAC System Designer	• Completion of MFNC National HVAC Design Report, Version 1 / 1.1 / 1.2
Functional Testing Agent	• Completion of MFNC National HVAC Functional Testing Checklist, Version 1 / 1.1 / 1.2

Note: Unless otherwise noted, Track A will be pursued as part of the Certified Building.

2. National Rater Field Checklist Requirements – To be confirmed.

Whole Building Energy Consumption Data Acquisition Plan

- For buildings 50,000 ft² and larger, a strategy that enables the collection of monthly or annual building-level energy consumption data (electricity, natural gas, chilled water, steam, fuel oil, propane, etc.) has been confirmed.

3. National HVAC Design Report Requirements

HVAC Designer Responsibilities

- Complete one National HVAC Design Report for each building, including system design for all unique unit plans and shared spaces. For projects with multiple buildings, one National HVAC Design Report per building or per project is permitted.
- Obtain efficiency features (e.g., window performance, insulation levels, and infiltration rate) from the builder, architect, or Rater.
- **Provide the completed National HVAC Design Report to the Rater and the person/company completing the National HVAC Functional Testing Checklist before construction kick-off.**

- A copy of the MFNC HVAC Design Excel Tool can be downloaded from: https://www.energystar.gov/sites/default/files/2024-05/ENERGY%20STAR%20MFNC%20HVAC%20Design%20Report%20EXCEL%20V1Rev04.02.xlsm

4. HVAC Contractors

- HVAC Quality Installation Training and Oversight Organizations (H-QUITOs) are independent, third-party oversight organizations that provide HVAC contractors with the required training and oversight activities.
- By becoming credentialed to work with ENERGY STAR, contractors can access a select group of leading builders and developers that consistently deliver high-quality homes and apartments.
- How to Become an HVAC Quality Installation Training and Oversight Organization ("H-QUITO")

5. National Water Management System Requirements

Builder / Developer Partner Responsibilities

- It is the exclusive responsibility of the Partner to ensure that each multifamily building is constructed to meet these requirements.
- While Partners are not required to maintain documentation demonstrating compliance for each multifamily building, Partners are required to develop a process to ensure compliance for each building (e.g., incorporate these requirements into the Scope of Work for relevant sub-contractors, require the site supervisor to inspect each building for these requirements, and/or sub-contract the verification of these requirements to a Rater).
- If the EPA determines that a certified multifamily building was constructed without meeting these requirements, the building may be decertified.
- MFNC Water Management System Requirements

Disclaimer and Limitations

As the ENERGY STAR MFNC, DOE ENH (fka: ZERH), and Indoor airPLUS inspector, D3G has no authority to award the project certification. The authority to certify the project belongs to the certifying entity.

While certification will comply with many code requirements, a Rater is not responsible for ensuring that all code requirements have been met before certification. For more information about how these program requirements help satisfy code requirements, visit www.energystar.gov/newhomesguidance. If a code requirement, a manufacturer's installation instructions, or an engineering document conflicts with a requirement of the ENERGY STAR program (e.g., slab insulation is prohibited to allow visual access for termite inspections), then the conflicting requirement within these requirements shall not be met. Certification shall only be permitted if the Rater has determined that no equivalent option could meet the conflicting requirement (e.g., switching from exterior to interior slab edge insulation). Note that a dwelling unit must still meet its ENERGY STAR ERI Target. Therefore, other efficiency measures may be needed to compensate for the omission of the conflicting requirement.

Certification is contingent upon the client's compliance with all mandatory program requirements. Without 100% compliance, D3G does not guarantee the project's final certification.

D3G's consulting role is advisory in nature. D3G will guide materials, methods, and strategies to meet program requirements. The client assumes all responsibility for the final design, material selection, and installation ofsystems.

Energy modeling, inspections, testing, and other services provided by D3G should not be interpreted as a guarantee of warranty of building durability or energy performance. Through the building program documentation and onsite inspections, D3G certifies that the information in the submitted documents is accurate and consistent with the DOE ENH and ENERGY STAR National Program Requirements. D3G, as the ENERGY STAR MFNC inspector, submits the inspection information and report details to the Home Certification Organization, which will then approve the project certification.

The professional services rendered by D3G are for the client's sole benefit and use. Governing law related to the services performed may be subject to reasonable interpretation. This report does not represent that D3G's opinions and interpretations of governing laws, codes, standards, or regulations are exclusive to all others, and D3G shall not be liable because of contrary opinions or interpretations of clients or governmental or regulatory agencies.

Sincerely,

Kevin Robicheau, HERS Rater, NGBS Verifier _____

Stephen Evanko, LEED AP, NGBS Master Verifier _____

Appendix:

A: DOE ENH – National Program Requirements Exhibit 1
B: DOE ENH – National Program Requirements Exhibit 2
C: DOE ENH – National Rater Design Review Checklist
D: National Program Requirements v1.2
E: Mandatory Requirements for Certified ENERGY STAR Buildings
F: National Water Management System Requirement
G: Indoor airPLUS Construction Specifications
H: DOE ENH – Multifamily PV-Ready Checklist Version 2
I: DOE ENH – Multifamily EV-Ready Checklist Version 2
J: MFNC Rater Design Review Checklist
K: MFNC Rater Field Checklist
L: MFNC HVAC Functional Testing Checklist
M: MFNC HVAC Design Supplement – Dwelling Units
N: MFNC HVAC Design Supplement – Common Spaces & Central
O : HERS, ENERGY STAR, AND DOE ENH Energy Modeling Reports

A: *DOE ENH – National Program Requirements Exhibit 1*

Component	Mandatory Requirements	Applicability[15]
1. ZERH National Rater Checklist	1.1 Rater completes the DOE ZERH Multifamily Version 2 (Rev. 1) National Rater Checklist.[16]	Dwelling units; common spaces
2. ENERGY STAR Baseline	2.1 Building is certified under ENERGY STAR Multifamily New Construction National Program Version 1.2.[17]	Dwelling units; common spaces
3. Building Envelope	3.1a ERI and ASHRAE paths: ceiling, wall, floor, and slab insulation for the building meets specified efficiency levels from the 2021 IECC.[18, 19, 20] 3.1b Prescriptive path: ceiling, wall, floor, and slab insulation for the building meets or exceeds specified ZERH MF V2 Target Dwelling Design insulation levels in dwelling units, and specified efficiency levels from the 2021 IECC in common spaces.[20, 21] 3.2 Windows in dwelling units meet high performance requirements based on climate zone.[22]	Dwelling units; common spaces
4. Duct System	4.1 All in-unit heating and cooling system distribution ducts and in-unit heating and cooling system air-handling equipment are located within the thermal and air barrier boundary.[23]	Dwelling units
5. Hot Water Efficiency	5.1 WaterSense labeled fixtures for dwelling unit showerheads, and bathroom sink faucets and/or faucet accessories.[24] 5.2 Hot water delivery systems meet stored volume criteria.[25] 5.3 In-dwelling unit recirculation systems use on-demand controls.[26] 5.4 Recirculating central hot water distribution systems meet pipe insulation thickness criteria.[27]	Dwelling units
6. Lighting & Appliances [28]	6.1 All builder-supplied and builder-installed in-dwelling refrigerators[29], dishwashers, clothes washers, and clothes dryers are ENERGY STAR certified.[30] 6.2 100% of in-dwelling, builder-installed lighting fixtures and lamps are LEDs.[31, 32] 6.3 All installed bathroom ventilation fans in dwelling units are ENERGY STAR certified.[33]	Dwelling units
7. Indoor Air Quality	7.1 Certified under EPA Indoor AirPlus (Version 1 or Version 2 (Certified or Gold), determined by permit date).[34] 7.2 Either in-unit or centralized energy efficient balanced ventilation (HRV or ERV) is provided for dwelling units in Climate Zones 6, 7, and 8.[35, 36]	Dwelling units
8. Renewable Ready	8.1 Provisions of the DOE ZERH Multifamily PV-Ready Checklist Version 2 (Rev. 1) are completed.	See Checklist
9. Electric Vehicle Ready	9.1 Provisions of the DOE ZERH Multifamily EV-Ready Checklist Version 2 (Rev. 1) are completed.	See Checklist

A: *DOE ENH – National Program Requirements Exhibit 1 Continued*

10. Heat Pump Water Heater Ready	10.1 Dwelling units with in-unit water heaters meet minimum electric and space requirements.[37] 10.2 Dwelling units with in-unit water heaters have a condensate drain installed within three feet of existing water heater.[38]	Dwelling units
11. Heat Pump Space Heating Ready	11.1 For units with in-unit combustion space heaters, individual branch circuit outlet is installed, or conduit is installed to facilitate future wiring for a heat pump installation. Circuit or conduit labeled as "For future heat pump." [39]	Dwelling units
12. HPWH Installation Quality ***Advisory Only***	Where heat pump water heaters are installed in dwelling units, partners are encouraged, but not required, to adhere to these installation practices to achieve optimal performance: 12.1 HPWH has direct access to manufacturer-specified volume of ambient air (typical specs range from 450 to 1200 ft3), free of major dust sources, in the space surrounding the water heater through the mechanical room volume or the use of a louvered door, wall vents, ducting, or other strategy. 12.2 HPWH installation complies with the manufacturer's minimum clearance requirements to make the unit accessible for maintenance and filter cleaning/replacement. 12.3 HPWH has a sound rating of ≤ 55 dBA and a louvered door is not used to separate the unit from living space, or the HPWH has a sound rating of ≤ 35 dBA when a louvered door is used. Alternately, the HPWH is separated from living spaces by sound-attenuating assemblies with STC 35 or greater (i.e., by adding batt insulation to the surrounding wall assembly). *DOE will consider making these installation practices requirements in a future program update.*	

B: *DOE ENH – National Program Requirements Exhibit 2*

Residential Cooling Equipment (where provided) serving Dwelling Units[16] modeled at the applicable efficiency levels below.[40] If specified equipment type is not listed here, see Exhibit A.			
2021 IECC Climate Zone	**1, 2**	**3, 4A, 4B**	**4C, 5, 6, 7, 8**
Central A/C Cooling	18 SEER	16 SEER	14 SEER
Air Source Heat Pump Cooling	18 SEER	16 SEER	16 SEER
Ground Source Heat Pump Cooling	16 EER	14 EER	14 EER
Residential Heating Equipment (where provided) serving Dwelling Units[16] modeled at the applicable efficiency levels below.[41] If specified equipment type is not listed here, see Exhibit A.			
2021 IECC Climate Zone	**1, 2**	**3, 4A, 4B**	**4C, 5, 6, 7, 8**
Gas Furnace, Gas Boiler (AFUE)	90%	CZ 3: 90%; CZ 4: 95%	95%
Air Source Heat Pump (HSPF)	9.2	9.2	9.5
Ground Source Heat Pump (COP)	2.7	2.7	2.8

HVAC Grading for Residential Heating and Cooling Equipment (where provided) in Dwelling Units			
Total Duct Leakage	**Airflow Deviation**	**Watt Draw Efficiency**	**Refrigerant Grade**
Grade I [42]	Grade 1, -7.5%	Grade I, 0.45 W/cfm	Grade III (as applicable)

Infiltration and Mechanical Ventilation in Dwelling Units[16]								
2021 IECC Climate Zone	**1**	**2**	**3**	**4A, 4B**	**4C, 5**	**6**	**7**	**8**
Mech. Ventilation Efficacy (cfm/W)[43]	2.9	2.9	2.9	2.9	1.2	1.2	1.2	1.2
Heat Recovery	None				Balanced, 65% ASRE			
Infiltration Rate[44]	0.25 CFM50/ft^2 of enclosure surface							
Mechanical Ventilation Rate	CFM = (0.01 x CFA) + (7.5 x (Nbr +1)), where CFA = Conditioned Floor Area and Nbr = Number of Bedrooms; Runtime: 24 hours/day							
Mechanical Ventilation Fan Watts	Watts = CFM Rate/Ventilation Efficacy, where CFM Rate and Ventilation Efficacy are determined above							

Dwelling unit insulation levels modeled to 2021 IECC levels (Residential, wood-frame) and Grade I installation per ANSI/RESNET/ICC 301.[19]								
2021 IECC Climate Zone	**1**	**2**	**3**	**4A, 4B**	**4C, 5**	**6**	**7**	**8**
Slab Insulation R-value	0	0	10	10	10	10	10	10
Slab insulation Depth (ft)	0	0	2	4	4	4	4	4
Basement Wall U-Factor	0.360	0.360	0.091	0.059	0.050	0.050	0.050	0.050
Wood Framed Floor Assembly U-Factor [45]	0.064	0.064	0.047	0.047	0.033	0.033	0.028	0.028
Mass Floor U-Factor	0.322	0.087	0.074	0.051	0.051	0.051	0.042	0.038
Wall Assembly U-Factor	0.084	0.084	0.060	0.045	0.045	0.045	0.045	0.045
Celling Assembly U-factor	0.035	0.026	0.026	0.024	0.024	0.024	0.024	0.024

Dwelling Unit Windows (Prescriptive pathway: meet allowable U/SHGC combinations as listed in endnote 22. If Class AW, meet values listed in Class AW table below.)								
2021 IECC Climate Zone	**1**	**2**	**3**	**4A, 4B**	**4C, 5**	**6**	**7**	**8**
Window U-Value	0.40	0.40	0.30	0.30	0.27	0.25	0.25	0.25
Window SHGC	0.23	0.23	0.25	0.30	0.30	0.30	0.30	0.30

Dwelling Unit Doors (for Class AW, see below)				
Door type[46]	**Opaque**	**≤ ½ Lite**	**> ½ Lite**	
2021 IECC Climate Zone	**Any**	**Any**	**1 – 3**	**4 – 8**
Whole Door U-Factor	0.17	0.25	0.30	0.30
Door SHGC	Any	0.25	0.25	0.40

Dwelling Unit Class AW Fenestration								
2021 IECC Climate Zone	**1**	**2**	**3**	**4A, 4B**	**4C, 5**	**6**	**7**	**8**
Fixed Window U-Factor	0.48	0.43	0.40	0.34	0.34	0.32	0.28	0.27
Operable Window U-Factor	0.59	0.57	0.51	0.43	0.43	0.40	0.34	0.30
Glazed Entrance Door U-Factor	0.79	0.73	0.65	0.60	0.60	0.60	0.60	0.60
SHGC	0.25	0.25	0.25	0.40	0.40	0.40	any	any

B: *DOE ENH – National Program Requirements Exhibit 2 Continued*

Water Heater Serving Dwelling Units								
In-Dwelling Gas Water Heater: UEF = 0.95			In-Dwelling Electric Water Heater: UEF = 1.95					
Central System Gas Water Heater: E_t = 95%			Central System Electric Water Heater: COP = 1.6					
Dwelling Unit Solar Water Heating System Solar Fraction[47] *(only for use in Prescriptive path projects, not to be included in the ERI Target Dwelling)*	**1**	**2**	**3**	**4A, 4B**	**4C, 5**	**6**	**7**	**8**
	0.80	0.80	0.64	0.64	0.47	0.47	0.28	0.28
Thermostat and Ductwork								
Programmable thermostat								
All ducts and air handlers located in conditioned space, uninsulated.[48]								
Dwelling Unit Lighting, Appliances, and Fixtures								
Lighting	ENERGY STAR light bulbs or fixtures with Tier II efficiency in 100% of Qualifying Light Fixture Locations, as defined by ANSI/RESNET/ICC 301.							
ENERGY STAR Certified Appliances	Refrigerator, Dishwasher, Ceiling Fans (if used)							
WaterSense Fixtures	WaterSense bathroom faucets, aerators, showerheads							

C: DOE ENH – National Rater Design Review Checklist

DOE Efficient New Homes Multifamily National Rater Checklist Version 2 (Rev. 2)

The program requirements in this checklist must be verified based on as-built conditions unless noted otherwise. Project teams are strongly encouraged to use this checklist during the project design phase as well. Raters are reminded that these checklist items must be completed in addition to the items required by ENERGY STAR Multifamily New Construction Version 1.2 or 1.3 and Indoor AirPlus. Overlapping requirements are not repeated in this checklist.[1] For items that do not apply based on selected compliance path (ERI, ASHRAE, or Prescriptive) the Rater may enter "N/A." This checklist must be completed for each certified dwelling unit.

DOE Efficient New Homes – Multifamily National Rater Checklist Version 2 (Rev. 2)						
Dwelling Unit Address:			Must Correct	Rater [2] Verified	Verified by Builder or Licensed Professional [3]	Exception or Alternate Used [4] (enter endnote #)
City:	State:	Permit Date[5]:				
1. Partnership Status						
1.1 Rater has verified that builder is a registered DOE Efficient New Homes Builder Partner and identified the builder's Partner ID.[6]			☐	☐		
1.2 Rater has verified and documented that their company has a DOE Efficient New Homes partnership agreement using the Partner Locator.[7]			☐	☐		
1.3 Rater(s) signing checklists attest that they have completed DOE-recognized training (according to the timeline posted on the program website) and are credentialed by a Home Certification Organization for DOE Efficient New Homes (HCO for DOE) or meet the credential requirements of a Multifamily Review Organization for DOE Efficient New Homes (MRO for DOE).			☐	☐		
2. ENERGY STAR Baseline						
2.1 Unit is certified under ENERGY STAR Multifamily New Construction National Program Version 1.2 or 1.3.[8]			☐	☐		
3. Building Envelope						
3.1a ERI and ASHRAE paths: ceiling, wall, floor, and slab insulation for the building meets specified efficiency levels from the 2021 IECC or 2024. [9, 10]			☐	☐		
3.1b Prescriptive path: ceiling, wall, floor, and slab insulation for the building meets or exceeds specified DOE Efficient New Homes Multifamily Version 2 Target Dwelling Design insulation levels in dwelling units, and specified efficiency levels from the 2021 or 2024 IECC in common spaces.[10, 11]			☐	☐		
3.2 Windows, skylights, and doors in dwelling units that are ≥ 50% glazed achieve an area-weighted average SHGC less than or equal to 0.23 (Climate Zone 1-2), 0.25 (Climate Zone 3), or 0.40 (Climate Zone 4A, 4B).[12, 13]			☐	☐		
4. Duct System						
4.1 All in-unit heating and cooling system distribution ducts and in-unit heating and cooling system air-handling equipment are located within the thermal and air barrier boundary.[14]			☐	☐		
5. Hot Water Efficiency						
5.1 WaterSense labeled fixtures for dwelling unit showerheads and bathroom sink faucets and/or faucet accessories.[15]			☐	☐		

5.2 Hot water delivery systems meet stored volume criteria (using Calculation or Field Verification method).[16]		☐	☐		
5.3 In-dwelling unit recirculation systems use on-demand controls.[17]		☐	☐		
5.4 Recirculating central hot water distribution systems meet pipe insulation thickness criteria.[18]		☐	☐	☐	
6. Lighting & Appliances[19]					
6.1 All builder-supplied and builder-installed in-dwelling refrigerators,[20] dishwashers, clothes washers, and clothes dryers are ENERGY STAR certified.[21]		☐	☐		
6.2 100% of in-dwelling, builder-installed lighting fixtures and lamps are LEDs.[22, 23]		☐	☐		
6.3 All installed bathroom ventilation fans in dwelling units are ENERGY STAR certified.[24]		☐	☐		
7. Indoor Air Quality					
7.1 Certified under EPA Indoor AirPlus (Version 1 or Version 2 (Certified or Gold), determined by permit date).[25]		☐	☐		
7.2 Either in-unit or centralized energy efficient balanced ventilation (HRV or ERV) is provided for dwelling units in Climate Zones 6, 7 and 8.[26,27]		☐	☐		
8. Renewable Ready					
8.1 Provisions of the DOE Efficient New Homes Multifamily PV-Ready Checklist Version 2 (Rev. 1) are completed.		☐	☐		
9. Electric Vehicle Ready					
9.1 Provisions of the DOE Efficient New Homes Multifamily EV-Ready Checklist Version 2 (Rev. 1) are completed.		☐	☐		
10. Heat Pump Water Heater Ready					
10.1 Dwelling units with in-unit water heaters meet minimum electric and space requirements.[28]		☐	☐	☐	
10.2 Dwelling units with in-unit water heaters have a condensate drain installed within three feet of existing water heater.[29]		☐	☐		
11. Heat Pump Space Heating Ready					
11.1 For units with in-unit combustion space heaters, individual branch circuit outlet is installed, or conduit is installed to facilitate future wiring for a heat pump installation. Circuit or conduit labeled as “For future heat pump.” [30]		☐	☐	☐	
12. HVAC System[31]					
Track A	12a.1 For Prescriptive path projects: blower fan volumetric airflow is Grade I per ANSI/RESNET/ACCA 310.	☐	☐		
	12a.2 For Prescriptive path projects: blower fan watt draw is Grade I per ANSI/RESNET/ACCA 310.	☐	☐		
Track B	12b.1 For Prescriptive path projects [32]: Install a heat pump water heater ***OR*** Achieve dwelling unit infiltration ≤ 0.20 CFM50/sf [33]	☐	☐		

12.3 For Prescriptive path projects: HVAC system meets or exceeds efficiency levels based on climate zone and system type as defined by Exhibit 2 of the DOE Efficient New Homes Multifamily Version 2 National Program Requirements.	☐	☐		
13. Energy Efficiency Threshold				
13.1 ERI Path: Dwelling unit's ERI value ≤ DOE Efficient New Homes Target Dwelling ERI.	☐	☐		
13.2 ASHRAE Path: Whole building model complies and meets DOE Efficient New Homes savings target.	☐	☐		
13.3 Prescriptive Path: Efficiency features described in the DOE Efficient New Homes Multifamily Version 2 Target Dwelling Design (Exhibit 2 of the National Program Requirements) are present in the Rated Unit as applicable.	☐	☐		
14. Photo Documentation				
14.1 For ASHRAE and Prescriptive path projects, photo documentation is collected that complies with the DOE Efficient New Homes Photo Documentation Guidance. For ERI path projects, photo documentation is collected that complies with the Rater's HCO for DOE's documentation requirements.	☐	☐		

Verification Signoffs		
Rater Name: _____ Rater Company Name: _____	Rater Pre-Drywall Inspection[34] Date(s): _____	Rater Initials: _____
Rater Name: _____ Rater Company Name: _____	Rater Final Inspection[35] Date(s): _____	Rater Initials: _____
Builder/Developer Employee: _____ Builder/Developer Name: _____	Builder Inspection Date(s): _____	Builder Initials: _____
Licensed Professional: _____	LP Inspection Date(s): _____	LP Initials: _____

Endnotes:

The following endnotes are intended to relate the same exemptions and clarifications as noted in the DOE Efficient New Homes Multifamily Version 2 National Program Requirements. However, if there are any inconsistencies, the endnotes in the National Program Requirements shall take precedence.

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[1] This Checklist applies to all dwelling units, sleeping units, common spaces, and garages (open or enclosed, shared or individual) in the building being certified, and where specified, parking lots. These requirements apply to all compliance Paths, unless otherwise specified. These requirements do not apply to parking garages or lots where the cost of the energy use of the parking garage or lot is not the responsibility of the Builder/Developer, Building Owner or Property Manager. This Checklist does not apply to commercial or retail spaces, except in the ASHRAE path, if included in the energy model and the savings contribute to achieving the Performance Target. This Checklist does not apply to common spaces that are located in buildings on the property without any dwelling or sleeping units. A 'sleeping unit' as defined by ANSI / RESNET / ICC 301, is a room or space in which people sleep, which can also include permanent provisions for living, eating, and either sanitation or kitchen facilities but not both. Where the term 'dwelling unit' is used in this Checklist, the requirement is also required of 'sleeping' units. The term 'building' refers to a structure that encompasses dwelling/sleeping units and (if present) common spaces, sharing one or more of the following attributes: a common street address, a common entrance or exit, central/shared mechanical systems, or structurally interdependent wall or roof systems. Attached structures such as townhouses and 4-story two-unit structures (commonly referred to as "2-over-2s") may be considered separate buildings if they are divided by a vertical fire separation wall from the foundation to the roof sheathing and share none of the other attributes listed above. A skyway or a breezeway that connects two structures is not considered a common entrance or exit. DOE adopts these parameters from the ENERGY STAR program, thus, building type eligibility for certification under DOE Efficient New Homes Multifamily Version 2 is the same as building type eligibility for certification under ENERGY STAR Multifamily New Construction Version 1.2.

[2] The Rater is defined as the person(s) completing the third-party verification required for certification. Raters must comply with the following:

- Raters are required to complete all training modules applicable to the DOE Efficient New Homes Multifamily Version 2 program specifications (according to the timeline posted on the program website) prior to completing a project's first inspection. Please note that required training modules are subject to change and Raters will have an allocated time period to complete additional or updated training modules as they become available. If a Rater does not successfully complete these modules before the end of the allocated time period, they may not certify DOE Efficient New Homes projects until the modules are complete.
- Raters must be (a) a Certified Rater, Approved Inspector, as defined by ANSI / RESNET / IECC 301, or (b) credentialed by a Home Certification Organization for DOE Efficient New Homes (HCO for DOE), or (c) meet the credential requirements of a Multifamily Review Organization for DOE Efficient New Homes (MRO for DOE). Learn more and find a current list of HCOs and MROs for DOE here.

As stated in the National Program Requirements, Raters who operate under an MRO or HCO for DOE with a Sampling Protocol are permitted to verify any Checklist Item designated "Rater Verified" using an MRO or HCO for DOE-approved sampling protocol. No parties other than Raters are permitted to use sampling to complete this Checklist. Apartments participating in sampling must be within the same building, be the same construction type, and include the same envelope systems.

[3] At the discretion of the Rater, a licensed professional (LP) may verify those line items in this Checklist where a checkbox is in the "Licensed Professional" column. A Licensed Professional must be a Professional Engineer, Registered Architect, or other industry professional (e.g., electrician) in good standing and possess a current license. When exercised, the LP's responsibility will be formally acknowledged by the LP signing off on the

checklist for the item(s) that they verified. However, if a quality assurance review indicates that Items have not been successfully completed, the Rater will be responsible for facilitating corrective action.

[4] If an exception for a program requirement or an alternate compliance method is used, enter the number of the corresponding endnote from this document that lists the exception or alternate.

[5] The 'permit date' is the date on which the permit authorizing construction of the building was issued. In cases where multiple permits are issued for a project (e.g., footing permits, building permits), the 'permit date' is the date on which the permit authorizing construction of the building, including the building features affecting energy use (e.g., insulation levels, window U/SHGC specifications, mechanical equipment efficiency), was issued. Alternatively, the application date of the permit authorizing construction of the building or the date that the Rater first verifies a DOE Efficient New Homes program provision requiring an on-site inspection (e.g., inspection of slab insulation) is allowed to be used as the 'permit date'.

[6] The DOE Efficient New Homes Partner ID number for the builder may be obtained from the builder or found on the Partner Locator tool on the DOE Efficient New Homes program website.

[7] Raters are only required to document the partnership status of their company once, for the first home that the Rater certifies for them.

[8] DOE Efficient New Homes Multifamily Version 2 requires certification under ESMFNC V1.2 or 1.3, including in states where ESMFNC V1.1 (or an earlier version) is effective. In states where the ENERGY STAR Residential New Construction program requires additional measures or efficiency levels beyond ESMFNC V1.2, these measures are also mandatory for compliance with the DOE Efficient New Homes Multifamily Version 2 National Program.

[9] ERI and ASHRAE path projects may use a whole-building 2021 IECC UA calculation or whole-building 2024 IECC TC calculation to demonstrate compliance with the mandatory envelope insulation requirements. When using the 2021 UA approach, the total building envelope UA must be less than or equal to the sum of UA values that result from multiplying the U factors specified in Table 3.1a below (for the 2021 IECC) by the same exterior assembly areas as the building being certified. When using the 2024 TC approach, the total building envelope TC must be less than or equal to the total TC resulting from using the assembly factors specified in Table 3.1a below for the 2024 IECC and Equation 4-1 in the Residential chapter of that code.

ERI path projects may also meet the thermal backstop on a unit-by-unit basis but must document common space compliance using the Multifamily Workbook.

Table 3.1a: Mandatory Envelope Insulation Requirements for ERI and ASHRAE Path Projects

<table>
<tr><th>Space Type</th><th>Opaque assemblies (including opaque doors and opaque spandrel panels)</th><th>Windows and glazed doors (except Class AW)</th><th>Class AW windows and glazed doors</th><th>Skylights</th></tr>
<tr><td colspan="5">Mandatory Building Envelope Requirements, 2021 IECC UA Option (Table references found in the 2021 IECC)</td></tr>
<tr><td>Dwelling Units</td><td>Table R402.1.2 [a] or Table C402.1.4 (Group R) [b]</td><td rowspan="2">Table R402.1.2</td><td>Table C402.4</td><td rowspan="2">Table C402.4</td></tr>
<tr><td>Common Spaces</td><td>Table R402.1.2 [a] or Table C402.1.4 (All Other) [c]</td><td>ERI path: DOE Efficient New Homes Reference Design (Exhibit 2)
ASHRAE path: Table C402.4</td></tr>
<tr><td colspan="5">Mandatory Building Envelope Requirements, 2024 TC Option (Table references found in the 2024 IECC)</td></tr>
</table>

Dwelling Units	Table R402.1.2 or Table C402.1.2 (Group R) [b]	Table R402.1.2	Table C402.5	Table C402.5
Common Spaces	Table R402.1.2 or Table C402.1.2 (All Other) [c]		**ERI path:** DOE Efficient New Homes Reference Design (Exhibit 2) **ASHRAE path:** Table C402.5	

[a] For steel-frame ceilings, walls, and floors, use 2021 IECC Table R402.2.6.
[b] The same chapter must be used for all opaque dwelling unit envelope components.
[c] The same chapter must be used for all opaque common space envelope components.

[10] Compliance notes and alternatives:

a. The calculations shall be done using a method consistent with the ASHRAE Handbook of Fundamentals and shall include the thermal bridging effects of framing materials. The calculation for a steel-frame envelope assembly shall use the ASHRAE zone method or a method providing equivalent results, and not a series-parallel path calculation method.
b. Where documenting UA within the workbook, F-factors and slab perimeter lengths will be used in place of U-factors and areas.
c. The 2021 UA or 2024 TC calculation (and energy model) for the dwelling unit must accurately reflect all envelope details assessed in Items 3.1 through 3.6 of the ESMFNC National Rater Field Checklist.
d. If no NFRC rating is noted on a window or in its product literature (e.g., for site-built fenestration), select the U factor from Tables 4 and 10, respectively, in 2013 ASHRAE Fundamentals, Chapter 15. Select the highest U-factor among the values listed for the known window characteristics (e.g., frame type, number of panes, glass color, and presence of low-e coating).
e. In jurisdictions designated by a code official as having Very Heavy Termite Infestation, the slab edge insulation value and depth shall be adjusted in the target UA or TC calculation for all paths. The slab insulation level and depth used in the UA or TC limit calculation and the energy model shall be set to the insulation level and depth found in the Rated Dwelling Unit. However, these projects are still required to achieve the DOE Efficient New Homes Target ERI, which assumes the use of slab edge insulation per Exhibit 2.

[11] Prescriptive path projects may meet these requirements in one of two ways. The calculations below are integrated into the ENEGY STAR Multifamily Workbook with DOE Efficient New Homes addenda, which must be used to demonstrate compliance with this requirement for Prescriptive path projects.

(1) Meet the requirements for all individual building envelope components using the U or R method:

- When using the 2021 IECC for common spaces, equivalent R values to the U factors provided for dwelling units in Exhibit 2 may be taken from the 2021 IECC, Table R402.1.3. When using R values to demonstrate compliance for steel-frame assemblies, the steel-frame equivalent R-value from Table 402.2.6 must be used.
- *Note: When individual U factors are used, each component must have a U-factor* ***less than or equal to*** *what is prescribed by the table below. When individual R values are used, each component must have an R-value* ***greater than or equal to*** *what is prescribed by the references in the above bullets.*

(2) Meet the requirements by using the whole building UA or TC. When using the UA or TC method, the as-built UA shall be less than or equal to the target UA or TC. When using the 2021 UA approach, the total building envelope UA must be less than or equal to the sum of UA values that result from multiplying the U factors specified in the table below for the 2021 IECC by the same exterior assembly areas as the building being certified. When using the 2024 TC approach, the total building envelope TC must be less than or equal to the total TC resulting from using the assembly factors specified below for the 2024 IECC and Equation 4-1 in the Residential chapter of that code.

Table 3.1b: Mandatory Envelope Insulation Requirements for Prescriptive path projects

Space Type	Opaque assemblies (including opaque doors and opaque spandrel panels)	Windows and glazed doors (except Class AW)	Class AW windows and glazed doors	Skylights
Mandatory Building Envelope Requirements, 2021 IECC UA Option (Table references found in the 2021 IECC)				
Dwelling Units	DOE Efficient New Homes Reference Design (Exhibit 2)	DOE Efficient New Homes Reference Design (Exhibit 2)	DOE Efficient New Homes Reference Design (Exhibit 2)	Table C402.4
Common Spaces	Table R402.1.2 [a] or Table C402.1.4 (All Other) [c]	ENERGY STAR MFNC 1.2 Reference Design		
Mandatory Building Envelope Requirements, 2024 TC Option (Table references found in the 2024 IECC)				
Dwelling Units	DOE Efficient New Homes Reference Design (Exhibit 2)	DOE Efficient New Homes Reference Design (Exhibit 2)	DOE Efficient New Homes Reference Design (Exhibit 2)	Table C402.5
Common Spaces	Table R402.1.2 or Table C402.1.2 (All Other) [c]	ENERGY STAR MFNC 1.2 Reference Design		

[a] For steel-frame ceilings, walls, and floors, use 2021 IECC Table R402.2.6.
[b] The same chapter must be used for all opaque dwelling unit envelope components.
[c] The same chapter must be used for all opaque common space envelope components.

[12] Exceptions:
a. Fenestration used as part of a passive solar design is exempt from the SHGC requirements and may be excluded from area-weighted average. fenestration must be facing within 45 degrees of true south and directly coupled to thermal storage mass that has a heat capacity > 20 btu / ft^3x°F and provided in a ratio of at least 3 sq. ft. per sq. ft. of south facing windows. Generally, thermal mass materials will be at least 2 in. thick.
b. In Phius or PHI certified homes, where triple-glazed window assemblies with thermal breaks/spacers between the panes are used, such windows meet the intent of Item 3.2 and may be excluded from the area-weighted average SHGC.
c. Structural dwelling unit windows and doors that are classified as “Class AW” under the North American Fenestration Standard may use the following SHGC values:

Climate Zone	1-3	4A, 4B	4C, 5-8
Class AW SHGC	≤ 0.25	≤ 0.40	Any

[13] If no NFRC rating is noted on the window or in product literature (e.g., for site-built fenestration), select the SHGC value from Tables 4 and 10, respectively, in 2013 ASHRAE Fundamentals, Chapter 15. Select the highest SHGC value among the values listed for the known window characteristics (e.g., frame type, number of panes, glass color, and presence of low-e coating). Alternatively, where the U-factor is determined in accordance with NFRC 100 by a laboratory accredited by a nationally recognized accreditation organization, such as the NFRC, documentation provided by the laboratory or manufacturer listing the assembly U-factor and SHGC can be used in lieu of NFRC labels.

[14] Exceptions and alternative compliance paths to this requirement are:
a. Up to 10 ft. of total duct length is permitted to be outside of the thermal and air barrier boundary. Jump ducts are not included as part of this duct length and are covered by exception (d).

b. Ducts (but not air handlers) may be located in a vented attic if minimum R-8 duct insulation is used, duct leakage to outdoors is measured ≤ 3 CFM25 per 100ft2 of conditioned floor area, and:
   i. In Moist (A) climate zones (per 2021 IECC Table R301.1), an additional 1.5 in. (min.) of closed-cell spray foam encapsulates the ducts and ductwork is buried under 2 in. (min.) of blown-in insulation; OR
   ii. In Dry (B) and Marine (C) climate zones (per 2021 IECC Table R301.1, ductwork is buried under at least 3.5 in. of blown-in insulation.
c. Ducts which meet the criteria for "Ducts Located in Conditioned Space" as defined by the 2021 IECC Section R403.3.2.
d. Jump ducts which do not directly deliver conditioned air from the heating/cooling equipment may be located in attics if all joints, including boot-to-drywall, are air sealed and the jump duct is fully buried under the attic insulation.
e. Ducts and air-handling equipment associated with dedicated outdoor air systems (DOAS), which may also provide supplemental heating and cooling, are permitted to be outside of the building's thermal and air barrier boundary.

This requirement does not apply to equipment or ductwork that only provides ventilation, including make-up air systems. This requirement does not apply to air handling equipment or ductwork serving multiple dwelling units. This requirement does not apply to through-wall systems (i.e., packaged terminal heat pumps (PTHPs), packaged terminal air conditioners (PTACs), and vertical terminal air conditioners (VTACs)).

[15] WaterSense labelling of products may be verified in one of two ways:
a. A cut sheet for the installed product indicates that it is WaterSense labeled and field verification shows that the installed product is the one described on the cut sheet.
b. The installed product can be found in the most recent WaterSense Product Search tool (https://lookforwatersense.epa.gov/products/) and field verification shows that the installed product matches the product described in the search tool.

[16] To minimize water wasted while waiting for hot water and water heating energy, the hot water distribution system shall store no more than 1.8 gallons (6.8 liters) of water in any piping/manifold between the hot water source (e.g., central or in-unit hot water tank, central or in-unit recirculation loop) and any in-dwelling hot water fixture. This provision applies to in-dwelling unit plumbing systems and central hot water distribution systems. In-dwelling unit system options include manifold-fed systems; structured plumbing systems; core plumbing layouts, and recirculation systems. This provision does not apply to fixtures in dwelling unit bathrooms without a shower or bathtub.

To verify that the distribution system stores no more than 1.8 gallons (6.8 liters), raters shall either use the Calculation method ***or*** the Field Verification method. In the Calculation method, the rater shall calculate the stored volume between the hot water source and the furthest fixture from the source using the piping or tubing inside diameter and the length of the piping/tubing. In the case of recirculation systems (either within the dwelling or central systems), the 1.8 gallon (6.8 liter) storage limit shall be measured from the point where the branch feeding the furthest fixture branches off the recirculation loop, to the fixture itself. An Excel-based tool is available on the DOE Efficient New Homes website for this calculation.

Using the Field Verification method, no more than 2 gallons (7.6 liters) of water shall be collected from the hot water fixture before hot water is delivered. This accounts for any water stored in the fixture in addition to the 1.8-gallon limit on pipe storage. Only the fixture with the greatest stored volume between the fixture and the hot water source (or recirculation loop) needs to be tested. To field-verify that the system meets the 2-gallon (7.6 liter) limit, raters shall first initiate operation of recirculation systems, if present, and let such systems run for at least 40 seconds. Next, a bucket or flow measuring bag (pre-marked for 2 gallons) shall be placed under the hot water

fixture. The hot water shall be turned on completely and a digital temperature sensor used to record the initial temperature of the water flow. Once the water reaches the pre-marked line at 2 gallons, the water shall be turned off and the ending temperature of the water flow (not the collection bucket) shall be recorded. The temperature of the water flow must increase by ≥ 10 °F in comparison to the final to the initial temperature reading.

[17] In-dwelling unit hot water recirculation systems meet the following requirements:

a. Must be based on an occupant-controlled switch or an occupancy sensor. A sensor or switch must be installed for each fixture or set of fixtures within a room (e.g., a bathroom with multiple fixtures) in the dwelling unit which is located beyond a 1.8 gallon stored-volume range from the water heater or central recirculation loop.
b. In-dwelling unit recirculation systems which operate based on "adaptive" scheduling, meaning that they "learn" the hot water demand profile in the dwelling unit and adapt their operation to anticipate this profile, are permitted at this time, and do not require the use of occupant-controlled switches or occupancy sensors.
c. In-dwelling unit recirculation systems that are activated based **solely** on a timer and/or temperature sensor are not eligible.

These provisions do not apply to recirculating central hot water distribution systems.

[18] For recirculating central hot water distribution systems, the following pipe insulation thickness levels or R-values must be met or exceeded. Additionally, pipe insulation shall cover the entire length of the recirculation loop to the extent possible. If piping is routed in building cavities that prevent the noted thickness or R-value from being used due to space constraints, then the maximum thickness of insulation possible within the space shall be used.

Nominal Pipe or Tube Size (inches)	Insulation Thickness (inches)
< 1.5	1.5 (or R10 minimum)
≥ 1.5	2.0 (or R12 minimum)

[19] ENERGY STAR product certification must be verified with a visual confirmation that installed product is listed in the online ENERGY STAR product registry.

[20] Due to industry supply chain challenges, DOE is temporarily allowing the use of non-ENERGY STAR certified refrigerators for projects using the ERI and ASHRAE compliance paths. Any project utilizing this temporary alternative must account for the non-ENERGY STAR certified refrigerator in the energy model and still achieve the required performance threshold. DOE advises partners that this alternative may be rescinded in a future program update.

[21] Products in categories which are not covered by ENERGY STAR product criteria are exempt.

[22] Up to 5% of lighting, for task or decorative lighting, may be exempt from this provision. The Target Dwelling specification for lighting will remain at 100% regardless of whether this exemption is used. Projects following the prescriptive path may not use this 5% exemption.

[23] This requirement does not apply to lighting inside appliances (e.g., refrigerator, laundry, microwave, cooking equipment).

[24] This provision does not apply to H/ERVs that are used to provide exhaust ventilation for bathrooms or to exhaust ventilation systems serving more than one dwelling unit.

[25] Buildings permitted on or before 12/31/2026 must certify under either Indoor airPLUS (IAP) Version 1 (Rev 4), or the IAP Version 2 Certified or Gold tier. Buildings permitted on or after 1/1/2027 must certify under the IAP

Version 2 Certified or Gold tier. See the Indoor airPLUS program site for information on Version 2 requirements: https://www.epa.gov/indoorairplus/indoor-airplus-version-2.

[26] An in-unit HRV or ERV is required to provide whole-dwelling mechanical ventilation for dwelling units in Climate Zones 6 – 8 and must meet or exceed the following specifications: ≥ 65% SRE (@ 32 °F) and ≥ 1.2 CFM/Watt (at one or more rating points). Alternatively, projects may utilize centralized H/ERVs serving multiple dwelling units with any efficacy and recovery efficiency.

[27] Advisory: DOE encourages, but does not require, that partners use equipment listed in the Home Ventilating Institute (HVI) Certified Product Directory (CPD) to comply with this requirement. The listing may be used to demonstrate compliance with this program requirement.

[28] Each dwelling unit with an in-unit fossil fuel water heater must have:

a. An individual branch circuit outlet that is installed and energized and terminates within 3 feet of each installed fossil fuel water heater. The individual branch circuit shall have a rating not less than 240V/30A or 120V/20A.
b. A volume of open space located within the dwelling unit that is at least 3’ x 3’ wide and 7’ high available surrounding or within 3 feet of the installed fossil fuel water heater, to facilitate future heat pump water heater installation. The 3’ x 3’ x 7’ volume may contain the existing water heater. The 3’ x 3’ x 7’ space does not need to be provided if the installed water heater is a tankless water heater system.

Dwelling units using an electric water heater are exempt from these requirements.

[29] Drain is no more than two inches higher than the base of the installed water heater and allows draining without pump assistance. Drain is not required to be reserved exclusively for use with a future heat pump water heater. Drain does not need to be provided if the installed water heater is a tankless water heater system or an electric system with a nominal tank volume less than 50 gallons.

[30] If a branch circuit outlet is installed, it shall be in compliance with 2021 IRC Section E3702.11 based on heat pump space heating equipment sized in accordance with 2021 IECC R403.7 and shall terminate within three feet of each fossil fuel space heater. Alternatively, code-compliant wiring conduit to facilitate future wiring for a heat pump installation may be installed and shall terminate within three feet of each fossil fuel space heater.

Dwelling units utilizing in-unit electric heating systems as the primary heating for the dwelling unit are exempt from this requirement.

[31] Any project may choose to follow Track B for common spaces, even if Track A has been used for dwelling units. Systems eligible for Track A include all systems eligible for Track A under ENERGY STAR Multifamily New Construction, Version 1.2.

[32] For Prescriptive Path projects using Track B, one of these additional measures is required to achieve energy savings that would be achieved through HVAC Grading for projects using Track A. Projects may use either option for each dwelling unit in the building. If any units are served by a central heat pump water heater, those units also comply with this requirement.

[33] Field verification of infiltration requirements must be done on a unit-by-unit basis. Infiltration requirements may not be verified with whole-building testing or with an average of results across all units.

[34] Any Item that will be concealed by drywall (e.g., wall insulation) must be verified during the pre-drywall inspection. If drywall is installed prior to the inspection, then it must be entirely removed to fully verify all Items. It

is not sufficient to remove only portions of drywall to inspect a subset of areas. Additional information is available in the ENERGY STAR Technical Bulletin: Pre-Drywall Inspection Is Always Required.

[35] Some Items can typically only be verified at a later stage of construction than when the pre-drywall inspection occurs (e.g., bath fan airflow). Any Item that has not been verified during the pre-drywall inspection must be verified prior to or during the final inspection.

D: National Program Requirements for ENERGY STAR v1.2

Hot Climates (2021 IECC Zones 1,2,3,4A,4B) [13]	**Mixed and Cold Climates** (2021 IECC Zones 4C,5,6,7,8) [13]
Residential Cooling Equipment (Where Provided) in Dwelling Units or Common Spaces. If not listed here, see Rater Field Checklist Exhibit X. [14]	
• Cooling equipment meets the applicable efficiency levels below:	
○ ENERGY STAR AC: 16 SEER ○ Heat pump (See Residential Heating Equipment)	○ AC: 14 SEER ○ Heat pump (See Residential Heating Equipment)
• Installation quality at -20% blower fan airflow deviation, 0.52 W / CFM blower fan efficiency, and Grade III refrigerant charge	
Residential Heating Equipment (Where Provided) in Dwelling Units or Common Spaces. If not listed here, see Rater Field Checklist Exhibit X. [14]	
• Heating equipment meet the applicable efficiency levels below, dependent on fuel and system type: [14]	
○ Gas furnace: CZ 1-3: 80 AFUE; CZ 4A & 4B: 90 AFUE [13] ○ Gas boiler: CZ 1-3: 80 AFUE; CZ 4A& 4B: 90 AFUE [13] ○ ENERGY STAR air-source heat pump: 9.2 HSPF / 16 SEER	○ ENERGY STAR gas furnace: 95 AFUE ○ ENERGY STAR gas boiler: 95 AFUE ○ ENERGY STAR air-source heat pump: 9.2 HSPF / 16 SEER
• Installation quality at -20% blower fan airflow deviation, 0.52 W / CFM blower fan efficiency, and Grade III refrigerant charge.	

Envelope, Windows, & Doors

- Dwelling unit insulation levels meet the 2021 IECC levels (Residential, wood-frame) and Grade I installation per ANSI / RESNET / ICC 301. For common spaces, refer to Item 3.2 of the National Rater Design Review Checklist for insulation levels.

Climate Zone: [13]	**CZ 1**	**CZ 2**	**CZ 3**	**CZ 4**	**CZ 4 C & 5**	**CZ 6**	**CZ 7**	**CZ 8**
Slab Insulation R-Value:	0	0	10	10	10	10	10	10
Slab Insulation Depth (ft):	0	0	2	4	4	4	4	4
Basement Wall Assembly U-Factor:	0.360	0.360	0.091	0.059	0.050	0.050	0.050	0.050
Wood Framed Floor U-Factor:	0.064	0.064	0.047	0.047	0.033	0.033	0.028	0.028
Mass Floor U-Factor:	0.322	0.087	0.074	0.051	0.051	0.051	0.042	0.038
Wall Assembly U-Factor:	0.084	0.084	0.060	0.045	0.045	0.045	0.045	0.045
Ceiling Assembly U-Factor:	0.035	0.026	0.026	0.024	0.024	0.024	0.024	0.024

- Infiltration rate: 0.30 CFM50/ft^2 of enclosure
- Dwelling unit windows and doors, unless Class AW, meet the following:

Climate Zone: [13]	1 - 2	3	4A & 4B	4C - 8
Window U-Value:	0.40	0.30	0.30	0.27
Window SHGC:	0.25	0.25	0.40	Any

Door Type:	Opaque	≤½ Lite	>½ Lite	
Climate Zone: [13]	All	All	1 - 3	4 - 8
Door U-Value:	0.17	0.25	0.30	0.30
Door SHGC:	Any	0.25	0.25	0.40

Class AW fenestration and common spaces meet the 2021 IgCC levels (Commercial fenestration U-Factor requirements) below: [14]

Climate Zone: [13]	**CZ 1**	**CZ 2**	**CZ 3**	**CZ 4**	**CZ 4 C & 5**	**CZ 6**	**CZ 7**	**CZ 8**
Fixed Window U-Factor:	0.48	0.43	0.40	0.34	0.34	0.32	0.28	0.27
Operable Window U-Factor:	0.59	0.57	0.51	0.43	0.43	0.40	0.34	0.30
Glazed Entrance Door U-Factor:	0.79	0.73	0.65	0.60	0.60	0.60	0.60	0.60
SHGC	0.25	0.25	0.25	0.40	0.40	0.40	any	any

Water Heater

- Dwelling unit DHW equipment meets the following applicable efficiency levels, dependent on fuel type: [14] Gas: 0.90 UEF; Electric: 1.49 UEF
- Common space DHW equipment meets the following applicable efficiency levels, dependent on fuel type: [14] Gas: 0.90 UEF; Electric: 0.93 UEF

Thermostat & Ductwork

- Programmable thermostat
- All ducts and air handlers within conditioned space, uninsulated, with no leakage to the outside

Lighting, Appliances, & Fixtures

- ENERGY STAR refrigerators and dishwashers
- ENERGY STAR light bulbs or fixtures with Tier II efficiency in 100% of Qualifying Light Fixture Locations, as defined by ANSI / RESNET / ICC 301. For all other spaces, refer to the Common Space Applicability Notes on page 4 [14]
- WaterSense bathroom faucets, bathroom aerators, and showerheads [14]

E: Mandatory Requirements for Certified ENERGY STAR Buildings

Exhibit 2: Mandatory Requirements for All Certified Multifamily Buildings

Party Responsible	Mandatory Requirements
Requirements Applicable to Track A & B	
Rater	• Completion of MFNC National Rater Design Review Checklist, Version 1 / 1.1 / 1.2 • Completion of MFNC National Rater Field Checklist, Version 1 / 1.1 / 1.2
Builder or Developer	• Completion of MFNC National Water Management System Requirements, Version 1 / 1.1 / 1.2
Requirements Only Applicable to Track A – HVAC Grading by Rater [16]	
HVAC System Designer	• Completion of HVAC design report(s) compliant with ANSI / RESNET / ACCA 310, plus the SFNH / MFNC National HVAC Design Supplement(s) to Std. 310 for Dwellings & Units, All Versions • Completion of the MFNC National HVAC Design Supplement to Std. 310 for Common Spaces & Central Systems, All Versions, where applicable
Functional Testing Agent	• Completion of applicable sections of the National HVAC Functional Testing Checklist, Version 1 / 1.1 / 1.2. Exempt from Sections 2 and 3 for Dwelling Unit HVAC as the Rater is the party responsible for assessing these systems installation quality in accordance with ANSI / RESNET / ACCA 310
Requirements Only Applicable to Track B – HVAC Testing by FT Agent	
HVAC System Designer	• Completion of MFNC National HVAC Design Report, Version 1 / 1.1 / 1.2
Functional Testing Agent	• Completion of MFNC National HVAC Functional Testing Checklist, Version 1 / 1.1 / 1.2

F: National Water Management System Requirement

ENERGY STAR Multifamily New Construction
National Water Management System Reqs.[1], Version 1 / 1.1 / 1.2 (Rev. 04)

Builder / Developer Partner Responsibilities:

- It is the exclusive responsibility of the Partner to ensure that each multifamily building is constructed to meet these requirements.
- While Partners are not required to maintain documentation demonstrating compliance for each multifamily building, Partners are required to develop a process to ensure compliance for each building (e.g., incorporate these requirements into the Scope of Work for relevant sub-contractors, require the site supervisor to inspect each building for these requirements, and/or sub-contract the verification of these requirements to a Rater [2]).
- In the event that the EPA determines that a certified multifamily building was constructed without meeting these requirements, the building may be decertified.

1. Water-Managed Site and Foundation
1.1 Impermeable surfaces, such as patio, porch, or plaza slabs, sidewalks, ramps and driveways, sloped ≥ 0.25 in. per ft. away from building to edge of surface or 10 ft., whichever is less. [3]
1.2 Back-fill has been tamped, and permeable surfaces sloped ≥ 0.5 in. per ft. away from building for ≥ 10 ft. Alternatives in Footnote. [3]
1.3 Capillary break beneath all slabs (e.g., slab on grade, basement slab) except crawlspace slabs using either: ≥ 6 mil polyethylene sheeting, lapped 6-12 in., or ≥ 1 in. extruded polystyrene insulation with taped joints. See additional exemptions for garage slabs in Footnote 4. [4, 5, 6, 7]
1.4 Capillary break at all crawlspace floors using one of the following options: [5, 6, 7]
1.4.1 Concrete slab over one of the following materials:
1.4.1a ≥ 6 mil polyethylene sheeting, lapped 6-12 in; OR,
1.4.1b ≥ 1 in. extruded polystyrene insulation with taped joints.
1.4.2 ≥ 6 mil polyethylene sheeting, lapped 6-12 in., & installed using one of the following:
1.4.2a Lapped up each wall or pier and fastened with furring strips or equivalent; OR,
1.4.2b Secured in the ground at the perimeter using stakes.
1.5 Exterior surface of below-grade walls of basements & unvented crawlspaces finished as follows: a) For poured concrete, masonry, & insulated concrete forms, finish with damp-proofing coating. [8] b) For wood framed walls, finish with polyethylene and adhesive or other equivalent waterproofing.
1.6 Class 1 vapor retarder not installed on interior side of vapor permeable insulation in exterior below-grade walls. [9]
1.7 Sump pit cover mechanically attached with full gasket seal or equivalent.
1.8 Drain tile installed at basement and crawlspace walls, with the top of the drain tile pipe below the bottom of the concrete slab or crawlspace floor. Drain tile surrounded with ≥ 6 in. of ½ to ¾ in. washed or clean gravel and with gravel layer fully wrapped with fabric cloth. Drain tile level or sloped to discharge to outside grade (daylight) or to a sump pit with a pump. If drain tile is on interior side of footing, then channel provided through footing to exterior side. [10]
2. Water-Managed Wall Assembly
2.1 Flashing at bottom of exterior walls with weep holes included for anchored stone / masonry veneer and weep screed for adhered stone / masonry veneer or stucco cladding, or equivalent drainage system. [11]
2.2 Fully sealed continuous drainage plane behind exterior cladding that laps over flashing in Item 2.1 and fully sealed at all penetrations. Additional bond-break drainage plane layer provided behind all adhered stone / masonry veneer or stucco cladding. [11, 12]
2.3 Window and door openings fully flashed. [13]
3. Water-Managed Roof Assembly
3.1 Step and kick-out flashing at all roof-wall intersections, extending ≥ 4" on wall surface above roof deck and integrated shingle-style with drainage plane above; boot / collar flashing at all roof penetrations. [14]
3.2 For buildings that don't have a slab-on-grade foundation and do have expansive or collapsible soils, gutters & downspouts provided that empty to lateral piping that discharges water on sloping final grade ≥ 5 ft. from foundation, or to underground catchment system not connected to the foundation drain system that discharges water ≥ 10 ft. from foundation. Alternatives & exemptions in Footnote. [5, 15, 16]
3.3 Self-adhering polymer-modified bituminous membrane at all valleys & roof deck penetrations. [5, 17]
3.4 In 2009 IECC Climate Zones 5 & higher, self-adhering polymer-modified bituminous membrane over sheathing at eaves from the edge of the roof line to > 2 ft. up roof deck from the interior plane of the exterior wall. [5, 17]
4. Water-Managed Building Materials
4.1 Wall-to-wall carpet *not* installed within 2.5 ft. of toilets, tubs, and showers.
4.2 If present, backers for wall tile and wall panels in tub and shower enclosures are fiber-cement board complying with ASTM C1288 or ISO 8336, Category C, or an alternate material listed in the Footnote. Paper-faced backerboard shall not be used. [18]
4.3 In Warm-Humid climates, Class 1 vapor retarders not installed on the interior side of air permeable insulation in above-grade walls, except at shower and tub walls. [9]
4.4 Building materials with visible signs of water damage or mold *not* installed or allowed to remain. [19]
4.5 Framing members & insulation products having high moisture content *not* enclosed (e.g., with drywall). [20]
4.6 For each condensate-producing HVAC component, corrosion-resistant drain pan (e.g., galvanized steel, plastic) included that drains to a conspicuous point of disposal in case of blockage. Backflow prevention valve included if connected to a shared drainage system.

ENERGY STAR Multifamily New Construction
National Water Management System Reqs.[1], Version 1 / 1.1 / 1.2 (Rev. 04)

Footnotes:

1. These requirements are designed to improve moisture control in buildings. However, these features alone cannot prevent all moisture problems. For example, leaky pipes or overflowing baths can lead to moisture issues and negatively impact the performance of the building. For the purpose of this document, the term 'Partner' represents either the builder or the developer.
2. The term 'Rater' refers to the person(s) completing the third-party verification required for certification. The person(s) shall: a) be a Certified Rater, Approved Inspector, as defined by ANSI / RESNET / ICC 301, or an equivalent designation as determined by a Home Certification Organization or Multifamily Review Organization and, b) have attended and successfully completed an EPA-recognized training class. See www.energystar.gov/mftraining.
3. Swales or drains designed to carry water from foundation are permitted to be provided as an alternative to the slope requirements for any building, and shall be provided for a building where setbacks limit space to less than 10 ft. Also, tamping of back-fill is not required if either: proper drainage can be achieved using non-settling compact soils, as determined by a certified hydrologist, soil scientist, or engineer; OR, the builder / developer has scheduled a site visit to provide in-fill and final grading after settling has occurred (e.g., after the first rainy season).
4. Not required for garage slabs that meet any of the following criteria:
    a. "Open" (i.e., 20% of wall area is openings for natural ventilation); OR
    b. Mechanically ventilated automatically by means of carbon monoxide detectors applied in conjunction with nitrogen dioxide detectors at a standby airflow rate of not less than 0.05 cfm/ft^2 and full-on rate not less than 0.75 cfm/ft^2.
5. Not required in Dry (B) climates as shown in 2009 IECC Figure 301.1 and Table 301.1.
6. Not required for raised pier foundations with no walls. To earn the ENERGY STAR, EPA recommends, but does not require, that radon resistant features be included in buildings built in EPA Radon Zones 1, 2 & 3. For more information, see www.epa.gov/indoorairplus.
7. For an existing slab (e.g., in a building undergoing a gut rehabilitation), in lieu of a capillary break beneath the slab, a continuous and sealed Class I or Class II Vapor Retarder (per Footnote 8) is permitted to be installed on top of the entire slab. In such cases, up to 10% of the slab surface is permitted to be exempted from this requirement (e.g., for sill plates). In addition, for existing slabs in occupiable space, the Vapor Retarder shall be, or shall be protected by, a durable floor surface. If Class I Vapor Retarders are installed, they shall not be installed on the interior side of air permeable insulation or materials prone to moisture damage.
8. Interior surface of an existing below-grade wall (e.g., in a building undergoing a gut rehab.) listed in Item 1.5a is permitted to be finished by:
    - Installing a continuous and sealed drainage plane, capillary break, Class I Vapor Retarder (per Footnote 8) and air barrier that terminates into a foundation drainage system as specified in Item 1.8; OR
    - If a drain tile is not required as specified in Footnote 9, adhering a capillary break and Class I Vapor Retarder (per Footnote 8) directly to the wall with the edges taped / sealed to make it continuous.

    Note that no alternative compliance option is provided for existing below-grade wood-framed walls in Item 1.5b.
9. The 2009 IRC defines Class I vapor retarders as a material or assembly with a rating of ≤ 0.1 perm, using the desiccant method with Proc. A of ASTM E 96. The following materials are typically ≤ 0.1 perm and shall not be used on the interior side of vapor permeable insulation in above-grade exterior walls in warm-humid climates or below-grade exterior walls in any climate: rubber membranes, polyethylene film, glass, aluminum foil, sheet metal, and foil-faced insulating / non-insulating sheathings. These materials can be used on the interior side of walls if air permeable insulation is not present (e.g., foil-faced rigid foam board adjacent to a below-grade concrete foundation wall is permitted).

    Note that this list is not comprehensive and other materials with a perm rating ≤ 0.1 also shall not be used. Also, if mfr. spec.'s for a product indicate a perm rating ≥ 0.1, then it may be used, even if it is in this list. Also note that open-cell and closed-cell foam generally have ratings above this limit and may be used unless mfr. spec.'s indicate a perm rating ≤ 0.1. Several exemptions to these requirements apply:
    - Class I vapor retarders, such as ceramic tile, may be used at shower and tub walls;
    - Class I vapor retarders, such as mirrors, may be used if mounted with clips or other spacers that allow air to circulate behind them.
10. Alternatively, either a drain tile that is pre-wrapped with a fabric filter or a Composite Foundation Drainage System (CFDS) that has been evaluated by ICC-ES per AC 243 are permitted to be used. Note that the CFDS must include a soil strip drain or another ICC-ES evaluated perimeter drainage system to be eligible for use. In an existing building (e.g., in a building undergoing a gut rehab.) a drain tile installed only on the interior side of the footing without a channel is permitted. Additionally, a drain tile is not required when a certified hydrologist, soil scientist, or engineer has determined that a crawlspace foundation, or an existing basement foundation (e.g., in a building undergoing a gut rehab.), is installed in Group I Soils (i.e., well-drained ground or sand-gravel mixtures), as defined by 2009 IRC Table R405.1.
11. These Items not required for existing structural masonry walls (e.g., in a building undergoing a gut rehabilitation). Note this exemption does not extend to existing wall assemblies with adhered or anchored stone / masonry veneers.
12. Any of the following systems may be used: a monolithic weather-resistant barrier (i.e., house wrap) shingled at horizontal joints and sealed or taped at all joints; weather resistant sheathings (e.g., faced rigid insulation) fully taped at all "butt" joints; lapped shingle-style building paper or felts; or other water-resistive barrier recognized by ICC-ES or other accredited agency.
13. Apply pan flashing over the rough sill framing, inclusive of the corners of the sill framing; side flashing that extends over pan flashing; and top flashing that extends over side flashing or equivalent details for structural masonry walls or structural concrete walls.
14. Intersecting wall siding shall terminate 1 in. above the roof or higher, per manufacturer's recommendations. Continuous flashing shall be installed in place of step flashing for metal and rubber membrane roofs.
15. The assessment of whether the soil is expansive or collapsible shall be completed by a certified hydrologist, soil scientist, or engineer.
16. Any of the following are permitted to be used as alternatives to Item 3.2: a) a roof design that deposits rainwater to a grade-level rock bed with a waterproof liner and a lateral drain pipe that meets discharge requirements per Item 3.2; b) a rainwater harvesting system that drains overflow to meet discharge requirements per Item 3.2; or c) a continuous rubber membrane (e.g., EPDM) that is aligned with the foundation wall from final grade to ≥ 8 in. below grade and then slopes ≥ 0.5 in. per ft. away from the building for at least 5 ft., with Group I Soils (as defined in Footnote 9) covering the membrane to within 3 in. of final grade.

17. As an alternative, any applicable option in 2009 IRC Section R905.2.8.2 is permitted to be used to meet Item 3.3 and any option in 2009 IRC Section R905.2.7.1 is permitted to be used to meet Item 3.4. EPA recommends, but does not require, that products meet ASTM D1970. In addition, any option in 2009 IRC Section R905.13 is permitted to be used to meet either Item 3.3 or 3.4.
18. In addition to fiber-cement board, fiber-mat reinforced cementitious panels complying with ASTM C1325; glass mat water-resistant gypsum panels complying with ASTM C1178; water-resistant fiber-reinforced gypsum panels complying with Section 6 of ASTM C1278; or materials that have been evaluated by ICC-ES per AC 115 may also be used to meet this requirement. Paper-faced backerboard may only be used behind monolithic enclosures or waterproof membranes that have been evaluated by ICC-ES per AC 115, and then only if it has received a rating of 10 when tested in accordance with ASTM D3273.
19. If mold is present, effort should be made to remove all visible signs of mold (e.g., by damp wipe with water and detergent). If removal methods are not effective, then the material shall be replaced. However, stains that remain after damp wipe are acceptable. Lumber with "sap stain fungi" is exempt from this Item as long as the lumber is structurally intact.
20. For wet-applied insulation, follow manufacturer’s drying recommendations. EPA recommends that lumber moisture content be ≤ 18%.

G: Indoor airPLUS Construction Specifications

EPA
United States
Environmental Protection
Agency

VERSION 1 (REV. 04)

Indoor airPLUS

CONSTRUCTION SPECIFICATIONS

February 2018
www.epa.gov/indoorairplus

Indoor Air Quality (IAQ)

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About the Indoor airPLUS Construction Specifications

These specifications were developed by the U.S. Environmental Protection Agency (EPA) to recognize new homes equipped with a comprehensive set of indoor air quality (IAQ) features. They were developed with significant input from stakeholders, based on best available science and information about risks associated with IAQ problems, and balanced with practical issues of cost, builder production process compatibility, and verifiability.

The Indoor airPLUS Program fully integrates ENERGY STAR Certified Home requirements as a prerequisite. In addition, both the ENERGY STAR Certified Home label and the Indoor airPLUS label are prerequisites for the Department of Energy's Zero Energy Ready Home Program and the PHIUS+ certification by Passive House Institute US, both of which are additional certification options in building high performance, sustainable homes.

In addition to these Construction Specifications, the Indoor airPLUS Program periodically publishes a Policy Record document. The Policy Record is used to provide updates on the resolution of issues, including clarifications, refinements, and/or changes to program requirements. Policy Record updates may be made more frequently than revisions to the Construction Specifications. As such, the Policy Record should be referenced alongside the Construction Specifications for the most current program requirements and interpretations.

The Construction Specifications, Policy Record, and other program documents can be found at www.epa.gov/indoorairplus/indoor-airplus-program-documents.

NOTE: Although these measures are designed to help improve IAQ in new homes compared with homes built to minimum code, they alone cannot prevent all IAQ problems. For example, occupant behavior, such as smoking indoors, and system maintenance are also important.

What's New in Version 1 (Rev. 04)?

Indoor airPLUS V1 (Rev. 04) revises the Construction Specifications to incorporate Policy Record updates recorded since the release of Revision 03 in October 2015. Although Indoor airPLUS Revision 4 does not increase program stringency from previous revisions, it adds clarification and/or refinement to some requirements. Additionally, this revision updates or eliminates various referenced standards as the industry continues to make improvements on consensus-based best practices in high performance construction techniques.

Homes permitted starting 05/01/2018 are required to use Revision 4 of the Construction Specifications for qualification. For homes permitted before 05/01/2018, partners can use either Revision 3 or Revision 4 if desired. The Rater may define "permit date" as either the date that the permit was issued or the date of the contract on the home.

Qualified homes earn the Indoor airPLUS label. Place it next to the ENERGY STAR label.

Eligibility and Verification Requirements

For a home to earn the Indoor airPLUS label, it must also earn the ENERGY STAR Certified Homes label. Requirements for both programs can be verified and homes can be reported simultaneously. Verification can be completed during the ENERGY STAR inspection process and must be conducted by a certified Home Energy Rater, Rating Field Inspector, or an equivalent designation as determined by a Verification Oversight Organization, such as the Residential Energy Services Network (RESNET). The home must also comply with all applicable state and local codes and standards. Instructions for Indoor airPLUS verification are listed below in the Verification Checklist.

Terms Used in This Document

- **EXCEPTIONS** to the requirements described in these construction specifications are noted as appropriate. For climate exceptions, refer to the 2015 International Energy Conservation Code (IECC) Climate Zone map (Figure 301.1). Climate Zone names may include a number for the temperature zone and a letter for the moisture zone (e.g., Zone 3C refers to coastal California only).
- **NOTES** provide additional information to clarify specification requirements.
- **ADVISORIES** provide additional guidance to be considered, but are not specification requirements.
- **ENERGY STAR Certified Homes**– Complete Mandatory Measures Checklists:

Rater – D	Rater Design Review Checklist
Rater – F	Rater Field Checklist
Builder – W	Water Management System Builder Requirements
HVAC – D	HVAC Design Report
HVAC – C	HVAC Commissioning Checklist

Indoor airPLUS Version 1 (Rev. 04) Verification Checklist

Home Address:	City:	State:	Zip:
Climate Zone (1-6):	Radon Zone (1-3):		

Section		Requirements (Refer to full Indoor airPLUS Construction Specifications for details)	Must Correct	Builder Verified	Rater Verified	N/A
ENERGY STAR V3		***Note:*** **The Rev. 04 checklist reflects only the additional Indoor airPLUS requirements and their corresponding section numbers that must be met after completing the ENERGY STAR requirements. ENERGY STAR remains a prerequisite for Indoor airPLUS qualification.**				
		ENERGY STAR Version 3 (or 3.1, 3.2) Program Requirements must be followed and the home shall be ENERGY STAR certified in conjunction with Indoor airPLUS qualification.	☐		☐	
Moisture Control	1.1	Drain or sump pump installed in basements and crawlspaces. In EPA Radon Zone 1, check valve also installed.	☐	☐	☐	☐
		Exception Applied: ☐ Slab-on-grade foundation ☐ Free-draining soils				
	1.2	Layer of aggregate or sand (4 in.) with geotextile matting installed below slabs AND radon techniques used in EPA Radon Zone 1.	☐	☐	☐	☐
		Exception Applied: ☐ Slab-on-grade foundation ☐ Free-draining soils ☐ Dry climate				
	1.4	Basements/crawlspaces insulated, sealed and conditioned.	☐	☐	☐	☐
		Exception Applied: ☐ 100-year flood zone ☐ Marine climate ☐ Dry climate ☐ Crawlspace sealed with capillary break and active dehumidification ☐ Raised pier foundation with no walls				
	1.7	Protection from water splash damage if no gutters.	☐	☐	☐	☐
		Exception Applied: ☐ Rainwater harvesting system ☐ Dry climates				
	1.11	Supply piping in exterior walls insulated with pipe wrap.	☐	☐	☐	☐
		Exception Applied: ☐ Dry climate AND climate zone 1-3 ☐ Air barrier insulation in wall cavity				
	1.14	Hard-surface flooring in kitchens, baths, entry, laundry, and utility rooms.	☐	☐	☐	
Radon	2.1	Radon-resistant features installed in Radon Zone 1 homes in accordance with Construction Specification 2.1.	☐	☐	☐	☐
		Exception Applied: ☐ Perimeter pipe loop in lieu of full aggregate (dry climate) ☐ Manufactured home with raised pier foundation				
Pests	3.2	Corrosion-proof rodent/bird screens installed at all openings that cannot be fully sealed. (Not required for clothes dryer vents.)	☐	☐	☐	
HVAC Systems	4.1	Equipment selected to keep relative humidity < 60% in "Warm-Humid" climates.	☐		☐	☐
		Exception Applied: ☐ Climate zones 4-8, 3B, 3C and portions of 3A and 2B				
	4.2	Duct systems protected from construction debris AND no building cavities used as air supplies or returns.	☐	☐	☐	
	4.3	No air-handling equipment or ductwork installed in garage.	☐		☐	
	4.6	Clothes dryers vented to the outdoors or plumbed to a drain according to manufacturer's instructions.	☐		☐	
	4.7	Central forced-air HVAC system(s) have minimum MERV 8 filter AND no ozone generators in home. Temporary filter installed to protect unit from construction dust.	☐	☐	☐	☐
Combustion Pollutants	5.1	Emissions standards met for fuel-burning and space-heating appliances.	☐		☐	☐
		Identify appliance type: ☐ Masonry heater ☐ Factory-built wood-burning fireplace ☐ Wood stove ☐ Pellet stove ☐ Natural gas/propane fireplace Appliance model name/number:_____				
	5.2	CO alarms installed in each sleeping zone (e.g., common hallway) according to NFPA 720.	☐		☐	☐
	5.3	Multifamily buildings: Smoking restrictions implemented AND ETS transfer pathways minimized.	☐	☐	☐	☐
	5.4	Attached garages: Door closer installed on all connecting doors.	☐		☐	☐
		Attached garages: In homes with exhaust-only whole-house ventilation EITHER ☐ 70 cfm exhaust fan installed in garage OR ☐ Pressure test conducted to verify the effectiveness of the garage-to-house air barrier.	☐		☐	☐

Materials	6.1	All composite wood products certified low-emission. See spec.	☐	☐	☐	
	6.2	Interior paints and finishes certified low-emission. See spec.	☐	☐	☐	
	6.3	Carpet, carpet adhesives, and carpet cushion certified low-emission. See spec.	☐	☐	☐	☐
Final	7.1	HVAC system and ductwork verified to be dry and clean AND new filter installed.	☐	☐	☐	
	7.2	Home ventilated before occupancy.	☐	☐	☐	
	7.3	Equipment manuals, Indoor airPLUS label, and certificate provided for owner/occupant.	☐	☐	☐	

Rater Company: _____

Rater Employee: _____

Rater Signature: _____ **Date:** _____

Builder Company: _____

Builder Employee: _____

Builder Signature: _____ **Date:** _____

Guidance for Completing the Indoor airPLUS Verification Checklist:

1. Only ENERGY STAR certified homes verified to comply with these specifications can earn the Indoor airPLUS label. See Indoor airPLUS Construction Specifications for full descriptions of the requirements, terms, exceptions, abbreviations, references and climate map used in this checklist. Verification is not complete until this checklist is completed in full and signed.

   Note: ENERGY STAR footnotes and exceptions will always be utilized unless otherwise noted in the Indoor airPLUS Construction Specifications. In some cases, Indoor airPLUS modifies or excludes certain ENERGY STAR exceptions or alternate pathways.

2. Check one box per line. Check "N/A" for specifications that do not apply for specific conditions (e.g., climate) according to the exceptions described in the Indoor airPLUS Construction Specifications. Check either "Builder Verified" or "Rater Verified" for all other items to indicate who verified each item. Items may be verified visually on site during construction, by reviewing photographs taken during construction, by checking documentation, or through equivalent methods as appropriate.

3. The Rater who conducted the verification, or a responsible party from the Rater's company, must sign the completed verification checklist. The builder must also sign the checklist if any items in the "Builder Verified" column are checked, and by so doing accepts full responsibility for verifying that those items meet Indoor airPLUS requirements.

4. The Rater shall retain the rating documentation, all required ENERGY STAR Certified Homes documentation, and the Indoor airPLUS Verification Checklist for the home for a minimum of 2 years from final verification. The Rater shall coordinate with the Provider and/or builder to provide an Indoor airPLUS label and certificate for each qualified home.

5. Raters who operate under a Sampling Provider are permitted to use a RESNET-approved sampling protocol for Indoor airPLUS homes located outside California, and a sampling protocol approved by the California Energy Commission for homes located in California, to verify any item designated "Rater Verified." For example, if the approved sampling protocol requires rating one in seven homes, then the checklist will be completed for the one home that was rated. Only Raters are permitted to use sampling. All items verified by the builder shall be verified for each qualified home or unit within a multifamily building. For example, if a Rater verifies 10 items on the Indoor airPLUS Checklist and the builder verifies the remaining checklist items, then an approved sampling protocol is permitted to be used only on the 10 Rater-verified items.

   However, the builder may provide the Rater with a single signed copy of the checklist for an entire building or group of units with builder-verified items under the condition that all units within the building or group utilize: 1) the same HVAC system type (i.e. ductless mini-split, forced air, hydronic); 2) the same combustion appliances and combustion pollutant controls; and 3) the same low-emission materials certification/standard for all products (within their respective categories) verified in Section 6 of the Indoor airPLUS Construction Specifications. If there are no builder-verified items, the Rater may also utilize one checklist per group of units if the above criteria are met. Groups of units with any of the following conditions will require a separate and unique checklist to be completed and signed by the Rater and builder:

   - Any units with differing HVAC system type (i.e., ductless mini-split, forced air, hydronic);
   - Any units with differing combustion appliance types (e.g., masonry heater, pellet stove, wood-burning fireplace) stove, factory-built, etc.) or combustion pollutant controls; or Any units/groups with low-emission materials or finishes addressed in Section 6 that are compliant based on different certifications/standards within their product category.
   - Exception: Builders and Raters may use a single checklist for units utilizing low-emission materials certified to different labels or standards, provided that documentation of the certifications for those materials are retained by the builder and available for inspection upon request.

For further information on the Indoor airPLUS program, visit www.epa.gov/indoorairplus.

ENERGY STAR

All Indoor airPLUS qualified homes meet strict guidelines for energy efficiency set by ENERGY STAR, the nationally-recognized symbol for energy efficiency.

Indoor airPLUS Construction Specifications

Version 1 (Rev. 04)

ENERGY STAR certification is a pre-requisite for a home to achieve Indoor airPLUS qualification. ENERGY STAR checklist items that satisfy Indoor airPLUS requirements are only summarized below. Please refer to the ENERGY STAR National Program Requirements and the checklists under *Complete Mandatory Measures* for more information and the full description of the requirement. Depending on your state, newer versions of the ENERGY STAR Program Requirements may be in effect (e.g. V3.1, V3.2). States under newer versions of the ENERGY STAR Program Requirements can be found listed with other individual Regional Specifications.

1. Moisture Control

1.1 Site and Foundation Drainage

NOTE: Completion of the ENERGY STAR requirements satisfies the following Indoor airPLUS requirements:

- ✓ *Slope patio slabs, walks and driveway; tamp back-fill to prevent settling; AND slope the final grade away from the foundation (Builder-W 1.1 and 1.2).*
- ✓ *Swales or drains designed to carry water away from the foundation are permitted to be provided as an alternative to the slope requirements for any home, and shall be provided for a home where setbacks limit space to less than 10 ft. (Builder-W 1.1 and 1.2).*
- ✓ *Install protected drain tile at the footings of basement and crawlspace walls. Surround each drain tile pipe with washed or clean gravel wrapped with fabric cloth, or install an approved Composite Foundation Drainage System (CFDS) (Builder-W 1.8).*

Additional Indoor airPLUS Requirements:

- Install a drain or sump pump in basement and crawlspace floors, discharging to daylight at least 10 ft. outside the foundation or into an approved sewer system.

  Exceptions:

  - Slab-on-grade foundations.
  - In areas of free-draining soils — identified as Group 1 (Table R405.1, 2015 IRC) by a certified hydrologist, soil scientist, or engineer through a site visit — installation of a drain or sump pump is not required.

- In EPA Radon Zone 1, if a drain tile discharges to daylight install a backwater valve (check valve) at the drain tile outfall (see Specification 2.1 for additional radon measures).

1.2 Capillary Break Installation

NOTE: Completion of the ENERGY STAR requirements satisfies the following Indoor airPLUS requirements:

- ✓ *Install polyethylene sheeting or extruded polystyrene (XPS) insulation beneath concrete slabs, including basement floors. Ensure sheeting is in direct contact with the concrete slab above (Builder-W 1.3).*
- ✓ *Install a capillary break at all crawlspace floors using ≥ 6 mil polyethylene sheeting, lapped 6 to 12 in. (Builder-W 1.4).*

Additional Indoor airPLUS Requirements:

- Under the polyethylene sheeting or extruded polystyrene (XPS), insulation installed to meet ENERGY STAR Water Management System Builder Checklist Item 1.3:
  - Install a 4 in. layer of 1/2 in. diameter or greater clean aggregate; **OR**
  - Install a 4 in. uniform layer of sand, overlain with either a layer of geotextile drainage matting throughout or strips of geotextile drainage matting along the perimeter installed according to the manufacturer's instructions.

Exceptions to the aggregate OR sand requirement:
(Not applicable in EPA Radon Zone 1)

- Dry climates, as defined by 2015 IECC Figure 301.1.
- Areas with free-draining soils – identified as Group 1 (Table R405.1, 2015 IRC) by a certified hydrologist, soil scientist, or engineer through a site visit.
- Slab-on-grade foundations.

Alternative path for gut-rehabs:

- For an existing slab in a home undergoing a gut rehabilitation in Radon Zones 2 and 3, the alternate slab treatment in the ENERGY STAR Water Management System Builder Checklist, footnote 5, shall apply as an alternative to polyethylene and aggregate or sand under the slab. Homes undergoing gut rehabilitation in Radon Zone 1 must also install an active radon system utilizing sub-slab depressurization, and radon levels shall be verified upon final inspection to be below the EPA action level (4pCi/l) to receive qualification.

Note: In EPA Radon Zone 1 (see Specification 2.1):

- Polyethylene sheeting must be installed and overlapped by 6 to 12 in. at the seams.
- ENERGY STAR staking method for poly sheeting may not be used in crawlspaces with no slab.
- ENERGY STAR exceptions for capillary break (polyethylene) under slabs do not apply. Poly is required in Radon Zone 1.

Advisory: 10 mil polyethylene is recommended if crawlspace floors are not covered with a concrete slab.

1.3 Damp-Proofing and Waterproofing Below-Grade Exterior Walls

NOTE: Completion of the ENERGY STAR requirements satisfies the following Indoor airPLUS requirements:

- ✓ *Finish all masonry and concrete walls (e.g., poured concrete, concrete masonry, insulated concrete forms) with a damp-proof coating (Builder-W 1.5).*
- ✓ *Finish all wood-framed walls with polyethylene and adhesive or other equivalent waterproofing (Builder-W 1.5).*

No additional Indoor airPLUS Requirements

1.4 Basement and Crawlspace Insulation and Conditioned Air

Indoor airPLUS Requirements:

- Seal crawlspace and basement perimeter walls to prevent outside air infiltration.
- Insulate crawlspace and basement perimeter walls according to the prescriptive values determined by local code or R-5, whichever is greater.
- Provide conditioned air at a rate not less than 1 cfm per 50 sq. ft. of horizontal floor area. This can be achieved by a dedicated supply (2015 IRC section R408.3.2.2) or through crawl-space exhaust (2015 IRC section R408.3.2.1). However, if radon-resistant features are required (see Specification 2.1), do not use the crawlspace exhaust method.

Exceptions:

- Homes built in areas designated as 100-year flood zones. (Conditioned crawlspaces are not recommended for use in flood zones. For more information on designated 100-year flood zones, see FEMA's definition of Special Flood Hazard Areas: https://www.fema.gov/flood-zones).
- Raised pier foundations with no walls.
- Dry climates, as defined by 2015 IECC Figure 301.1.
- Marine climates, as defined by 2015 IECC Figure 301.1, if no air handler or return ducts are installed in the crawlspace.

Additional Exceptions:

- In lieu of perimeter wall insulation and conditioned air, crawlspaces that utilize a capillary break on the floor and that are well-sealed to prevent outside air infiltration are permitted to utilize active dehumidification with sufficient latent capacity to maintain relative humidity (RH) at or below 60 percent. The dehumidifier shall be drained to the outside or to a sump pump. With this exception, ENERGY STAR Certified Homes Water Management System Builder Requirements Item 1.4.3 staking method for poly sheeting may not be used in crawlspaces with no slab.

1.5 Drainage Plane and Drainage System

NOTE: Completion of the ENERGY STAR requirements satisfies the following Indoor airPLUS requirements:

- ✓ *Install a continuous drainage plane behind exterior wall cladding that overlaps flashing and is fully sealed at all penetrations (Builder-W 2.2).*
- ✓ *Install flashing or an equivalent drainage system at the bottom of exterior walls to direct water away from the drainage plane and foundation (Builder-W 2.1).*

No additional Indoor airPLUS Requirements

1.6 Window and Door Openings

NOTE: Completion of the ENERGY STAR requirements satisfies the following Indoor airPLUS requirement:

- ✓ *Fully flash all window and door openings, including pan flashing over the rough sill framing, side flashing that extends over pan flashing and top flashing that extends over side flashing (Builder-W 2.3).*

No additional Indoor airPLUS Requirements

1.7 Gutters, Downspouts and Site Drainage

NOTE: Completion of the ENERGY STAR requirements satisfies the following Indoor airPLUS requirements:

- ✓ *Direct roof water away from the house using gutters and downspouts that empty into lateral piping on a sloping finish grade (Builder-W 3.2); OR*
- ✓ *Direct roof water to an underground catchment system not connected to the foundation drain system that discharges water ≥ 10 ft. from foundation (Builder-W 3.2).*

Additional Indoor airPLUS Requirements:

- Provide extra protection for water splash damage on homes meeting one of the following ENERGY STAR exceptions for gutters and downspouts: slab on grade homes, homes that deposit rainwater to a grade-level rock bed with a waterproof liner and drain pipe, or homes that use a continuous rubber membrane system. Protection for water splash damage shall be met by one of the following:
  - Extend the foundation walls at least 16 in. above final grade; **OR**
  - Provide a drip line at eaves that is horizontally 16 in. away from the edge of the foundation wall; **OR**
  - Use cladding materials that are decay and rot resistant and can tolerate regular wetting extending at least 16 in. above final grade and install a well-sealed, continuous drainage plane per manufacturer's instructions.

    Advisory: The use of self-adhering moisture membranes directly on exterior sheathing should be limited in these applications to encourage drying potential of moisture vapor through the wall assembly. A moisture resistant, non-perforated, and vapor permeable housewrap is preferred. (However, this may not be true for all wall assemblies where 50% or more of the insulation is outboard the structural assembly.)

Exceptions:

- Dry climates, as defined by 2015 IECC Figure 301.1.
- Homes with rainwater harvesting systems that are designed to properly drain overflow, meeting discharge-distance requirements outlined in ENERGY STAR Builder-W Item number 3.2.

1.8 Roof to Wall Intersections and Roof Penetrations

NOTE: Completion of the ENERGY STAR requirements satisfies the following Indoor airPLUS requirements:

- ✓ *Fully flash all roof-to-wall intersections and all roof penetrations using step flashing for conventional roofs or continuous flashing for metal and rubber membrane roofs (Builder-W 3.1).*
- ✓ *Install "kick-out" flashing at the low end of roof-to-wall intersections (Builder-W 3.1).*

No additional Indoor airPLUS Requirements

1.9 Roof Valleys and Decking

NOTE: Completion of the ENERGY STAR requirements satisfies the following Indoor airPLUS requirement:

- ✓ *Install a self-sealing bituminous membrane or the equivalent at all valleys and roof decking penetrations for durability at potential failure points (Builder-W 3.3).*

No additional Indoor airPLUS Requirements

1.10 Roof Eaves

NOTE: Completion of the ENERGY STAR requirements satisfies the following Indoor airPLUS requirement:

- ✓ *Install ice flashing over the sheathing at eaves to provide protection from ice dams in climate zones 5 and higher (Builder-W 3.4).*
- ✓ *Extend a self-sealing bituminous membrane or the equivalent ("ice flashing") from the edge of the roof line to > 2 ft. up roof deck from the interior plane of the exterior wall (Builder-W 3.4).*

No additional Indoor airPLUS Requirements

1.11 Moisture-Protective Systems

NOTE: Completion of the ENERGY STAR requirements satisfies the following Indoor airPLUS requirements:

- ✓ *Install moisture-resistant backing material behind tub and shower enclosures (Builder-W 4.2).*
- ✓ *Install a corrosion-resistant drain pan properly draining to a conspicuous point of disposal (Builder-W 4.6).*

Additional Indoor airPLUS Requirements:

- Insulate water supply pipes in exterior walls with pipe wrap.

Exceptions:

- Climate zones 1-3 located in dry climates, as defined by 2015 IECC Figure 301.1.
- When insulation in the wall cavity qualifies as an air barrier and pipes are located within the interior 50% of the wall cavity.

Advisory: Pipes should be installed as close as possible to conditioned space while maintaining Grade 1 insulation installation to reduce risk of freezing and/or condensation.

1.12 Class 1 Vapor Retarders

NOTE: Completion of the ENERGY STAR requirements satisfies the following Indoor airPLUS requirement:

- ✓ *Do not install Class 1 vapor retarders on the interior side of vapor permeable insulation in below-grade exterior walls or in any exterior walls in Warm-Humid climates (Builder-W 1.6 and 4.3). Footnote: Class 1 vapor retarders, such as mirrors, may be used if mounted with clips or other spacers that allow air to circulate behind them.*

No additional Indoor airPLUS Requirements

1.13 Materials with Signs of Water Damage or Mold

NOTE: Completion of the ENERGY STAR requirements satisfies the following Indoor airPLUS requirements:

- ✓ *Building materials with visible signs of water damage or mold not installed or allowed to remain. If mold is present, effort should be made to remove all visible signs of mold (e.g., by damp wipe with water and detergent). If removal methods are not effective, then the material shall be replaced. However, stains that remain after damp wipe are acceptable. Lumber with "sap stain fungi" is exempt from this Item as long the lumber is structurally intact. (Builder-W 4.4).*
- ✓ *Do not enclose (e.g., with drywall) framing members and insulation products having high moisture content. (Note: Lumber should not exceed 18 percent moisture) (Builder-W 4.5).*
- ✓ *For wet-applied insulation, follow the manufacturer's drying recommendations (Builder-W 4.5).*

No additional Indoor airPLUS Requirements

1.14 Moisture-Resistant Materials

Indoor airPLUS Requirements:

- Install only water-resistant hard-surface flooring in kitchens, bathrooms, entryways, laundry areas and utility rooms.

Note: Wood flooring, either pre-finished or site-finished, can be utilized in these areas, as long as any composite wood material or site-applied finish comply with Items 6.1 and 6.2, respectively.

2. Radon

2.1 Radon-Resistant Construction

NOTE: Completion of the ENERGY STAR requirements satisfies the following Indoor airPLUS requirement:

- ✓ *Air seal all sump covers (Builder-W 1.7).*

Additional Indoor airPLUS Requirements:

- Construct homes in EPA Radon Zone 1 (see www.epa.gov/radon/zonemap.html) with radon-resistant features (a passive system at minimum). EPA recommends that radon-resistant features are installed according to ANSI/AARST CCAH for 1-2 family dwellings and townhouses (max. total foundation area of 2500 sq. ft.) OR ANSI/AARST CC-1000 for larger foundations.

  Visually verify the following requirements:

  - Capillary break installed according to Specification 1.2, irrespective of climate zone.

    Exception: In dry climates as defined by 2015 IECC Figure 301.1, a "pipe loop" in a trench of clean aggregate along the entire inside perimeter of the foundation (installed according to ANSI/AARST CCAH 403.1.1) can be used in lieu of a uniform layer of aggregate under the entire slab.

  - A 3 or 4 in. diameter gas-tight vertical vent pipe, clearly labeled as a component of a radon reduction system. The vent pipe shall be connected to an open T-fitting in the aggregate layer (or connected to geotextile drainage matting according to the manufacturer's instructions) beneath the polyethylene sheeting, extending up through the conditioned spaces and terminating a minimum of 12 in. above the roof opening. At least 10 ft. of horizontal perforated drain tile is to be attached to the T-fitting beneath the polyethylene sheeting placed over earthen crawlspaces and below concrete slabs. Note: suction points are not permitted on sump lids.
  - Radon fan (i.e., an active system) OR an electrical receptacle installed in an accessible attic location near the radon vent pipe (i.e., a passive system) to facilitate future fan installation if needed. A space surrounding the radon pipe, having a vertical height of not less than 48 inches and a diameter of not less than 21 inches, shall be provided in the attic area where the radon fan can be installed, if required.
  - Homes with no accessible attic location for a fan must utilize another exterior location or a garage that is not below conditioned space per ANSI/AARST CCAH. The branch circuit supply shall be labeled at the electrical panel indicating its intended use.
  - Foundation air sealing with polyurethane caulk or the equivalent at all slab openings, penetrations and control or expansion joints.

Exception to Item 2.1: Manufactured homes with raised-pier foundations (i.e. no solid perimeter foundation wall).

Alternative path for gut-rehabs:

- For homes with an existing slab undergoing gut rehabilitation in Radon Zone 1, an active radon system utilizing sub-slab depressurization must be installed, and radon levels shall be verified upon final inspection to be below the EPA action level (4pCi/l) to receive qualification. The alternate slab treatment in the ENERGY STAR Water Management System Builder Checklist, footnote 5, shall apply as an alternative to polyethylene and aggregate or sand under the slab.

Note: Larger buildings and multifamily properties may share mitigation systems across multiple units or may require multiple soil gas vent systems to accommodate large building footprints. See ANSI/AARST CC-1000 for electric metering requirements in shared (collateral) mitigation systems, as well as for maximum nominal sizes of soil gas collection plenums and corresponding pipe sizes.

Note: Consult local building codes to determine whether additional radon requirements apply. Also consult EPA's "Building Radon Out" (EPA 402-K-01-002) for general guidance on installing radon-resistant features.

Advisories:

1. Elevated levels of radon have been found in homes built in all three zones on EPA's Map of Radon Zones. Consult your state radon program for current information about radon in your area. Go to www.epa.gov/radon/whereyoulive.html and click on your state for contact information.
2. EPA recommends, but does not require, that all homes built with radon-resistant features in EPA Radon Zone 1 include a radon vent fan. EPA also recommends radon-resistant features for homes built in EPA Radon Zones 2 and 3, and that all homes with or without radon-resistant features be tested for radon prior to occupancy. A radon vent fan should be installed when the test result is 4 pCi/L (the EPA action level) or more.
3. Provide buyers with EPA's Citizen's Guide to Radon, encourage them to test for radon and refer them to www.epa.gov/radon for more information.
4. If soil or groundwater contamination is suspected on or near the building site (e.g., former industrial sites), volatile chemical contaminants from soil gas or vapor intrusion into a building may pose an IAQ risk. In such cases, EPA recommends radon-resistant features consistent with Specification 2.1, which can minimize or prevent the vapor intrusion into a house. See the EPA Vapor Intrusion Primer or ASTM E2600 for more information. You should also consult your state, tribal, or local environmental regulatory agency for information on the location of contaminated sites, including those subject to Superfund (CERCLA), Resource Conservation and Recovery Act (RCRA) cleanup requirements, or the Brownfields program. Visit EPA's "Where You Live" for more information.

3. Pest Barriers

3.1 Minimize Pathways for Pest Entry

NOTE: Completion of the ENERGY STAR requirements satisfies the following Indoor airPLUS requirements:

- ✓ *Seal all penetrations and joints between the foundation and exterior wall assemblies (Rater-F 4.1 and 4.3).*
- ✓ *Air seal all sump covers (Builder-W 1.7).*

No additional Indoor airPLUS Requirements

Advisories:

1. When sealing larger gaps that provide potential points of entry for rodents, copper or stainless steel wool is recommended in addition to sealant.
2. Additional precautions should be taken in areas classified as "Moderate to Heavy" termite infestation probability (as identified by 2015 IRC Figure R301.2 [6]):
   - Foundation walls should be solid concrete or masonry with a top course of solid block, bond beam, or concrete-filled block.
   - Interior concrete slabs should be constructed with 6 x 6 in. welded wire fabric, or the equivalent, and concrete walls should be constructed with reinforcing rods to reduce cracking.
   - Sill plates should be made of metal or preservative-treated wood.
3. Additional precautions should be taken in areas classified as "Very Heavy" termite infestation probability (as identified by 2015 IRC Figure R301.2[6]) i.e., Alabama, Florida, Georgia, Louisiana, Mississippi, South Carolina and parts of California and Texas:
   - Foam plastic insulation should not be installed on the exterior face of below-grade foundation walls or under slabs.
   - Foam plastic insulation installed on the exterior of above-grade foundation walls should be kept a minimum of 6 in. above the final grade and any landscape bedding materials and should be covered with moisture-resistant, pest-proof material (e.g., fiber cement board or galvanized insect screen at the bottom-edge of openings).
   - Foam plastic insulation applied to the interior side of conditioned crawlspace walls should be kept a minimum of 3 in. below the sill plate.

3.2 Rodent/Bird Screens for Building Openings

Indoor airPLUS Requirements:

- Provide corrosion-proof rodent/bird screens (e.g., copper or stainless steel mesh) for all building openings that cannot be fully sealed and caulked (e.g., ventilation system intake/exhaust outlets and attic vent openings).

Exception: This requirement does not apply to clothes dryer vents.

4. HVAC Systems

4.1 HVAC Sizing and Design

NOTE: Completion of the ENERGY STAR requirements satisfies the following Indoor airPLUS requirements:

- ✓ *Calculate room-by-room heating and cooling design loads using Unabridged ACCA Manual J, 2013 ASHRAE Fundamentals, or other methodology per the Authority Having Jurisdiction (HVAC-D 3).*
- ✓ *Select all heating and cooling equipment to accommodate the calculated heating and cooling design loads using ACCA Manual S and ENERGY STAR allowances, inclusive of the pressure drop from all specified filters (HVAC-D 4).*

Additional Indoor airPLUS Requirements:

- In "Warm-Humid" climates as defined by Section 301 of the 2015 IECC (i.e., Climate Zone 1 and portions of Zones 2 and 3A below the white line), equipment shall be installed with sufficient latent capacity to maintain indoor relative humidity (RH) at or below 60 percent. This requirement shall be met by either:
  - Additional dehumidification system(s), **OR**
  - A central HVAC system equipped with additional controls to operate in dehumidification mode.

Exception: Climate Zones 4-8, 3B, 3C and the portions of 3A and 2B above the white line as shown by 2015 IECC Figure 301.1.

Advisory: Although not required to meet this specification, independent dehumidification is recommended in Climate Zones 4A and 3A above the white line as shown in 2015 IECC Figure 301.1.

4.2 Duct System Design and Installation

NOTE: Completion of the ENERGY STAR requirements satisfies the following Indoor airPLUS requirements:

- ✓ *Design all duct systems according to ACCA Manual D (HVAC-D 5).*
- ✓ *Ensure that all duct systems are installed to be substantially airtight (Rater-F 6.4 and 6.2).*

Additional Indoor airPLUS Requirements:

- Do not use building cavities as part of the forced air supply or return systems.
- Either cover duct openings throughout construction to protect from construction debris or vacuum out ducts thoroughly prior to installing registers, grilles and diffusers (see Specification 7.1).

Advisory: Seams in the HVAC cabinet, plenum and adjacent ductwork should be sealed with mastic systems, tape that meets the applicable requirements of UL 181a or UL 181b, or gasket systems.

4.3 Location of Air-Handling Equipment and Ductwork

Indoor airPLUS Requirement:

- Do not locate air-handling equipment or ductwork in garages.

Note: Ducts and equipment may be located in framing spaces or building cavities adjacent to garage walls or ceilings if they are separated from the garage space with a continuous air barrier.

4.4 Room Pressure Differentials

NOTE: Completion of the ENERGY STAR requirements satisfies the following Indoor airPLUS requirement:

- ✓ *Minimize room pressure differentials for any bedroom (as defined by RESNET's Mortgage Industry National Home Energy Rating Systems Standards (the RESNET Standard) that does not have a dedicated return (Rater-F 6.2).*

No additional Indoor airPLUS Requirements

4.5 Mechanical Whole-Dwelling Ventilation

NOTE: Completion of the ENERGY STAR requirements satisfies the following Indoor airPLUS requirements:

- ✓ *Provide mechanical whole-dwelling ventilation meeting all requirements of ASHRAE 62.2-2010 or later (HVAC-D 2).*
- ✓ *Test airflows to ensure they meet ASHRAE 62.2-2010 or later minimum requirements (Rater-F 7.1).*
- ✓ *Visually verify the following requirements:*
  - *Transfer air is not used to meet ventilation requirements (Rater-F 7.7.1).*
  - *Outdoor air inlets are located a minimum of 10 ft. from contaminant sources (Rater-F 7.7.2).*

No additional Indoor airPLUS Requirements

Advisory: Outdoor air ducts connected to the return side of an air handler should be used as supply ventilation only if the manufacturers' requirements for return air temperature are met (e.g., most manufacturers recommend a minimum of 60 degrees Fahrenheit air flow across furnace heat exchangers). EPA also recommends filtering air inlets with a filter rated at MERV 13 or higher to minimize outdoor particles entering the home.

4.6 Local Exhaust for Known Pollutant Sources

NOTE: Completion of the ENERGY STAR requirements satisfies the following Indoor airPLUS requirements:

- ✓ *Provide local mechanical exhaust ventilation to the outdoors in each bathroom and kitchen, meeting ASHRAE 62.2-2010 Section 5 requirements (Rater-F 8.1 and 8.2).*

Additional Indoor airPLUS Requirements:

- Conventional clothes dryers shall be vented to the outdoors. Electric condensing dryers shall be plumbed to a drain according to manufacturer's instructions.

4.7 Filtration for Central Forced-Air HVAC Systems

NOTE: Completion of the ENERGY STAR requirements satisfies the following Indoor airPLUS requirement:

- ✓ *Equip all filter access panels with gasket material or comparable sealing mechanism and ensure access panels fit snugly against the exposed edge of the installed filter when closed to prevent bypass (Rater-F 9.3).*

Additional Indoor airPLUS Requirements:

- Install only HVAC filters that are rated MERV 8 or higher according to ASHRAE 52.2-2007 (at approximately 295 fpm).

  Advisory: EPA recommends, but does not require, filters rated at MERV 13 or higher to reduce exposure to fine particles. Filters perform best when the filter rack design includes the following features, which are also included in some manufacturers' filter media boxes:
  - Flexible, air-tight (e.g., closed-cell foam) gasket material on the surface that contacts the air-leaving (downstream) side of the filter.
  - Friction fit or spring clips installed on the upstream side of the filter to hold it firmly in place.

- Upon installation of the air handling unit, include a filter for the remainder of construction activity to protect the unit and/or coil from construction debris and dust. Filter should be clean upon final inspection following construction (see Specification 7.1).

  Advisory: To reduce the likelihood of construction dust contaminating the ducts and air handler, limit use of the HVAC system during activities with increased dust (e.g. drywall sanding, floor sanding).

- Do not install any air-cleaning equipment designed to produce ozone (i.e., ozone generators).

5. Combustion Pollutant Control

5.1 Combustion Equipment Located in Conditioned Spaces

NOTE: Completion of the ENERGY STAR requirements satisfies the following Indoor airPLUS requirements:

- ✓ *Mechanically draft or direct vent all gas- and oil-fired furnaces, boilers and water heaters located in conditioned spaces. Naturally drafted equipment is allowed in Climate Zones 1-3 if the Rater has followed the combustion safety test procedures in Section 805 of the RESNET Standard. (Rater-F 10.1).*
- ✓ *Fireplaces that are not mechanically drafted or direct-vented to the outdoors must meet maximum allowed exhaust flow (Rater-F 10.2).*

Additional Indoor airPLUS Requirements:

- Do not install any unvented combustion space-heating or decorative appliances within conditioned space.
- Ensure that all fireplaces and other fuel-burning and space-heating appliances located in conditioned spaces are vented to the outdoors and supplied with adequate combustion and ventilation air according to the manufacturers' installation instructions.
- Meet the following energy efficiency and emissions standards and restrictions for all fireplaces and other fuel-burning and space-heating appliances located in conditioned spaces:
  - Traditional masonry fireplaces designed for open fires are not permitted, with the exception of "masonry heaters" as defined by ASTM E1602 and section 2112.1 of the 2012 International Building Code (i.e., fireplaces engineered to store and release substantial portions of heat generated from a rapid burn).
  - Factory-built wood-burning fireplaces shall meet the certification requirements of UL 127 and shall have tight-fitting, gasketed glass doors and a dedicated outside air supply.

    Advisory: Factory-built wood burning fireplaces qualified under EPA's wood-burning fireplace program are recommended. See: www.epa.gov/burnwise/fireplacelist.html
  - Wood stove and fireplace inserts as defined in section 3.8 of UL 1482 shall meet the certification requirements of that standard, **AND** they shall meet the emission requirements of the EPA's New Source Performance Standards for new residential wood heaters. See: www.epa.gov/residential-wood-heaters/final-new-source-performance-standards-residential-wood-heaters.
  - Pellet stoves shall meet the requirements of ASTM E1509 AND they shall meet the emission requirements of the EPA New Source Performance Standards for new residential wood heaters.
  - Natural gas and propane fireplaces shall have a permanently affixed glass front or gasketed door, and be power vented or direct vented in accordance with ANSI Z21.88/CSA 2.33. Decorative gas logs as defined in ANSI Z21.84/CSA 2.33 are not permitted.

Note: Unfinished basements and crawlspaces (except raised pier foundations with no walls) and attached garages that are air-sealed to the outside and intended for use as work or living space, are considered "conditioned spaces" for the purpose of this requirement.

5.2 Carbon Monoxide Alarms

Indoor airPLUS Requirement:

- All homes equipped with combustion appliance(s) or an attached garage shall have a carbon monoxide (CO) alarm installed in a central location in the immediate vicinity of each separate sleeping zone (e.g., in a hallway adjacent to bedrooms.) The alarm(s) shall be hard-wired with a battery back-up function and placed according to NFPA 720. The alarms shall be certified by either CSA 6.19-01 or UL 2034.

5.3 Multi-Family Environmental Tobacco Smoke Protections

Indoor airPLUS Requirements:

- Reduce exposure to environmental tobacco smoke (ETS) in multi-family buildings by:
  - Prohibiting smoking in indoor common areas, specified explicitly in building rental/lease agreements or condo/co-op association covenants and restrictions.
  - Locating designated outdoor smoking areas a minimum of 25 ft. from entries, outdoor air intakes and operable windows.
  - Minimizing uncontrolled pathways for ETS transfer between individual dwelling units by sealing penetrations in the walls, ceilings and floors of dwelling units; sealing vertical chases adjacent to dwelling units; and applying weather stripping to all doors in dwelling units leading to common hallways.

Advisory: To ensure that air sealing will effectively prevent migration of ETS, other air pollutants and odors between units in multifamily structures, conduct air-tightness testing of each unit in accordance with Section 802 of the RESNET Standard. The maximum air leakage rate should not exceed 0.3 CFM per square foot of the dwelling unit's enclosure area, at an induced pressure difference of 50 Pa, where the enclosure area includes the floor area, the ceiling area, and the demising and exterior wall areas.

5.4 Attached Garages

NOTE: Completion of the ENERGY STAR requirements satisfies the following Indoor airPLUS requirement:

- ✓ *Isolate attached garages from conditioned spaces as follows:*
  - *Air-seal common walls and ceilings between attached garages and living spaces before installing insulation (Rater-F 2.4, 2.6, and 4.7).*

- *Use weather stripping or equivalent gasket to ensure all doors between living spaces and attached garages are substantially air-tight (Rater-F 4.9).*

Additional Indoor airPLUS Requirements:

- Install an automatic door closer on all connecting doors between living spaces and attached garages, **AND**
- In homes with exhaust-only whole house ventilation meet one of the following two requirements:
  - Equip the attached garage with an exhaust fan with a minimum installed capacity of 70 cfm that is vented directly outdoors. The fan shall be wired for continuous operation or with automatic fan controls (e.g., a motion detector) that activate the fan whenever the garage is occupied and operate for at least 1 hour after the garage has been vacated. If a ducted fan (not through-the-wall) is used, test and verify minimum capacity of 70 cfm, **OR**
  - Verify that the garage-to-house air barrier can maintain a pressure difference of greater than 45 Pa while the home maintains a 50 Pascal pressure difference with respect to the outdoors. All operable garage openings shall be closed during this test.

Advisories:

1. EPA recommends installing a garage exhaust fan if the homebuyer is expected to occupy the garage for work or recreational activities over extended periods of time.
2. ENERGY STAR certified fans are highly recommended.
3. Provide occupants with information in the Buyer Information Kit on the importance of, and methods for, ensuring adequate ventilation in the garage while occupied for extended periods of time.

6. Low-Emission Materials

Download *How to Find Indoor airPLUS Compliant Low Emission Products*, which provides guidance on identifying compliant products including industry databases and examples of product labeling.

Note: The evaluation, certification and labeling of products for indoor emissions of volatile organic compounds (VOCs) is complex and evolving. EPA has not established threshold levels for indoor VOC emissions from any of the product categories addressed in these specifications. The third-party programs referenced in these specifications include U.S. programs that are designed to reduce human exposure indoors to individual VOCs of potential concern for human health effects, compared to similar products not certified as low-VOC or no-VOC. EPA will consider modifying these specifications to include additional third-party programs as appropriate.

6.1 Composite Wood

NOTE: The following requirements pertain to ALL composite wood products installed in the home during construction. Examples include but are not limited to: structural panels, cabinetry, shelving, trim, doors, stair treads, flooring, etc. See exceptions.

Indoor airPLUS Requirements:

- Structural plywood and oriented strand board (OSB): Use only products certified compliant with:
  - PS1 or PS2, as appropriate, and made with moisture-resistant adhesives as indicated by "Exposure 1" or "Exterior" on the American Plywood Association (APA) trademark.
- Hardwood plywood: Use only products certified compliant with:
  - Formaldehyde emissions requirements of ANSI/HPVA HP-1-2016; **OR**
  - California Air Resources Board (CARB) Airborne Toxics Control Measure (ATCM) Phase II to Reduce Formaldehyde Emissions from Composite Wood Products; **OR**
  - EPA Toxic Substances Control Act (TSCA) Title VI certified.
- Particleboard and MDF products: Use only products certified compliant with:
  - CARB ATCM Phase II to Reduce Formaldehyde Emissions from Composite Wood Products; **OR**
  - EPA Toxic Substances Control Act (TSCA) Title VI certified; **OR**
  - Formaldehyde emissions requirements of ANSI A208.1 (particleboard) and A208.2 (MDF); **OR**
  - ECC Sustainability Standard by the Composite Panel Association**; OR**
  - GREENGUARD or GREENGUARD GOLD Certification.
- Cabinetry: Made with component materials (plywood, particleboard, MDF) that are certified to comply with:
  - The appropriate standards above; **OR**
  - Registered brands or products produced in plants certified under the Kitchen Cabinet Manufacturers Association's (KCMA) Environmental Stewardship Certification Program (ESP 05-12); **OR**
  - GREENGUARD or GREENGUARD GOLD Certification for Cabinetry.

Exceptions to Item 6.1 per the CA ATCM and EPA's TSCA Title VI:

- Windows that contain composite wood products are exempt from the requirements of this section if the window product contains less than five percent by volume of HWPW, PB, or MDF combined in relation to the total volume of the finished window product.
- Exterior doors and garage doors that contain composite wood products are exempt from the requirements of this section if either: (A) the doors are made from composite wood products manufactured with no added formaldehyde based resins or ULEF resins; or (B) the doors contain less than three percent by volume of HWPW, PB, or MDF combined in relation to the total volume of the finished exterior door or garage door.

Note: "No added formaldehyde" (NAF) or "Ultra-low emitting formaldehyde" (ULEF) products that are specifically manufactured under a limited exemption from the CARB ATCM to Reduce Formaldehyde Emissions from Composite Wood Products or EPA's TSCA Title VI rule are compliant with Indoor airPLUS.

6.2 Interior Paints and Finishes

Indoor airPLUS Requirements:

- At least 90 percent of the interior surface area covered by site-applied paints and coatings shall use low-VOC or no-VOC products certified by one of the following third-party standards or certifications:
    - GREENGUARD or GREENGUARD GOLD Certification for Paints and Coatings, **OR**
    - Scientific Certification Systems (SCS) Standard EC-10.3-2014, Indoor Advantage Gold, **OR**
    - A third-party low-emitting product list based on CA Section 01350 (CDPH Standard Method V1.2-2017), **OR**
    - Green Seal Standard GS-11, **OR**
    - Green Wise and Green Wise Gold products, **OR**
    - Master Painters Institute (MPI) Green Performance Standards X-Green, GPS-1 or GPS-2.

6.3 Carpets and Carpet Adhesives

Indoor airPLUS Requirements:

- At least 90 percent of the interior surface area covered by carpet and carpet adhesives must use products labeled with, or otherwise documented as meeting, the Carpet and Rug Institute (CRI) Green Label Plus testing program criteria.
- For carpet cushion (i.e., padding), use only products certified to meet the CRI Green Label Plus testing program criteria.

6.4 Adhesives and Sealants

Advisory: While not currently required by Indoor airPLUS, EPA recommends that at least 90 percent of site-applied interior adhesives and sealants be low-VOC or no-VOC products certified by one of the following third-party standards or certifications:

- A third-party low-emitting product list based on CA Section 01350 (CDPH Standard Method V1.2-2010), **OR**
- Green Seal GS-36, **OR**
- GREENGUARD or GREENGUARD GOLD certification for adhesives and sealants.

6.5 Hard Surface Flooring

Advisory: While not currently required by Indoor airPLUS, EPA recommends that at least 90 percent of the interior hard surface flooring materials, adhesives, and underlayments be low-VOC or no-VOC emitting as certified by one of the following third-party standards or certifications:

- FloorScore ®; **OR**
- GREENGUARD or GREENGUARD Gold; **OR**
- SCS Indoor Advantage Gold; **OR**
- A third party low-emitting product list based on CA Section 01350 (CDPH Standard Method v1.2-2017); **OR**
- CRI Green Label Plus (adhesives)

7. Home Commissioning

7.1 HVAC and Ductwork Verification

Indoor airPLUS Requirements:

- Inspect ductwork before installing registers, grilles and diffusers to verify it is dry and substantially free of dust or debris. If duct openings were not covered during construction, thoroughly vacuum out each opening prior to installing registers, grilles and diffusers.
- After all dust-producing construction activities are complete (e.g., drywall, trim carpentry, floor sanding), verify HVAC filters are new, clean, and meet specified MERV rating (see Specification 4.7).

Advisory: Air balancing of supply registers and return grilles is highly recommended to improve the performance of the HVAC system and comfort of the occupants, but is not required at this time for Indoor airPLUS qualification.

7.2 Ventilation after Material Installation

Indoor airPLUS Requirements:

- Ventilate the home with outside air at the highest rate and duration practical, meeting ventilation requirements for outdoor air flow and humidity control (see Item 4.5):
    - During and shortly after installing products that are known sources of contaminants (e.g., cabinets, carpet padding and painting), **AND**
    - During the period between finishing and occupancy.

Advisory: If whole house ventilation cannot be scheduled prior to occupancy, advise the buyer to operate the ventilation system at the highest rate it can provide during the first few months of occupancy, meeting the above requirements.

7.3 Owner and Resident Information Kit

Indoor airPLUS Requirements:

- Provide resident(s), property manager, and/or building owner with information and documentation of the home's IAQ protections, including:
    - An Indoor airPLUS label and certificate.
    - Operations and maintenance instruction manuals for all installed equipment and systems addressed by Indoor airPLUS and ENERGY STAR requirements, including HVAC systems and accessories, dehumidifiers, combustion appliances and any radon system.

Advisory: Provide the homebuyer with information that addresses the importance of ensuring that manually controlled ventilation options (e.g., bathroom, garage (if applicable), kitchen exhaust fans; operable windows, and doors, etc.) are used when strong pollutant sources are present, such as when using common household products (e.g., cleaning products, pesticides) and when using the garage for hobbies or other pollutant generating activities.

Abbreviations

CFDS	Composite Foundation Drainage System
cfm	cubic feet per minute
ETS	Environmental Tobacco Smoke
fpm	feet per minute
ft.	feet
HVAC	heating, ventilating and air-conditioning
IAQ	indoor air quality
in.	inches
mil	common term to describe plastic sheeting thickness; 1 mil equals 0.001 inches
min.	minimum

MDF	medium density fiberboard
MERV	Minimum Efficiency Reporting Value; defined in ASHRAE 52.2-2007
OSB	oriented strand board
Pa	Pascal
pCi/L	picocuries per liter
Rev.	Revision
sq. ft.	square foot
spec	specification
VOC	Volatile Organic Compound
w.c.	water column

References

ACCA Man D: ACCA Manual D: Residential Duct Systems. 2015. Air Conditioning Contractors of America.

ACCA Man J: ACCA Manual J: Residential Load Calculation – 8th Ed. 2015. Air Conditioning Contractors of America.

ANSI A208.1: ANSI A208.1: Standard Particleboard. 2016. American National Standards Institute.

ANSI A208.2: ANSI A208.2: Standard for Medium Density Fiberboard (MDF) for Interior Applications. 2016. American National Standards Institute.

ANSI/AARST CCAH 2012: ANSI/AARST Standard: Reducing Radon in New Construction of 1 & 2 Family Dwellings and Townhouses. 2012. American Association of Radon Scientists and Technologists.

ANSI/AARST CC-1000 2017: ANSI/AARST Standard: Soil Gas Control Systems In New Construction of Buildings. 2017. American National Standards Institute / American Association of Radon Scientists and Technologists. **ANSI/HPVA HP-1-2016:** American National Standard for Hardwood and Decorative Plywood. 2015. American National Standards Institute / Hardwood Plywood and Veneer Association.

ANSI Z21.88/CSA 2.33: ANSI Standard Z21.88-2014/CSA Standard 2.33-2014: Vented Gas Fireplace Heaters. 2014. American National Standards Institute/Canadian Standards Association.

APA: American Plywood Association provides a voluntary product standard for structural plywood and oriented strand board (OSB). http://www.apawood.org/plywood.

ASHRAE Handbooks: ASHRAE Handbook Series. American Society of Heating, Refrigerating, and Air-Conditioning Engineers.

ASHRAE 52.2: ANSI/ASHRAE Standard 52.2-2007: Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size. 2007. American Society of Heating, Refrigerating, and Air-Conditioning Engineers.

ASHRAE 62.2: ANSI/ASHRAE Standard 62.2-2010: Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings. 2010. American Society of Heating, Refrigerating, and Air-Conditioning Engineers.

ASTM E1465: ASTM Standard E1465-08a: Standard Practice for Radon Control Options for the Design and Construction of New Low-Rise Residential Buildings. 2008. American Society for Testing and Materials.

ASTM E1509: ASTM Standard E1509-04: Standard Specification for Room Heaters, Pellet Fuel-Burning Type. 2004. American Society for Testing and Materials.

ASTM E2600: ASTM Standard E2600-10: Standard Guide for Vapor Encroachment Screening on Property Involved In Real Estate Transactions. 2010. American Society for Testing and Materials.

ASTM E1602: ASTM Standard E1602-03(2010) e1: Standard Guide for Construction of Solid Fuel Burning Masonry Heaters. 2010. American Society for Testing and Materials.

CA Section 01350: CDPH Standard Method V1.2-2017; California Section 01350: Special Environmental Requirements Specification: Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Environmental Chambers. 2017. State of California. https://archive.cdph.ca.gov/programs/IAQ/Documents/CDPH-IAQ_StandardMethod_V1_2_2017.pdf.

California Air Resources Board (CARB) Airborne Toxics Control Measure (ATCM) Phase II to Reduce Formaldehyde Emissions from Composite Wood Products. CA Title 17, Section 93120. www.arb.ca.gov/toxics/compwood/compwood.htm.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): Known as Superfund, authorizes EPA to respond to releases, or threatened releases of hazardous substances that may endanger public health, welfare, or the environment.

CRI Green Label: Carpet and Rug Institute Green Label Testing Programs.

CRI Green Label Plus: Carpet and Rug Institute Green Label Plus Testing Programs. http://www.carpet-rug.org/CRI-Testing-Programs/Green-Label-Plus/Carpet,-Adhesive-Cushion.aspx.

CSA 6.19-01: CAN/CSA Standard 6.19-01: Residential Carbon Monoxide Alarming Devices. 2006. Canadian Standards Association.

Eco-Certified Composite (ECC) Sustainability Standard (CPA 4-11): Composite Panel Association. 2012.

ENERGY STAR Certified Homes Version 3 Checklists: U.S. Environmental Protection Agency. http://www.energystar.gov/index.cfm?c=bldrs_lenders_raters.nh_v3_guidelines.

EPA Building Radon Out (EPA 402-K-01-002): Building Radon Out: A Step-by-Step Guide On How to Build Radon-Resistant Homes. 2001. U.S. Environmental Protection Agency.

EPA How to Find Indoor airPLUS Compliant Low Emission Products provides guidance on identifying compliant products. http://www.epa.gov/indoorairplus/indoor-airplus-compliant-low-emission-products.

EPA Radon Maps: EPA's Map of Radon Zones. 2008. U.S. Environmental Protection Agency.

EPA's New Source Performance Standard: Clean air standards for residential wood heaters. 2015. U.S. Environmental Protection Agency.

EPA Vapor Intrusion Primer: Brownfields Technology Primer: Vapor Intrusion Considerations for Redevelopment. 2008. U.S. Environmental Protection Agency.

FloorScore ®: FloorScore® certification standard for hard surface flooring materials, adhesives, and underlayments. 2014. Scientific Certification Systems. https://www.scsglobalservices.com/floorscore.

Formaldehyde Emission Standards for Composite Wood Products: Toxic Substances Control Act Title VI Formaldehyde Emission Standards for Composite Wood Products. 2016. 40 Code of Federal Regulations, Part 770. https://www.regulations.gov/document?D=EPA-HQ-OPPT-2016-0461-0001.

GREENGUARD and GREENGUARD Gold Certification: GREENGUARD Certification Program for Low Emitting Products: Paints and Coatings. 2015. GREENGUARD Environmental Institute. http://greenguard.org/en/certificationprograms.aspx.

Green Seal Standard GS-11: GS-11: Green Seal Environmental Standard for Paints and Coatings 3rd Ed. 2011. Green Seal, Inc. http://www.greenseal.org/portals/0/documents/standards/gs-11/gs-11_paints_and_coatings_standard.pdf.

Green Wise and Green Wise Gold Standard: Certified by Coatings Research Group Incorporated. 2010. http://greenwisepaint.com/performance-standards.

HPVA: Hardwood Plywood & Veneer Association. ANSI/HPVA HP-1 2015 standard for hardwood and decorative plywood and the ANSI/HPVA EF 2015 standard for engineered wood flooring. http://www.hpva.org/hpva-national-consensus-standards.

IBC: International Building Code. 2012. International Code Council, Inc.

IECC: International Energy Conservation Code. 2015. International Code Council, Inc.

IRC: International Residential Code for One- and Two-Family Dwellings. 2015. International Code Council, Inc.

KCMA ESP 05-12: Environmental Stewardship Program. 2012. Kitchen Cabinet Manufacturer's Association.

MPI X-Green (Extreme Green), GPS-1 and GPS-2: Master Painters Institute (MPI) Green Performance Standards for Paints and Coatings [X-Green, GPS-1 and GPS-2]. 2015. Master Painters Institute, Inc. http://www.paintinfo.com/mpi/approved/Specification_index.shtml.

NFPA 720: Standard for the Installation of Carbon Monoxide (CO) Detection and Warning Equipment. 2012. National Fire Protection Association.

NFPA 5000: Building and Construction Safety Code. 2012. National Fire Protection Association.

PS1-09: Voluntary Product Standard, PS 1-09, Structural Plywood 2015. American Plywood Association.

PS2-10: Performance Standard for Wood-based Structural-Use Panels. 2011. American Plywood Association.

RESNET: Mortgage Industry National Home Energy Rating System Standards (RESNET Standard). 2013. Residential Energy Services Network. http://www.resnet.us/standards/RESNET_Mortgage_Industry_National_HERS_Standards.pdf.

Resource Conservation and Recovery Act (RCRA): Public law that creates the framework for the proper management of hazardous and non-hazardous solid waste.

SCS-EC-10.3.2014: Scientific Certification Systems (SCS) Indoor Air Quality Product Performance Standard for Building Interiors. 2014. Scientific Certification Systems. https://www.scsglobalservices.com/files/standards/scs_stn_ec10-3-2014_051614.pdf.

UL 127: Standard for Factory-Built Fireplaces. 2011. Underwriters Laboratories, Inc.

UL 181A: Standard for Closure Systems for Use with Rigid Air Ducts. 2008. Underwriters Laboratories, Inc.

UL 181B: Standard for Closure Systems for Use with Flexible Air Ducts and Air Connectors. 2008. Underwriters Laboratories, Inc.

UL 1482: Standard for Solid-Fuel Type Room Heaters. 2011. Underwriters Laboratories, Inc.

UL 2034: Standard for Single and Multiple Station Carbon Monoxide Alarms. 2008. Underwriters Laboratories, Inc.

Climate Zones of the Continental United States

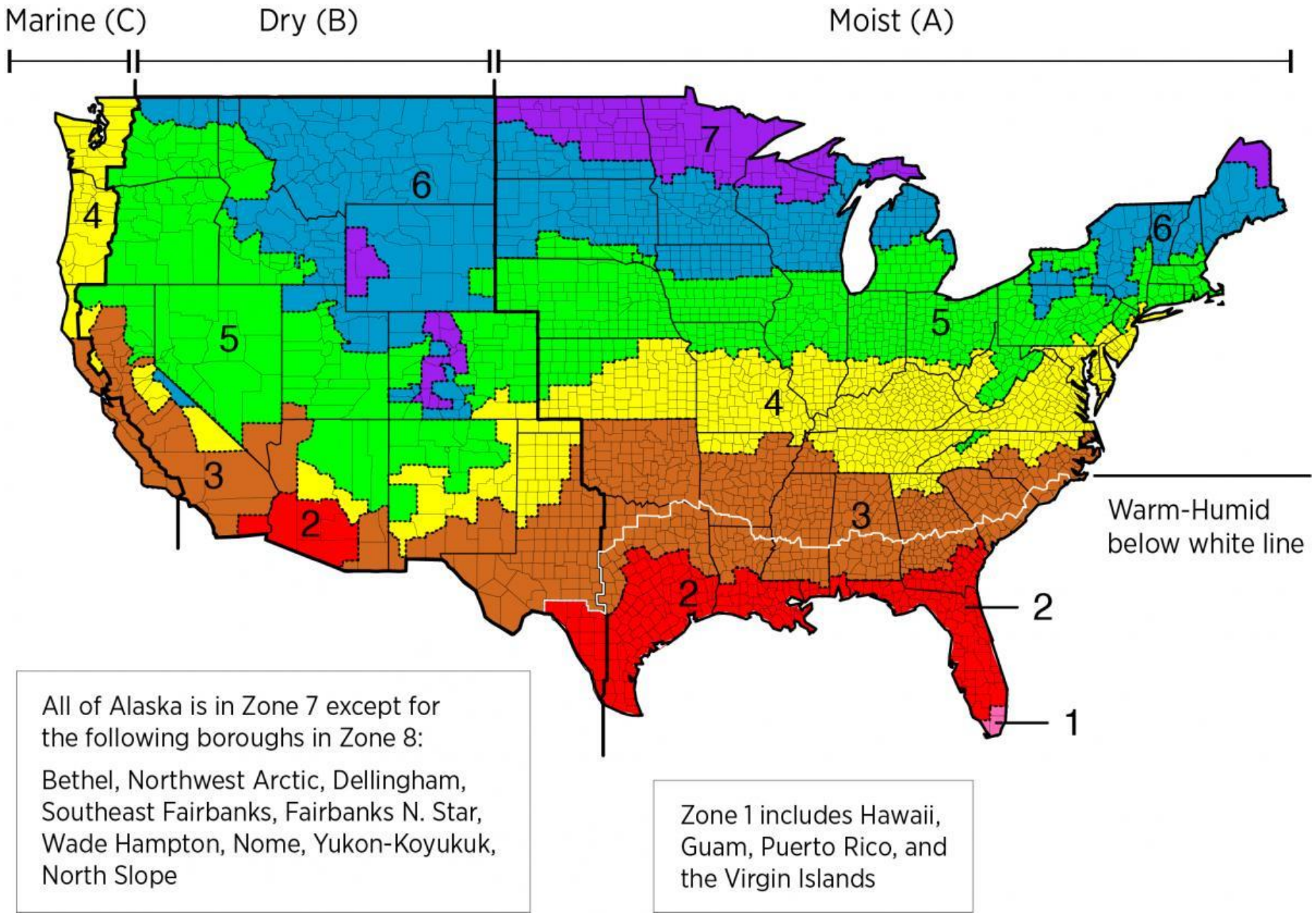

Figure 301.1 Climate Zones of the Continental United States. International Energy Conservation Code

United States
Environmental Protection
Agency

Office of Air and Radiation (6609J)

EPA-402-K-13/001 l Revised February 2018

Homes with the Indoor airPLUS label are designed for improved indoor air quality compared to homes built to minimum code.

www.epa.gov/indoorairplus

H: DOE ENH – Multifamily PV-Ready Checklist Version 2

DOE Efficient New Homes Multifamily PV-Ready Checklist Version 2 (Rev. 1)

The Photovoltaic Ready provisions of the DOE Efficient New Homes program shall be met by any building eligible for certification under the Multifamily National Program Requirements Version 2 or the Multifamily California Program Requirements Version 2, unless one or more of the exceptions (noted below) applies. Checklist requirements may be verified using final construction documents or direct field observation unless an item is marked as "Field Verify," in which case it must be verified in the field.

If one or more exceptions apply, a project may be certified under the DOE Efficient New Homes program if all other applicable program requirements are met.

The exceptions are:

a. The building already includes an on-site PV system with a capacity of at least 1 Watt per square foot of roof area. Documentation of the system must be retained by the rater.
b. The building receives renewable energy from a community solar system, and there is a legally binding agreement in place for the provision of this energy to the building with a duration ≥ 15 years and written to survive a full or partial transfer of ownership of the property. Documentation of this agreement must be retained by the rater.
c. A building with a solar-ready zone that is shaded for more than 70 percent of daylight hours annually. Documentation of the analysis concluding that the 70 percent threshold is not met must be retained by the rater.
d. Buildings where 75% or more of the roof (by surface area) has a slope of 4:12 or greater and no portion of the 4:12 or greater roof section is oriented in between 110 degrees to 270 degrees of true north. Documentation must be retained by the rater.
e. A building where the licensed professional certifies that the solar zone area required by this checklist cannot be met because of extensive rooftop equipment, skylights, vegetated roof areas, or other obstructions. Rater must retain this documentation.

These requirements are based, in part, on the provisions of the 2021 Commercial IECC, Appendix CB.

U.S. DOE Efficient New Homes Multifamily PV-Ready Checklist Version 2 (Rev. 1)		
Item	**Requirement**	**Rater Verified** [1]
One or more of the exceptions listed above applies and required documentation is retained by the rater. If this box is checked, the remaining items on this list are not required and the rater may mark the PV-Ready checklist as complete on the Rater Checklist.		☐
1	A solar-ready zone (a section or sections of the roof or building overhang designated and reserved for the future installation of a solar PV system) is located on the roof and/or other viable building surfaces (which may include awnings and the roofs of ancillary buildings including carports). For buildings where solar-ready zone(s) are located on roof slopes of 4:12 or greater, solar-ready zone is located in between 110 degrees to 270 degrees of true north.	☐
2	The total solar-ready zone area is not less than 40 percent of the roof area calculated as the horizontally projected gross roof area less the area covered by skylights, occupied roof decks, vegetated roof areas and mandatory access or set back areas required by the International Fire Code (IFC). For buildings with roof slopes of 4:12 or greater, the solar-ready zone is not less than 40 percent of the horizontally projected gross roof area with an orientation between 110 degrees to 270 degrees of true north (less the area covered by skylights, occupied roof decks, vegetated roof areas and mandatory access or set back areas required by the IFC).	☐

3	The solar-ready zone is either a single area or several smaller, separated sub-zone areas not less than 5 feet (1524 mm) in width in the narrowest dimension.	☐
4	The solar-ready zone is free from obstructions, including pipes, vents, ducts, HVAC equipment, skylights, and roof-mounted equipment.	☐
5	A collateral dead load[2] of not less than 5 pounds per square foot (PSF) shall be included in the gravity and lateral design calculations for the solar-ready zone. The structural design loads for roof dead load and roof live load are indicated on construction documents.	☐
6	Construction documents indicate pathways for routing of conduit or piping from the solar-ready zone(s) to the main electrical service panel.[3]	☐
7	The main electrical service panel[3] has a reserved space to allow installation of a dual-pole circuit breaker for future solar electric system. This space is labeled "For Future Solar Electric." The reserved space is positioned at the end of the panel that is opposite from the panel supply conductor connection. ***Field Verify***.	☐
8	A permanent certificate indicating the solar-ready zone and all other requirements of this checklist is posted near the electrical distribution panel or other conspicuous location by the builder or registered design professional. ***Field Verify.***	☐

Verification Signoffs		
Rater Name: _____ Rater Company Name: _____	Rater Inspection Date(s): _____	Rater Initials: _____

Endnotes:

[1] The Rater is defined as the person(s) completing the third-party verification required for certification. Raters must comply with the following:

- Raters are required to complete all training modules applicable to the DOE Efficient New Homes Multifamily Version 2 program specifications (according to the timeline posted on the program website) prior to completing a project's first inspection. Please note that required training modules are subject to change and Raters will have an allocated time period to complete additional or updated training modules as they become available. If a Rater does not successfully complete these modules before the end of the allocated time period, they may not certify DOE Efficient New Homes projects until the modules are complete.
- Raters must be (a) a Certified Rater, Approved Inspector, as defined by ANSI / RESNET / IECC 301, or (b) credentialed by a Home Certification Organization for DOE Efficient New Homes (HCO for DOE), or (c) meet the credential requirements of a Multifamily Review Organization for DOE Efficient New Homes (MRO for DOE). Learn more and find a current list of HCOs and MROs for DOE here.

[2] Collateral dead load is a subset of dead load that includes the weight of any materials (current or future) other than permanent construction.

[3] If the building does not have a main electrical service panel serving the entire building, then an electrical service panel serving common space may be used to satisfy this provision. If the building also does not have an electrical service panel serving common space, this requirement shall be applied to the electrical service panels within individual dwelling units. If this approach is used, at least 50% of the dwelling units in the building must meet the stated requirements.

Projects may also choose to use this individual dwelling unit approach even if a main electrical service panel or an electrical service panel serving common spaces exists. When designing the electrical service panels in dwelling units to be PV Ready, builders are permitted to include disclosures to residents in buildings where the resident may need permission to install a rooftop PV system in the future.

I: DOE ENH – Multifamily EV-Ready Checklist Version 2

DOE Efficient New Homes Multifamily EV-Ready Checklist Version 2 (Rev. 1)

Applicability[1]

These Electric Vehicle Ready provisions of the DOE Efficient New Homes program must be met by any building eligible for certification under the Multifamily National Program Requirements Version 2 and the Multifamily California Program Requirements Version 2, unless one or more of the exceptions noted below applies. For Exception A, a project may be certified under the DOE Efficient New Homes program if all other applicable program requirements are met, and this checklist is not required. If Exceptions B and/or C applies, check the box below. If this box is checked, the rater must record the percentage of spaces provided and may mark the EV-Ready checklist as complete on the Rater Checklist.

Exceptions

A. The cost of the energy use of the parking garage or lot is not the responsibility of the Builder, Developer, Building Owner, or Property Manager, or no parking is provided.
B. Where the local electric distribution entity has certified in writing that it is not able to provide 100% of the necessary distribution capacity that would be needed according to this checklist (assuming that all of the required EVSE, EV Ready, and EV Capable spaces are eventually energized) within 2 years after the estimated certificate of occupancy date, the required EV charging infrastructure shall be reduced based on the available existing electric distribution capacity. The Rater must include the utility's written explanation in the project records.
C. Where meeting the capacity requirements associated with eventually energizing all of the EVSE, EV Ready, and EV Capable spaces required by this checklist will alter the local utility infrastructure design requirements on the utility side of the meter so as to increase the utility side cost to the builder or developer by more than $450 per dwelling unit, the required EV charging infrastructure shall be reduced based on the available existing electric distribution capacity. The Rater must include documentation from the utility regarding added costs in the project records.

Exception B and/or C applies and required documentation is retained by the rater.	☐
Both Exceptions require that EV charging infrastructure is installed based on the available existing electric distribution capacity. Document the percentage of total automobile parking spaces which are EV Capable, EV Ready, or EVSE spaces. All installed spaces must meet the design requirements of this checklist.	___ %

Notes

1. All electrical infrastructure shall be in accordance with NFPA 70.
2. An asterisk (*) denotes a requirement that must be field verified. All other requirements (i.e., those without an asterisk) may be verified based on construction documents or field verification.
3. These requirements are adapted from Appendix RE of the 2024 Residential IECC.

U.S. DEPARTMENT of ENERGY

DOE Efficient New Homes Multifamily EV-Ready Checklist Version 2 (Rev. 1)

Item	Requirement	Rater Verified[2]	Builder or LP Verified[3]
1	Allocated parking for dwelling units in multifamily or mixed-use buildings are provided with an EV Capable, EV Ready, or EVSE space for 20% of units or automobile parking spaces, whichever is less. See endnotes for parking that is shared by multiple buildings[4] and alternative percentage requirements for Low-Power Level 2 (L2) charging.[5] The following minimum types of spaces are provided:[6] 10% of the spaces provided must be EVSE spaces. 10% of the spaces provided may be any combination of EVSE, EV Capable, or EV Ready spaces. ***Advisory:*** DOE intends to raise these percentages in a future program update.		
All **EV Capable** spaces must comply with items 2a – 2d, below.			
2a	A continuous raceway or cable assembly is installed between a suitable panelboard (or other on-site electrical distribution equipment) and an enclosure or outlet located within 6 feet of the EV Capable space.		
2b	The raceway or assembly and panelboard (or other electrical distribution equipment) are sized and rated to supply a system capacity not less than: 6.2 kVA per space, if serving a single space or serving multiple spaces without an energy management system. 2.1 kVA per space, if serving multiple spaces with an energy management system.[7]		
2c	The panelboard (or other electrical distribution equipment) to which the raceway or cable assembly connects has sufficient dedicated space and spare electrical capacity for a two-pole circuit breaker or set of fuses.		
2d	The electrical enclosure or outlet and the panelboard (or other electrical distribution equipment) are both marked: “For electric vehicle supply equipment (EVSE)”		
All **EV Ready** spaces must comply with items 3a – 3c, below.			
3a	A branch circuit is installed and terminates at an enclosure or outlet located within 6 feet of the EV Ready space. The termination is marked “For electric vehicle supply equipment (EVSE).”		
3b	Circuit and panelboard (or other electrical distribution equipment) are sized and rated to supply a system capacity not less than: 6.2 kVA per space, if serving a single space or serving multiple spaces without an energy management system. 2.1 kVA per space, if serving multiple spaces with an energy management system.[7]		
3c	The electrical enclosure or outlet and the panelboard (or other electrical		

	distribution equipment) are both marked: “For electric vehicle supply equipment (EVSE)”		
All **EVSE** spaces must comply with items 4a – 4d, below. An installed EVSE[8] with multiple output connections is permitted to serve multiple EVSE spaces.			
4a	EVSE is installed within 6 feet of the EVSE space.		
4b	Circuit and panelboard (or other electrical distribution equipment) serving EVSE are sized and rated to supply a system capacity not less than: 6.2 kVA per space, if serving a single space or serving multiple spaces without an energy management system. 2.1 kVA per space, if serving multiple spaces with an energy management system.[7]		
4c	Nameplate charging capacity of installed EVSE is not less than: 6.2 kVA (or 30A and 208/240V) per space, if serving a single space or serving multiple spaces without an energy management system. 2.1 kVA per space (or 10A at 208/240V), if serving multiple spaces with an energy management system.[7]		
4d	EVSE is listed and labeled in accordance with UL 2202 or UL 2594.		

Verification Signoffs		
Rater Name: Rater Company Name:	Rater Pre-Drywall Inspection[9] Date(s):	Rater Initials:
Rater Name: Rater Company Name:	Rater Final Inspection[10] Date(s):	Rater Initials:
Builder/Developer Employee: Builder/Developer Name:	Builder/Developer Inspection Date(s):	Builder Initials:
Licensed Professional:	Licensed Professional Inspection Date(s):	LP Initials:

Endnotes

[1] For projects certifying under the DOE Efficient New Homes Single Family Version 2 program requirements, this checklist must be applied to the shared parking area (if provided) when homes are not provided with a private driveway or garage. These project types are eligible to claim Exceptions A, B, and/or C, if applicable.

Only units seeking DOE Efficient New Homes certification must be included when determining the number of spaces required to be EVSE, EV-Ready, and/or EV-Capable.

[2] The Rater is defined as the person(s) completing the third-party verification required for certification. Raters must comply with the following:

- Raters are required to complete all training modules applicable to the DOE Efficient New Homes Multifamily Version 2 program specifications (according to the timeline posted on the program website) prior to completing a project's first inspection. Please note that required training modules are subject to change and Raters will have an allocated time period to complete additional or updated training modules as they become available. If a Rater does not successfully complete these modules before the end of the allocated time period, they may not certify DOE Efficient New Homes projects until the modules are complete.
- Raters must be (a) a Certified Rater, Approved Inspector, as defined by ANSI / RESNET / IECC 301, or (b) credentialed by a Home Certification Organization for DOE Efficient New Homes (HCO for DOE), or (c) meet the credential requirements of a Multifamily Review Organization for DOE Efficient New Homes (MRO for DOE). Learn more and find a current list of HCOs and MROs for DOE here.

[3] At the discretion of the Rater, a licensed professional (LP) may verify those line items in this Checklist where a checkbox is in the "Licensed Professional" column. A Licensed Professional must be a Professional Engineer, Registered Architect, or other industry professional (e.g., electrician) in good standing and possess a current license. When exercised, the LP's responsibility will be formally acknowledged by the LP signing off on the checklist for the item(s) that they verified. However, if a quality assurance review indicates that Items have not been successfully completed, the Rater will be responsible for facilitating corrective action.

[4] For developments where multiple buildings (and/or townhomes, when certifying under DOE Efficient New Homes Multifamily Version 2) share common parking area(s) (e.g., lot(s) or garage(s)), the percentage of spaces required by this checklist shall be applied to the total number of parking spaces in the common parking area(s) that are intended for use by the buildings' residents *or* by the total number of units in the buildings, whichever is less, and shall be based on the total number of dwelling units that share the parking area(s).

[5] Projects that do not include an energy management system may opt to reduce the capacity of EVSE spaces (and associated circuit and panel board/distribution equipment) to a nameplate rating less than 6.2 kW (but no less than 3.3 kW, or 16A at 208/240V), if the percentage of EVSE spaces is increased from 10% to 20% of units or automobile parking spaces, whichever is less. If this alternative is used, the project is not required to provide any additional EV Ready or EV Capable spaces.

[6] To determine the number of EVSE, EV-Ready, and EV-Capable spaces required for a project:

1. Calculate the number of spaces equal to 20% of spaces provided for resident parking or 20% of dwelling units, whichever is less. Round up to the next whole number.
2. At least half of these spaces must be EVSE. The remaining spaces may be any combination of EVSE, EV Ready, and/or EV Capable.

For example, a building with 70 dwelling units and 62 spaces provided for resident parking would require at least 7 EVSE spaces and 6 EVSE, EV Ready, or EV Capable spaces.

1. *20% of 62 = 12.4, rounded up to the next whole number = 13*
2. *At least half of 13 must be EVSE (7). The remaining 6 may be any combination of EVSE, EV Ready, and EV Capable.*

[7] An energy management system is defined as a system of one or more monitors, controllers, communications systems, or other devices used to control electric vehicle charging loads by increasing or reducing electric power supplied to the vehicle charging location. If used, an energy management system must not be configured to turn off electrical power to EVSE or EV Ready spaces used to meet DOE Efficient New Homes requirements.

[8] Electrical Vehicle Service Equipment (EVSE) transfers power to an electric vehicle. EVSE must include an energized conductor, and a connector and plug (i.e., charging cord) or apparatus for wireless (e.g., inductive) charging to provide power directly to a vehicle. EVSE may also optionally include load management, scheduling, adapters, and other features to facilitate on-site electric vehicle charging.

[9] Any Item that will be concealed by drywall (e.g., wall insulation) must be verified during the pre-drywall inspection. If drywall is installed prior to the inspection, then it must be entirely removed to fully verify all Items. It is not sufficient to remove only portions of drywall to inspect a subset of areas. Additional information is available in the ENERGY STAR Technical Bulletin: Pre-Drywall Inspection Is Always Required.

[10] Some Items can typically only be verified at a later stage of construction than when the pre-drywall inspection occurs (e.g., bath fan airflow). Any Item that has not been verified during the pre-drywall inspection must be verified prior to or during the final inspection.

J: MFNC Rater Design Review Checklist

ENERGY STAR Multifamily New Construction
National Rater Design Review Checklist [1], Version 1.1 / 1.2 / 1.3 (Rev. 05)

If pursuing Track A – HVAC Grading by Rater, complete this page. [3]

Building Name: _____ Number of Units: _____ Permit Date: _____

Building Address: _____ City: _____ State: _____

	Must Correct	Rater [4] Verified	N/A
1. Partnership Status			
1.1 Rater has verified and documented that builder or developer has an ENERGY STAR partnership agreement using www.energystar.gov/ResPartnerDirectory. Builder name: _____ Developer name: _____	☐	☐	-
1.2 ASHRAE Only: Rater has verified modeler is listed in the online directory: www.energystar.gov/ASHRAEdirectory. Modeler name: _____ (Not required for buildings in California)	☐	☐	☐
1.3 Rater has verified and documented that their company has an ENERGY STAR partnership agreement using www.energystar.gov/ResPartnerDirectory. [5]	☐	☐	-
1.4 Rater(s) signing checklists attest that they have completed EPA-recognized training and are credentialed by a Home Certification Organization (HCO) or meet the credential requirements of a Multifamily Review Organization (MRO).	☐	☐	-
1.5 Certification is being pursued for the whole building; all units and common spaces in the building are designed to meet the requirements below. [6]	☐	☐	-
2. High-Performance Insulation & Fenestration			
2.1 Specified total building thermal envelope meets the requirements described in Footnote 11 and 12, and is documented through ERI energy modeling or in the Multifamily Workbook. [7, 8, 9, 10, 11, 12, 13]	☐	☐	-
2.2 In CZ 1-3, 4A, and 4B, specified windows, skylights, and doors that are ≥ 50% glazed achieve the area-weighted average SHGC described in Footnote 11 and 13 and are documented through ERI energy modeling or in the Multifamily Workbook. [7, 13]	☐	☐	☐
3a. Review of ANSI / RESNET / ACCA 310 HVAC Design Report with ENERGY STAR Supplements [14]			
3a.1 The following documentation collected for records, with no applicable Items left blank. [15]			
3a.1.1 For all dwelling units, HVAC design report(s) compliant with ANSI / RESNET / ACCA 310 and the National HVAC Design Supplement(s) to Std. 310 for Dwellings & Units.	☐	☐	-
3a.1.2 National HVAC Design Supplement to Std. 310 for Common Spaces & Central Systems.	☐	☐	☐
3a.2For all dwelling units, ANSI / RESNET / ACCA 310 design review criteria have been met for applicable housing type.	☐	☐	-
3a.3 Prescriptive Path: Dwelling Unit Mechanical Ventilation is <150% of ASHRAE 62.2-2013 requirements. [16]	☐	☐	☐
3a.4 Dwelling Units: Total occupant gains do not exceed 645 Btuh per occupant. [17]	☐	☐	☐
3a.5 Dwelling Units: Non-occupant internal gains are less than 3,600 Btuh.	☐	☐	☐
3a.6 Dwelling Units: Cooling sizing % is within the cooling sizing limit selected by the HVAC designer.	☐	☐	☐
3a.7 Common spaces: Item 2.3 of the National HVAC Design Supplement to Std. 310 for Common Spaces & Central Systems is completed for all spaces in the building listed in Footnote 18.	☐	☐	☐
3a.8 Common spaces: Item 2.4 is equal to or greater than Item 2.3.	☐	☐	☐

Rater Name: _____ Date of Review: _____

Rater Signature: _____ Rater Company Name: _____

ENERGY STAR Multifamily New Construction
National Rater Design Review Checklist [1], Version 1.1 / 1.2 / 1.3 (Rev. 05)

If pursuing Track B – HVAC Testing by FT Agent, complete this page.

Building Name: _____ Number of Units: _____ Permit Date: _____

Building Address: _____ City: _____ State: _____

1. Partnership Status	Must Correct	Rater [4] Verified	N/A
1.1 Rater has verified and documented that builder or developer has an ENERGY STAR partnership agreement using www.energystar.gov/partnerlocator. Builder name: _____ Developer name: _____	☐	☐	-
1.2 ASHRAE Only: Rater has verified modeler is listed in the online directory: www.energystar.gov/ASHRAEdirectory. Modeler name: _____ (Not required for buildings in California)	☐	☐	☐
1.3 Rater has verified and documented that their company has an ENERGY STAR partnership agreement using www.energystar.gov/ResPartnerDirectory. [5]	☐	☐	-
1.4 Rater(s) signing checklists attest that they have completed EPA-recognized training and are credentialed by a Home Certification Organization (HCO) or meet the credential requirements of a Multifamily Review Organization (MRO).	☐	☐	-
1.5 Certification is being pursued for the whole building; all units and common spaces in the building are designed to meet the requirements below. [6]	☐	☐	-
2. High-Performance Insulation & Fenestration			
2.1 Specified total building thermal envelope meets the requirements described in Footnote 11 and 12, and is documented through ERI energy modeling or in the Multifamily Workbook. [7, 8, 9, 10, 11, 12, 13]	☐	☐	-
2.2 In CZ 1-3, 4A, and 4B, specified windows, skylights, and doors that are ≥ 50% glazed achieve the area-weighted average SHGC described in Footnote 11 and 13 and are documented through ERI energy modeling or in the Multifamily Workbook. [7, 13]	☐	☐	☐
3b. Review of ENERGY STAR MFNC National HVAC Design Report [19, 20]			
3b.1 National HVAC Design Report(s) collected for records, with no applicable Items left blank.	☐	☐	-
3b.2 National HVAC Design Report(s) reviewed by Rater for the following parameters (Nat'l MFNC HVAC Design Report Item # in parenthesis):			
3b.2.1 Prescriptive Path: Dwelling Unit Mechanical Ventilation (2.7) is <150% of ASHRAE 62.2-2013 requirements. [16]	☐	☐	☐
3b.2.2 Cooling season and heating season outdoor design temperatures used in loads (3.4) are within the limits defined for the State and County, or US Territory, where the building will be built, or the designer has provided an allowance from the EPA to use alternative values. All limits are published at www.energystar.gov/hvacdesigntemps. Note that revised (i.e., 2019 Edition) limits are required to be used for all HVAC Design Reports generated after 07/01/2020.[21]	☐	☐	☐
3b.2.3 Number of occupants used in loads (3.6) is within ± 2 of each dwelling unit to be certified and total occupant gains (3.7) do not exceed 645 Btuh per occupant. [17]	☐	☐	☐
3b.2.4 Conditioned floor area used in loads (3.8) is between 100 sq. ft. smaller and 300 sq. ft. larger than each dwelling unit to be certified. [22]	☐	☐	☐
3b.2.5 Window area used in loads (3.9) is between 15 sq. ft. smaller and 60 sq. ft. larger than each dwelling unit to be certified, or for dwelling units to be certified with > 500 sq. ft. of window area, between 3% smaller and 12% larger.[23]	☐	☐	☐
3b.2.6 Predominant window SHGC used in loads (3.10) is within 0.1 of predominant value in each dwelling unit to be certified. [24]	☐	☐	☐
3b.2.7 Mechanical ventilation used in loads (3.12) is the same as the ventilation design (2.7) for the given unit plan.	☐	☐	☐
3b.2.8 Non-occupant internal gains (3.13) are less than 3,600 Btuh.	☐	☐	☐
3b.2.9 Sensible & total heat gain are documented (3.15, 3.17) for the configuration of each dwelling unit to be certified. [25]	☐	☐	☐
3b.2.10 Cooling sizing % (4.18) is within the cooling sizing limit (4.19) selected by the HVAC designer.	☐	☐	☐
3b.2.11 Common spaces: Item 2.8 is completed for all spaces in the building listed in Footnote 18.	☐	☐	☐
3b.2.12 Common spaces: Item 2.9 is equal to or greater than Item 2.8.	☐	☐	☐

Rater Name: _____ Date of Review: _____

Rater Signature: _____ Rater Company Name: _____

4. Additional Construction Document Review – Recommended, not required	
4.1 Air Sealing: Review construction documents to verify that air-sealing details at assemblies adjacent to the exterior, other buildings, or unconditioned spaces are represented which, at a minimum, demonstrate compliance with checklist items in Section 4 of the National Rater Field Checklist (noted with an asterisk below). Items 4.1.4, 4.1.9 and 4.1.10 are not verified by the Rater in the field, but are recommended.	
4.1.1 Ducts, flues, shafts, plumbing, piping, wiring, exhaust fans, & other penetrations are sealed, with blocking / flashing as needed*.	☐
4.1.2 Attic access panels, roof hatches and drop-down stairs are gasketed, (i.e., not caulked) or equipped with covers that are gasketed*.	☐
4.1.3 Recessed lighting fixtures are ICAT labeled and gasketed*.	☐
4.1.4 Continuous top plate or blocking is at top of walls adjoining unconditioned space including at balloon-framed parapets, and sealed.	☐
4.1.5 Drywall is sealed to top plate during installation, or from the attic side at all unconditioned attic / wall interfaces. Drywall adhesive (but not other construction adhesives) is permitted to be used*.	☐
4.1.6 Rough opening around windows & exterior doors is sealed*.	☐
4.1.7 Assemblies that separate attached garages from occupiable space are sealed. In addition, an air barrier is installed, sealed, and aligned with these assemblies*. [26]	☐
4.1.8 Doors adjacent to unconditioned space (e.g., attics, garages, basements), ambient conditions, or a unit entrance to a corridor / stairwell, made substantially air-tight with door seal and weatherstripping or equivalent gasket*.	☐
4.1.9 Above-grade sill plates adjacent to conditioned space sealed to foundation or sub-floor. Gasket also placed beneath above-grade sill plate if resting atop concrete / masonry & adjacent to conditioned space. [27]	☐
4.1.10 The gap between the common wall (e.g., the drywall shaft wall) and the structural framing between units sealed at all exterior boundaries.	☐
4.2 Dwelling Unit Compartmentalization	
4.2.1 Review construction documents to verify that air-sealing details [28] are represented such that air exchange between the dwelling unit and outside as well as the dwelling unit and other adjacent spaces is minimized and designed to achieve compartmentalization less than or equal to the following CFM50 per sq. ft. of dwelling unit enclosure area, following procedures in ANSI / RESNET / ICC 380: For all Versions and Paths except National v1.3, Prescriptive Path: ≤ 0.30 CFM50 For National v1.3, Prescriptive Path: ≤ 0.27 CFM50	☐
4.2.2 Seal all spaces 4.1.1-4.1.10 on adiabatic unit enclosure assemblies.	☐
4.3 Prescriptive Path: Verify that Window-to-wall ratio ≤ 30%. [29]	☐
4.4 Verify that fully-aligned air barrier details are in compliance with checklist items in Section 2 of the National Rater Field Checklist.	☐
4.5 Verify that thermal bridging details are in compliance with checklist items in Section 3 of the National Rater Field Checklist.	☐
4.6 Verify that HVAC details are in compliance with checklist items in Sections 5 - 10 of the National Rater Field Checklist.	☐
4.6.1 Verify that HVAC design includes access and means to measure the dwelling-unit mechanical ventilation airflow rate.	☐
4.6.2 Verify that bedrooms with design airflow ≥ 150 CFM are specified with a combination of transfer grilles, jump ducts dedicated return ducts, and/or undercut doors to achieve a Rater-measured pressure differential ≥ -5 Pa and ≤ +5 Pa with respect to the main body of the dwelling unit when all air handlers are operating.	☐
4.6.3 Verify that Functional Testing Agent(s) hold(s) credential required to complete the applicable sections of the National HVAC Functional Testing Checklist for all HVAC equipment in the building. For Track A, a Functional Testing Agent is not needed to complete Sections 2 and 3 for HVAC systems that will be verified and graded by the Rater. [30]	☐
4.6.4 Verify that dwelling unit local kitchen exhausts directly to the outdoors	☐
4.7 Verify that Domestic Hot Water, Lighting, Appliances, Plumbing Fixtures, and Whole Building Utility Data Acquisition Strategy details are in compliance with checklist items in Sections 11 – 14 of the National Rater Field Checklist.	☐

Footnotes:

1. This Checklist applies to all dwelling units, sleeping units, common spaces [2], and garages (open or enclosed) in the building being certified, and where specified, parking lots. These requirements apply to all Paths, unless otherwise specified. These requirements do not apply to parking garages or lots where the cost of the energy use of the parking garage or lot is not the responsibility of the Builder/Developer, Building Owner or Property Manager. This Checklist does not apply to commercial or retail spaces, except in the ASHRAE Path, if included in the energy model and the savings contribute to achieving the Performance Target. This Checklist does not apply to common spaces that are located in buildings on the property without any dwelling or sleeping units. A 'sleeping unit' as defined by ANSI / RESNET / ICC 301, is a room or space in which people sleep, which can also include permanent provisions for living, eating, and either sanitation or kitchen facilities but not both. Where the term 'dwelling unit' is used in this Checklist, the requirement is also required of 'sleeping' units. The term 'building' refers to a structure that encompasses dwelling/sleeping units and (if present) common spaces, sharing one or more of the following attributes: a common street address, a common entrance or exit, central/shared mechanical systems, or structurally interdependent wall or roof systems. Attached structures such as 4-story two-unit structures (commonly referred to as "2-over-2s") may be considered separate buildings if they are divided by a vertical fire separation wall from the foundation to the roof sheathing and share none of the other attributes listed above. A skyway or a breezeway that connects two structures is not considered a common entrance or exit.
2. The term 'common space' refers to any spaces in the building being certified that serve a function in support of the residential part of the building that is not part of a dwelling or sleeping unit. This includes spaces used by residents, such as corridors, stairs, lobbies, laundry rooms, exercise rooms, residential recreation rooms, and dining halls, as well as offices and other spaces used by building management, administration or maintenance in support of the residents. For the ASHRAE Path, the requirements for 'common spaces' apply to commercial or retail spaces where they are included in the energy model and savings contribute to achieving the Performance Target.
3. To be eligible for Track A – HVAC Grading by Rater, dwelling units must have at least one unitary HVAC system including air conditioners or heat pumps up to 65 kBtuh, or furnaces up to 125 kBtuh (i.e., within the scope of ANSI / RESNET / ACCA 310). Track A – HVAC Grading by Rater shall use ANSI / RESNET / ACCA 310 including all Addenda and Normative Appendices, with new versions and Addenda implemented according to the schedule defined by the HCO or MRO that the building is being certified under for all dwelling unit systems.
4. The term 'Rater' refers to the person(s) completing the third-party verification required for certification. The person(s) shall: a) be a Certified Rater, Approved Inspector, as defined by ANSI / RESNET / IECC 301, or an equivalent designation as determined by a HCO or MRO; and, b) have attended and successfully completed an EPA-recognized training class. See www.energystar.gov/mftraining.

   As stated in the National Program Requirements, Raters who operate under an MRO or an HCO Sampling Protocol are permitted to verify any Checklist Item designated "Rater Verified" using an MRO or HCO-approved sampling protocol. No parties other than Raters are permitted to use sampling to complete this Checklist.
5. Raters are only required to document the partnership status of their company once, for the first home that the Rater certifies for them.
6. The whole building must be submitted to the HCO or MRO for certification after required verification is complete for all units and common spaces, unless using the conditional certification process described in the ENERGY STAR Certification Process in the applicable Program Requirements.
7. For all Versions except National v1.2 and 1.3, the 2009 IECC Climate Zone designations are applicable, as defined and illustrated in Section R301 of the code. For National v1.2 and 1.3, the 2021 IECC Climate Zone designations are applicable, as defined and illustrated in Section R301 of the code. Note that some locations have shifted to a different Climate Zone in the 2021 IECC compared to prior editions.
8. The building thermal envelope must include assemblies that are adjacent to other buildings, the exterior, or a garage; however, it does not include assemblies that separate Dwelling Units and Common Spaces from commercial or retail spaces within the building.
9. Note that Items 1.5 through 1.8 of the National Rater Field Checklist shall be met regardless of the UA or TC tradeoffs calculated.
10. Slab edge insulation shall be assessed for slab-on-grade floors with a floor surface less than 24 in. below grade, including where an insulated wall separates a garage, patio, porch, or other unconditioned space from the conditioned space of the building. Whether insulated or not, these perimeters must be documented in the energy model and, where using to document compliance with Item 2.1, the Multifamily Workbook. F-Factors for use in the Multifamily Workbook shall be determined using the guidance available at www.energystar.gov/F-Factor.
11. For all Versions except National v1.2 and National v1.3, the total building thermal envelope UA (i.e., accounting for ceilings, walls, floors, slabs, and fenestration) shall be less than or equal to the thermal backstop target in Table 1 resulting from multiplying the U-factors specified in Table 1 by the same assembly area as the building to be certified.

    For National v1.2, the total building thermal envelope UA (i.e., accounting for ceilings, walls, floors, slabs, and fenestration) shall be less than or equal to the thermal backstop target in Table 2 resulting from multiplying assembly U-factors specified in Table 2 by the same assembly area as the building to be certified. For buildings permitted before 01/01/2025 and following the ERI or ASHRAE Path only, the thermal backstop target shall be less than or equal to 105% of the total UA resulting from multiplying the U-factors in Table 2 by the same assembly area as the building to be certified.

    For National v1.3, the total building thermal envelope TC shall be less than or equal to the thermal backstop target in Table 3 resulting from using the assembly factors specified in Table 3 and using Equation 4-1 of the 2024 IECC.

    Where noted in Table 1, 2 and 3, the term "classified as "Class AW"' indicates windows that are classified as such under the North American Fenestration Standard (AAMA / WDMA / CSA 101 / I.S.2 / A440).

ENERGY STAR Multifamily New Construction
National Rater Design Checklist Footnotes, Version 1.1/1.2/1.3 (Rev. 05)

Table 1: For all Versions except National v1.2 and National v1.3:

Options by Path	Thermal Backstop Target	Opaque Assemblies (including opaque doors and opaque spandrel panels)		Fenestration (including fully & partially glazed doors and skylights)		
		Dwelling Units	Common Spaces	Residential dwelling unit doors and windows (i.e., not classified "Class AW")	Structural dwelling unit windows and doors that are classified as "Class AW" and all skylights	Common Space
Prescriptive, Residential Option	≤ 100% of total UA	ENERGY STAR MF Reference Design	2009 IECC 402.1.3	ENERGY STAR MF Reference Design	Windows and Doors ENERGY STAR MF Reference Design for "Class AW" Skylights 2012 IECC 502.3	ENERGY STAR MF Reference Design for "Class AW"
Prescriptive, Commercial Option	≤ 100% of total UA		2009 IECC 502.1.2 "All Other" Column			
ERI, Residential Option	≤ 100% of total UA	2009 IECC 402.1.3	2009 IECC 402.1.3	2009 IECC 402.1.3	2009 IECC 502.3	ENERGY STAR MF Reference Design for "Class AW"
ERI, Commercial Option	≤ 100% of total UA	2009 IECC 502.1.2 "Group R" Column	2009 IECC 502.1.2 "All Other" Column			
ASHRAE, Residential Option	≤ 100% of total UA	2009 IECC 402.1.3	2009 IECC 402.1.3	2009 IECC 402.1.3	2009 IECC 502.3	2009 IECC 502.3
ASHRAE, Commercial Option	≤ 100% of total UA	2009 IECC 502.1.2 "Group R" Column	2009 IECC 502.1.2 "All Other" Column			

Table 2: For National Version 1.2

Options by Path	Thermal Backstop Target	Opaque Assemblies (including opaque doors and opaque spandrel panels)		Fenestration (including fully & partially glazed doors and skylights)		
		Dwelling Units	Common Spaces	Residential dwelling unit doors and windows (i.e., not classified "Class AW")	Structural dwelling unit windows and doors that are classified as "Class AW" and all skylights	Common Space
Prescriptive, Residential Option	≤ 100% of total UA	ENERGY STAR MF Reference Design	2021 IECC R402.1.2	ENERGY STAR MF Reference Design	Windows and Doors ENERGY STAR MF Reference Design for "Class AW" Skylights 2021 IECC C402.4	ENERGY STAR MF Reference Design for "Class AW"
Prescriptive, Commercial Option	≤ 100% of total UA		2021 IECC C402.4.4 "All Other" Column			
ERI, Residential Option	≤ 100% of total UA	2021 IECC R402.1.2	2021 IECC R402.1.2	2021 IECC R402.1.2	2021 IECC C402.4	ENERGY STAR MF Reference Design for "Class AW"
ERI, Commercial Option	≤ 100% of total UA	2021 IECC C402.1.4 "Group R" Column	2021 IECC C402.1.4 "All Other" Column			
ASHRAE, Residential Option	≤ 100% of total UA	2021 IECC R402.1.2	2021 IECC R402.1.2	2021 IECC R402.1.2	2021 IECC C402.4	2021 IECC C402.4
ASHRAE, Commercial Option	≤ 100% of total UA	2021 IECC C402.1.4 "Group R" Column	2021 IECC C402.1.4 "All Other" Column			

Table 3: For National Version 1.3

Options by Path	Thermal Backstop Target	Opaque Assemblies (including opaque doors and opaque spandrel panels)		Fenestration (including fully & partially glazed doors and skylights)		
		Dwelling Units	Common Spaces	Residential dwelling unit doors and windows (i.e., not classified "Class AW")	Structural dwelling unit windows and doors that are classified as "Class AW" and all skylights	Common Space
Prescriptive, Residential Option	≤ 100% of total TC	ENERGY STAR MF Reference Design	2024 IECC R402.1.2	ENERGY STAR MF Reference Design	Windows and Doors ENERGY STAR MF Reference Design for "Class AW" Skylights 2024 IECC C402.5	ENERGY STAR MF Reference Design for "Class AW"
Prescriptive, Commercial Option	≤ 100% of total TC		2024 IECC C402.1.2 "All Other" Column			
ERI, Residential Option	In CZ 1-2, ≤ 108% of total TC In CZ 3-8, ≤ 115% of total TC	2024 IECC R402.1.2	2024 IECC R402.1.2	2024 IECC R402.1.2	2024 IECC C402.5	ENERGY STAR MF Reference Design for "Class AW"
ERI, Commercial Option	≤ 100% of total TC	2024 IECC C402.1.2 "Group R" Column	2024 IECC C402.1.2 "All Other" Column			
ASHRAE, Residential Option	In CZ 1-2, ≤ 108% of total TC In CZ 3-8, ≤ 115% of total TC	2024 IECC R402.1.2	2024 IECC R402.1.2	2024 IECC R402.1.2	2024 IECC C402.5	2024 IECC C402.5
ASHRAE, Commercial Option	≤ 100% of total TC	2024 IECC C402.1.2 "Group R" Column	2024 IECC C402.1.2 "All Other" Column			

12. The calculations shall be done using a method consistent with the ASHRAE Handbook of Fundamentals and shall include the thermal bridging effects of framing materials. The calculation for a steel-frame envelope assembly shall use the ASHRAE zone method or a method providing equivalent results, and not a series-parallel path calculation method.

    Where documenting UA within the workbook, F-factors and slab perimeter lengths will be used in place of U-factors and areas.

    The following exceptions apply:

    i. When referencing the 2009 IECC Commercial chapter, buildings in Climate Zone 4 and Climate Zone 5/Marine 4 may use U-0.089 and U-0.064 respectively for Group R wood-framed walls instead of the printed U-0.064 and U-0.051.

    ii. In jurisdictions designated by a code official as having Very Heavy Termite Infestation, the total UA limit shall be calculated by replacing the code-required slab insulation R-value and depth with the slab insulation R-value and depth specified in the building to be certified.

    iii. Where using the Multifamily Workbook to document compliance, assemblies may alternatively meet the U-factor or F-Factor by building component rather than using the total UA or TC approach.

    iv. The thermal backstop may be met through meeting the Residential option for dwelling units and the Commercial option for common spaces. It is not permitted to choose the Residential chapter for one building component for dwelling units and the Commercial chapter for another building component for dwelling units.

13. The area-weighted average SHGC of all windows, skylights, and doors that are ≥ 50% glazed must not exceed the area-weighted average of the SHGC requirements specified in the Fenestration section of the appliable Table in Footnote 11. If no NFRC rating is noted on the window or in product literature (e.g., for site-built fenestration), select the U-factor and SHGC value from Tables 4 and 10, respectively, in 2013 ASHRAE Handbook of Fundamentals, Chapter 15. Select the highest U-factor and SHGC value among the values listed for the known window characteristics (e.g., frame type, number of panes, glass color, and presence of low-e coating). Alternatively, where the U-factor is determined in accordance with NFRC 100 by a laboratory accredited by a nationally recognized accreditation organization, such as the NFRC, documentation provided by the laboratory or manufacturer listing the assembly U-factor and SHGC can be used in lieu of NFRC labels. Note that the U-factor requirement applies to all fenestration while the SHGC only applies to the glazed portion. The following exceptions apply:

    i. 5% of all combined fenestration area (glazed and opaque) shall be exempt from the U-factor and SHGC requirements, and shall be excluded from the area-weighted averages calculated in Item 2.1 and 2.2.

    ii. In Phius or PHI certified buildings, where triple-glazed window assemblies with thermal breaks / spacers between the panes are used, such windows meet the intent of Items 2.1 and 2.2 and shall be excluded from the area-weighted averages calculated.

14. If pursuing Track A, all dwelling units must complete Items 3a.1.1 and 3a.2. Item 3a.3 shall be completed for dwelling units in buildings pursuing the Prescriptive Path. Items 3a.4 through 3a.6 shall be completed if any dwelling units in the building to be certified contain an air conditioner or heat pump; otherwise, 'N/A' shall be checked. All common space systems and central systems must be documented within the HVAC Design Supplement to Std. 310 for Common Spaces & Central Systems.

15. As an alternative, the ENERGY STAR SFNH National HVAC Design Report may be collected in lieu of the ENERGY STAR National HVAC Design Supplement to Std. 310 for Dwellings & Units. In such cases, at least two documents will still be collected – an HVAC design report compliant with ANSI / RESNET / ACCA Std. 310 plus the ENERGY STAR SFNH National HVAC Design Report. Note that for buildings with more than one HVAC system, one ENERGY STAR SFNH National HVAC Design Report per system would need to be collected. For buildings

with central systems or common space systems, the ENERGY STAR National HVAC Design Supplement to Std. 310 for Common Spaces & Central Systems must also be collected.

16. Raters may use this table to determine the maximum ventilation rate allowed. Where the Exhaust Fan Type in Item 2b of the HVAC Design Report indicates "Continuous" for both Bathroom and Kitchen, the Rater may use this equation to determine the maximum ventilation rate allowed: 30 CFM x number of bathrooms + 75 CFM.

	Number of Bedrooms				
Floor area	**1**	**2**	**3**	**4**	**5**
<500	45	57	67.5	79.5	90
501-1000	67.5	79.5	90	102	112.5
1001-1500	90	102	112.5	124.5	135
1501-2000	112.5	124.5	135	147	157.5
2001-2500	135	147	157.5	169.5	180
2501-3000	157.5	169.5	180	192	202.5
3001-3500	180	192	202.5	214.5	225
3501-4000	202.5	214.5	225	237	247.5
4001-4500	225	237	247.5	259.5	270
4501-5000	247.5	259.5	270	282	292.5

17. To determine the number of occupants among all HVAC systems in the dwelling unit, calculate the number of bedrooms, as defined below, and add one. The number of occupants used in loads must be within ± 2 of the dwelling unit to be certified.

    A bedroom is defined by ANSI / RESNET / ICC 301-2014 as a room or space 70 sq. ft. or greater size, with egress window and closet, used or intended to be used for sleeping. A "den", "library", or "home office" with a closet, egress window, and 70 sq. ft. or greater size or other similar rooms shall count as a bedroom, but living rooms and foyers shall not.

    An egress window, as defined in 2009 IRC Section R310, shall refer to any operable window that provides for a means of escape and access for rescue in the event of an emergency. The egress window definition has been summarized for convenience. The egress window shall:

    - have a sill height of not more than 44 in. above the floor; AND
    - have a minimum net clear opening of 5.7 sq. ft.; AND
    - have a minimum net clear opening height of 24 in.; AND
    - have a minimum net clear opening width of 20 in.; AND
    - be operational from the inside of the room without the use of keys, tools or special knowledge.

18. The following spaces require outdoor air ventilation: corridors, offices, break rooms, gyms, fitness centers, exercise rooms, lobbies, community rooms, meeting rooms, multi-purpose rooms, lounges, laundry rooms, swimming pools, daycares, classrooms, shared or commercial kitchens, shared dining rooms, and computer rooms.

19. If pursuing Track B, then Section 3b shall be fully completed if any dwelling unit contains split air conditioners, unitary air conditioners, air-source heat pumps, and water-source (i.e., geothermal) heat pumps up to 65 kBtuh with forced-air distribution systems (i.e., ducts), or furnaces up to 225 kBtuh with forced-air distribution systems (i.e., ducts). For a building without any of these system types in the dwelling units, collection of the National HVAC Design Report is still required and reviewed per Items 3b.2.1, 3b.2.11 and 3b.2.12 where applicable, but the EPA does not require that the report be reviewed per Item 3b.2.2 – 3b.2.10. For Track B systems that are documented using the SFNH HVAC Design Report, where room-by-room loads are calculated using Unabridged ACCA Manual J v8 and where occupant gains and non-occupant gains are not reported, items 3b.2.3 and 3b.2.8 may be marked "N/A". Where the HVAC designer has checked the "N/A" box in Section 3 of the National HVAC Design Report, the Rater shall confirm that all dwelling unit heating and cooling systems are exempt (i.e., non-ducted mini-splits or multi-splits, PTACs, or PTHPs) and mark "N/A" for Items 3b.2.2-3b.2.10.

20. The Rater shall collect the National HVAC Design Report(s) per building. See Footnote 1 of the National HVAC Design Report for alternatives. Where using an ENERGY STAR Single-Family New Homes National HVAC Design Report, Rater must still review all Items under 3b.2. Regardless of whether the "unit-specific design", "group design", or "worst-case design" box has been checked in Item 3.2 of the National HVAC Design Report, the system design as documented on the National HVAC Design Report must fall within the tolerances in Item 3b.2 for the unit to be certified. The Rater is only responsible for verifying that the designer has not left any applicable items blank on the National HVAC Design Report and for verifying the discrete objective parameters in Item 3b.2 of this Checklist, not for verifying the accuracy of every input on the National HVAC Design Report. Buildings certified under Rev. 05 of the program requirements are permitted to use any Revision of the MFNC National HVAC Design Report.

21. Visit www.energystar.gov/hvacdesigntemps for the maximum cooling season design temperature and minimum heating season design temperature permitted and the process for a designer to obtain an allowance from the EPA. The same design report is permitted to be used in other counties, as long as the design temperature limits in those other counties meet or exceed the cooling and heating season temperature limits for the county selected. For example, if Fauquier County, VA, is used for the load calculations, with a 1% cooling temperature limit of 93 °F, then the same report could be used in Fairfax County (which has a higher limit of 94 °F) but not in Arlington County (which has a lower limit of 92 °F).

22. Conditioned Floor Area for the dwelling unit to be certified shall be calculated in accordance with the definition in ANSI / RESNET / ICC 301-2019.

23. Window area for the dwelling unit to be certified shall be calculated in accordance with the on-site inspection protocol provided in Normative Appendix B of ANSI / RESNET / ICC 301-2019.
24. “Predominant” is defined as the SHGC value used in the greatest amount of window area in the dwelling unit.
25. The Rater shall confirm that the designer has documented the loads for all the configurations (e.g., level, orientation) that the dwelling unit might be built in. For example, if a unit plan will only be built in a specific level and orientation (e.g., top-floor, facing South), then the designer only needs to document the loads for this one configuration. Orientation represents the direction that the front door of the dwelling unit is facing.
26. For dwelling or sleeping units adjacent to garages, the EPA recommends, but does not require, carbon monoxide (CO) alarms installed in a central location in the immediate vicinity of each separate sleeping zone and according to NFPA 720.
27. Existing sill plates (e.g., in a building undergoing a substantial reconstruction or rehabilitation) on the interior side of structural masonry or monolithic walls may not be able to complete this Item. In addition, other existing sill plates resting atop concrete or masonry and adjacent to conditioned space can in lieu of using a gasket, be sealed with caulk, foam, or equivalent material at both the interior seam between the sill plate and the subfloor and the seam between the top of the sill plate and the sheathing.
28. Recommended air leakage paths to be sealed include, but are not limited to the following:
    a. Plumbing penetrations, including those from water piping, drain waste and vent piping, HVAC piping, and gas line piping.
    b. Electrical penetrations, including those for receptacle outlets, lighting outlets / fixtures, communications wiring, thermostats, and smoke alarms.
    c. HVAC penetrations, including those for fans and for exhaust, supply, transfer, and return air ducts.
    d. Envelope penetrations, including at the intersection of baseboard trim and floor, at the intersection of walls and ceilings, around window trim and dwelling unit doors, including the door latch hole.
29. Window-to-Wall ratio is taken as the sum of all window area divided by the total exterior above-grade wall area. All decorative glass and skylight window area contribute to the total window area to above-grade wall ratio (WWR). Spandrel sections of curtain wall systems contribute to the above-grade wall area.
30. Functional Testing Agents must hold an approved credential, as listed at www.energystar.gov/ftas, or must be a representative of the Original Equipment Manufacturer (OEM), or a contractor credentialed by an HVAC Quality Installation Training and Oversight Organization (H-QUITO), if not completing Sections 5 and higher. Functional Testing Agents may not be the installing contractor, nor employed by the same company as the installing contractor, unless they are a credentialed contractor. An explanation of the credentialing process and links to H-QUITOs, which maintain lists of credentialed contractors, can be found at www.energystar.gov/findhvac. A directory of other FT Agents can be found at www.energystar.gov/ftas.

K: MFNC Rater Field Checklist

ENERGY STAR Multifamily New Construction
National Rater Field Checklist [1], Version 1.1 / 1.2 / 1.3 (Rev. 05)

Building Name: _____ Number of Units: _____ Permit Date: _____

Building Address: _____ City: _____ State: _____

Thermal Enclosure System **1. High-Performance Insulation & Fenestration**	**Must Correct**	**Builder Verified [3]**	**Rater Verified [4]**	**N/A [5]**
1.1 Insulation meets specifications in National Rater Design Review Checklist Item 2.1.	☐	Pre-rock+20 ☐	☐	-
1.2 All insulation achieves Grade I install. per ANSI / RESNET / ICC 301. Alternatives in Footnote 6. [7]	☐	Pre-rock+20 ☐	☐	-
1.3 Fenestration meets specifications in National Rater Design Review Checklist Items 2.1 & 2.2.	☐	-	☐	-
1.4 Prescriptive Path: Window-to-wall ratio ≤ 30%. [8]	☐	-	☐	☐
1.5 For mass or metal-framed above-grade walls (including floor perimeter edges), continuous rigid insulation, insulated siding, or combination of the two is: ≥ R-3 in CZ 1-4; ≥ R-5 in CZ 5-8. [9, 10,11, 12, 13, 14]	☐	≤ 20 sq. ft. ☐	☐	☐
1.6 For concrete slab floors in CZ 4-8 above ambient conditions, heated or unheated garages, or unconditioned spaces outside the thermal boundary, floor insulation meets the U-factor specified in Table 502.1.2 of the 2009 IECC for Group R when dwelling units are above the slab, & 'All Other' when common space is above the slab. Alternative in Fn. 15. [9, 16]	☐	≤ 20 sq. ft. ☐	☐	☐
1.7 Heated plenums in unconditioned space or ambient conditions must meet the following requirements: [17]				
1.7.1 Sides of heated plenum are an air barrier and insulated to ≥ R-3ci in CZ 1-4; ≥ R-5ci in CZ 5-6; ≥ R-7.5ci in CZ 7; ≥ R-9.5ci in CZ 8, [9] **AND;**	☐	≤ 20 sq. ft. ☐	☐	☐
1.7.2 Insulation at top of heated plenum meets Item 1.6 where applicable. Otherwise, meets or exceeds the R-value for mass floors from the "All Other" column of Table 502.2(1) of 2009 IECC, [9, 18] **AND;**	☐	≤ 20 sq. ft. ☐	☐	☐
1.7.3 Bottom of heated plenum must have at least R-13 insulation. [18, 19]	☐	≤ 20 sq. ft. ☐	☐	☐
1.8 Garages with space heating must meet the following requirements: [17]				
1.8.1 Insulation on above grade walls and walls on the first story below grade ≥ R-5ci in CZ 5-6; ≥ R-7.5ci in CZ 7; ≥ R-9.5ci in CZ 8, [9] **AND;**	☐	≤ 20 sq. ft. ☐	☐	☐
1.8.2 Ceiling insulation meets Item 1.6 where applicable. Otherwise, meets or exceeds the R-value for mass floors from the "All Other" column of Table 502.2(1) of 2009 IECC. [9]	☐	≤ 20 sq. ft. ☐	☐	☐
2. Fully-Aligned Air Barriers [20] At each insulated location below, a complete air barrier is provided that is fully aligned as follows:				
Ceilings: At interior or exterior horizontal surface of ceiling insulation in Climate Zones 1-3; at interior horizontal surface of ceiling insulation in Climate Zones 4-8. Also, at exterior vertical surface of ceiling insulation in all climate zones (e.g., using a wind baffle that extends to the full height of the insulation in every bay or a tabbed baffle in each bay with a soffit vent that prevents wind washing in adjacent bays). [9, 21]				
2.1 Dropped ceilings / soffits below unconditioned attics, chase / dead space, and all other ceilings.	☐	≤ 20 sq. ft. ☐	☐	☐
Walls: At exterior vertical surface of wall insulation in all climate zones; also at interior vertical surface of wall insulation in Climate Zones 4-8. [9, 22]				
2.2 Walls behind showers, tubs, staircases, and fireplaces.	☐	≤ 20 sq. ft. ☐	☐	☐
2.3 Architectural bump-outs, dead space, and all other exterior walls.	☐	≤ 20 sq. ft. ☐	☐	-
Floors: At exterior vertical surface of floor insulation in all climate zones and, if over unconditioned space, also at interior horizontal surface including supports to ensure alignment. Alternatives in Footnotes 22 & 23. [23, 24, 25]				
2.4 Floors above garages, floors above unconditioned spaces, and cantilevered floors.	☐	≤ 20 sq. ft. ☐	☐	☐
2.5 All other floors adjoining unconditioned space (e.g., rim / band joists at exterior wall or at porch roof).	☐	≤ 20 sq. ft. ☐	☐	☐
3. Reduced Thermal Bridging – Reduced thermal bridging strategies are not mandatory. However, the following details must be accurately assessed per ANSI / RESNET / ICC 301 and Footnote 28. [26]				
3.1 Insulated ceilings assessed at the attic edge for variance in R-value and install quality.	☐	-	☐	☐
3.2 Insulation assessed beneath attic platforms and walkways for variance in R-value.	☐	-	☐	☐
3.3 Attic access panels and drop-down stairs assessed for insulated covers.	☐	-	☐	☐
3.4 Wood-framed above-grade walls separating conditioned from unconditioned space assessed for advanced framing.	☐	-	☐	☐
3.5 Above-grade and at-grade concrete floor edges (e.g., podiums, balconies, projected slabs) assessed for a complete thermal break per Footnote 28 and, in CZ 4-8, total building UA documented in the Multifamily Workbook. [9, 27, 28, 29]	☐	-	☐	☐
3.6 Slabs on grade assessed for insulation where walls separate conditioned from unconditioned space. [30]	☐	-	☐	☐
4. Air Sealing	**Must Correct**	**Builder Verified [3]**	**Rater Verified [4]**	**N/A [5]**
Rater has verified each air sealing detail below. Unless otherwise specified, items apply to assemblies in dwelling units and common spaces where adjacent to the exterior, other buildings, or unconditioned spaces. "Sealed" indicates the use of caulk, foam, or equivalent material.				
4.1 Ducts, flues, shafts, plumbing, piping, wiring, exhaust fans, & other penetrations are sealed, with blocking / flashing as needed.	☐	≤ 2 penetrations ☐	☐	-
4.2 Attic access panels, roof hatches and drop-down stairs are gasketed, (i.e., not caulked) or equipped with covers that are gasketed.	☐	-	☐	☐

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4. Air Sealing (cont.)	Must Correct	Builder Verified [3]	Rater Verified [4]	N/A [5]
4.3 Recessed lighting fixtures are ICAT labeled and gasketed.	☐	No limit ☐	☐	☐
4.4 Drywall is sealed to top plate during installation, or from the attic side at all unconditioned attic / wall interfaces. Drywall adhesive (but not other construction adhesives), is permitted to be used.	☐	No limit ☐	☐	☐
4.5 Rough opening around windows & exterior doors is sealed.	☐	-	☐	-
4.6 Assemblies that separate attached garages from occupiable space are sealed. In addition, an air barrier is installed, sealed, and aligned with these assemblies. [31]	☐	-	☐	☐
4.7 Doors adjacent to unconditioned space (e.g., attics, garages, basements) or ambient conditions are made substantially air-tight with door seal and weatherstripping or equivalent gasket.	☐	-	☐	☐
The following items must be additionally verified in dwelling units, to reduce air leakage between conditioned spaces.				
4.8 Doors serving as a unit entrance from a corridor/stairwell made substantially air-tight with door seal and weatherstripping or equivalent gasket.	☐	-	☐	☐
4.9 Rater-measured air leakage meets the following CFM50 per sq. ft. of Dwelling Unit Compartmentalization Boundary: [32, 33] For all Versions and Paths except National v1.3, Prescriptive Path: ≤ 0.30 CFM50 For National v1.3, Prescriptive Path: ≤ 0.27 CFM50	☐	-	☐	-
4.9.1 For dwelling units with forced air distribution systems without ducted returns and air handlers located in a closet or space adjacent to unconditioned space, the Rater-measured pressure difference between the space containing the air handler and the conditioned space during the compartmentalization test is no greater than 5 Pa. [34]	☐	-	☐	☐

HVAC System [35]		Must Correct	Rater Verified [4]	N/A [5]
5. Heating & Cooling Eqpt. Complete Track A - HVAC Grading by Rater[36] or Track B - HVAC Testing by FT Agent[37]				
Track A	5a.1 Blower fan volumetric airflow is Grade I or II per ANSI / RESNET / ACCA 310.	☐	☐	☐
	5a.2 Blower fan watt draw is Grade I or II per ANSI / RESNET / ACCA 310.	☐	☐	☐
	5a.3 Refrigerant charge is Grade I per ANSI / RESNET / ACCA 310. See Footnote 38 for exemptions.	☐	☐	☐
	5a.4 HVAC manufacturer & model number on installed equipment matches the HVAC Design Report in compliance with ANSI / RESNET / ACCA 310 or the HVAC Design Supplement to Std. 310 for Common Spaces and Central Systems. [39]	☐	☐	☐
Track B	5b.1 HVAC manufacturer & model number on installed equipment matches either of the following (check box):[40] ☐ National HVAC Design Report (4.6-4.9 & 4.25-4.26) ☐ Written approval received from designer	☐	☐	-
	5b.2 External static pressure measured by Rater at contractor-provided test locations and documented below: [41] Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure: _____ IWC	☐	☐	☐
5.5 Prescriptive Path: Heating and cooling equipment serving dwelling units, common spaces, and garages meet the efficiency levels specified in the ENERGY STAR Multifamily Reference Design. Electric resistance space heating is not installed in dwelling units. [42]		☐	☐	☐
5.6 ERI Path: Heating and cooling equipment serving common spaces and garages, but not serving dwelling units, meet the efficiency levels specified in the ENERGY STAR Multifamily Reference Design. See Footnote 42 for restrictions on electric resistance space heating. [42]		☐	☐	☐
5.7 National HVAC Functional Testing Checklist(s) collected prior to certification, with all HVAC systems in the building fully documented. Exception: Where credentialed HVAC Contractor(s) are completing the National HVAC Functional Testing Checklist, the checklist is not required to be collected for the systems they verify. [43]		☐	☐	☐
5.8 Rater has verified and documented that Functional Testing Agent(s) (FT Agent(s)) completing the National HVAC Functional Testing Checklist(s) hold one of the required credentials and completed orientation, if applicable. [43] Credential(s): _____ FT Agent Name(s):_____		☐	☐	☐

Equipment Controls	Must Correct	LP Verified[44]	Rater Verified [4]	N/A [5]
5.9 All heating and cooling systems serving a dwelling unit have thermostatic controls within the dwelling unit.	☐	-	☐	☐
5.9.1 Prescriptive Path: Dwelling unit thermostats are programmable.	☐	-	☐	☐
5.10 For all indoor / terminal units in dwelling units and common spaces: [45]				
5.10.1 Measured zone temperature is within 5°F of zone temperature displayed on thermostat or sensor.	☐	-	☐	☐
5.10.2 System turns on when there is a call for heat and heating is provided. System turns off when the heating setpoint has been met. If N/A, select the reason: ☐ due to high ambient temperature OR ☐ equipment lock-out	☐	-	☐	☐
5.10.3 System turns on when there is a call for cool and cooling is provided. System turns off when the cooling setpoint has been met. If N/A, select the reason: ☐ due to high ambient temperature OR ☐ equipment lock-out	☐	-	☐	☐

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Equipment Controls (Cont.)	Must Correct	LP Verified[44]	Rater Verified [4]	N/A [5]
5.11 Where present in CZ 4-8, stair and elevator shaft vents are equipped with motorized dampers that are capable of being automatically closed during normal building operation and are interlocked to open as required by fire and smoke detection systems. Dampers are verified to be closed at the time of inspection.	☐	☐	☐	☐
5.12 Garage heating, plenum heating, and freeze protection systems include automatic controls that are verified to shut systems off above 40°F space or pipe wall temperatures, as applicable. Freeze protection systems include heat tracing of piping, even if self-regulating.	☐	☐	☐	☐
5.12.1 Where heat tracing is installed for freeze-protection, controls must be based on pipe wall temperature and a minimum of R-3 pipe insulation is also required.	☐	☐	☐	☐
5.13 Snow- and ice-melting systems include automatic controls that are verified to shut off the systems when the pavement temperature is above 50°F and no precipitation is falling, and an automatic or manual control is installed that is verified to shut off system when the outdoor temperature is above 40°F, so that the potential for snow or ice accumulation is negligible.	☐	☐	☐	☐
Hydronic Distribution Requirements – Applies to heating or cooling systems serving more than one dwelling unit				
5.14 For hydronic distribution systems, all terminal heating and cooling distribution equipment are separated from the riser or distribution loop by a control valve or terminal distribution pump, so that heated or cooled fluid is not delivered to the dwelling unit distribution equipment when there is no call from the thermostat.	☐	☐	☐	☐
5.15 Terminal units in hydronic distribution systems are equipped with pressure independent balancing valves or pressure independent control valves.	☐	☐	☐	☐
5.16 Piping of a heating or cooling system is insulated in accordance with Item 4.42 on the National HVAC Design Report, including where passing through planks or any other penetrations. [46]	☐	☐	☐	☐
5.17 For circulating pumps serving hydronic heating or cooling systems with three-phase motors, 1 horse-power or larger, motors meet or exceed efficiency standards for NEMA Premium™ motors. If 5 horse-power or larger, also installed with variable frequency drives.	☐	☐	☐	☐
6. Duct Quality Installation – Applies to Heating, Cooling, Ventilation, Exhaust, & Pressure Balancing Ducts, Unless Noted in Footnote.		**Must Correct**	**Rater Verified[4]**	**N/A [5]**
6.1 Ductwork installed without kinks, sharp bends, compressions, or excessive coiled flexible ductwork. [47]		☐	☐	☐
6.2 All bedrooms provided with transfer grilles, jump ducts, dedicated return ducts, and/or undercut doors. Bedrooms with a design supply airflow ≥ 150 CFM (per Item 5.2 on the National HVAC Design Report) achieve a Rater-measured pressure differential ≥ -5 Pa and ≤ +5 Pa with respect to the main body of the dwelling unit when all air handlers are operating. See Footnote 48 for test configuration.		☐	☐	☐
6.3 All supply and return ducts in unconditioned space, including connections to trunk ducts, are insulated to ≥ R-6. [49]		☐	☐	☐
6.3.1 Prescriptive Path: Dwelling unit ductwork and air handlers are installed within conditioned space.		☐	☐	☐
6.4 Rater-measured total duct leakage in dwelling units (and common spaces using ANSI / RESNET / ACCA 310) meets one of the following: [50, 51]				
6.4.1 Rough-in: Tested per allowances below, with air handler & all ducts, building cavities used as ducts, & duct boots installed. In addition, all duct boots sealed to finished surface, Rater-verified at final. [52] No ducted returns [34]: The greater of ≤ 3 CFM25 per 100 sq. ft. of CFA or ≤ 30 CFM. Additionally, the Rater-measured pressure difference between the space containing the air handler and the conditioned space, with the air handler running at high speed, is ≤ 5 Pa. For systems > 1 ton, increase by 1 Pa per half ton. One or two ducted returns [34]: The greater of ≤ 4 CFM25 per 100 sq. ft. of CFA or ≤ 40 CFM. Three or more ducted returns [34]: The greater of ≤ 6 CFM25 per 100 sq. ft. of CFA or ≤ 60 CFM.		☐	☐	☐
6.4.2 Final: Tested per allowances below, with the air handler & all ducts, building cavities used as ducts, duct boots, & register grilles atop the finished surface (e.g., drywall, floor) installed. [53] No ducted returns [34]: The greater of ≤ 6 CFM25 per 100 sq. ft. of CFA or ≤ 60 CFM. Additionally, the Rater-measured pressure difference between the space containing the air handler and the conditioned space, with the air handler running at high speed, is ≤ 5 Pa. For systems > 1 ton, increase by 1 Pa per half ton. One or two ducted returns [34]: The greater of ≤ 8 CFM25 per 100 sq. ft. of CFA or ≤ 80 CFM. Three or more ducted returns [34]: The greater of ≤ 12 CFM25 per 100 sq. ft. of CFA or ≤ 120 CFM.		☐	☐	☐
6.5 Common Space: Supply, return, and exhaust ductwork and all plenums serving common spaces are sealed at all transverse joints, longitudinal seams, and duct wall penetrations with mastic, mastic tape, or internal aerosol-based sealant.		☐	☐	☐
6.6 Duct leakage of central exhaust ductwork serving four or more dwelling units, meets one of the following two options: [54]				
6.6.1 Rough-in: Tested including all ductwork from the exhaust fan location up to, but not including the grilles, the leakage does not exceed 25% of exhaust fan flow. [55, 56, 57]		☐	☐	☐
6.6.2 Final: Tested inclusive of all ductwork between the fan and the grilles, the leakage does not exceed 30% of exhaust fan flow. [55, 56, 57]		☐	☐	☐

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7. Dwelling-Unit & Common Space Mechanical Vent. Systems ("Vent Systems") [58] & Inlets in Return Duct [59] (National HVAC Design Report Item # indicated in parenthesis)					
7.1 Ventilation manufacturer & model number on installed equipment matches either of the following (check box): [40] ☐ National HVAC Design Report ☐ Written approval received from designer			☐	☐	-
7.2 Rater-measured ventilation rate is within either ± 15 CFM or ±15% of dwelling unit design values (2.7), and meets or exceeds rates required by ASHRAE 62.2-2010. [60]			☐	☐	-
7.3 Measured ventilation rate is within either ± 15 CFM or ±15% of common space design values (2.9), and meets or exceeds rates required by ASHRAE 62.1-2010 (2.8). [61, 62]			☐	☐	☐
7.4 A ventilation override control installed and also labeled if its function is not obvious (e.g., a label is required for a toggle wall switch, but not for a switch that's on the ventilation equipment).			☐	☐	-
7.5 For any outdoor air inlet connected to a ducted return of the dwelling unit HVAC system (Complete if present; otherwise check "N/A"): [59]					☐
7.5.1 Controls automatically restrict airflow using a motorized damper during vent. off-cycle and occupant override. [63]			☐	☐	-
7.5.2 Rater-measured vent. Rate is ≤ 15 CFM or 15% above design value at highest HVAC fan speed. Alt. in Fn. 64. [64]			☐	☐	-
7.6 Where OA inlets are connected to the dwelling unit HVAC system, a motorized damper is installed that closes when there is no call for ventilation or when fan is off.			☐	☐	☐
7.7 If located in the dwelling unit, system fan rated ≤ 3 sones if intermittent, ≤ 2 sones if continuous, or exempted. [65]			☐	☐	-
7.8 If dwelling-unit Vent System controller operates the dwelling unit HVAC fan, then HVAC fan operation is intermittent and either the fan type is ECM / ICM (4.12), or the controls will reduce the run-time by accounting for HVAC system heating or cooling hours. [66]			☐	☐	☐
7.9 In-unit bathroom fans or in-line fans are ENERGY STAR certified if used as part of the dwelling-unit mechanical ventilation system. [67]			☐	☐	☐
7.10 If central exhaust fans, ≤ 1 HP, are installed as part of the dwelling-unit mechanical ventilation system, then they are direct-drive, ECM, with variable speed controllers. If > 1 HP, their motors meet or exceed efficiency standards for NEMA Premium ™ motors. [68]			☐	☐	☐
7.11 Air inlet locations (Complete if ventilation air inlet locations were installed (2.23, 2.24); otherwise check "N/A"): [69]			-	-	☐
7.11.1 Inlet(s) pull ventilation air directly from outdoors and not from attic, crawlspace, garage, or adjacent dwelling unit.			☐	☐	-
7.11.2 Inlet(s) are ≥ 2 ft. above grade or roof deck; ≥ 10 ft. of stretched-string distance from known contamination sources not exiting the roof, and ≥ 3 ft. distance from dryer exhausts and sources exiting the roof. [70, 71]			☐	☐	-
7.11.3 Inlet(s) are provided with rodent / insect screen with ≤ 0.5 in. mesh.			☐	☐	-
8. Local Mechanical Exhaust (National HVAC Design Report Item # indicated in parenthesis)					
Dwelling Unit Mechanical Exhaust – In each dwelling unit kitchen and bathroom, a system is installed that exhausts directly to the outdoors and meets one of the following Rater-measured airflow and manufacturer-rated sound level standards: [58, 72]					
Location		**Continuous Rate**	**Intermittent Rate [73]**	**Must Correct**	**Rater Verified [4]**	**N/A [5]**
8.1 Kitchen	Airflow	≥ 5 ACH, based on kitchen volume [74, 75] (Alternative in Fn. 74)	≥ 100 CFM and, if not integrated with range, also ≥ 5 ACH based on kitchen volume [74, 75, 76]	☐	☐	-
	Sound	Recommended: ≤ 1 sone	Recommended: ≤ 3 sones			
8.2 Bathroom	Airflow	≥ 20 CFM	≥ 50 CFM	☐	☐	-
	Sound	Required: ≤ 2 sones	Recommended: ≤ 3 sones			
Mechanical Exhaust for Common Spaces [2] and Shared Garages						
8.3 Measured exhaust rates are ≥ ASHRAE 62.1-2010 rates (2c). [61]				☐	☐	☐
8.4 Where an exhaust system is installed in a shared garage, it is equipped with controls that sense CO and NO2.				☐	☐	☐
9. Filtration						
9.1 MERV 6+ filter(s) installed in each ducted mechanical system serving an individual dwelling unit, designed so all return and mechanically supplied outdoor air passes through filter(s) prior to conditioning, and located to facilitate access & regular service by the occupant, building owner, or building maintenance staff. [77]				☐	☐	☐
9.1.1 Filter access panel includes gasket and fits snugly against the exposed edge of filter when closed to prevent bypass. [78]				☐	☐	☐
10. Combustion Appliances						
10.1 Furnaces, boilers, and water heaters located within the building's pressure boundary are mechanically drafted or direct-vented. Alternatives in Footnote 81. [79, 80]				☐	☐	☐
10.2 Fireplaces located within the building's pressure boundary are direct-vented. [79, 80]				☐	☐	☐
10.3 No unvented combustion appliances other than cooking ranges or ovens are located inside the building's pressure boundary. [79]				☐	☐	☐

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Other	Must Correct	LP Verified[44]	Rater Verified [4]	N/A [5]
11. Domestic Hot Water				
11.1 Prescriptive Path: Hot Water Equipment Minimum Efficiency Levels meet or exceed the ENERGY STAR Multifamily Reference Design.	☐	-	☐	☐
11.2 ERI Path: Hot Water Equipment Min. Efficiency Levels for equipment serving common spaces but not dwelling units nor shared laundry meet or exceed the ENERGY STAR Multifamily Reference Design.	☐	-	☐	☐
12. Lighting				
12.1 Common Space [2] Lighting Controls:				
12.1.1 ERI and Prescriptive Path: All common spaces [2] (including shared garages), except the building lobby, mechanical equipment rooms, and where automatic shutoff would endanger the safety of occupants [82], have occupancy or vacancy sensors, programmed timers, or automatic bi-level lighting controls [83] installed and operation has been verified.	☐	☐	☐	☐
12.1.2 ASHRAE Path only: All common spaces [2] (including shared garages), except the building lobby, mechanical equipment rooms, corridors, and stairwells and where automatic shutoff would endanger the safety of occupants [82], have occupancy or vacancy sensors, programmed timers, or automatic bi-level lighting controls [83] installed and operation has been verified.	☐	☐	☐	☐
12.2 Exterior lighting controls: Fixtures, including parking lot fixtures, must include automatic switching on timers or photocell controls except fixtures intended for 24-hour operation, required for security, or associated with the electric meter for an individual dwelling unit.	☐	☐	☐	☐
12.3 Common Spaces [2] , Exterior, and Garages: 90% of installed lighting fixtures are integrated LED fixtures or contain LED lamps. [84]	☐	-	☐	☐
12.4 Prescriptive Path: All dwelling unit lighting fixtures meet the efficiency requirements in the ENERGY STAR Multifamily Reference Design.	☐	-	☐	☐
12.5 Prescriptive Path: Dwelling unit overall in-unit lighting power density ≤ 0.75 W/sq. ft. When calculating overall lighting power density, use 1.1 W/sq. ft. where lighting is not installed. [85]	☐	-	☐	☐
13. Appliances and Plumbing Fixtures		**Must Correct**	**Rater Verified [4]**	**N/A [5]**
13.1 Prescriptive Path: Installed appliances are ENERGY STAR certified. Installed bathroom faucets, bathroom aerators, and showerheads are WaterSense labeled. [86]		☐	☐	☐
13.2 ERI Path: Where installed in common spaces, refrigerators and dishwashers are ENERGY STAR certified and showerheads are WaterSense labeled.		☐	☐	☐
13.3 Prescriptive Path: Shower compartments with multiple fixtures cannot be operated simultaneously OR the total flow rate per shower compartment must not exceed 1.75 gallons per minute, as rated at 80 psi.		☐	☐	☐
14. Whole Building Energy Consumption Data Acquisition Strategy				
14.1 For buildings 50,000 sq. ft. and larger, a strategy that enables the collection of monthly or annual building-level energy consumption data (electricity, natural gas, chilled water, steam, fuel oil, propane, etc.) has been confirmed. [87]		☐	☐	☐

Rater Name: _____ Rater Pre-Drywall Inspection Date(s) [88]:_____ Rater Initials: _____

Rater Company Name: _____ On-site Photos Documented [89] ☐ 📷

Rater Name: _____ Rater Final Inspection Date(s) [90]: _____ Rater Initials: _____

Rater Company Name: _____ On-site Photos Documented [89] ☐ 📷

Builder/Developer Employee: _____ Builder Inspection Date(s): _____ Builder Initials: _____

Builder/Developer Name: _____

Licensed Professional: _____ LP Inspection Date(s): _____ LP Initials: _____

Footnotes:

1. This Checklist applies to all dwelling units, sleeping units, common spaces [2], and garages (open or enclosed, shared or individual) in the building being certified, and where specified, parking lots. These requirements apply to all Paths, unless otherwise specified. These requirements do not apply to parking garages or lots where the cost of the energy use of the parking garage or lot is not the responsibility of the Builder/Developer, Building Owner or Property Manager. This Checklist does not apply to commercial or retail spaces, except in the ASHRAE Path, if included in the energy model and the savings contribute to achieving the Performance Target. This Checklist does not apply to common spaces [2] that are located in buildings on the property without any dwelling or sleeping units. A 'sleeping unit' as defined by ANSI / RESNET / ICC 301, is a room or space in which people sleep, which can also include permanent provisions for living, eating, and either sanitation or kitchen facilities but not both. Where the term 'dwelling unit' is used in this Checklist, the requirement is also required of 'sleeping' units. The term 'building' refers to a structure that encompasses dwelling/sleeping units and (if present) common spaces, sharing one or more of the following attributes: a common street address, a common entrance or exit, central/shared mechanical systems, or structurally interdependent wall or roof systems. Attached structures such as 4-story two-unit structures (commonly referred to as "2-over-2s") may be considered separate buildings if they are divided by a vertical fire separation wall from the foundation to the roof sheathing and share none of the other attributes listed above. A skyway or a breezeway that connects two structures is not considered a common entrance or exit.
2. The term 'common space' refers to any spaces in the building being certified that serve a function in support of the residential part of the building that is not part of a dwelling or sleeping unit. This includes spaces used by residents, such as corridors, stairs, lobbies, laundry rooms, exercise rooms, residential recreation rooms, and dining halls, as well as offices and other spaces used by building management, administration or maintenance in support of the residents. For the ASHRAE Path, the requirements for 'common spaces' apply to commercial or retail spaces where they are included in the energy model and savings contribute to achieving the Performance Target.
3. At the discretion of the Rater, the builder or developer may verify up to five of the indicated Checklist Items. For the purpose of this Checklist, "Builder" represents either the builder or the developer. When this allowance is used for Items marked "Pre-rock + 20", for each dwelling unit, up to 200 sq. ft. of wall areas that have drywall installed prior to general installation of drywall (i.e., "pre-rock" areas such as walls behind tubs or staircases), plus an additional 20 sq. ft., may be builder verified. In the remainder of the building, up to 500 sq. ft. of wall areas that have drywall installed prior to general installation of drywall, plus an additional 50 sq. ft., may be builder verified. For Items marked "20 sq. ft.", up to 20 sq. ft. of area per dwelling unit and 50 sq. ft. in the remainder of the building may be verified by the builder. For Items marked "2 penetrations", up to two penetrations per dwelling unit and 5 in the remainder of the building may be builder verified. The remaining items and areas (i.e., all the applicable area other than what the builder verifies) must be visually verified on-site by the Rater or, for applicable minimum rated features, verified using an alternative on-site inspection protocol defined by ANSI / RESNET / ICC 301 (e.g., for slab insulation or continuous exterior wall insulation). When exercised, the builder's responsibility will be formally acknowledged by the builder, or their designated agent, signing off on the checklist for the item(s) that they verified. However, if a quality assurance review indicates that Items have not been successfully completed, the Rater will be responsible for facilitating corrective action.
4. The term 'Rater' refers to the person(s) completing the third-party verification required for certification. The person(s) shall: a) be a Certified Rater, Approved Inspector, as defined by ANSI / RESNET / IECC 301, or an equivalent designation as determined by a Home Certification Organization (HCO) or Multifamily Review Organization (MRO); and, b) have attended and successfully completed an EPA-recognized training class. See www.energystar.gov/mftraining.

   As stated in the National Program Requirements, Raters who operate under an MRO or an HCO Sampling Protocol are permitted to verify any Checklist Item designated "Rater Verified" using an MRO or HCO-approved sampling protocol. No parties other than Raters are permitted to use sampling to complete this Checklist.
5. The column titled "N/A," which denotes items that are "not applicable," should be used when the checklist Item is not present in the building or conflicts with local requirements.
6. Two alternatives are provided: a) Grade II cavity insulation is permitted to be used for assemblies that contain a layer of continuous, air impermeable insulation ≥ R-3 in Climate Zones 1 to 4, ≥ R-5 in Climate Zones 5 to 8; [1] b) Grade II batts are permitted to be used in floors if they fill the full width and depth of the floor cavity, even when compression occurs due to excess insulation, as long as the R-value of the batts has been appropriately assessed based on manufacturer guidance and the only defect preventing the insulation from achieving Grade I is the compression caused by the excess insulation.
7. Ensure compliance with this requirement using ANSI / RESNET / ICC 301 including all Addenda and Normative Appendices, with new versions and Addenda implemented according to the schedule defined by the HCO or MRO that the building is certified under, with approved exceptions listed at www.energystar.gov/ERIExceptions.
8. Window-to-Wall ratio is taken as the sum of all window area divided by the total exterior above-grade wall area. All decorative glass and skylight window area contribute to the total window area to above-grade wall ratio (WWR). Spandrel sections of curtain wall systems contribute to the above-grade wall area.
9. For all Versions except National v1.2 and 1.3, the 2009 IECC Climate Zone designations are applicable, as defined and illustrated in Section R301 of the code. For National v1.2 and 1.3, the 2021 IECC Climate Zone designations are applicable, as defined and illustrated in Section R301 of the code. Note that some locations have shifted to a different Climate Zone in the 2021 IECC compared to prior editions.
10. Item 1.5 is not applicable to wood-framed walls. Item 1.5 is also not applicable to the concrete floor edge associated with a podium since Item 3.5 applies. Item 1.5 is applicable to walls separating conditioned space from the exterior, including walls that are adjacent to other buildings and the wall area associated with between floor spandrels and intermediate floor perimeter edges..
11. Mass walls utilized as the thermal mass component of a passive solar design (e.g., a Trombe wall) are exempt from Item 1.5. To be eligible for this exemption, the passive solar design shall be comprised of the following five components: an aperture or collector, an absorber, thermal mass, a distribution system, and a control system. For more information, see: www.energy.gov/sites/prod/files/guide_to_passive_solar_home_design.pdf.

    Mass walls that are not part of a passive solar design (e.g., CMU block or log home enclosure) shall either utilize the strategies outlined in Item 1.5 or the pathway in the assembly with the least thermal resistance, as determined using a method consistent with the 2013 ASHRAE Handbook of Fundamentals, shall provide ≥ 50% of the applicable assembly resistance, defined as the reciprocal of the mass wall equivalent U-factor in the 2009 IECC Table 502.1.2. Documentation identifying the pathway with the least thermal resistance and its resistance value shall be collected by the Rater and any Builder Verified or Rater Verified box under Item 1.5 shall be checked.

12. Up to 10% of the total exterior wall surface area is exempted from the reduced thermal bridging requirements to accommodate intentionally designed details. This exemption does not apply to steel columns or the repeated concrete floor perimeter edges of a multistory building. To calculate the exempted wall area, the Rater shall sum the areas of the following features that either prevent the use of, or interrupt, continuous insulation when they are present in the design: architectural details (e.g., wing walls, shading devices, roof overhangs, projected balconies, brick returns, stone window sills, metal panels, or masonry fireplaces); cladding details (e.g., non-thermally broken shelf angles, metal clips, metal brackets, and metal z-girts; but not stand-off shelf angles, screws, bolts, or brick ties); mechanical openings (e.g., PTACs, PTHPs, through-wall air conditioners). It shall be apparent to the Rater that the exempted areas are intentionally designed details, or the exempted area shall be documented in a plan provided by the builder, architect, or engineer. The Rater need not evaluate the necessity of the designed detail to certify the building.
13. If used, insulated siding shall be attached directly over a water-resistive barrier and sheathing. In addition, it shall provide the required R-value as demonstrated through either testing in accordance with ASTM C 1363 or by attaining the required R-value at its minimum thickness. Insulated sheathing rated for water protection can be used as a water resistant barrier if all seams are taped and sealed. If non-insulated structural sheathing is used at corners, the advanced framing details assessed by Item 3.4 shall be met for those wall sections.
14. In a building undergoing a substantial reconstruction or rehabilitation, continuous interior insulation may be used in lieu of continuous exterior rigid insulation or insulated siding. This alternative does not require continuous interior insulation where a floor intersects an exterior wall, it only requires it from floor to ceiling. Continuous interior insulation is required where the demising wall intersects the exterior wall; however, it may be exempted per Footnote 12.
15. As an alternative to the insulation in Table 502.1.2, a maximum U-factor of 0.123 is permitted where compliance with Item 2.1 of the Rater Design Review Checklist is documented using the Multifamily Workbook and the concrete slab floor is explicitly entered as a row in the table.
16. While the EPA recommends insulating interior columns for a minimum of R-5 for 4 vertical ft. and vertically along other areas of discontinuity, such as where walls intersect the concrete slab; this is not required.
17. Compliance with Items 1.7 and 1.8 is not required for buildings pursuing the ASHRAE Path, but the energy used by the heating systems must be modeled following the requirements in the Simulation Guidelines, available at www.energystar.gov/mfguidance. Heated plenums and garages with space heating must also comply with Item 5.12.
18. Where conditioned space is above the plenum, in lieu of insulating the top of the plenum, the bottom of the plenum may be used to comply with Items 1.7.2 and 1.7.3, if its insulation meets the requirements of Item 1.7.2 and, where applicable, Item 1.6. When using this alternative, the bottom of the plenum must meet all the requirements for floor insulation which include a fully-aligned air barrier as described in Footnote 20 and Grade I installation per Item 1.2.
19. The bottom of the heated plenum is permitted to be suspended ceiling tiles or other non-air barrier material. If fiberglass insulation is installed, it shall achieve a Grade I or Grade II install.
20. For purposes of this Checklist, an air barrier is defined as any durable solid material that blocks air flow between conditioned space and unconditioned space, including necessary sealing to block excessive air flow at edges and seams and adequate support to resist positive and negative pressures without displacement or damage. The EPA recommends, but does not require, rigid air barriers.

    Open-cell or closed-cell foam shall have a finished thickness ≥ 5.5 in. or 1.5 in., respectively, to qualify as an air barrier unless the manufacturer indicates otherwise.

    If flexible air barriers such as house wrap are used, they shall be fully sealed at all seams and edges and supported using fasteners with caps or heads ≥ 1 in. diameter unless otherwise indicated by the manufacturer. Flexible air barriers shall not be made of kraft paper, paper-based products, or other materials that are easily torn. If polyethylene is used, its thickness shall be ≥ 6 mil.
21. All insulated ceiling surfaces, regardless of slope (e.g., cathedral ceilings, tray ceilings, conditioned attic roof decks, flat ceilings, sloped ceilings), must meet the requirements for ceilings, unless the ceiling is adiabatic.
22. All insulated vertical surfaces are considered walls (e.g., above and below grade exterior walls, knee walls) and must meet the air barrier requirements for walls. The following exceptions apply: air barriers recommended, but not required, in adiabatic walls; and, in Climate Zones 4 through 8, an air barrier at the interior vertical surface of insulation is recommended but not required in basement walls or crawlspace walls. For the purpose of these exceptions, a basement or crawlspace is a space for which ≥ 40% of the total gross wall area is below-grade.
23. The EPA highly recommends, but does not require, an air barrier at the interior vertical surface of floor insulation in Climate Zones 4-8. [9]
24. Examples of supports necessary for permanent contact include staves for batt insulation or netting for blown-in insulation. Alternatively, supports are not required if batts fill the full depth of the floor cavity, even when compression occurs due to excess insulation, as long as the R-value of the batts has been appropriately assessed based on manufacturer guidance and the only defect preventing the insulation from achieving the required installation grade is the compression caused by the excess insulation.
25. Alternatively, an air barrier is permitted to be installed at the exterior horizontal surface of the floor insulation if the insulation is installed in contact with this air barrier, the exterior vertical surfaces of the floor cavity are also insulated, and air barriers are included at the exterior vertical surfaces of this insulation.
26. Reduced thermal bridging details, while not mandatory, will improve the comfort and efficiency of the building and help meet the ENERGY STAR performance target, as well as the thermal backstop in Item 1.1, EPA recommends, but does not require, that builders include details on plans to ensure proper implementation during construction.
27. Item 3.5 applies to all balconies and projected slabs and first floor podiums, but does not otherwise apply to the intermediate concrete floor perimeter edges above the podium of a multistory building as those are subject to Item 1.5.
28. Concrete floor edges meeting one of the following are considered to have a thermal break:
    a. For projected concrete floors that are not resting on podiums, one of the following insulation options is met:
        i. Install ≥ R-2 insulation at the floor edge between conditioned space and the projected slab; OR
        ii. Install ≥ R-5 insulation, above and below the concrete slab that extends horizontally for a minimum of 4 ft. Insulation installed on top of slab shall be covered by a durable floor surface. When entering the floor edge into the Multifamily Workbook, R-1 insulation may be associated with the area of the wall that is uninsulated due to the projected slab.

b. For all concrete floors resting on podiums, including projected concrete floors, one of the following is met:
   i. R-5 insulation is installed that extends from the top of the floor edge and continues a minimum of 4ft. on both interior and exterior surfaces of the wall below the floor edge. For podiums that are at-grade or continue below-grade, insulate to a minimum of 4ft. or a depth of 2 ft.; OR
   ii. For projected slabs only: Insulation is installed per a.i. or a.ii. above AND R-5 insulation is installed that extends from the bottom of the floor edge and continues a minimum of 4ft. on both interior and exterior surfaces of the wall below the floor edge. For podiums that are at-grade or continue below-grade, insulate to a minimum of 4ft. or a depth of 2 ft.; OR
   iii. Where the horizontal slab is not in direct contact with the exterior wall, R-5 insulation is installed at the slab edge continuous with the floor insulation under the slab.; OR
   iv. Floor insulation meeting the requirements of Item 1.6 is installed above the slab and provides a continuous thermal break where it intersects the wall.

29. In CZ 4-8, where a building has concrete podiums, balconies, or projected slabs, with or without thermal breaks, the building must document compliance with Item 2.1 of the Rater Design Review Checklist using the Multifamily Workbook.

    Where a thermal break has not been met based on the requirements in Footnote 28:

    1. For the ASHRAE or ERI Paths, in the energy model, the concrete floor edge area must be modeled with R-0.
    2. In addition, for all Paths, in the Multifamily Workbook, a row representing this floor edge area should be added as either “Projected Concrete Floor Edge / Balcony” or “Podium Floor Edge” as applicable, with the following U-factors:
       a. Where the concrete floor is above conditioned space, U-1.20.
       b. Where the concrete floor is above unconditioned space, U-1.64.

    Where a thermal break has been met based on the requirements in Footnote 28:

    1. For the ASHRAE or ERI Paths, in the energy model, the concrete floor edge area must be modeled with the insulation provided at that edge, which may be different than the R-value of the wall above.
    2. In addition, for all Paths, in the Multifamily Workbook, a row representing this floor edge area should be added as either “Projected Concrete Floor Edge / Balcony” or “Podium Floor Edge” as applicable, with the U-factor associated with the assembly based on the insulation installed.

30. Slab edge insulation shall be assessed for slab-on-grade floors with a floor surface less than 24 in. below grade, including where an insulated wall separates a garage, patio, or other unconditioned space from the conditioned space of the building. Whether insulated or not, these perimeters must be documented in the energy model and, where using to document compliance with Item 2.1 of the Rater Design Review Checklist, the Multifamily Workbook. F-Factors for use in the Multifamily Workbook shall be determined using the guidance available at www.energystar.gov/F-Factor.
31. For dwelling or sleeping units adjacent to garages, the EPA recommends, but does not require, carbon monoxide (CO) alarms installed in a central location in the immediate vicinity of each separate sleeping zone and according to NFPA 720.
32. Where a sampling protocol is permitted in accordance with the National or California Program Requirements, at least 20% of the dwelling or sleeping units adjacent to a garage shall be selected for testing.
33. Air leakage shall be measured and documented by a Rater using ANSI / RESNET / ICC 380 including all Addenda and Normative Appendices, with new versions and Addenda implemented according to the schedule defined by the HCO or MRO that the building is being certified under.
34. A ‘ducted return’ is defined as a continuous duct made of sheet metal, duct board, or flexible duct that connects one or more return grilles to the return-side inlet of the air handler. Any other approach to convey air from return or transfer grille(s) to the air handler, such as the use of building cavities, does not constitute a ‘ducted return’. Where there are no ‘ducted returns’, the duct leakage test shall include the leakage from the air handler and supply side of the forced air system. Where building cavities used to return air to the air handler are included in the duct leakage test, the allowances for “One or two ducted returns” shall be permitted.
35. This section of the Checklist is designed to meet ASHRAE 62.1-2010 or later, ASHRAE 62.2-2010 or later, and ANSI / ACCA’s 5 QI-2015 protocol, thereby improving the performance of HVAC equipment in new multifamily buildings when compared to multifamily buildings built to minimum code. However, these features alone cannot prevent all ventilation, indoor air quality, and HVAC problems, (e.g., those caused by a lack of maintenance or by occupant behavior). Therefore, this Checklist is not a guarantee of proper ventilation, indoor air quality, or HVAC performance.
36. To be eligible for Track A – HVAC Grading by Rater, dwelling units must have at least one unitary HVAC system including air conditioners or heat pumps up to 65 kBtuh, or furnaces up to 125 kBtuh (i.e., within the scope of ANSI / RESNET / ACCA Standard 310). Track A – HVAC Grading by Rater shall use ANSI / RESNET / ACCA 310 including all Addenda and Normative Appendices, with new versions and Addenda implemented according to the schedule defined by the HCO or MRO that the building is being certified under for all dwelling units.
37. For Track A, all unitary HVAC Systems including air conditioners and heat pumps up to 65 kBtuh and furnaces up to 125 kBtuh serving individual dwelling units shall comply with 5a.1 through 5a.4 for the building to be certified. Other systems within the scope of ANSI / RESNET / ACCA 310, except for serving common spaces, may meet Items 5a.1 through 5a.4, or meet Item 5a.4 and Sections 2 and 3 on the National HVAC Functional Testing Checklist. When systems serving common spaces complete Items 5a.1 through 5a.3 they are exempt from meeting the prerequisite ANSI / RESNET / ACCA 310 design review criteria.

    For Track B, Item 5b.1 is applicable for all systems. Item 5b.2 is applicable to split air conditioners, unitary air conditioners, air-source heat pumps, and water-source (i.e., geothermal) heat pumps up to 65 kBtuh with forced-air distribution systems (i.e., ducts) and to furnaces up to 225 kBtuh with forced-air distribution systems (i.e., ducts). All systems shall comply with 5b.1 and 5b.2, as applicable, for the building to be certified.

    If, based on the selected Track, an Item in Section 5 is not applicable to any systems in the building, the Rater shall mark ‘N/A’ for that Item.

38. If the non-invasive procedure in ANSI / RESNET / ACCA 310 is not permitted to be used during the final inspection of a unit (i.e., due to the equipment type or to outdoor air temperatures that do not meet the requirements of the non-invasive method), then the unit is permitted to be

certified with a default refrigerant charge designation of Grade III. Note that in these circumstances, the weigh-in method procedure in ANSI / RESNET / ACCA 310 may still be used to pursue a Grade I designation.

39. While this verification is completed as part of ANSI / RESNET / ACCA 310, it must also be documented in this checklist.
40. If installed equipment does not match the National HVAC Design Report, then prior to certification the Rater shall obtain written approval from the designer (e.g., email, updated National HVAC Design Report) confirming that the installed equipment meets the requirements of the National HVAC Design Report. In addition, the Rater shall verify that all installed equipment are still exempted types per Footnote 30 of the National HVAC Design Report or, if no longer an exempted type, shall re-review Section 3b of the National Rater Design Review Checklist to ensure compliance with all requirements (e.g., full completion of HVAC Design Report, HVAC design tolerances). In cases where the condenser unit is installed after the time of inspection by the Rater, the HVAC manufacturer and model numbers on installed equipment can be documented through the use of photographs provided by the HVAC Contractor or Functional Testing Agent after installation is complete.
41. The Rater shall measure and record the external static pressure in the return-side and supply-side of the system using the contractor-provided test locations. However, at this time, the Rater need not assess whether these values are within a specific range to certify the dwelling unit. Ductless systems and systems with a total amount of supply ductwork or distribution building cavities ≤ 10 ft. in length are exempted from this requirement. The Rater is also not required to measure external static pressure for multi-split systems and may mark “N/A”. If the space provided in Item 5b.2 does not accommodate all the measurements, use the table in Appendix A to supplement.
42. Electric resistance heating specified in common spaces has a total heating capacity ≤ 12 kBtu/h (3.5 kW) per enclosed space and has automatic thermostatic controls. Electric resistance limitations do not apply to heat pumps with integral supplemental or emergency electric resistance heating. The EPA recommends but does not require that heat pumps have controls to limit the use of emergency or supplemental heat to heat pump failures or when the heat pump cannot meet the heating load. The EPA also recommends but does not require that heat pumps in CZ 5-8 are ENERGY STAR certified cold-climate heat pumps. Electric resistance limitations do not apply to systems dedicated to heating outdoor air supplied by a mechanical ventilation system, as long as the space served is primarily heated by a non-electric-resistance system that meets the efficiency requirements noted in the ENERGY STAR Multifamily Reference Design. Electric resistance limitations apply to garages, but do not apply to heated plenums meeting Item 5.12, or stairwells where automatic thermostatic controls prevent operation above 50°F.
43. Functional Testing Agents must hold an approved credential, as listed at www.energystar.gov/ftas, or must be a representative of the Original Equipment Manufacturer (OEM), or a contractor credentialed by an HVAC Quality Installation Training and Oversight Organization (H-QUITO), if not completing Sections 5 and higher. Functional Testing Agents may not be the installing contractor, nor employed by the same company as the installing contractor, unless they are a credentialed contractor. An explanation of the credentialing process and links to H-QUITOs, which maintain lists of credentialed contractors, can be found at www.energystar.gov/findhvac. A directory of other FT Agents can be found at www.energystar.gov/ftas. Raters can confirm FT Agents have met the requirements by documenting they are listed in a directory. For Track A, Sections 2 and 3 of the National HVAC Functional Testing Checklist do not need to be completed for systems using ANSI / ACCA / RESNET 310 and meeting Items 5a.1 – 5a.4.
44. At the discretion of the Rater, a Licensed Professional (LP), (i.e., a Registered Architect or Professional Engineer in good standing and with a current license), may verify any of the items in Sections 5, and 12 of this Checklist, where a checkbox is provided for “LP Verified”. When exercised, the LP’s responsibility will be formally acknowledged by the LP signing off on the checklist for the item(s) that they verified. However, if a quality assurance review indicates that Items have not been successfully completed, the Rater will be responsible for facilitating corrective action.
45. Item 5.10 must be completed for all heating and cooling equipment located within dwelling units and common spaces, including, but not limited to the indoor units associated with split systems (e.g., split air conditioners and air-source heat pumps, mini-splits, multi-splits), unitary air conditioners, furnaces, unit heaters, PTAC’s, PTHP’s, GLHP’s, WLHP’s, fan coils, and hydronic distribution systems. For shared VRF systems, where a Rater is using sampling to complete Item 5.10, Raters must select units from a representative sample of the associated outdoor units.
46. Item 5.16 does not apply to factory-installed piping within HVAC equipment or piping that conveys fluids having a design operating temperature range between 60°F and 105°F, inclusive.
47. Kinks are to be avoided and are caused when ducts are bent across sharp corners such as framing members. Sharp bends are to be avoided and occur when the radius of the turn in the duct is less than one duct diameter. Compression is to be avoided and occurs when flexible ducts in unconditioned space are installed in cavities smaller than the outer duct diameter and ducts in conditioned space are installed in cavities smaller than inner duct diameter. Ducts shall not include coils or loops except to the extent needed for acoustical control.
48. Item 6.2 does not apply to ventilation ducts, exhaust ducts, or non-ducted systems. For an HVAC system with a multi-speed fan, the highest design fan speed shall be used when verifying this requirement. When verifying this requirement, doors separating bedrooms from the main body of the dwelling unit (e.g., a door between a bedroom and a hallway) shall be closed and doors to rooms that can only be entered from the bedroom (e.g., a closet, a bathroom) shall be open. The Rater-measured pressure shall be rounded to the nearest whole number to assess compliance.
49. Item 6.3 does not apply to ducts that are a part of local mechanical exhaust or exhaust-only dwelling-unit mechanical ventilation systems. The EPA recommends, but does not require, that all metal ductwork not encompassed by Section 6 (e.g., exhaust ducts, duct boots, ducts in conditioned space) also be insulated and that insulation be sealed to duct boots to prevent condensation.
50. Item 6.4 generally applies to the ducts of space heating, space cooling, and dwelling-unit mechanical ventilation systems.

    However, visual inspection is permitted in lieu of testing for the following system types: 1) a dwelling-unit mechanical ventilation system not connected to the space heating or space cooling system, regardless of the number of dwelling units it serves, except where testing is required by Item 6.6; 2) a space heating or space cooling system for which the ducts and air handler are in conditioned space and the total supply duct length of the system, including all supply trunks and branches, is ≤ 10 ft.; and 3) a space heating or space cooling system that serves more than one dwelling unit. In such cases, a Rater shall visually verify that all seams and connections are sealed with mastic or metal tape and all duct boots are sealed to floor, wall, or ceiling using caulk, foam, or mastic tape.

    For duct systems requiring testing, duct leakage shall be determined and documented by a Rater using ANSI / RESNET / ICC 380 including all Addenda and Normative Appendices, with new versions and Addenda implemented according to the schedule defined by the HCO or MRO that the building is being certified under. Leakage limits shall be assessed on a per-system, rather than per-dwelling unit, basis.

51. Note that compliance with Item 6.4.1 or 6.4.2 in conjunction with Section 3a of the National Rater Design Review Checklist automatically achieves Grade I total duct leakage per ANSI / RESNET / ACCA 310.
52. Cabinets (e.g., kitchen, bath, multimedia) or ducts that connect duct boots to toe-kick registers are not required to be in place during the 'rough-in' test.
53. Registers atop carpets are permitted to be removed and the face of the duct boot temporarily sealed during testing. In such cases, the Rater shall visually verify that the boot has been durably sealed to the subfloor (e.g., using duct mastic or caulk) to prevent leakage during normal operation.
54. Item 6.6 does not apply to central exhaust systems serving clothes dryers but is required for the central exhaust portion of balanced systems such as HRVs and ERVs.
55. Duct leakage shall be measured using one of the following two options:
    a. Measure duct leakage using a duct leakage tester: To determine leakage, measure duct leakage by testing at the design or average operating pressure following the procedures available at www.energystar.gov/centralexhausttest. Where testing at the design or average operating pressure is not feasible, testing at 50 Pa is permitted, however the following flow equation must be used to determine the leakage allowance at 50 Pa:

    $$CFM_{50} = CFM_{design} / [P_{design}^{(0.65)} / 50^{(0.65)}]$$

    The design pressure, P_{design}, can be obtained from the HVAC Designer and typically is reported on the mechanical schedule as the "external static pressure" or "ESP". Where reported in "inches of water column", convert to Pascals: 1 in. w.c. = 250 Pascals. Compare the measured leakage to the applicable leakage allowances.

    Where testing at rough-in, to calculate the 25% leakage allowance, the 'exhaust fan flow' shall be the lesser of the rated fan flow (i.e., nameplate rating) and 133% of the sum of the design exhaust airflow of the spaces served by that fan.

    Where testing at final, to calculate the 30% leakage allowance, the 'exhaust fan flow' shall be the lesser of the rated fan flow (i.e., nameplate rating) and 143% of the sum of the design exhaust airflow of the spaces served by that fan.

    Measured fan flow (either at the fan itself or the total airflow measured from all exhaust grilles served by the fan) may be used in lieu of the rated fan flow to determine the leakage allowance.

    To calculate central exhaust duct leakage allowance, the EPA recommends using worksheet 3b of the Multifamily Workbook.

    b. Measure duct leakage as the difference in exhaust system airflows: To determine leakage, first the total exhaust airflow from a central exhaust fan is measured by a Rater or certified air-balancing contractor. Duct leakage is then calculated as the difference of the total measured exhaust fan airflow and the sum of the measured exhaust airflows from each of the spaces served by the fan. This test option is only permitted for exhaust fans with a rated fan flow (i.e., nameplate rating) that does not exceed 143% of the sum of the design exhaust airflow of the spaces served by that fan. Where there are more than 8 exhaust fans, sampling at a rate of 1 in 7 is permitted after 7 exhaust fans demonstrate compliance with Item 6.6.2.
56. Where testing for duct leakage following the pressurization or depressurization test procedure in Footnote 55a, sampling is permitted given the following requirements are all met:
    a. No less than 50% of the exhaust ductwork, based on total linear feet, are tested. Where failures occur, the percentage of total linear feet required to be tested increases by 10%.
    b. Where aerosol-based sealant is used on some but not all ductwork, the ductwork selected for testing must be representative of all sealing strategies used in the building.
    c. Testing only a portion of the ductwork associated with an exhaust fan is permitted, however the total tested ductwork in the building must include representative portions of all ductwork sections, such as vertical risers, main trunks, horizontal run outs, branches, take-offs, and register boxes.
    d. Floor plans or riser diagrams that clearly document the total duct length and the length of the duct sections tested must be collected and retained by the Rater.
    e. Where portions of ductwork are tested, the leakage allowed is calculated by multiplying the total allowance by this ratio: linear feet being tested divided by the total duct length served by the fan.
57. Where aerosol-based sealant is used on an entire exhaust ductwork system (i.e., 100% of the ductwork between an exhaust fan and the grilles served by the fan), the duct-sealing contractor is permitted to perform the duct leakage test. The Rater is not required to witness these tests. Where the duct-sealing contractor is not performing the test on all exhaust ductwork systems, at least 50% of the ductwork in the untested systems, based on linear feet, shall be tested by the Rater according to the requirements in Footnote 56.
58. As defined by ANSI / RESNET / ICC 301-2019, a Dwelling Unit Mechanical Ventilation System is a ventilation system consisting of powered ventilation equipment such as motor-driven fans and blowers and related mechanical components such as ducts, inlets, dampers, filters and associated control devices that provides dwelling-unit ventilation at a known or measured airflow rate.
59. Item 7.5 applies to any outdoor air inlet connected to a ducted return of the dwelling unit HVAC system, regardless of its intended purpose (e.g., for ventilation air, make-up air, combustion air). This Item does not apply to HVAC systems without a ducted return.
60. The dwelling-unit ventilation air flows and local exhaust air flows shall be determined and documented by a Rater using ANSI / RESNET / ICC 380 including all Addenda and Normative Appendices, with new versions and Addenda implemented according to the schedule defined by the HCO or MRO that the building is being certified under. To facilitate testing the air flow of a microwave-integrated exhaust fan, Raters are permitted to tape off all air inlets except at the bottom. However, no correction factors shall be applied to the measured air flow to account for the increased airflow restriction. In Item 7.2, the dwelling-unit ventilation rates required by ASHRAE 62.2-2010 can be calculated using the Multifamily Workbook or the following equation: 0.01 x Conditioned Floor Area + 7.5 x (number of bedrooms + 1). For sleeping units, the following equation must be used: 0.01 x Conditioned Floor Area + 7.5 x (number of beds). Where local codes do not permit dwelling-unit ventilation to exceed ASHRAE 62.2-2010 rates, Rater-measured ventilation rate is permitted to be 0-15 CFM less than rates required by ASHRAE 62.2-2010. Designers are permitted to provide multiple combinations of a design ventilation airflow rate, run-time per cycle, and cycle time. When multiple

combinations are provided, the Rater shall first assess the run-time setting of the installed system and use that to determine the corresponding design ventilation rate. The Rater-measured ventilation rate must fall within the program-specified tolerance relative to that design ventilation rate.

61. While common spaces are not under the scope of ANSI / RESNET / ICC 380, the ventilation air flow and exhaust air flows in common spaces shall be measured in accordance with the procedures in ANSI / RESNET / ICC 380. The air flows may be measured by a Rater or a certified air-balancing contractor under the observation of a Rater. Sampling is only permitted where airflows are measured directly by the Rater. Where a system provides supply air that is a mix of return and outdoor air, and not 100% outdoor air, the outdoor air airflow shall be measured and compared to the total supply airflow to determine percentage of outdoor air supplied. This percentage shall be applied to airflow measured at supply registers to determine outdoor air provided for comparison to design airflow rates. Where the building has total corridor space ≤ 250 sq. ft. and does not contain any of the other common spaces which require outdoor air per Item 2.2 of the National HVAC Design Report, outdoor air is not required to be provided to the corridor.
62. For permits on or before 01/01/2024, where outdoor air is supplied via a PTAC or PTHP, in lieu of measurement, the design CFM shall meet or exceed the ventilation rates required by ASHRAE 62.1-2010 and the space served by the PTAC or PTHP shall have at least one operable window. For permits after 01/01/2024, both the runtime and measurement of outdoor air through these systems will be required to demonstrate compliance with ASHRAE 62.1-2010 or alternative ventilation system specified (e.g., ducted supply).
63. For example, if an outdoor air inlet connected to a ducted return is used as a dedicated source of outdoor air for an exhaust ventilation system (e.g., bath fan), the outdoor airflow must be automatically restricted when the exhaust fan is not running and in the event of an override of the exhaust ventilation system.

    In dwelling / sleeping units in multifamily buildings, automatic restriction of airflow is exempted if a manual shutoff damper is used with a continuous exhaust ventilation system and is readily-accessible, labeled as the override, and not used as a balancing damper.
64. When assessing the ventilation rate, the highest HVAC fan speed applicable to ventilation mode shall be used (e.g., if the inlet only opens when the HVAC is in 'fan-only' mode, then test in this mode). If the inlet has a motorized damper that only opens when the local mechanical kitchen exhaust is turned on, then testing is not required.

    When required, the ventilation airflow through the inlet shall be measured and documented by a Rater using ANSI / RESNET / ICC 380 including all Addenda and Normative Appendices, with new versions and Addenda implemented according to the schedule defined by the HCO or MRO that the building is being certified under. As an alternative, measurement of the outdoor airflow can be waived if a Constant Airflow Regulating (CAR) damper with a manufacturer-specified maximum flow rate no higher than 15 CFM or 15% above the ventilation design value is installed on the inlet.
65. Dwelling-unit mechanical ventilation fans shall be rated for sound at no less than the airflow rate in Item 2.7 of the National HVAC Design Report. Fans exempted from this requirement include HVAC air handler fans, remote-mounted fans, and intermittent fans rated ≥ 400 CFM. To be considered for this exemption, a remote-mounted fan must be mounted outside the habitable spaces, bathrooms, toilets, and hallways and there shall be ≥ 4 ft. ductwork between the fan and intake grille. Per ASHRAE 62.2-2010, habitable spaces are intended for continual human occupancy; such space generally includes areas used for living, sleeping, dining, and cooking but does not generally include bathrooms, toilets, hallways, storage areas, closets, or utility rooms.
66. Note that the 'fan-on' setting of a thermostat would not be an acceptable controller because it would continuously operate the HVAC fan.
67. Bathroom fans with a rated flow rate ≥ 500 CFM and heat/energy recovery ventilation fans are exempted from the requirement to be ENERGY STAR certified.
68. As an alternative to meeting or exceeding the efficiency standards for NEMA Premium motors, documentation that an exhaust fan motor has a fan energy index (FEI) ≥ 1.2 at the design point of operation OR a fan efficacy ≥ 1.1 CFM/Watt is permitted.
69. Without proper maintenance, ventilation air inlet screens often become filled with debris. Therefore, the EPA recommends, but does not require, that these ventilation air inlets be located so as to facilitate access and regular service by the building owner or maintenance staff. Ventilation air inlets that are only visible via rooftop access are exempted from Item 7.11 and the Rater shall mark "N/A".
70. Two alternatives to the required 10 ft. distance are provided: 1) inlets providing outdoor air to a dwelling unit are permitted to be ≥ 5 ft. of stretched-string distance from outlets of both exhaust dwelling-unit mechanical ventilation systems and local mechanical exhaust systems, and 2) the outlet and inlet of ERV's and HRV's may use a smaller distance if allowed by the manufacturer of the system. If the second alternative is used, the manufacturer's instructions shall be collected for documentation purposes.
71. Known contamination sources include, but are not limited to, stacks, vents, exhausts, and vehicles.
72. Continuous bathroom local mechanical exhaust fans shall be rated for sound at no less than the airflow rate in Item 8.2. Intermittent bathroom and both intermittent and continuous kitchen local mechanical exhaust fans are recommended, but not required, to be rated for sound at no less than the airflow rate in Items 8.1 and 8.2. Per ASHRAE 62.2-2010, an exhaust system is one or more fans that remove air from the building, causing outdoor air to enter by ventilation inlets or normal leakage paths through the building envelope (e.g., bath exhaust fans, range hoods, clothes dryers). Per ASHRAE 62.2-2010, a bathroom is any room containing a bathtub, shower, spa, or similar source of moisture.
73. An intermittent mechanical exhaust system, where provided, shall be designed to operate as needed by the occupant. Control devices shall not impede occupant control in intermittent systems.
74. Where 5 ACH is selected, kitchen volume shall be determined by drawing the smallest possible rectangle on the floor plan that encompasses all cabinets, pantries, islands, peninsulas, ranges / ovens, and the kitchen exhaust fan, and multiplying by the average ceiling height for this area. In addition, the continuous kitchen exhaust rate shall be ≥ 25 CFM, per 2009 IRC Table M1507.3, regardless of the rate calculated using the kitchen volume. Cabinet volume shall be included in the kitchen volume. As an alternative to 5 ACH for dwelling units and sleeping units, 50 CFM of continuous exhaust is permitted to be used, regardless of kitchen volume. In such cases, the edge of the exhaust fan or intake grille shall be located within 10 ft. of the edge of the range, as measured horizontally on the floor plan.
75. Alternatively, the prescriptive duct sizing requirements in Table 5.3 of ASHRAE 62.2-2010 or later are permitted to be used for kitchen exhaust fans based upon the rated airflow of the fan at 0.25 IWC. If the rated airflow is unknown, ≥ 6 in. smooth duct shall be used, with a rectangular to round duct transition as needed. Guidance to assist partners with these alternatives is available at www.energystar.gov/newhomesguidance. As an alternative to Item 8.1, dwelling units are permitted to use a continuous kitchen exhaust rate of 25 CFM per 2009 IRC Table M1507.3, if they

are either a) Phius or PHI certified, or b) provide both dwelling-unit ventilation and local mechanical kitchen exhaust using a balanced system, and have a Rater-verified whole-building infiltration rate ≤ 1.0 ACH50 or ≤ 0.05 CFM50 per sq. ft. of Enclosure Area. 'Enclosure Area' is defined as the area of the surfaces that bound the volume being pressurized / depressurized during the test.

76. All intermittent kitchen exhaust fans must be capable of exhausting at least 100 CFM. In addition, if the fan is not part of a vented range hood or appliance-range hood combination (i.e., if the fan is not integrated with the range), then it must also be capable of exhausting ≥ 5 ACH, based on the kitchen volume.
77. Based upon, ASHRAE 62.2-2010, ducted mechanical systems are those that supply air to an occupiable space with a total amount of supply ductwork exceeding 10 ft. in length and through a thermal conditioning component, except for evaporative coolers. Systems that do not meet this definition are exempt from this requirement. Filters are recommended, but not required, for mini-split systems, HRV's, and ERV's. HVAC filters located in the attic shall be considered accessible to the occupant, building owner, or building maintenance staff if either 1) drop-down stairs, a pull-down ladder, or door provide access to attic and a permanently installed walkway has been provided between the attic access location and the filter or 2) the filter location enables arm-length access from a portable ladder without the need to step into the attic and the height of the ceiling access panel or the bottom of the wall access panel where access is provided is ≤ 12 ft.
78. Sealing mechanisms comparable to a gasket are also permitted to be used. The filter media box (i.e., the component in the HVAC system that houses the filter) may be either site-fabricated by the installer or pre-fabricated by the manufacturer to meet this requirement. These requirements only apply when the filter is installed in a filter media box located in the HVAC system, not when the filter is installed flush with the return grille.
79. The pressure boundary is the primary enclosure boundary separating indoor and outdoor air. For example, a volume that has more leakage to outside than to conditioned space would be outside the pressure boundary.
80. Per the 2009 International Mechanical Code, a direct-vent appliance is one that is constructed and installed so that all air for combustion is derived from the outdoor atmosphere and all flue gases are discharged to the outside atmosphere; a mechanical draft system is a venting system designed to remove flue or vent gases by mechanical means consisting of an induced draft portion under non-positive static pressure or a forced draft portion under positive static pressure; and a natural draft system is a venting system designed to remove flue or vent gases under nonpositive static vent pressure entirely by natural draft.
81. Naturally drafted equipment is only allowed if located in a space outside the pressure boundary, where the envelope assemblies separating it from conditioned space are insulated and air-sealed.
82. For common spaces where automatic lighting controls are not installed due to safety concerns associated with automatic lighting shutoff, the architect or engineer must provide the specific location(s) where this concern is applicable. The Rater shall retain a copy of the email or letter that documents the location(s) for their records and check the box in the "Rater Verified" column. For Item 12.1.1, this exemption does not apply to corridors or stairwells; where safety is a concern in those spaces, the ASHRAE Path should be pursued.
83. Bi-level lighting controls include any design strategy that achieves at least one intermediate step between all fixtures being fully ON and fully OFF that provides 30-70% of full lighting power to that space. This can be achieved by light fixtures with integral bi-level controls or with occupancy sensors that activate select fixtures ON/OFF, while the others remain fully on.
84. This requirement applies to exterior lighting fixtures that are attached to the building, but does not apply to landscape or parking lot lighting fixtures. For the ASHRAE Path, where the proposed lighting power in a given space is modeled with 30% or greater savings compared to the allowance in the Simulation Guidelines, field measurement of footcandles is required.
85. For senior housing buildings, Prescriptive Path dwelling unit overall in-unit lighting power density is permitted to be ≤ 1.3 W/sq. ft., using 1.65 W/sq. ft. where lighting is not installed.
86. Appliances include refrigerators, dishwashers, clothes washers, and clothes dryers. Where an appliance type is not eligible for ENERGY STAR certification, (e.g., commercial dryers) the appliance is exempt from this requirement. Where a bathroom faucet or aerator is not eligible for WaterSense certification, (e.g., public use lavatory faucets) the fixture is exempt from this requirement.
87. Building area shall be calculated according to Gross Floor Area as defined by ENERGY STAR Portfolio Manager, which specifies to measure from the outside surface of exterior walls and includes all areas inside the building and excludes parking areas. Refer to the ENERGY STAR Portfolio Manager Glossary for a complete definition. Strategies include: an agreement with the utility companies to provide the aggregated building-level data, in a spreadsheet format or directly through Portfolio Manager; OR evidence that securing signed utility data release forms will be a mandatory component of all lease agreements; OR installation of a building-level energy monitor, data acquisition system, or utility-owned energy meter. If an energy monitor is installed, the builder shall provide the building operator with the manufacturer's documentation and operations manual. The EPA recommends, but does not require, that one of these strategies also be implemented in buildings 25,000-49,999sq. ft.
88. Any Item that will be concealed by drywall (e.g., wall insulation) must be verified during the pre-drywall inspection.
    If drywall is installed prior to the inspection, then it must be entirely removed to fully verify all Items. It is not sufficient to remove only portions of drywall to inspect a subset of areas. Furthermore, it is not acceptable to complete a Sampled Rating on a unit that has missed the pre-drywall inspection. Additional information is available in the Technical Bulletin: Pre-Drywall Inspection Is Always Required.
89. The Rater is required to capture photos according to the Photo Documentation Guidance Document available at www.energystar.gov/mfnc, which generally requires one representative photo per building for each specified item, as well as one geo-tagged and time-stamped photo of the Rater in front of the dwelling unit or building during each inspection.
90. Some Items can typically only be verified at a later stage of construction than when the pre-drywall inspection occurs (e.g., bath fan airflow). Any Item that has not been verified during the pre-drywall inspection must be verified prior to or during the final inspection.

Appendix A – Supplementary tables for Section 5

5. Heating & Cooling Equipment			
5b.2 External static pressure measured by Rater at contractor-provided test locations and documented below:	**Must Correct**	**Rater Verified [4]**	**N/A [5]**
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐
Dwelling Unit / Common Space Served: _____ Return-Side External Static Pressure: _____ IWC Supply-Side External Static Pressure _____ IWC	☐	☐	☐

L: MFNC HVAC Functional Testing Checklist

M: MFNC HVAC Design Supplement – Dwelling Units

ENERGY STAR Single-Family New Homes, All Versions (Rev. 14)
ENERGY STAR Multifamily New Construction, All Versions (Rev. 05)
National HVAC Design Supplement to Std. 310 for Dwellings & Units [1]

1. Design Basis							
1.1 Design description (optional):							
1.2 Designer company:		Designer name:		Date:			

2. Dwelling Unit Mechanical Ventilation System Design ("Vent System") & Inlets in Return Duct [2, 3, 4]	Verified [5]	N/A
Airflow:		
2.1 Ventilation airflow design rate & run-time for each Vent System meets ASHRAE 62.2-2010 or later edition. [6, 7]	☐	
2.2 Access point is specified for Rater to measure ventilation airflow rate and inspect any motorized / shutoff dampers. [4, 8]	☐	
System Controls:		
2.3 Specified controls for each Vent System allow it to operate automatically, without occupant intervention.	☐	
2.4 Specified controls for each Vent System include a readily-accessible override & a label has also been specified if its function is not obvious (e.g., a label is required for a toggle wall switch, but not for a switch that's on the vent. equip.). [9]	☐	
2.5 For any outdoor air inlet designed to connect to a ducted return of the HVAC system, specified controls automatically restrict airflow using a motorized damper during ventilation off-cycle and occupant override. [4, 10]	☐	☐
Sound: 2.6 Specified fan of each Vent System is rated ≤ 3 sones if intermittent and ≤ 1 sone if continuous, or exempted. [11]	☐	
Efficiency: (Complete if Vent System controller operates HVAC fan or Vent System uses bath fans; otherwise, check "N/A")		☐
2.7 If Vent System controller operates the HVAC fan, then HVAC fan operation is intermittent and either fan type in HVAC design report is ECM or controls will reduce the run-time by accounting for HVAC system heating or cooling hours. [12]	☐	☐
2.8 If bathroom fans are specified as part of any Vent System, then they are ENERGY STAR certified. [13]	☐	☐
2.9 MFNC Only:[14] If central exhaust fans are specified as part of the Vent System, then if ≤ 1 HP, they are direct-drive, ECM, with variable speed controllers; and if > 1 HP, they are specified with NEMA Premium™ Motors or equivalent. [15]	☐	☐
Air Inlet Location: (Complete this section if system has a specified air inlet location; otherwise check "N/A") [16]		☐
2.10 Inlet(s) pull ventilation air directly from outdoors and not from attic, crawlspace, garage, or adjacent dwelling unit.	☐	
2.11 Inlet(s) are ≥ 2 ft. above grade or roof deck; ≥ 10 ft. of stretched-string distance from known contamination sources (e.g., stack, vent, exhaust, vehicles) not exiting the roof, and ≥ 3 ft. from known sources exiting the roof. [17]	☐	
2.12 Inlet(s) are provided with rodent / insect screen with ≤ 0.5 in. mesh.	☐	

3. Dwelling Unit Local Mechanical Exhaust Design						
3.1 System(s) are designed that mechanically exhaust air from each dwelling unit kitchen and bathroom directly to the outdoors or to ventilation risers and meet the requirements in Table 1. [18]					☐	
Kitchens:	Runtime: [19]	☐ Continuous	☐ Intermittent [20]	Dwelling Units Served by Fan: [21]	☐ Single Unit	☐ Multiple Units
Bathrooms:	Runtime: [19]	☐ Continuous	☐ Intermittent [20]	Dwelling Units Served by Fan: [21]	☐ Single Unit	☐ Multiple Units

4. Heating Equipment, Cooling Equipment, & Equipment Controls Selection		
4.1 MFNC Only: [14] If using Prescriptive Path, equipment serving dwelling units meet the efficiency specified in the ENERGY STAR Multifamily Reference Design, have programmable thermostatic controls, & do not use electric resistance heating.[22]	☐	☐
4.2 MFNC Only: [14] Thermostatic controls for systems serving a dwelling unit are within the unit.	☐	☐

Air Conditioners & Heat Pumps	If none will be installed, check N/A ☐	1	2	3
4.3 Unique name or ID for each system:				
4.4 Maximum sensible and total heat gain load of zone served (kBtuh):				
4.5 Sensible, latent, & total cooling capacity at design conditions (kBtuh): [23]				
4.6 If HP, heating capacity at 17°F and at 47°F (kBtuh):		N/A ☐	N/A ☐	N/A ☐
4.7 Compressor speed type:				
4.8 Cooling sizing % & applicable sizing limit key from Table 2: [24, 25]				
4.9 If C2 chosen in Item 4.8, load sensible heat ratio & HDD / CDD ratio: [26]		N/A ☐	N/A ☐	N/A ☐
4.10 Affirm that cooling sizing % is within cooling sizing limit (4.8):		☐	☐	☐

Furnaces	If none will be installed, check N/A ☐	1	2	3
4.11 Unique name or ID for each system:				
4.12 Total heat loss load of zone served (kBtuh):				
4.13 Total heating capacity (kBtuh): [27]				
4.14 Heating sizing % & applicable sizing limit key from Table 3: [28, 29]				
4.15 Affirm that heating sizing % is within heating sizing limit (4.14):		☐	☐	☐

5. Duct Design	5.1 All duct requirements in Table 4 have been included in the design, where applicable.	☐	☐

ENERGY STAR Single-Family New Homes, All Versions (Rev. 14)
ENERGY STAR Multifamily New Construction, All Versions (Rev. 05)
National HVAC Design Supplement to Std. 310 for Dwellings & Units [1]

Table 1 – Local Mechanical Exhaust Airflow and Sound Limits

Location		Continuous Rate	Intermittent Rate
Kitchen	Airflow	≥ 5 ACH, based on kitchen volume [30, 31, 32] (Alternative in Fn. 30)	≥ 100 CFM and, if not integrated with range, also ≥ 5 ACH based on kitchen volume [30, 31, 33]
	Sound [34]	Recommended: ≤ 1 sone	Recommended: ≤ 3 sones
Bathroom	Airflow	≥ 20 CFM	≥ 50 CFM
	Sound [34]	Required: ≤ 1 sone	Recommended: ≤ 3 sones

Table 2 – Air Conditioner and Heat Pump Cooling Sizing Limits

Limit Key	Criteria for Limit Type	Sizing Limits by Compressor Type		
		Single-Speed	Two-Speed	Variable-Speed
C1	Cooling-only equipment or Cooling mode of HP in Condition A Climate	Recommended: 90 – 115% Allowed: 90 – 130%	Recommended: 90 – 120% Allowed: 90 – 140%	Recommended: 90 – 130% Allowed: 90 – 160%
C2	Cooling mode of HP in Condition B Climate	90% - 100%, plus 15 kBtuh	90% - 100%, plus 15 kBtuh	90% - 100%, plus 15 kBtuh
C3	Low-load: Total heat gain load ≤ 15 kBtuh	≤ 20 kBtuh	N/A	N/A
C4	Low-load: Total heat gain load ≤ 18 kBtuh	N/A	≤ 25 kBtuh	≤ 25 kBtuh

Table 3 – Furnace Heating Sizing Limits

Limit Key	Criteria for Limit Type	Sizing Limits
H1	Furnaces used for heating only	100 - 140%
H2	Furnaces when paired with cooling	Recommended: 100 – 140% Allowed: 100 – 400%
H3	Low-load: Total heat loss load ≤ 10 kBtuh	≤ 40 kBtuh

Table 4 – Duct Quality Design & Installation Requirements

a) **Design:** SFNH Only: [35] Duct system designed per ACCA Manual D.

b) **Insulation**: All supply and return ducts that are not in conditioned space, including connections to trunk ducts, specified to be insulated ≥ R-6. MFNC Only: [14] In addition, if using Prescriptive Path, all ducts and air handlers specified to be within conditioned space.

c) **Sealing**: Duct sealing specified to achieve Rater-measured total duct leakage that does not exceed ENERGY STAR limits:

# of Ducted Returns	**Total Duct Leakage Limit in CFM at 25 Pa (Select the Largest Applicable Value)**	
	If Tested at Rough-In:	If Tested at Final:
None [36]	≤ 3 per 100 sq. ft. of Conditioned Floor Area or ≤ 30	≤ 6 per 100 sq. ft. of Conditioned Floor Area or ≤ 60
1- 2	≤ 4 per 100 sq. ft. of Conditioned Floor Area or ≤ 40	≤ 8 per 100 sq. ft. of Conditioned Floor Area or ≤ 80
≥ 3	≤ 6 per 100 sq. ft. of Conditioned Floor Area or ≤ 60	≤ 12 per 100 sq. ft. of Conditioned Floor Area or ≤ 120

SFNH Only: [35] In addition, sealing specified to achieve Rater-measured duct leakage to outside, when tested at final, that is the greater of ≤ 4 CFM25 per 100 sq. ft. of conditioned floor area or ≤ 40 CFM25.

d) **Filtration**: MERV 6+ filter(s) specified for each ducted mechanical system serving an individual dwelling unit, designed so all return and mechanically supplied outdoor air passes through filter(s) prior to conditioning, and located to facilitate access & regular service by the occupant or building owner. Filter access panel specified with a gasket or comparable sealing mechanism.

e) **Pressure Balancing**: Bedrooms with a design supply airflow ≥ 150 CFM are specified with any combination of transfer grilles, jump ducts, dedicated return ducts, and/or undercut doors to achieve a Rater-measured pressure differential ≥ - 5 Pa and ≤ +5 Pa with respect to the main body of the dwelling unit when all air handlers are operating. SFNH Only: [35] In addition, bedrooms with a design supply airflow < 150 CFM are specified to achieve a Rater-measured pressure differential ≥ - 3 Pa and ≤ +3 Pa.

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Footnotes

1. This report must be completed for dwellings (e.g., single-family homes, duplexes), townhouses, and dwelling / sleeping units pursuing ENERGY STAR certification using Track A – HVAC Grading. It provides supplemental design information not captured in the ANSI / RESNET / ACCA / ICC 310 HVAC Design Report, which must also be collected for such projects.
2. As defined by ANSI / RESNET / ICC 301-2019, a Dwelling Unit Mechanical Ventilation System is a ventilation system consisting of powered ventilation equipment such as motor-driven fans and blowers and related mechanical components such as ducts, inlets, dampers, filters and associated control devices that provides dwelling unit ventilation at a known or measured airflow rate. Each Vent System shall have at least one supply or exhaust fan with associated ducts and controls. Local exhaust fans are allowed to be part of a Vent System. Designers may provide supplemental documentation as needed to document the system design.
3. In "Warm-Humid" climates as defined by 2009 IECC Figure 301.1 (i.e., CZ 1 and portions of CZ 2 and 3A below the white line), it is recommended, but not required, that equipment be specified with sufficient latent capacity to maintain indoor relative humidity at ≤ 60%.
4. Item 2.5 applies to any outdoor air inlet connected to a ducted return of the dwelling unit HVAC system, regardless of its intended purpose (e.g., for ventilation air, make-up air, combustion air). This Item does not apply to HVAC systems without a ducted return.

   For example, if an outdoor air inlet connected to a ducted return is used as a dedicated source of outdoor air for an exhaust ventilation system (e.g., bath fan), the outdoor airflow must be automatically restricted when the exhaust fan is not running and in the event of an override of the exhaust ventilation system. MFNC only: Automatic restriction of airflow is exempted if a manual shutoff damper is used with a continuous exhaust ventilation system and is readily-accessible, labeled as the override, and not used as a balancing damper.

   Note that a Rater will generally measure the ventilation rate at the highest HVAC fan speed applicable to ventilation mode (e.g., if the inlet only opens when the HVAC is in 'fan-only' mode, it will be tested in this mode) to verify that it is ≤ 15 CFM or 15% above design value. As an alternative, measurement of the outdoor airflow can be waived if a Constant Airflow Regulating (CAR) damper with a manufacturer-specified maximum flow rate no higher than 15 CFM or 15% above the ventilation design value is installed on the inlet.
5. In Section 2 through 5, 'Verified' indicates designer has verified that all specified Vent Systems, inlets in return ducts, dwelling unit local mechanical exhaust systems, equipment controls, and duct systems in the dwelling, townhouse, or dwelling/sleeping unit, meet the applicable requirement.
6. Airflow design rates and run-times shall be determined using ASHRAE 62.2-2010 or later. Designers are permitted, but not required, to use published addenda and/or more recent editions of the standard to assess compliance.
7. MFNC Prescriptive Path Only: Rates shall not exceed 2013 rates by more than 50%. Where the Exhaust Fan Type in Section 3 indicates "Continuous" for both Bathroom and Kitchen, the Rater may use this equation to determine the maximum ventilation rate allowed: 30 CFM x number of bathrooms + 75 CFM.
8. The term 'Rater' refers to the person(s) completing the third-party verification required for certification. Examples of access points for measuring ventilation airflow rate include a section of smooth-walled duct with a hole and removable plug to facilitate an in-duct measurement; the grille of an exhaust fan for an exhaust-only ventilation system; or a tool that is integrated into the ventilation equipment.
9. In dwellings (e.g., single-family homes, duplexes) and townhouses, this control must be readily accessible to the occupant. In all other multifamily dwelling units, the override control is not required to be readily accessible to the occupant. However, in such cases, the EPA recommends but does not require that the control be readily accessible to others (e.g., building maintenance staff) in lieu of the occupant.
10. In addition, consult manufacturer requirements to ensure return air temperature requirements are met.
11. Dwelling Unit Mechanical Ventilation System fans shall be rated for sound at no less than the airflow rate(s) specified in the ANSI / RESNET / ACCA / ICC 310 HVAC Design Report. Fans exempted from this requirement include HVAC air handler fans, remote-mounted fans, and intermittent fans rated ≥ 400 CFM. To be considered for this exemption, a remote-mounted fan must be mounted outside the habitable spaces, bathrooms, toilets, and hallways and there shall be ≥ 4 ft. ductwork between the fan and intake grill. Per ASHRAE 62.2-2010, habitable spaces are intended for continual human occupancy; such space generally includes areas used for living, sleeping, dining, and cooking but does not generally include bathrooms, toilets, hallways, storage areas, closets, or utility rooms.
12. Note that the 'fan-on' setting of a thermostat would not be an acceptable controller because it would continuously operate the HVAC fan.
13. Bathroom fans with a rated flow rate ≥ 500 CFM are exempted from the requirement to be ENERGY STAR certified.
14. Complete this Item only if the project is being certified using the ENERGY STAR Multifamily New Construction (MFNC) program.
15. As an alternative to meeting or exceeding the efficiency standards for NEMA Premium motors, documentation that an exhaust fan motor has a fan energy index (FEI) ≥ 1.2 at the design point of operation OR a fan efficacy ≥ 1.1 CFM/Watt is permitted.
16. Without proper maintenance, ventilation air inlet screens often become filled with debris. Therefore, the EPA recommends, but does not require, that these ventilation air inlets be located so as to facilitate access and regular service by the occupant.
17. Two alternatives to the required 10 ft. distance are provided: 1) inlets providing outdoor air to a dwelling unit are permitted to be ≥ 5 ft. of stretched-string distance from outlets of both exhaust dwelling-unit mechanical ventilation systems and local mechanical exhaust systems, and 2) the outlet and inlet of ERV's and HRV's may use a smaller distance if allowed by the manufacturer of the system. If the second alternative is used, the manufacturer's instructions shall be collected for documentation purposes.
18. Per ASHRAE 62.2-2010, an exhaust system is one or more fans that remove air from the building, causing outdoor air to enter by ventilation inlets or normal leakage paths through the building envelope (e.g., bath exhaust fans, range hoods, clothes dryers). Per ASHRAE 62.2-2010, a bathroom is any room containing a bathtub, shower, spa, or similar source of moisture.
19. If both continuous and intermittent fans are present in the design for the kitchen(s) or bathroom(s), then select both boxes.
20. An intermittent mechanical exhaust system, where provided, shall be designed to operate as needed by the occupant. Control devices shall not impede occupant control in intermittent systems.

21. Select “Single Unit” if the kitchen or bathroom exhaust fan serves a single dwelling unit and select “Multiple Units” if the fan serves multiple dwelling units (e.g., a central or shared fan). If both types are present in the design, then select both boxes.
22. Electric resistance limitations do not apply to heat pumps with integral supplemental or emergency electric resistance heating. The EPA recommends but does not require that heat pumps have controls to limit the use of emergency or supplemental heat to heat pump failures or when the heat pump cannot meet the heating load. The EPA also recommends but does not require that heat pumps in CZ 5-8 are ENERGY STAR certified cold-climate heat pumps. Electric resistance limitations do not apply to systems dedicated to heating outdoor air supplied by a mechanical ventilation system, as long as the space served is primarily heated by a non-electric-resistance system that meets the efficiency requirements noted in the ENERGY STAR Multifamily Reference Design.
23. The full system capacity at design conditions, from OEM expanded performance data, shall be listed. For two-speed equipment, the full system capacity shall reflect the capacity at the maximum available compressor speed. For variable-speed equipment, it shall reflect the capacity when the compressor operates at the AHRI rating speed.
24. Cooling sizing % = Total capacity (Item 4.5) divided by maximum total heat gain (Item 4.4).
25. Select the cooling sizing limit key from Table 2, either C1, C2, C3, or C4, based upon the equipment type and the compressor type. If selecting limit key C1 or C2, then also use the climate condition. If selecting limit key C3 or C4, then also use the total heat gain load of the zone.
26. Per ACCA Manual S, Second Edition, if the load sensible heat ratio is ≥ 95% and the HDD / CDD ratio is ≥ 2.0, then the Climate is Condition B, otherwise it is Condition A. The load sensible heat ratio = maximum sensible heat gain (Item 4.4) / maximum total heat gain (Item 4.4). For the HDD / CDD ratio, see Appendix A of ANSI / RESNET / ACCA / ICC 310 to determine this value for the design location.
27. The full system capacity shall be listed. For two-stage and modulating furnaces, the full system capacity shall reflect the maximum output available.
28. Heating sizing % = total heating capacity (Item 4.13) divided by total heat loss (Item 4.12).
29. Select the heating sizing limit key from Table 3, either H1, H2, or H3, based upon whether the equipment is a furnace used for heating only or a furnace paired with cooling. If selecting limit key H3, then also use the total heat loss load of the zone.
30. Where 5 ACH is selected, kitchen volume shall be determined by drawing the smallest possible rectangle on the floor plan that encompasses all cabinets, pantries, islands, peninsulas, ranges / ovens, and the kitchen exhaust fan, and multiplying by the average ceiling height for this area. In addition, the continuous kitchen exhaust rate shall be ≥ 25 CFM, per 2009 IRC Table M1507.3, regardless of the rate calculated using the kitchen volume. Cabinet volume shall be included in the kitchen volume. MFNC Only: As an alternative to 5 ACH, 50 CFM of continuous exhaust is permitted to be used, regardless of kitchen volume. In such cases, the edge of the exhaust fan or intake grille shall be located within 10 ft. of the edge of the range, as measured horizontally on the floor plan.
31. While not required, the prescriptive duct sizing requirements in Table 5.3 of ASHRAE 62.2-2010 or later are recommended to be used for kitchen exhaust.
32. As an alternative, projects are permitted to use a continuous kitchen exhaust rate of 25 CFM per 2009 IRC Table M1507.3, if they are either a) Phius or PHI certified, or b) provide both dwelling unit ventilation and local mechanical kitchen exhaust using a balanced system, and have a Rater-verified whole-building infiltration rate ≤ 1.0 ACH50 or ≤ 0.05 CFM50 per sq. ft. of Enclosure Area, and a Rater-verified dwelling unit compartmentalization rate ≤ 0.30 CFM50 per sq. ft. of Enclosure Area if multiple dwelling units are present in the building. ‘Enclosure Area’ is defined as the area of the surfaces that bound the volume being pressurized / depressurized during the test.
33. All intermittent kitchen exhaust fans must be capable of exhausting at least 100 CFM. In addition, if the fan is not part of a vented range hood or appliance-range hood combination (i.e., if the fan is not integrated with the range), then it must also be capable of exhausting ≥ 5 ACH, based on the kitchen volume.
34. Continuous bathroom local mechanical exhaust fans shall be rated for sound at no less than the design airflow rate. Intermittent bathroom and both intermittent and continuous kitchen local mechanical exhaust fans are recommended, but not required, to be rated for sound at no less than the design airflow rate.
35. Complete this Item only if the project is certified using the ENERGY STAR Single-Family New Homes (SFNH) program.
36. If project is certified using the ENERGY STAR Single-Family New Homes (SFNH) program and has no ducted return, then the leakage limit for 1-2 returns applies.

N: MFNC HVAC Design Supplement – Common Spaces & Central Systems

ENERGY STAR Multifamily New Construction
National HVAC Design Supplement to Std. 310 for Common Spaces & Central Systems [1], All Versions (Rev. 05)

HVAC Designer Responsibilities:

- This Supplement shall be used for MFNC buildings where "Track A – HVAC Grading by Rater" is used for all dwelling unit HVAC systems.
- Complete one Supplement for Common Spaces & Central Systems for each building. This Supplement includes system design for all hydronic systems, common space heating and cooling systems, and common space and central ventilation requirements not covered under ANSI / RESNET / ACCA 310 or the National HVAC Design Supplement to Std. 310 for Dwellings & Units. For projects with multiple buildings, one Supplement per building or per project is permitted. [1]
- Obtain efficiency features (e.g., window performance, insulation levels, and infiltration rate) from the builder, architect, or Rater. [2]
- Provide the completed Supplement to the Rater and the person / company completing the National HVAC Functional Testing Checklist. [2]

1. Design Overview

1.1 Designer name: _____ Designer company: _____ Date: _____

1.2 Select which party you are providing these design services to: ☐ Builder / Developer ☐ FT Agent ☐ MEP / Credentialed HVAC contractor

1.3 Name of company you are providing these design services to (if different than Item 1.1): _____

1.4 Building address: _____ City: _____ State: _____ Zip code: _____

2a. Common Space Mechanical Ventilation Design ("Vent System") [3] & Inlets in Return Duct [4, 5]						**Designer Verified**
Airflow:						
2.1 Common space outdoor airflow design rate meet the requirements of Section 6 of ASHRAE 62.1 [5, 6] -_____. ERI and Prescriptive Path Only: Rates shall not exceed 2013 rates by more than 50%.[7]						☐
2.2 Access points to measure airflow rate and inspect outdoor air dampers are provided and accessible by the Rater. [9]						☐
List common space for which 62.1 ventilation rates were calculated in the spaces to the right: [8, 9, 10]						
2.3 Ventilation airflow required by ASHRAE 62.1 (CFM): [6]						
2.4 Ventilation airflow designed (CFM): [6]						
Common Space System Type & Controls:						
List Ventilation System ID in the spaces to the right: [8]						
2.5 Specified system type: (e.g., supply, exhaust, balanced, ERV, HRV)						
2.6 Manufacturer:						
2.7 Model Number:						
2.8 # installed in the building:						
2.9 # of spaces served (e.g., single, multiple)						
2.10 Area / space(s) that system serves: (e.g., Unit A kitchens, corridor, community room)						
2.11 Specified control location: (e.g., Master bath, utility):						
2.12 Specified controls allow the systems to operate automatically, without occupant intervention. A ventilation override control is specified and also labeled if its function is not obvious (e.g., a label is required for a toggle wall switch, but not for a switch that's on the ventilation equipment).						☐

Common Space Air Inlet Locations: (Complete this section if system has specified air inlet location(s); otherwise check "N/A".) [11]	**Designer Verified** ☐ N/A
2.13 Inlet(s) pull ventilation air directly from outdoors and not from attic, crawlspace, garage, or adjacent dwelling unit.	☐
2.14 Inlet(s) are ≥ 2 ft. above grade or roof deck; ≥ 10 ft. of stretched-string distance from known contamination sources (e.g., stack, vent, exhaust, vehicles) not exiting the roof, and ≥ 3 ft. from dryer exhausts and sources exiting the roof. [12]	☐
2.15 Inlet(s) are provided with rodent / insect screen with ≤ 0.5 in. mesh.	☐

2b. Common Space and Garage Minimum Exhaust Rates – System(s) are designed that mechanically exhaust air from each common space listed below, as required by ASHRAE 62.1-2010 (or later). ☐

Location	ASHRAE 62.1 Rate	Design Rate	Location	ASHRAE 62.1 Rate	Design Rate
Janitor Room	1 cfm/sq. ft.		Common space kitchen [13]	50 cfm / 100 cfm	
Trash / Recycling Room	1 cfm/sq. ft.		Common space bathroom [14]	50 cfm per toilet / urinal	
Parking Garage	0.05 cfm/sq. ft., standby 0.75 cfm/sq. ft., full-on		☐ Shared garage exhaust fan controls include CO and NO2 sensors.		

3. Heating & Cooling Loads

3.1 Common Space Heating & Cooling Loads [8]

Common Space Name: _____ Design Conditions: Total Heat Gain: _____(kBtuh) Total Heat Loss: _____(kBtuh)

Common Space Name: _____ Design Conditions: Total Heat Gain: _____(kBtuh) Total Heat Loss: _____(kBtuh)

Common Space Name: _____ Design Conditions: Total Heat Gain: _____(kBtuh) Total Heat Loss: _____(kBtuh)

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3.2 Building Heating & Cooling Loads [8] (only required when shared systems such as central boilers or chillers are specified.)	**Designer Verified** ☐ N/A
System Name: _____ Design Conditions: Total Heat Gain: _____(kBtuh) Total Heat Loss: _____(kBtuh)	
System Name: _____ Design Conditions: Total Heat Gain: _____(kBtuh) Total Heat Loss: _____(kBtuh)	

4. Heating & Cooling Equipment Selection		
4.1 Equipment selected per ☐ ACCA Manual S, or where not applicable, ☐ Other: _____.	☐	
4.2 Prescriptive and ERI Path: Equipment serving common spaces and garages but not dwelling units meets the efficiency levels specified in the ENERGY STAR Multifamily Reference Design. Also see the ENERGY STAR Multifamily Reference Design for restrictions on electric space resistance.[15]	☐	☐ N/A

Common Space Cooling Equipment [8](Complete all applicable items, noting "N/A" as needed; where the same Equipment ID is used in multiple spaces (columns), identical data is not required to be repeated and can be left blank; where cooling is not provided, check "N/A".)

List Cooling Equipment ID in the spaces to the right; duplicating as needed for each unique space served:							
4.3 Equipment type: (e.g., PTAC / AC, Chiller / CT, PTHP / WLHP / GSHP / ASHP / VRF)							
4.4 Area / Space(s) that system serves:							
4.5 Chiller / condenser / outdoor unit manufacturer:							
4.6 Chiller / condenser / outdoor unit model #:							
4.7 Evaporator / indoor unit manufacturer:							
4.8 Evaporator / indoor unit model #:							
4.9 AHRI reference #: [16]							
4.10 Rated efficiency:							
4.11 Evaporator fan type: PSC, ECM / ICM, Other							
4.12 Compressor speed: Single, Two, Variable							
4.13 Turn down ratio (for variable speed equipment):							
4.14 Latent capacity at design conditions (kBtuh): [17]							
4.15 Sensible capacity at design conditions (kBtuh): [17]							
4.16 Total capacity at design conditions (kBtuh): [17]							

Common Space Heating Equipment [7] (Complete all applicable items, noting "N/A" as needed; where the same Equipment ID is used in multiple spaces (columns), identical data is not required to be repeated and can be left blank; where heating is not provided, check "N/A".)							**Designer Verified** ☐ N/A
List Heating Equipment ID in the spaces to the right; duplicating as needed for each unique space served:							
4.17 Electric equipment type: PTHP, WLHP, GSHP, ASHP, VRF, Boiler, Furnace, Electric Resistance							
4.18 Gas Equipment type: HW PTAC / fan coil, Gas-Fired PTAC, Boiler, Furnace							
4.19 Area / Space(s) that system serves:							
4.20 Manufacturer:							
4.21 Model Number:							
4.22 AHRI reference #: [16]							
4.23 Rated efficiency:							
4.24 Equipment output capacity (kBtuh): [18]							
4.25 Air-source heat pump output capacity (17°F) (kBtuh):							
4.26 Type of Venting: Natural Draft, Mechanically Drafted, Direct Vent [19]							

Equipment Controls	
4.27 All equipment controls below have been included where applicable in the HVAC Design.	☐
4.28 Where present in CZ 4-8, stair and elevator shaft vents shall be equipped with motorized dampers that are capable of being automatically closed during normal building operation and are interlocked to open as required by fire and smoke detection systems.	
4.29 Garage heating, plenum heating, and freeze protection systems shall include automatic controls capable of shutting systems off above 40°F space or pipe wall temperatures. Freeze protection systems include heat tracing of piping, even if self-regulating. Where heat tracing is specified for freeze protection, controls must be based on pipe wall temperature and a minimum of R-3 pipe insulation is also required.	
4.30 Snow- and ice-melting systems shall include automatic controls capable of shutting off the systems when the pavement temperature is above 50°F and no precipitation is falling, and an automatic or manual control that will allow shutoff when the outdoor temperature is above 40°F so that the potential for snow or ice accumulation is negligible.	

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Hydronic Distribution Requirements – Applies to heating or cooling systems serving more than one dwelling unit	☐N/A
4.31 All hydronic distribution requirements below have been included where applicable in the HVAC Design.	☐
4.32 All terminal heating and cooling distribution equipment must be separated from the riser or distribution loop by a control valve or terminal distribution pump, so that heated or cooled fluid is not delivered to the dwelling unit distribution equipment when there is no call from the thermostat.	
4.33 Terminal units must be equipped with pressure independent balancing valves or pressure independent control valves.	
4.34 Piping of a heating or cooling system (e.g., steam, hot or chilled water, brine, refrigerant) shall be thermally insulated in accordance with ASHRAE 90.1-2007, Section 6.4.4.1.3. Construction documents must account for piping total thickness including required insulation when passing through planks or any other penetrations and shall specify that the piping must be inspected before access is covered up: [20] Heating System: Pipe size:____ in. Insulation thickness:___ in. Pipe size:____ in. Insulation thickness:___ in. Cooling System: Pipe size:____ in. Insulation thickness:___ in. Pipe size:____ in. Insulation thickness:___ in.	
4.35 For circulating pumps serving hydronic heating or cooling systems with three-phase motors, 1 horse-power or larger, motors shall meet or exceed efficiency standards for NEMA Premium™ motors. If 5 horse-power or larger, must also be specified with variable frequency drives.	
4.36 If a variable speed pumping system is installed, system designed to prevent “dead-heading” and a method of water flow bypass is provided, such as a minimum flow bypass valve or 3-way valves on specific terminal units.	
4.37 For shared boilers, chillers, and cooling towers, temperature and pressure gauges, air eliminator, expansion tank, and check valves are clearly shown on the drawings. A complete sequence of operations for all systems indicating recommendations for all setpoints is provided. For condensing boilers, design return temperature is indicated, and system is designed to return water at a temperature that enables condensing.	
5. Duct Quality Installation - *Applies to Heating, Cooling, Ventilation, Exhaust, & Pressure Balancing Ducts, Unless Noted in Footnote*	
Common Spaces	
5.1 Applicable duct quality installation requirements in Items 5.2 – 5.5 below have been included in the HVAC Design.	☐
5.2 Ductwork specified without kinks, sharp bends, compressions, or excessive coiled flexible ductwork. [21]	
5.3 All supply and return ducts not in conditioned space, including connections to trunk ducts, are insulated to ≥ R-6. [22]	
5.3.1 Prescriptive Path: Dwelling unit ductwork meets the location and insulation requirements specified in the ENERGY STAR MF Reference Design.	
5.4 Duct design specifies that all supply, return, and exhaust ductwork and all plenums serving common spaces shall be sealed at all transverse joints, longitudinal seams, and duct wall penetrations.	
Duct Testing for Central Systems Serving Dwelling Units	
5.5 Central exhaust systems (that serve four or more dwelling units): Ductwork air-sealing specified such that measured duct leakage does not exceed 25% of exhaust fan flow at rough-in (e.g., all ductwork from the exhaust fan) or 30% of exhaust fan flow at final (e.g., inclusive of all ductwork between the fan and the grilles). [23]	

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Footnotes:

1. This report shall represent system design for all unique common spaces, hydronic systems, central ventilation systems serving common spaces or dwelling units, and where applicable, parking garages. The term 'common space' refers to any spaces in the building being certified that serve a function in support of the residential part of the building that is not part of a dwelling or sleeping unit. This includes spaces used by residents, such as corridors, stairs, lobbies, laundry rooms, exercise rooms, residential recreation rooms, and dining halls, as well as offices and other spaces used by building management, administration or maintenance in support of the residents. For the purpose of completing this report, for buildings being certified using the ASHRAE Path, the term 'common space' also includes commercial or retail spaces where they are included in the energy model and savings contribute to achieving the Performance Target. As an alternative, for common spaces using Track A-HVAC grading by Rater, designers may instead choose to complete an ANSI / RESNET / ACCA 310 HVAC Design Report and National HVAC Design Supplement to Std. 310 for Dwellings & Units for each unique common space. For those spaces, Items 2.2-2.13, 3.1, 4.1-4.27, and 5.1-5.4 of this Report are not required to be completed. All other systems serving common spaces, must be documented in this Design Report.
2. The term 'Rater' refers to the person(s) completing the third-party verification required for certification. The person(s) shall: a) be a Certified Rater, Approved Inspector, as defined by ANSI / RESNET / IECC 301, or an equivalent designation as determined by a Home Certification Organization (HCO) or Multifamily Review Organization (MRO); and, b) have attended and successfully completed an EPA-recognized training class. See www.energystar.gov/mftraining.
3. A Mechanical Ventilation System is a ventilation system consisting of powered ventilation equipment such as motor-driven fans and blowers and related mechanical components such as ducts, inlets, dampers, filters and associated control devices that provides outdoor air at a known or measured airflow rate.
4. In "Warm-Humid" climates as defined by 2009 IECC Figure 301.1 (i.e., CZ 1 and portions of CZ 2 and 3A below the white line), it is recommended, but not required, that equipment be specified with sufficient latent capacity to maintain indoor relative humidity at ≤ 60%.
5. Airflow design rates shall be determined using ASHRAE 62.1-2010 or later. Designers are permitted, but not required, to use published addenda and/or more recent editions of the standard to assess compliance. The year of the standard that is used shall be listed in the space provided.
6. The following spaces require outdoor air ventilation: corridors, offices, break rooms, gyms, fitness centers, exercise rooms, lobbies, community rooms, meeting rooms, multi-purpose rooms, lounges, laundry rooms, swimming pools, daycares, classrooms, shared or commercial kitchens, shared dining rooms, and computer rooms.
7. When calculating whether common space ventilation rates exceed ASHRAE 62.1-2013 rates by more than 50%, the calculation should use the minimum rates listed in Section 6 of the Standard by space, but it is permitted to combine the total ventilation provided to all common space areas when determining whether ventilation exceeds the 50%.
8. If the tables provided cannot accommodate all the unit plans, spaces, or systems in the building, use the tables in Appendix A to supplement the Design Report.
9. For permits on or before 01/01/2024, where outdoor air is supplied to a common space via a PTAC or PTHP, in lieu of measurement, the design CFM shall meet or exceed the ventilation rates required by ASHRAE 62.1-2010 and the space served by the PTAC or PTHP shall have at least one operable window. For permits after 01/01/2024, both the runtime and measurement of outdoor air through these systems will be required to demonstrate compliance with ASHRAE 62.1-2010 or alternative ventilation system specified (e.g., ducted supply).
10. List each individual common space separate from other spaces, such that when reporting airflow for Items 2.2 and 2.3, compliance for each space can be demonstrated. For example, list an office space separate from a community room, even if these spaces are served by the same system and even if the outdoor air rates required are the same. Similarly, where a space is repeated in the building, such as a corridor, report each space by floor (e.g., FL1 Corridor, FL2 Corridor). Rather than list these values in this report, as an alternative, the HVAC Designer is permitted to submit the values in a separate document or file. Where the building has total corridor space ≤ 250 sq. ft. and does not contain any of the other common spaces which require outdoor air per Item 2.1, outdoor air is not required to be provided to the corridor and "N/A" may be entered for Item 2.4.
11. Without proper maintenance, ventilation air inlet screens often become filled with debris. Therefore, the EPA recommends, but does not require, that these ventilation air inlets be located so as to facilitate access and regular service by the building maintenance staff.
12. Two alternatives to the required 10 ft. distance are provided: 1) inlets providing outdoor air to a dwelling unit are permitted to be ≥ 5 ft. of stretched-string distance from outlets of both exhaust dwelling-unit mechanical ventilation systems and local mechanical exhaust systems, and 2) the outlet and inlet of ERV's and HRV's may use a smaller distance if allowed by the manufacturer of the system. If the second alternative is used, the manufacturer's instructions shall be collected for documentation purposes.
13. For continuous system operation, the lower rate may be used. Otherwise, use the higher rate. Commercial kitchens shall be designed to provide a minimum continuous rate of 0.70 cfm/sq. ft.
14. As an alternative, for a toilet room intended to be occupied by one person at a time, a minimum continuous rate of 25 cfm is permitted.
15. Electric resistance limitations do not apply to heat pumps with integral supplemental or emergency electric resistance heating. The EPA recommends but does not require that heat pumps have controls to limit the use of emergency or supplemental heat to heat pump failures or when the heat pump cannot meet the heating load. The EPA also recommends but does not require that heat pumps in CZ 5-8 are ENERGY STAR certified cold-climate heat pumps. Electric resistance limitations do not apply to systems dedicated to heating outdoor air supplied by a mechanical ventilation system, as long as the space served is primarily heated by a non-electric-resistance system that meets the efficiency requirements noted in the ENERGY STAR Multifamily Reference Design. Electric resistance limitations apply to garages, but do not apply to heated plenums meeting Item 4.29, or stairwells where automatic thermostatic controls prevent operation above 50ºF.
16. If the equipment contains multiple components, the AHRI Reference # shall represent the rated efficiency of the specific combination of indoor and outdoor components. The EPA recommends, but does not require, that the rating also encompass the furnace when such a rating is available. If an AHRI Reference # is not available, OEM-provided documentation shall be attached with the rated efficiency. For split air conditioners and heat pumps, the rated efficiency shall be for the specific combination of indoor and outdoor components of the air conditioner or heat pump, along with confirmation that the two components are designed to be used together. If the AHRI Reference # is reported in Item 4.9 (e.g., heat pumps), the AHRI Reference # does not need to be listed again in Item 4.23.

17. The full system capacity at design conditions, from OEM expanded performance data, shall be listed and shall include the capacity of all systems providing space cooling to the dwelling unit. For two-speed or variable-speed equipment, the full system capacity shall reflect the capacity at the maximum available compressor speed or when the compressor operates at the AHRI rating test speed, respectively.
18. The full system capacity shall be listed. For two-stage and modulating furnaces, the full system capacity shall reflect the maximum output available. For shared boilers, the full system capacity may exclude standby equipment needed for redundancy.
19. Per the 2009 International Mechanical Code, a direct-vent furnace or boiler is one that is constructed and installed so that all air for combustion is derived from the outdoor atmosphere and all flue gases are discharged to the outside atmosphere; a mechanical draft system is a venting system designed to remove flue or vent gases by mechanical means consisting of an induced draft portion under non-positive static pressure or a forced draft portion under positive static pressure; and a natural draft system is a venting system designed to remove flue or vent gases under non-positive static vent pressure entirely by natural draft. Naturally drafted equipment is only allowed if located in a space outside the pressure boundary, where the envelope assemblies separating it from conditioned space are insulated and air-sealed. For mechanically drafted boilers, make-up air sources must be mechanically closed when the boiler is not in operation.
20. Item 4.34 does not apply to factory-installed piping within HVAC equipment or piping that conveys fluids having a design operating temperature range between 60°F and 105°F, inclusive.
21. Kinks are to be avoided and are caused when ducts are bent across sharp corners such as framing members. Sharp bends are to be avoided and occur when the radius of the turn in the duct is less than one duct diameter. Compression is to be avoided and occurs when flexible ducts in unconditioned space are installed in cavities smaller than the outer duct diameter and ducts in conditioned space are installed in cavities smaller than inner duct diameter. Ducts shall not include coils or loops except to the extent needed for acoustical control.
22. Item 5.3 does not apply to ducts that are a part of local mechanical exhaust or exhaust-only dwelling-unit ventilation systems. The EPA recommends, but does not require, that all metal ductwork not encompassed by Section 6 (e.g., exhaust ducts, duct boots, ducts in conditioned space) also be insulated and that insulation be sealed to duct boots to prevent condensation.
23. This test is not required of central exhaust systems serving clothes dryers but is required for the central exhaust portion of balanced systems such as HRVs and ERVs.

ENERGY STAR Multifamily New Construction
National HVAC Design Supplement to Std. 310 for Common Spaces & Central Systems [1], All Versions (Rev. 05)

Appendix A – Supplementary tables for Section 2 and 3

2a. Common Space Mechanical Ventilation Design [3, 5]						
List common space for which 62.1 ventilation rates were calculated in the spaces to the right: [7, 9, 10]						
2.3 Ventilation airflow required by ASHRAE 62.1 (CFM): [6, 11]						
2.4 Ventilation airflow designed (CFM): [6, 11]						

System Type & Controls:						
List Ventilation System ID in the spaces to the right: [7]						
2.5 Specified system type: (e.g., supply, exhaust, balanced, ERV, HRV)						
2.6 Manufacturer:						
2.7 Model Number:						
2.8 # installed in the building						
2.9 # of spaces served (e.g., single, multiple)						
2.10 Area / space(s) that system serves: (e.g., Unit A kitchens, corridor, community room)						
2.11 Specified control location: (e.g., Master bath, utility):						

3. Heating & Cooling Loads		
3.1 Common Space Heating & Cooling Loads [7, 10]		
Common Space Name: _____	Design Conditions: Total Heat Gain: _____(kBtuh)	Total Heat Loss: _____(kBtuh)
Common Space Name: _____	Design Conditions: Total Heat Gain: _____(kBtuh)	Total Heat Loss: _____(kBtuh)
Common Space Name: _____	Design Conditions: Total Heat Gain: _____(kBtuh)	Total Heat Loss: _____(kBtuh)
Common Space Name: _____	Design Conditions: Total Heat Gain: _____(kBtuh)	Total Heat Loss: _____(kBtuh)
Common Space Name: _____	Design Conditions: Total Heat Gain: _____(kBtuh)	Total Heat Loss: _____(kBtuh)
Common Space Name: _____	Design Conditions: Total Heat Gain: _____(kBtuh)	Total Heat Loss: _____(kBtuh)
Common Space Name: _____	Design Conditions: Total Heat Gain: _____(kBtuh)	Total Heat Loss: _____(kBtuh)
Common Space Name: _____	Design Conditions: Total Heat Gain: _____(kBtuh)	Total Heat Loss: _____(kBtuh)
Common Space Name: _____	Design Conditions: Total Heat Gain: _____(kBtuh)	Total Heat Loss: _____(kBtuh)
Common Space Name: _____	Design Conditions: Total Heat Gain: _____(kBtuh)	Total Heat Loss: _____(kBtuh)
Common Space Name: _____	Design Conditions: Total Heat Gain: _____(kBtuh)	Total Heat Loss: _____(kBtuh)
Common Space Name: _____	Design Conditions: Total Heat Gain: _____(kBtuh)	Total Heat Loss: _____(kBtuh)
Common Space Name: _____	Design Conditions: Total Heat Gain: _____(kBtuh)	Total Heat Loss: _____(kBtuh)
Common Space Name: _____	Design Conditions: Total Heat Gain: _____(kBtuh)	Total Heat Loss: _____(kBtuh)
Common Space Name: _____	Design Conditions: Total Heat Gain: _____(kBtuh)	Total Heat Loss: _____(kBtuh)
Common Space Name: _____	Design Conditions: Total Heat Gain: _____(kBtuh)	Total Heat Loss: _____(kBtuh)
Common Space Name: _____	Design Conditions: Total Heat Gain: _____(kBtuh)	Total Heat Loss: _____(kBtuh)
Common Space Name: _____	Design Conditions: Total Heat Gain: _____(kBtuh)	Total Heat Loss: _____(kBtuh)
Common Space Name: _____	Design Conditions: Total Heat Gain: _____(kBtuh)	Total Heat Loss: _____(kBtuh)
Common Space Name: _____	Design Conditions: Total Heat Gain: _____(kBtuh)	Total Heat Loss: _____(kBtuh)
Common Space Name: _____	Design Conditions: Total Heat Gain: _____(kBtuh)	Total Heat Loss: _____(kBtuh)
Common Space Name: _____	Design Conditions: Total Heat Gain: _____(kBtuh)	Total Heat Loss: _____(kBtuh)
Common Space Name: _____	Design Conditions: Total Heat Gain: _____(kBtuh)	Total Heat Loss: _____(kBtuh)

3.2 Building Heating & Cooling Loads [7] (only required when shared systems such as central boilers or chillers are specified)		
System Name: _____	Design Conditions: Total Heat Gain: _____(kBtuh)	Total Heat Loss: _____(kBtuh)
System Name: _____	Design Conditions: Total Heat Gain: _____(kBtuh)	Total Heat Loss: _____(kBtuh)
System Name: _____	Design Conditions: Total Heat Gain: _____(kBtuh)	Total Heat Loss: _____(kBtuh)
System Name: _____	Design Conditions: Total Heat Gain: _____(kBtuh)	Total Heat Loss: _____(kBtuh)

ENERGY STAR Multifamily New Construction
National HVAC Design Supplement to Std. 310 for Common Spaces & Central Systems [1], All Versions (Rev. 05)

Appendix A – Supplementary tables for Section 4

4. Heating & Cooling Equipment Selection							
Common Space Cooling Equipment (Complete all applicable items, noting "N/A" as needed; where the same Equipment ID is used in multiple spaces (columns), identical data is not required to be repeated and can be left blank; where cooling is not provided, check "N/A".) ☐ N/A							
List Cooling Equipment ID in the spaces to the right; duplicating as needed for each unique space served:							
4.3 Equipment type: (PTAC / AC, Chiller / CT, PTHP / WLHP / GSHP / ASHP / VRF)							
4.4 Area / Space(s) that system serves:							
4.5 Chiller / condenser / outdoor unit manufacturer:							
4.6 Chiller / condenser / outdoor unit model #:							
4.7 Evaporator / indoor unit manufacturer:							
4.8 Evaporator / indoor unit model #:							
4.9 AHRI reference #: [17]							
4.10 Rated efficiency:							
4.11 Evaporator fan type: PSC, ECM / ICM Other:							
4.12 Compressor speed: Single, Two, Variable							
4.13 Turn down ratio (for variable speed equipment):							
4.14 Latent capacity at design conditions (kBtuh): [18]							
4.15 Sensible capacity at design conditions (kBtuh): [18]							
4.16 Total capacity at design conditions (kBtuh): [18]							

Common Space Heating Equipment (Complete all applicable items, noting "N/A" as needed; where the same Equipment ID is used in multiple spaces (columns), identical data is not required to be repeated and can be left blank; where heating is not provided, check "N/A".) ☐ N/A							
List Heating Equipment ID in the spaces to the right; duplicating as needed for each unique space served:							
4.17 Electric equipment type: PTHP, WLHP, GSHP, ASHP, VRF, Boiler, Furnace, Electric Resistance							
4.18 Gas Equipment type: HW PTAC / fan coil, Gas-Fired PTAC, Boiler, Furnace							
4.19 Area / Space(s) that system serves:							
4.20 Manufacturer:							
4.21 Model Number:							
4.22 AHRI reference #: [17]							
4.23 Rated efficiency:							
4.24 Equipment output capacity (kBtuh): [19]							
4.25 Air-source heat pump output capacity (kBtuh) (17°F):							
4.26 Type of Venting: Natural Draft, Mechanically Drafted, Direct Vent [21]							
4.27 Furnace heating sizing % = Total capacity (Item 4.24) divided by Total Heat Loss of space(s) in Item 4.20:							

Appendix O – Energy Modeling Reports

HERS Reports

Home Energy Rating Certificate

Projected Report
Based on Plans

Rating Date:
Registry ID:
Ekotrope ID: dmQbY9nd

HERS® Index Score:

47

Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Annual Savings

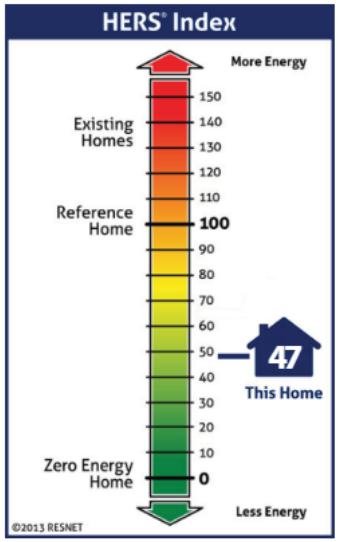
$769

*Relative to an average U.S. home

Home:
TBD
Leesburg, VA 20175
Builder:

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	4.1	$143
Cooling	1.0	$35
Hot Water	5.0	$175
Lights/Appliances	9.2	$323
Service Charges		$60
Generation (e.g. Solar)	0.0	$0
Total:	**19.2**	**$735**



Home Feature Summary:

Home Type:	Apartment, inside unit
Model:	N/A
Community:	Village at Clear Springs
Conditioned Floor Area:	743 ft^2
Number of Bedrooms:	1
Primary Heating System:	Air Source Heat Pump • Electric • 7.5 HSPF2
Primary Cooling System:	Air Source Heat Pump • Electric • 14.3 SEER2
Primary Water Heating:	Residential Water Heater • Electric • 0.93 UEF
House Tightness:	0.3 CFM50 / s.f. Shell Area (Adjusted Infiltration: 2.49 ACH50)
Ventilation:	40 CFM • 19 Watts • ERV
Duct Leakage to Outside:	27 CFM @ 25Pa (3.63 / 100 ft^2)
Above Grade Walls:	R-24
Ceiling:	Adiabatic, R-11
Window Type:	U-Value: 0.28, SHGC: 0.25
Foundation Walls:	N/A
Framed Floor:	N/A

This home meets or exceeds the criteria of the following:

ENERGY STAR MF v1.2
ENERGY STAR MF v1.1
ENERGY STAR MF v1.0
2021 International Energy Conservation Code
2009 International Energy Conservation Code
2006 International Energy Conservation Code

Rating Completed by:

Energy Rater: Kevin Robicheau
RESNET ID: 8611030

Rating Company: Dominion Due Diligence Group
201 Wylderose Drive
804-237-1892

Rating Provider: Green Building Consulting
1435 Vine St 2nd flr, Cincinnati, OH 45202
513.381.1470

Kevin Robicheau, Certified Energy Rater
Date: 1/9/26 at 3:17 PM

ekotrope

Energy savings calculated without modifications to the energy model. (As Modeled)

Ekotrope RATER - Version:5.0.2.3779
The Energy Rating Disclosure for this home is available from the Approved Rating Provider.
This report does not constitute any warranty or guarantee.

Home Energy Rating Certificate

Projected Report
Based on Plans

Rating Date:
Registry ID:
Ekotrope ID: 2JRDBeE2

HERS® Index Score:

46 Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

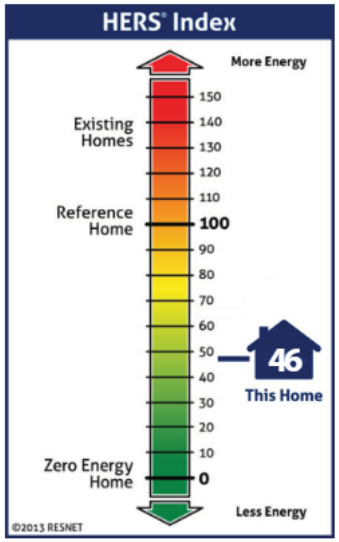
Annual Savings

$858
*Relative to an average U.S. home

Home:
TBD
Leesburg, VA 20175
Builder:

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	4.7	$164
Cooling	1.6	$56
Hot Water	5.0	$175
Lights/Appliances	9.1	$320
Service Charges		$60
Generation (e.g. Solar)	0.0	$0
Total:	**20.3**	**$775**



Home Feature Summary:

Home Type:	Apartment, inside unit
Model:	N/A
Community:	Village at Clear Springs
Conditioned Floor Area:	743 ft^2
Number of Bedrooms:	1
Primary Heating System:	Air Source Heat Pump • Electric • 7.5 HSPF2
Primary Cooling System:	Air Source Heat Pump • Electric • 14.3 SEER2
Primary Water Heating:	Residential Water Heater • Electric • 0.93 UEF
House Tightness:	0.3 CFM50 / s.f. Shell Area (Adjusted Infiltration: 2.22 ACH50)
Ventilation:	40 CFM • 19 Watts • ERV
Duct Leakage to Outside:	27 CFM @ 25Pa (3.63 / 100 ft^2)
Above Grade Walls:	R-24
Ceiling:	Vaulted Roof / Exposed Exterior, R-38
Window Type:	U-Value: 0.28, SHGC: 0.25
Foundation Walls:	N/A
Framed Floor:	R-11

This home meets or exceeds the criteria of the following:

ENERGY STAR MF v1.2
ENERGY STAR MF v1.1
ENERGY STAR MF v1.0
2021 International Energy Conservation Code
2009 International Energy Conservation Code
2006 International Energy Conservation Code

Rating Completed by:

Energy Rater: Kevin Robicheau
RESNET ID: 8611030

Rating Company: Dominion Due Diligence Group
201 Wylderose Drive
804-237-1892

Rating Provider: Green Building Consulting
1435 Vine St 2nd flr, Cincinnati, OH 45202
513.381.1470

Kevin Robicheau, Certified Energy Rater
Date: 1/9/26 at 3:17 PM

ekotrope

Energy savings calculated without modifications to the energy model. (As Modeled)

Ekotrope RATER - Version:5.0.2.3779
The Energy Rating Disclosure for this home is available from the Approved Rating Provider.
This report does not constitute any warranty or guarantee.

Home Energy Rating Certificate

Projected Report
Based on Plans

Rating Date:
Registry ID:
Ekotrope ID: LMk3WrJv

HERS® Index Score:

46 Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Annual Savings

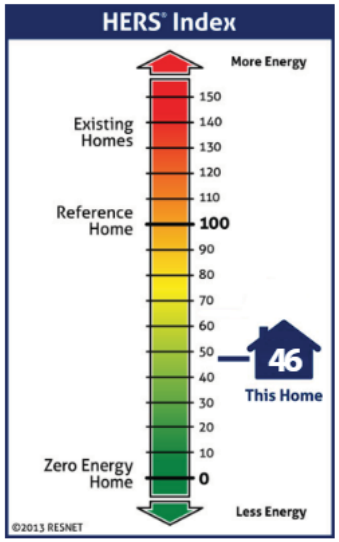
$818

*Relative to an average U.S. home

Home:
TBD
Leesburg, VA 20175
Builder:

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	5.3	$187
Cooling	0.5	$17
Hot Water	5.0	$176
Lights/Appliances	9.3	$326
Service Charges		$60
Generation (e.g. Solar)	0.0	$0
Total:	**20.1**	**$766**



Home Feature Summary:

Home Type:	Apartment, inside unit
Model:	N/A
Community:	Village at Clear Springs
Conditioned Floor Area:	705 ft^2
Number of Bedrooms:	1
Primary Heating System:	Air Source Heat Pump • Electric • 7.8 HSPF2
Primary Cooling System:	Air Source Heat Pump • Electric • 14.3 SEER2
Primary Water Heating:	Residential Water Heater • Electric • 0.93 UEF
House Tightness:	0.3 CFM50 / s.f. Shell Area (Adjusted Infiltration: 2.53 ACH50)
Ventilation:	40 CFM • 23 Watts • ERV
Duct Leakage to Outside:	27 CFM @ 25Pa (3.83 / 100 ft^2)
Above Grade Walls:	R-24
Ceiling:	Adiabatic, R-11
Window Type:	U-Value: 0.28, SHGC: 0.25
Foundation Walls:	N/A
Framed Floor:	N/A

This home meets or exceeds the criteria of the following:

ENERGY STAR MF v1.2
ENERGY STAR MF v1.1
ENERGY STAR MF v1.0
2021 International Energy Conservation Code
2009 International Energy Conservation Code
2006 International Energy Conservation Code

Rating Completed by:

Energy Rater: Kevin Robicheau
RESNET ID: 8611030

Rating Company: Dominion Due Diligence Group
201 Wylderose Drive
804-237-1892

Rating Provider: Green Building Consulting
1435 Vine St 2nd flr, Cincinnati, OH 45202
513.381.1470

Kevin Robicheau, Certified Energy Rater
Date: 1/9/26 at 3:17 PM

ekotrope

Energy savings calculated without modifications to the energy model. (As Modeled)

Ekotrope RATER - Version:5.0.2.3779
The Energy Rating Disclosure for this home is available from the Approved Rating Provider.
This report does not constitute any warranty or guarantee.

Home Energy Rating Certificate

Projected Report
Based on Plans

Rating Date:
Registry ID:
Ekotrope ID: da8an8aL

HERS® Index Score:

46 Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Annual Savings

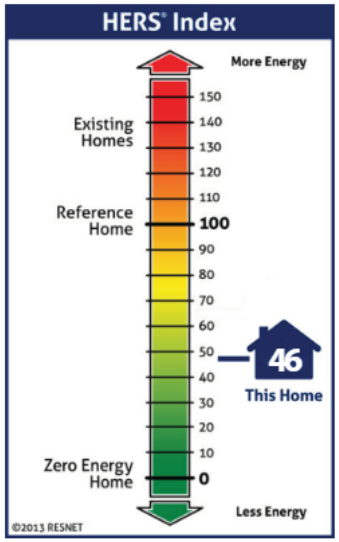
$834

*Relative to an average U.S. home

Home:
TBD
Leesburg, VA 20175
Builder:

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	4.1	$146
Cooling	1.6	$55
Hot Water	5.0	$176
Lights/Appliances	9.0	$318
Service Charges		$60
Generation (e.g. Solar)	0.0	$0
Total:	**19.7**	**$754**



Home Feature Summary:

Home Type:	Apartment, inside unit
Model:	N/A
Community:	Village at Clear Springs
Conditioned Floor Area:	705 ft^2
Number of Bedrooms:	1
Primary Heating System:	Air Source Heat Pump • Electric • 7.8 HSPF2
Primary Cooling System:	Air Source Heat Pump • Electric • 14.3 SEER2
Primary Water Heating:	Residential Water Heater • Electric • 0.93 UEF
House Tightness:	0.3 CFM50 / s.f. Shell Area (Adjusted Infiltration: 2.13 ACH50)
Ventilation:	40 CFM • 23 Watts • ERV
Duct Leakage to Outside:	27 CFM @ 25Pa (3.83 / 100 ft^2)
Above Grade Walls:	R-24
Ceiling:	Vaulted Roof / Exposed Exterior, R-43
Window Type:	U-Value: 0.28, SHGC: 0.25
Foundation Walls:	N/A
Framed Floor:	R-11

This home meets or exceeds the criteria of the following:

ENERGY STAR MF v1.2
ENERGY STAR MF v1.1
ENERGY STAR MF v1.0
2021 International Energy Conservation Code
2009 International Energy Conservation Code
2006 International Energy Conservation Code

Rating Completed by:

Energy Rater: Kevin Robicheau
RESNET ID: 8611030

Rating Company: Dominion Due Diligence Group
201 Wylderose Drive
804-237-1892

Rating Provider: Green Building Consulting
1435 Vine St 2nd flr, Cincinnati, OH 45202
513.381.1470

Kevin Robicheau, Certified Energy Rater
Date: 1/9/26 at 3:17 PM

ekotrope

Energy savings calculated without modifications to the energy model. (As Modeled)

Ekotrope RATER - Version:5.0.2.3779
The Energy Rating Disclosure for this home is available from the Approved Rating Provider.
This report does not constitute any warranty or guarantee.

Home Energy Rating Certificate

Projected Report
Based on Plans

Rating Date:
Registry ID:
Ekotrope ID: LXgAONe2

HERS® Index Score:

45

Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Annual Savings

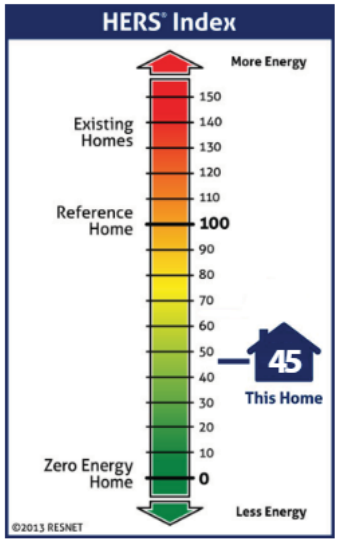
$936

*Relative to an average U.S. home

Home:
TBD
Leesburg, VA 20175
Builder:

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	4.4	$155
Cooling	1.5	$54
Hot Water	4.9	$172
Lights/Appliances	9.6	$336
Service Charges		$60
Generation (e.g. Solar)	0.0	$0
Total:	**20.4**	**$778**



Home Feature Summary:

Home Type:	Apartment, inside unit
Model:	N/A
Community:	Village at Clear Springs
Conditioned Floor Area:	836 ft^2
Number of Bedrooms:	1
Primary Heating System:	Air Source Heat Pump • Electric • 7.8 HSPF2
Primary Cooling System:	Air Source Heat Pump • Electric • 14.3 SEER2
Primary Water Heating:	Residential Water Heater • Electric • 0.93 UEF
House Tightness:	0.3 CFM50 / s.f. Shell Area (Adjusted Infiltration: 1.29 ACH50)
Ventilation:	40 CFM • 23 Watts • ERV
Duct Leakage to Outside:	32 CFM @ 25Pa (3.83 / 100 ft^2)
Above Grade Walls:	R-24
Ceiling:	Adiabatic, R-11
Window Type:	U-Value: 0.29, SHGC: 0.28
Foundation Walls:	N/A
Framed Floor:	R-28

This home meets or exceeds the criteria of the following:

ENERGY STAR MF v1.2
ENERGY STAR MF v1.1
ENERGY STAR MF v1.0
2021 International Energy Conservation Code
2009 International Energy Conservation Code
2006 International Energy Conservation Code

Rating Completed by:

Energy Rater: Kevin Robicheau
RESNET ID: 8611030

Rating Company: Dominion Due Diligence Group
201 Wylderose Drive
804-237-1892

Rating Provider: Green Building Consulting
1435 Vine St 2nd flr, Cincinnati, OH 45202
513.381.1470

Kevin Robicheau, Certified Energy Rater
Date: 1/9/26 at 3:17 PM

ekotrope

Energy savings calculated without modifications to the energy model. (As Modeled)

Ekotrope RATER - Version:5.0.2.3779
The Energy Rating Disclosure for this home is available from the Approved Rating Provider.
This report does not constitute any warranty or guarantee.

Home Energy Rating Certificate

Projected Report
Based on Plans

Rating Date:
Registry ID:
Ekotrope ID: dxVJeK02

HERS® Index Score:

44 Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Annual Savings

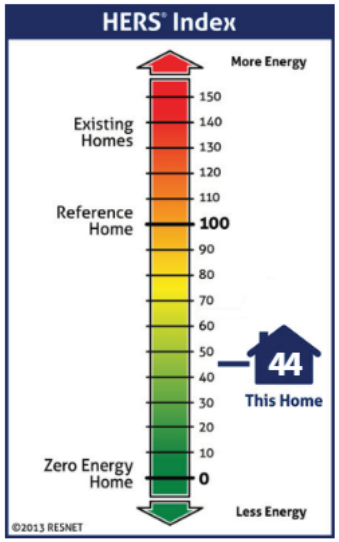
$909

*Relative to an average U.S. home

Home:
TBD
Leesburg, VA 20175
Builder:

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	5.3	$185
Cooling	1.6	$57
Hot Water	4.9	$172
Lights/Appliances	9.6	$337
Service Charges		$60
Generation (e.g. Solar)	0.0	$0
Total:	**21.4**	**$812**



Home Feature Summary:

Home Type:	Apartment, inside unit
Model:	N/A
Community:	Village at Clear Springs
Conditioned Floor Area:	836 ft^2
Number of Bedrooms:	1
Primary Heating System:	Air Source Heat Pump • Electric • 7.8 HSPF2
Primary Cooling System:	Air Source Heat Pump • Electric • 14.3 SEER2
Primary Water Heating:	Residential Water Heater • Electric • 0.93 UEF
House Tightness:	0.3 CFM50 / s.f. Shell Area (Adjusted Infiltration: 1.14 ACH50)
Ventilation:	40 CFM • 23 Watts • ERV
Duct Leakage to Outside:	32 CFM @ 25Pa (3.83 / 100 ft^2)
Above Grade Walls:	R-24
Ceiling:	Adiabatic, R-43
Window Type:	U-Value: 0.29, SHGC: 0.28
Foundation Walls:	N/A
Framed Floor:	R-11

This home meets or exceeds the criteria of the following:

ENERGY STAR MF v1.2
ENERGY STAR MF v1.1
ENERGY STAR MF v1.0
2021 International Energy Conservation Code
2009 International Energy Conservation Code
2006 International Energy Conservation Code

Rating Completed by:

Energy Rater: Kevin Robicheau
RESNET ID: 8611030

Rating Company: Dominion Due Diligence Group
201 Wylderose Drive
804-237-1892

Rating Provider: Green Building Consulting
1435 Vine St 2nd flr, Cincinnati, OH 45202
513.381.1470

Kevin Robicheau, Certified Energy Rater
Date: 1/9/26 at 3:17 PM

ekotrope

Energy savings calculated without modifications to the energy model. (As Modeled)

Ekotrope RATER - Version:5.0.2.3779
The Energy Rating Disclosure for this home is available from the Approved Rating Provider.
This report does not constitute any warranty or guarantee.

Home Energy Rating Certificate

Projected Report
Based on Plans

Rating Date:
Registry ID:
Ekotrope ID: LZgQVAxd

HERS® Index Score:

42 Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Annual Savings

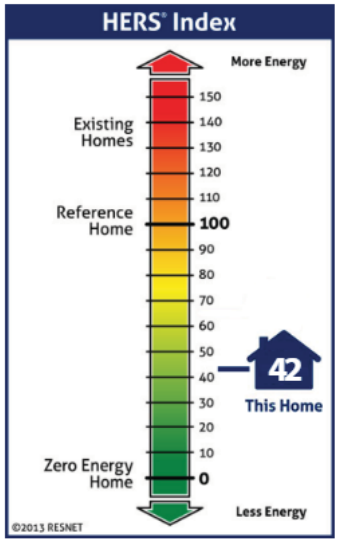
$1,133

*Relative to an average U.S. home

Home:
TBD
Leesburg, VA 20175
Builder:

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	6.0	$210
Cooling	1.8	$62
Hot Water	6.4	$225
Lights/Appliances	10.8	$380
Service Charges		$60
Generation (e.g. Solar)	0.0	$0
Total:	**24.9**	**$937**



Home Feature Summary:

Home Type:	Apartment, inside unit
Model:	N/A
Community:	Village at Clear Springs
Conditioned Floor Area:	938 ft^2
Number of Bedrooms:	2
Primary Heating System:	Air Source Heat Pump • Electric • 7.5 HSPF2
Primary Cooling System:	Air Source Heat Pump • Electric • 14.3 SEER2
Primary Water Heating:	Residential Water Heater • Electric • 0.93 UEF
House Tightness:	0.3 CFM50 / s.f. Shell Area (Adjusted Infiltration: 0.74 ACH50)
Ventilation:	40 CFM • 23 Watts • ERV
Duct Leakage to Outside:	36 CFM @ 25Pa (3.84 / 100 ft^2)
Above Grade Walls:	R-24
Ceiling:	Adiabatic, R-11
Window Type:	U-Value: 0.28, SHGC: 0.29
Foundation Walls:	N/A
Framed Floor:	R-28

This home meets or exceeds the criteria of the following:

ENERGY STAR MF v1.2
ENERGY STAR MF v1.1
ENERGY STAR MF v1.0
2021 International Energy Conservation Code
2009 International Energy Conservation Code
2006 International Energy Conservation Code

Rating Completed by:

Energy Rater: Kevin Robicheau
RESNET ID: 8611030

Rating Company: Dominion Due Diligence Group
201 Wylderose Drive
804-237-1892

Rating Provider: Green Building Consulting
1435 Vine St 2nd flr, Cincinnati, OH 45202
513.381.1470

Kevin Robicheau, Certified Energy Rater
Date: 1/9/26 at 3:17 PM

ekotrope

Energy savings calculated without modifications to the energy model. (As Modeled)

Ekotrope RATER - Version:5.0.2.3779
The Energy Rating Disclosure for this home is available from the Approved Rating Provider.
This report does not constitute any warranty or guarantee.

Home Energy Rating Certificate

Projected Report
Based on Plans

Rating Date:
Registry ID:
Ekotrope ID: LZgQbgRd

HERS® Index Score:

45

Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Annual Savings

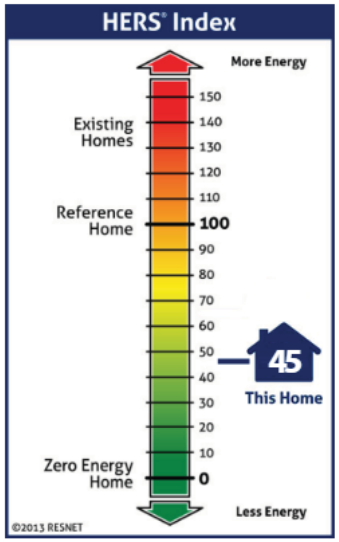
$1,090

*Relative to an average U.S. home

Home:
TBD
Leesburg, VA 20175
Builder:

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	5.8	$203
Cooling	2.1	$74
Hot Water	6.7	$234
Lights/Appliances	10.8	$380
Service Charges		$60
Generation (e.g. Solar)	0.0	$0
Total:	**25.3**	**$951**



Home Feature Summary:

Home Type:	Apartment, inside unit
Model:	N/A
Community:	Village at Clear Springs
Conditioned Floor Area:	938 ft^2
Number of Bedrooms:	2
Primary Heating System:	Air Source Heat Pump • Electric • 7.5 HSPF2
Primary Cooling System:	Air Source Heat Pump • Electric • 14.3 SEER2
Primary Water Heating:	Residential Water Heater • Electric • 0.93 Energy Factor
House Tightness:	0.3 CFM50 / s.f. Shell Area (Adjusted Infiltration: 2.25 ACH50)
Ventilation:	40 CFM • 23 Watts • ERV
Duct Leakage to Outside:	36 CFM @ 25Pa (3.84 / 100 ft^2)
Above Grade Walls:	R-24
Ceiling:	Vaulted Roof / Exposed Exterior, R-43
Window Type:	U-Value: 0.28, SHGC: 0.29
Foundation Walls:	N/A
Framed Floor:	R-11

This home meets or exceeds the criteria of the following:

ENERGY STAR MF v1.2
ENERGY STAR MF v1.1
ENERGY STAR MF v1.0
2021 International Energy Conservation Code
2009 International Energy Conservation Code
2006 International Energy Conservation Code

Rating Completed by:

Energy Rater: Kevin Robicheau
RESNET ID: 8611030

Rating Company: Dominion Due Diligence Group
201 Wylderose Drive
804-237-1892

Rating Provider: Green Building Consulting
1435 Vine St 2nd flr, Cincinnati, OH 45202
513.381.1470

Kevin Robicheau, Certified Energy Rater
Date: 1/9/26 at 3:17 PM

ekotrope

Energy savings calculated without modifications to the energy model. (As Modeled)

Ekotrope RATER - Version:5.0.2.3779
The Energy Rating Disclosure for this home is available from the Approved Rating Provider.
This report does not constitute any warranty or guarantee.

Home Energy Rating Certificate

Projected Report
Based on Plans

Rating Date:
Registry ID:
Ekotrope ID: dWPzrqOv

HERS® Index Score:

41

Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Annual Savings

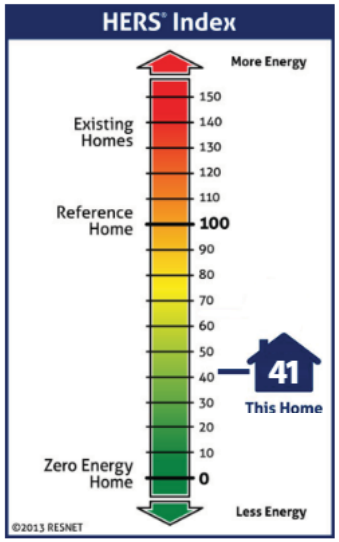
$1,264

*Relative to an average U.S. home

Home:
TBD
Leesburg, VA 20175
Builder:

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	6.0	$211
Cooling	1.8	$65
Hot Water	6.4	$224
Lights/Appliances	11.8	$416
Service Charges		$60
Generation (e.g. Solar)	0.0	$0
Total:	**26.1**	**$977**



Home Feature Summary:

Home Type:	Apartment, inside unit
Model:	N/A
Community:	Village at Clear Springs
Conditioned Floor Area:	1,198 ft²
Number of Bedrooms:	2
Primary Heating System:	Air Source Heat Pump • Electric • 7.5 HSPF2
Primary Cooling System:	Air Source Heat Pump • Electric • 14.3 SEER2
Primary Water Heating:	Residential Water Heater • Electric • 0.93 UEF
House Tightness:	0.3 CFM50 / s.f. Shell Area (Adjusted Infiltration: 0.35 ACH50)
Ventilation:	40 CFM • 23 Watts • ERV
Duct Leakage to Outside:	46 CFM @ 25Pa (3.84 / 100 ft²)
Above Grade Walls:	R-24
Ceiling:	Adiabatic, R-11
Window Type:	U-Value: 0.28, SHGC: 0.29
Foundation Walls:	N/A
Framed Floor:	R-28

This home meets or exceeds the criteria of the following:

ENERGY STAR MF v1.2
ENERGY STAR MF v1.1
ENERGY STAR MF v1.0
2021 International Energy Conservation Code
2009 International Energy Conservation Code
2006 International Energy Conservation Code

Rating Completed by:

Energy Rater: Kevin Robicheau
RESNET ID: 8611030

Rating Company: Dominion Due Diligence Group
201 Wylderose Drive
804-237-1892

Rating Provider: Green Building Consulting
1435 Vine St 2nd flr, Cincinnati, OH 45202
513.381.1470

Kevin Robicheau, Certified Energy Rater
Date: 1/9/26 at 3:17 PM

ekotrope

Energy savings calculated without modifications to the energy model. (As Modeled)

Ekotrope RATER - Version:5.0.2.3779
The Energy Rating Disclosure for this home is available from the Approved Rating Provider.
This report does not constitute any warranty or guarantee.

Home Energy Rating Certificate

Projected Report
Based on Plans

Rating Date:
Registry ID:
Ekotrope ID: vjgbQ032

HERS® Index Score:

41

Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Annual Savings

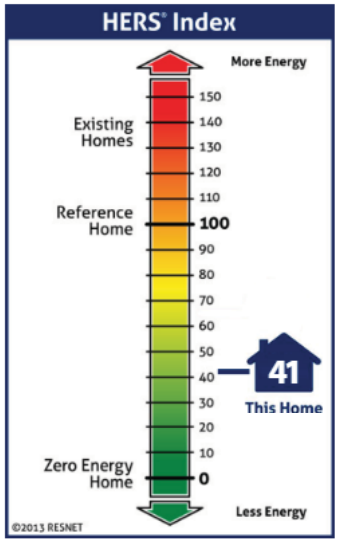
$1,262

*Relative to an average U.S. home

Home:
TBD
Leesburg, VA 20175
Builder:

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	6.3	$221
Cooling	1.9	$66
Hot Water	6.4	$224
Lights/Appliances	11.9	$417
Service Charges		$60
Generation (e.g. Solar)	0.0	$0
Total:	**26.4**	**$988**



Home Feature Summary:

Home Type:	Apartment, inside unit
Model:	N/A
Community:	Village at Clear Springs
Conditioned Floor Area:	1,198 ft²
Number of Bedrooms:	2
Primary Heating System:	Air Source Heat Pump • Electric • 7.5 HSPF2
Primary Cooling System:	Air Source Heat Pump • Electric • 14.3 SEER2
Primary Water Heating:	Residential Water Heater • Electric • 0.93 UEF
House Tightness:	0.3 CFM50 / s.f. Shell Area (Adjusted Infiltration: 0.31 ACH50)
Ventilation:	40 CFM • 23 Watts • ERV
Duct Leakage to Outside:	46 CFM @ 25Pa (3.84 / 100 ft²)
Above Grade Walls:	R-24
Ceiling:	Adiabatic, R-11
Window Type:	U-Value: 0.28, SHGC: 0.29
Foundation Walls:	N/A
Framed Floor:	R-28

This home meets or exceeds the criteria of the following:

ENERGY STAR MF v1.2
ENERGY STAR MF v1.1
ENERGY STAR MF v1.0
2021 International Energy Conservation Code
2009 International Energy Conservation Code
2006 International Energy Conservation Code

Rating Completed by:

Energy Rater: Kevin Robicheau
RESNET ID: 8611030

Rating Company: Dominion Due Diligence Group
201 Wylderose Drive
804-237-1892

Rating Provider: Green Building Consulting
1435 Vine St 2nd flr, Cincinnati, OH 45202
513.381.1470

Kevin Robicheau, Certified Energy Rater
Date: 1/9/26 at 3:17 PM

ekotrope

Energy savings calculated without modifications to the energy model. (As Modeled)

Ekotrope RATER - Version:5.0.2.3779
The Energy Rating Disclosure for this home is available from the Approved Rating Provider.
This report does not constitute any warranty or guarantee.

Home Energy Rating Certificate

Projected Report
Based on Plans

Rating Date:
Registry ID:
Ekotrope ID: dxmMqkRv

HERS® Index Score:

46 Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Annual Savings

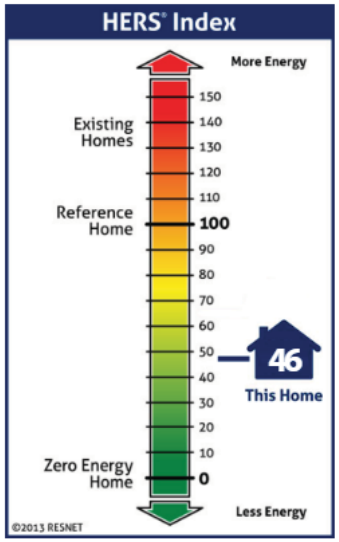
$1,169

*Relative to an average U.S. home

Home:
TBD
Leesburg, VA 20175
Builder:

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	8.4	$295
Cooling	1.2	$42
Hot Water	6.4	$226
Lights/Appliances	11.7	$411
Service Charges		$60
Generation (e.g. Solar)	0.0	$0
Total:	**27.7**	**$1,034**



Home Feature Summary:

Home Type:	Apartment, end unit
Model:	N/A
Community:	Village at Clear Springs
Conditioned Floor Area:	1,103 ft²
Number of Bedrooms:	2
Primary Heating System:	Air Source Heat Pump • Electric • 7.5 HSPF2
Primary Cooling System:	Air Source Heat Pump • Electric • 14.3 SEER2
Primary Water Heating:	Residential Water Heater • Electric • 0.93 UEF
House Tightness:	0.3 CFM50 / s.f. Shell Area (Adjusted Infiltration: 2.83 ACH50)
Ventilation:	40 CFM • 23 Watts • ERV
Duct Leakage to Outside:	42 CFM @ 25Pa (3.81 / 100 ft²)
Above Grade Walls:	R-24
Ceiling:	Adiabatic, R-11
Window Type:	U-Value: 0.28, SHGC: 0.29
Foundation Walls:	N/A
Framed Floor:	N/A

This home meets or exceeds the criteria of the following:

ENERGY STAR MF v1.2
ENERGY STAR MF v1.1
ENERGY STAR MF v1.0
2021 International Energy Conservation Code
2009 International Energy Conservation Code
2006 International Energy Conservation Code

Rating Completed by:

Energy Rater: Kevin Robicheau
RESNET ID: 8611030

Rating Company: Dominion Due Diligence Group
201 Wylderose Drive
804-237-1892

Rating Provider: Green Building Consulting
1435 Vine St 2nd flr, Cincinnati, OH 45202
513.381.1470

Kevin Robicheau, Certified Energy Rater
Date: 1/9/26 at 3:17 PM

ekotrope

Energy savings calculated without modifications to the energy model. (As Modeled)

Ekotrope RATER - Version:5.0.2.3779
The Energy Rating Disclosure for this home is available from the Approved Rating Provider.
This report does not constitute any warranty or guarantee.

Home Energy Rating Certificate

Projected Report
Based on Plans

Rating Date:
Registry ID:
Ekotrope ID: 2RJ58Pq2

HERS® Index Score:

45 Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Annual Savings

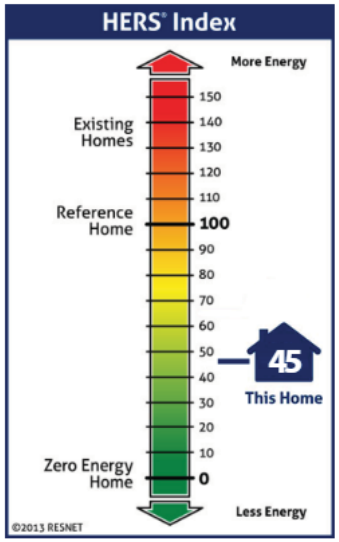
$1,251

*Relative to an average U.S. home

Home:
TBD
Leesburg, VA 20175
Builder:

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	7.9	$278
Cooling	2.8	$97
Hot Water	6.4	$226
Lights/Appliances	11.5	$403
Service Charges		$60
Generation (e.g. Solar)	0.0	$0
Total:	**28.6**	**$1,065**



Home Feature Summary:

Home Type:	Apartment, end unit
Model:	N/A
Community:	Village at Clear Springs
Conditioned Floor Area:	1,103 ft²
Number of Bedrooms:	2
Primary Heating System:	Air Source Heat Pump • Electric • 7.5 HSPF2
Primary Cooling System:	Air Source Heat Pump • Electric • 14.3 SEER2
Primary Water Heating:	Residential Water Heater • Electric • 0.93 UEF
House Tightness:	0.3 CFM50 / s.f. Shell Area (Adjusted Infiltration: 2.66 ACH50)
Ventilation:	40 CFM • 23 Watts • ERV
Duct Leakage to Outside:	42 CFM @ 25Pa (3.81 / 100 ft²)
Above Grade Walls:	R-24
Ceiling:	Vaulted Roof / Exposed Exterior, R-43
Window Type:	U-Value: 0.28, SHGC: 0.29
Foundation Walls:	N/A
Framed Floor:	R-11

This home meets or exceeds the criteria of the following:

ENERGY STAR MF v1.2
ENERGY STAR MF v1.1
ENERGY STAR MF v1.0
2021 International Energy Conservation Code
2009 International Energy Conservation Code
2006 International Energy Conservation Code

Rating Completed by:

Energy Rater: Kevin Robicheau
RESNET ID: 8611030

Rating Company: Dominion Due Diligence Group
201 Wylderose Drive
804-237-1892

Rating Provider: Green Building Consulting
1435 Vine St 2nd flr, Cincinnati, OH 45202
513.381.1470

Kevin Robicheau, Certified Energy Rater
Date: 1/9/26 at 3:17 PM

ekotrope

Ekotrope RATER - Version:5.0.2.3779

Energy savings calculated without modifications to the energy model. (As Modeled)

The Energy Rating Disclosure for this home is available from the Approved Rating Provider.
This report does not constitute any warranty or guarantee.

Home Energy Rating Certificate

Projected Report
Based on Plans

Rating Date:
Registry ID:
Ekotrope ID: dG5NwxW2

HERS® Index Score:

46 Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Annual Savings

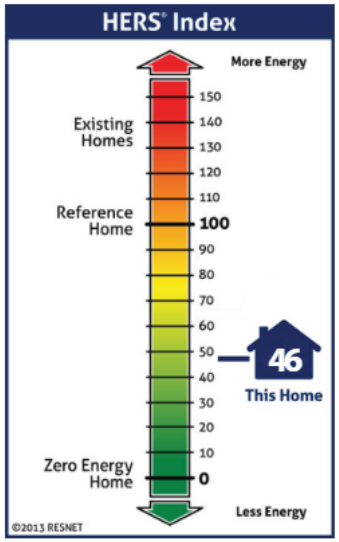
$1,311

*Relative to an average U.S. home

Home:
TBD
Leesburg, VA 20175
Builder:

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	9.4	$332
Cooling	1.6	$55
Hot Water	8.0	$280
Lights/Appliances	13.0	$458
Service Charges		$60
Generation (e.g. Solar)	0.0	$0
Total:	**32.0**	**$1,184**



Home Feature Summary:

Home Type:	Apartment, end unit
Model:	N/A
Community:	Village at Clear Springs
Conditioned Floor Area:	1,191 ft²
Number of Bedrooms:	3
Primary Heating System:	Air Source Heat Pump • Electric • 7.5 HSPF2
Primary Cooling System:	Air Source Heat Pump • Electric • 14.3 SEER2
Primary Water Heating:	Residential Water Heater • Electric • 0.93 UEF
House Tightness:	0.3 CFM50 / s.f. Shell Area (Adjusted Infiltration: 2.95 ACH50)
Ventilation:	59 CFM • 39 Watts • ERV
Duct Leakage to Outside:	46 CFM @ 25Pa (3.86 / 100 ft²)
Above Grade Walls:	R-24
Ceiling:	Adiabatic, R-11
Window Type:	U-Value: 0.28, SHGC: 0.29
Foundation Walls:	N/A
Framed Floor:	N/A

This home meets or exceeds the criteria of the following:

ENERGY STAR MF v1.2
ENERGY STAR MF v1.1
ENERGY STAR MF v1.0
2021 International Energy Conservation Code
2009 International Energy Conservation Code
2006 International Energy Conservation Code

Rating Completed by:

Energy Rater: Kevin Robicheau
RESNET ID: 8611030

Rating Company: Dominion Due Diligence Group
201 Wylderose Drive
804-237-1892

Rating Provider: Green Building Consulting
1435 Vine St 2nd flr, Cincinnati, OH 45202
513.381.1470

Kevin Robicheau, Certified Energy Rater
Date: 1/9/26 at 3:17 PM

Home Energy Rating Certificate

Projected Report
Based on Plans

Rating Date:
Registry ID:
Ekotrope ID: LzlJ7Bov

HERS® Index Score:

46 Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Annual Savings

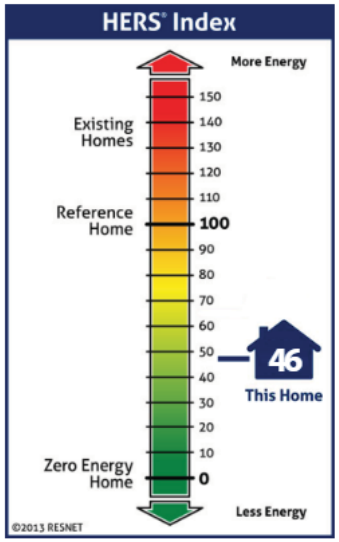
$1,402

*Relative to an average U.S. home

Home:
TBD
Leesburg, VA 20175
Builder:

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	9.0	$315
Cooling	3.4	$118
Hot Water	8.0	$280
Lights/Appliances	12.8	$449
Service Charges		$60
Generation (e.g. Solar)	0.0	$0
Total:	**33.0**	**$1,222**



Home Feature Summary:

Home Type:	Apartment, end unit
Model:	N/A
Community:	Village at Clear Springs
Conditioned Floor Area:	1,191 ft²
Number of Bedrooms:	3
Primary Heating System:	Air Source Heat Pump • Electric • 7.5 HSPF2
Primary Cooling System:	Air Source Heat Pump • Electric • 14.3 SEER2
Primary Water Heating:	Residential Water Heater • Electric • 0.93 UEF
House Tightness:	0.3 CFM50 / s.f. Shell Area (Adjusted Infiltration: 2.77 ACH50)
Ventilation:	59 CFM • 39 Watts • ERV
Duct Leakage to Outside:	46 CFM @ 25Pa (3.86 / 100 ft²)
Above Grade Walls:	R-24
Ceiling:	Vaulted Roof / Exposed Exterior, R-43
Window Type:	U-Value: 0.28, SHGC: 0.29
Foundation Walls:	N/A
Framed Floor:	R-11

This home meets or exceeds the criteria of the following:

ENERGY STAR MF v1.2
ENERGY STAR MF v1.1
ENERGY STAR MF v1.0
2021 International Energy Conservation Code
2009 International Energy Conservation Code
2006 International Energy Conservation Code

Rating Completed by:

Energy Rater: Kevin Robicheau
RESNET ID: 8611030

Rating Company: Dominion Due Diligence Group
201 Wylderose Drive
804-237-1892

Rating Provider: Green Building Consulting
1435 Vine St 2nd flr, Cincinnati, OH 45202
513.381.1470

Kevin Robicheau, Certified Energy Rater
Date: 1/9/26 at 3:17 PM

ekotrope

Ekotrope RATER - Version:5.0.2.3779

Energy savings calculated without modifications to the energy model. (As Modeled)

The Energy Rating Disclosure for this home is available from the Approved Rating Provider.
This report does not constitute any warranty or guarantee.

ENERGY STAR Reports

ENERGY STAR MF V1.2 Home Report

Property
TBD
Leesburg, VA 20175
Community: Village at Clear Springs

Organization
Dominion Due Diligence Gr
Kevin Robicheau
804-380-3924

Inspection Status
Results are projected

Village at Clear Springs Phase 1 - A1 Alt1 I
Initial House Design

Builder

UNCONFIRMED

Mandatory Requirements

- ✔ Duct leakage at post construction better than or equal to applicable requirements.
- ✔ This dwelling unit's thermal envelope UA meets or exceeds 2021 IECC Residential requirements.
- ✔ Slab on Grade Insulation must be > R-5, and at IECC 2009 Depth for Climate Zones 4 and above.
- ✔ Envelope insulation achieves RESNET Grade I installation, or uses exceptions in footnote 5.
- ✔ Total window thermal properties meet or exceed the applicable requirements
- ✔ Duct insulation meets the EPA minimum requirements of R-6.
- ✔ Mechanical ventilation system is installed in the home.
- ✔ Measured infiltration is better than or equal to applicable requirements.
- ✔ ENERGY STAR Checklists fully verified and complete.

ERI (HERS) Index Target

Reference Home ERI (HERS)	51
As Designed Home ERI (HERS)	47
As Designed Home ERI (HERS) w/o PV	47

Normalized, Modified End-Use Loads (MBtu / year)

	ENERGY STAR	As Designed
Heating	4.0	2.8
Cooling	0.8	0.8
Water Heating	3.6	4.3
Lights and Appliances	10.0	9.2
Total	18.4	17.1

This home MEETS or EXCEEDS the energy efficiency requirements for designation as an EPA ENERGY STAR Qualified Home under Version Multifamily V1.2

Pollution Prevented

Type of Emissions	*Reduction*
Carbon Dioxide (CO_2) - tons/yr	-0.1

Energy Cost Savings $/yr

Heating	-2
Cooling	-12
Water Heating	-28
Lights & Appliances	26
Generation Savings	0
Total	-15

The energy savings and pollution prevented are calculated by comparing the Rated Home to the ENERGY STAR Version Multifamily V1.2 Reference Home as defined in the ENERGY STAR Qualified Homes ERI (HERS) Target Procedure for National Program Requirements, Version Multifamily V1.2 promulgated by the Environmental Protection Agency (EPA). In accordance with the ANSI/RESNET/ICC 301 Standard, building inputs affecting setpoints infiltration rates, window shading and the existence of mechanical systems may have been changed prior to calculating loads

All results are based on data entered by Ekotrope users. Ekotrope disclaims all liability for the information shown on this report.

ENERGY STAR MF V1.2 Home Report

Property
TBD
Leesburg, VA 20175
Community: Village at Clear Springs

Organization
Dominion Due Diligence Gr
Kevin Robicheau
804-380-3924

Inspection Status
Results are projected

Village at Clear Springs Phase 1 - A1 Alt1 1
Initial House Design

Builder

UNCONFIRMED

Mandatory Requirements

- ✔ Duct leakage at post construction better than or equal to applicable requirements.
- ✔ This dwelling unit's thermal envelope UA meets or exceeds 2021 IECC Residential requirements.
- ✔ Slab on Grade Insulation must be > R-5, and at IECC 2009 Depth for Climate Zones 4 and above.
- ✔ Envelope insulation achieves RESNET Grade I installation, or uses exceptions in footnote 5.
- ✔ Total window thermal properties meet or exceed the applicable requirements
- ✔ Duct insulation meets the EPA minimum requirements of R-6.
- ✔ Mechanical ventilation system is installed in the home.
- ✔ Measured infiltration is better than or equal to applicable requirements.
- ✔ ENERGY STAR Checklists fully verified and complete.

ERI (HERS) Index Target

Reference Home ERI (HERS)	49
As Designed Home ERI (HERS)	46
As Designed Home ERI (HERS) w/o PV	46

Normalized, Modified End-Use Loads (MBtu / year)

	ENERGY STAR	As Designed
Heating	4.3	3.4
Cooling	2.0	1.6
Water Heating	3.6	4.3
Lights and Appliances	9.7	9.2
Total	19.6	18.5

This home MEETS or EXCEEDS the energy efficiency requirements for designation as an EPA ENERGY STAR Qualified Home under Version Multifamily V1.2

Pollution Prevented

Type of Emissions	*Reduction*
Carbon Dioxide (CO_2) - tons/yr	-0.0

Energy Cost Savings $/yr

Heating	-5
Cooling	-2
Water Heating	-28
Lights & Appliances	18
Generation Savings	0
Total	-17

The energy savings and pollution prevented are calculated by comparing the Rated Home to the ENERGY STAR Version Multifamily V1.2 Reference Home as defined in the ENERGY STAR Qualified Homes ERI (HERS) Target Procedure for National Program Requirements, Version Multifamily V1.2 promulgated by the Environmental Protection Agency (EPA). In accordance with the ANSI/RESNET/ICC 301 Standard, building inputs affecting setpoints infiltration rates, window shading and the existence of mechanical systems may have been changed prior to calculating loads

All results are based on data entered by Ekotrope users. Ekotrope disclaims all liability for the information shown on this report.

ENERGY STAR MF V1.2 Home Report

Property
TBD
Leesburg, VA 20175
Community: Village at Clear Springs

Village at Clear Springs Phase 1 - A1 LL
Initial House Design

Organization
Dominion Due Diligence Gr
Kevin Robicheau
804-380-3924

Builder

Inspection Status
Results are projected

UNCONFIRMED

Mandatory Requirements

- ✔ Duct leakage at post construction better than or equal to applicable requirements.
- ✔ This dwelling unit's thermal envelope UA meets or exceeds 2021 IECC Residential requirements.
- ✔ Slab on Grade Insulation must be > R-5, and at IECC 2009 Depth for Climate Zones 4 and above.
- ✔ Envelope insulation achieves RESNET Grade I installation, or uses exceptions in footnote 5.
- ✔ Total window thermal properties meet or exceed the applicable requirements
- ✔ Duct insulation meets the EPA minimum requirements of R-6.
- ✔ Mechanical ventilation system is installed in the home.
- ✔ Measured infiltration is better than or equal to applicable requirements.
- ✔ ENERGY STAR Checklists fully verified and complete.

ERI (HERS) Index Target

Reference Home ERI (HERS)	55
As Designed Home ERI (HERS)	46
As Designed Home ERI (HERS) w/o PV	46

Normalized, Modified End-Use Loads (MBtu / year)

	ENERGY STAR	As Designed
Heating	6.6	4.3
Cooling	0.3	0.2
Water Heating	3.7	4.3
Lights and Appliances	10.8	9.3
Total	21.4	18.2

This home MEETS or EXCEEDS the energy efficiency requirements for designation as an EPA ENERGY STAR Qualified Home under Version Multifamily V1.2

Pollution Prevented

Type of Emissions	*Reduction*
Carbon Dioxide (CO_2) - tons/yr	0.1

Energy Cost Savings

	$/yr
Heating	20
Cooling	-9
Water Heating	-26
Lights & Appliances	54
Generation Savings	0
Total	39

The energy savings and pollution prevented are calculated by comparing the Rated Home to the ENERGY STAR Version Multifamily V1.2 Reference Home as defined in the ENERGY STAR Qualified Homes ERI (HERS) Target Procedure for National Program Requirements, Version Multifamily V1.2 promulgated by the Environmental Protection Agency (EPA). In accordance with the ANSI/RESNET/ICC 301 Standard, building inputs affecting setpoints infiltration rates, window shading and the existence of mechanical systems may have been changed prior to calculating loads

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ENERGY STAR MF V1.2 Home Report

Property
TBD
Leesburg, VA 20175
Community: Village at Clear Springs

Village at Clear Springs Phase 1 - A1 TL
Initial House Design

Organization
Dominion Due Diligence Gr
Kevin Robicheau
804-380-3924

Builder

Inspection Status
Results are projected

UNCONFIRMED

Mandatory Requirements

- ✔ Duct leakage at post construction better than or equal to applicable requirements.
- ✔ This dwelling unit's thermal envelope UA meets or exceeds 2021 IECC Residential requirements.
- ✔ Slab on Grade Insulation must be > R-5, and at IECC 2009 Depth for Climate Zones 4 and above.
- ✔ Envelope insulation achieves RESNET Grade I installation, or uses exceptions in footnote 5.
- ✔ Total window thermal properties meet or exceed the applicable requirements
- ✔ Duct insulation meets the EPA minimum requirements of R-6.
- ✔ Mechanical ventilation system is installed in the home.
- ✔ Measured infiltration is better than or equal to applicable requirements.
- ✔ ENERGY STAR Checklists fully verified and complete.

ERI (HERS) Index Target

Reference Home ERI (HERS)	49
As Designed Home ERI (HERS)	46
As Designed Home ERI (HERS) w/o PV	46

Normalized, Modified End-Use Loads (MBtu / year)

	ENERGY STAR	As Designed
Heating	3.9	3.1
Cooling	2.0	1.6
Water Heating	3.6	4.3
Lights and Appliances	9.7	9.1
Total	19.1	18.1

This home MEETS or EXCEEDS the energy efficiency requirements for designation as an EPA ENERGY STAR Qualified Home under Version Multifamily V1.2

Pollution Prevented

Type of Emissions	*Reduction*
Carbon Dioxide (CO_2) - tons/yr	-0.0

Energy Cost Savings $/yr

Heating	-4
Cooling	-2
Water Heating	-29
Lights & Appliances	20
Generation Savings	0
Total	-14

The energy savings and pollution prevented are calculated by comparing the Rated Home to the ENERGY STAR Version Multifamily V1.2 Reference Home as defined in the ENERGY STAR Qualified Homes ERI (HERS) Target Procedure for National Program Requirements, Version Multifamily V1.2 promulgated by the Environmental Protection Agency (EPA). In accordance with the ANSI/RESNET/ICC 301 Standard, building inputs affecting setpoints infiltration rates, window shading and the existence of mechanical systems may have been changed prior to calculating loads

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ENERGY STAR MF V1.2 Home Report

Property
TBD
Leesburg, VA 20175
Community: Village at Clear Springs

Village at Clear Springs Phase 1 - A2 LL
Initial House Design

Organization
Dominion Due Diligence Gr
Kevin Robicheau
804-380-3924

Builder

Inspection Status
Results are projected

UNCONFIRMED

Mandatory Requirements

- ✔ Duct leakage at post construction better than or equal to applicable requirements.
- ✔ This dwelling unit's thermal envelope UA meets or exceeds 2021 IECC Residential requirements.
- ✔ Slab on Grade Insulation must be > R-5, and at IECC 2009 Depth for Climate Zones 4 and above.
- ✔ Envelope insulation achieves RESNET Grade I installation, or uses exceptions in footnote 5.
- ✔ Total window thermal properties meet or exceed the applicable requirements
- ✔ Duct insulation meets the EPA minimum requirements of R-6.
- ✔ Mechanical ventilation system is installed in the home.
- ✔ Measured infiltration is better than or equal to applicable requirements.
- ✔ ENERGY STAR Checklists fully verified and complete.

ERI (HERS) Index Target

Reference Home ERI (HERS)	48
As Designed Home ERI (HERS)	45
As Designed Home ERI (HERS) w/o PV	45

Normalized, Modified End-Use Loads (MBtu / year)

	ENERGY STAR	As Designed
Heating	4.5	3.3
Cooling	1.8	1.6
Water Heating	3.5	4.2
Lights and Appliances	10.3	9.7
Total	20.2	18.9

This home MEETS or EXCEEDS the energy efficiency requirements for designation as an EPA ENERGY STAR Qualified Home under Version Multifamily V1.2

Pollution Prevented

Type of Emissions	*Reduction*
Carbon Dioxide (CO_2) - tons/yr	-0.1

Energy Cost Savings $/yr

Heating	-11
Cooling	-7
Water Heating	-28
Lights & Appliances	21
Generation Savings	0
Total	-25

The energy savings and pollution prevented are calculated by comparing the Rated Home to the ENERGY STAR Version Multifamily V1.2 Reference Home as defined in the ENERGY STAR Qualified Homes ERI (HERS) Target Procedure for National Program Requirements, Version Multifamily V1.2 promulgated by the Environmental Protection Agency (EPA). In accordance with the ANSI/RESNET/ICC 301 Standard, building inputs affecting setpoints infiltration rates, window shading and the existence of mechanical systems may have been changed prior to calculating loads

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ENERGY STAR MF V1.2 Home Report

Property
TBD
Leesburg, VA 20175
Community: Village at Clear Springs

Village at Clear Springs Phase 1 - A2 TL
Initial House Design

Organization
Dominion Due Diligence Gr
Kevin Robicheau
804-380-3924

Builder

Inspection Status
Results are projected

UNCONFIRMED

Mandatory Requirements

- ✔ Duct leakage at post construction better than or equal to applicable requirements.
- ✔ This dwelling unit's thermal envelope UA meets or exceeds 2021 IECC Residential requirements.
- ✔ Slab on Grade Insulation must be > R-5, and at IECC 2009 Depth for Climate Zones 4 and above.
- ✔ Envelope insulation achieves RESNET Grade I installation, or uses exceptions in footnote 5.
- ✔ Total window thermal properties meet or exceed the applicable requirements
- ✔ Duct insulation meets the EPA minimum requirements of R-6.
- ✔ Mechanical ventilation system is installed in the home.
- ✔ Measured infiltration is better than or equal to applicable requirements.
- ✔ ENERGY STAR Checklists fully verified and complete.

ERI (HERS) Index Target

Reference Home ERI (HERS)	48
As Designed Home ERI (HERS)	44
As Designed Home ERI (HERS) w/o PV	44

Normalized, Modified End-Use Loads (MBtu / year)

	ENERGY STAR	As Designed
Heating	4.5	3.3
Cooling	1.8	1.6
Water Heating	3.5	4.2
Lights and Appliances	10.3	9.7
Total	20.2	18.9

This home MEETS or EXCEEDS the energy efficiency requirements for designation as an EPA ENERGY STAR Qualified Home under Version Multifamily V1.2

Pollution Prevented

Type of Emissions	*Reduction*
Carbon Dioxide (CO_2) - tons/yr	-0.1

Energy Cost Savings $/yr

Heating	-11
Cooling	-8
Water Heating	-27
Lights & Appliances	22
Generation Savings	0
Total	-25

The energy savings and pollution prevented are calculated by comparing the Rated Home to the ENERGY STAR Version Multifamily V1.2 Reference Home as defined in the ENERGY STAR Qualified Homes ERI (HERS) Target Procedure for National Program Requirements, Version Multifamily V1.2 promulgated by the Environmental Protection Agency (EPA). In accordance with the ANSI/RESNET/ICC 301 Standard, building inputs affecting setpoints infiltration rates, window shading and the existence of mechanical systems may have been changed prior to calculating loads

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ENERGY STAR MF V1.2 Home Report

Property
TBD
Leesburg, VA 20175
Community: Village at Clear Springs

Village at Clear Springs Phase 1 - B1 LL
Initial House Design

Organization
Dominion Due Diligence Gr
Kevin Robicheau
804-380-3924

Builder

Inspection Status
Results are projected

UNCONFIRMED

Mandatory Requirements

- ✔ Duct leakage at post construction better than or equal to applicable requirements.
- ✔ This dwelling unit's thermal envelope UA meets or exceeds 2021 IECC Residential requirements.
- ✔ Slab on Grade Insulation must be > R-5, and at IECC 2009 Depth for Climate Zones 4 and above.
- ✔ Envelope insulation achieves RESNET Grade I installation, or uses exceptions in footnote 5.
- ✔ Total window thermal properties meet or exceed the applicable requirements
- ✔ Duct insulation meets the EPA minimum requirements of R-6.
- ✔ Mechanical ventilation system is installed in the home.
- ✔ Measured infiltration is better than or equal to applicable requirements.
- ✔ ENERGY STAR Checklists fully verified and complete.

ERI (HERS) Index Target

Reference Home ERI (HERS)	50
As Designed Home ERI (HERS)	42
As Designed Home ERI (HERS) w/o PV	42

Normalized, Modified End-Use Loads (MBtu / year)

	ENERGY STAR	As Designed
Heating	7.1	3.8
Cooling	2.0	1.7
Water Heating	4.8	5.6
Lights and Appliances	12.0	11.0
Total	25.8	22.2

This home MEETS or EXCEEDS the energy efficiency requirements for designation as an EPA ENERGY STAR Qualified Home under Version Multifamily V1.2

Pollution Prevented

Type of Emissions	*Reduction*
Carbon Dioxide (CO_2) - tons/yr	0.0

Energy Cost Savings

	$/yr
Heating	23
Cooling	-8
Water Heating	-34
Lights & Appliances	33
Generation Savings	0
Total	14

The energy savings and pollution prevented are calculated by comparing the Rated Home to the ENERGY STAR Version Multifamily V1.2 Reference Home as defined in the ENERGY STAR Qualified Homes ERI (HERS) Target Procedure for National Program Requirements, Version Multifamily V1.2 promulgated by the Environmental Protection Agency (EPA). In accordance with the ANSI/RESNET/ICC 301 Standard, building inputs affecting setpoints infiltration rates, window shading and the existence of mechanical systems may have been changed prior to calculating loads

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ENERGY STAR MF V1.2 Home Report

Property
TBD
Leesburg, VA 20175
Community: Village at Clear Springs

Village at Clear Springs Phase 1 - B1 TL
Initial House Design

Organization
Dominion Due Diligence Gr
Kevin Robicheau
804-380-3924

Builder

Inspection Status
Results are projected

UNCONFIRMED

Mandatory Requirements

- ✔ Duct leakage at post construction better than or equal to applicable requirements.
- ✔ This dwelling unit's thermal envelope UA meets or exceeds 2021 IECC Residential requirements.
- ✔ Slab on Grade Insulation must be > R-5, and at IECC 2009 Depth for Climate Zones 4 and above.
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- ✔ Total window thermal properties meet or exceed the applicable requirements
- ✔ Duct insulation meets the EPA minimum requirements of R-6.
- ✔ Mechanical ventilation system is installed in the home.
- ✔ Measured infiltration is better than or equal to applicable requirements.
- ✔ ENERGY STAR Checklists fully verified and complete.

ERI (HERS) Index Target

Reference Home ERI (HERS)	49
As Designed Home ERI (HERS)	45
As Designed Home ERI (HERS) w/o PV	45

Normalized, Modified End-Use Loads (MBtu / year)

	ENERGY STAR	As Designed
Heating	5.6	4.2
Cooling	2.6	2.2
Water Heating	4.7	5.9
Lights and Appliances	11.7	10.9
Total	24.6	23.0

This home MEETS or EXCEEDS the energy efficiency requirements for designation as an EPA ENERGY STAR Qualified Home under Version Multifamily V1.2

Pollution Prevented

Type of Emissions	*Reduction*
Carbon Dioxide (CO_2) - tons/yr	-0.0

Energy Cost Savings

	$/yr
Heating	1
Cooling	-5
Water Heating	-43
Lights & Appliances	28
Generation Savings	0
Total	-19

The energy savings and pollution prevented are calculated by comparing the Rated Home to the ENERGY STAR Version Multifamily V1.2 Reference Home as defined in the ENERGY STAR Qualified Homes ERI (HERS) Target Procedure for National Program Requirements, Version Multifamily V1.2 promulgated by the Environmental Protection Agency (EPA). In accordance with the ANSI/RESNET/ICC 301 Standard, building inputs affecting setpoints infiltration rates, window shading and the existence of mechanical systems may have been changed prior to calculating loads

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ENERGY STAR MF V1.2 Home Report

Property
TBD
Leesburg, VA 20175
Community: Village at Clear Springs

Village at Clear Springs Phase 1 - B2 LL
Initial House Design

Organization
Dominion Due Diligence Gr
Kevin Robicheau
804-380-3924

Builder

Inspection Status
Results are projected

UNCONFIRMED

Mandatory Requirements

- ✔ Duct leakage at post construction better than or equal to applicable requirements.
- ✔ This dwelling unit's thermal envelope UA meets or exceeds 2021 IECC Residential requirements.
- ✔ Slab on Grade Insulation must be > R-5, and at IECC 2009 Depth for Climate Zones 4 and above.
- ✔ Envelope insulation achieves RESNET Grade I installation, or uses exceptions in footnote 5.
- ✔ Total window thermal properties meet or exceed the applicable requirements
- ✔ Duct insulation meets the EPA minimum requirements of R-6.
- ✔ Mechanical ventilation system is installed in the home.
- ✔ Measured infiltration is better than or equal to applicable requirements.
- ✔ ENERGY STAR Checklists fully verified and complete.

ERI (HERS) Index Target

Reference Home ERI (HERS)	51
As Designed Home ERI (HERS)	41
As Designed Home ERI (HERS) w/o PV	41

Normalized, Modified End-Use Loads (MBtu / year)

	ENERGY STAR	As Designed
Heating	8.1	3.1
Cooling	2.4	1.8
Water Heating	4.7	5.6
Lights and Appliances	13.1	12.2
Total	28.2	22.7

This home MEETS or EXCEEDS the energy efficiency requirements for designation as an EPA ENERGY STAR Qualified Home under Version Multifamily V1.2

Pollution Prevented

Type of Emissions	*Reduction*
Carbon Dioxide (CO_2) - tons/yr	0.1

Energy Cost Savings $/yr

Heating	53
Cooling	-0
Water Heating	-37
Lights & Appliances	33
Generation Savings	0
Total	49

The energy savings and pollution prevented are calculated by comparing the Rated Home to the ENERGY STAR Version Multifamily V1.2 Reference Home as defined in the ENERGY STAR Qualified Homes ERI (HERS) Target Procedure for National Program Requirements, Version Multifamily V1.2 promulgated by the Environmental Protection Agency (EPA). In accordance with the ANSI/RESNET/ICC 301 Standard, building inputs affecting setpoints infiltration rates, window shading and the existence of mechanical systems may have been changed prior to calculating loads

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ENERGY STAR MF V1.2 Home Report

Property
TBD
Leesburg, VA 20175
Community: Village at Clear Springs

Village at Clear Springs Phase 1 - B2 TL
Initial House Design

Organization
Dominion Due Diligence Gr
Kevin Robicheau
804-380-3924

Builder

Inspection Status
Results are projected

UNCONFIRMED

Mandatory Requirements

- ✔ Duct leakage at post construction better than or equal to applicable requirements.
- ✔ This dwelling unit's thermal envelope UA meets or exceeds 2021 IECC Residential requirements.
- ✔ Slab on Grade Insulation must be > R-5, and at IECC 2009 Depth for Climate Zones 4 and above.
- ✔ Envelope insulation achieves RESNET Grade I installation, or uses exceptions in footnote 5.
- ✔ Total window thermal properties meet or exceed the applicable requirements
- ✔ Duct insulation meets the EPA minimum requirements of R-6.
- ✔ Mechanical ventilation system is installed in the home.
- ✔ Measured infiltration is better than or equal to applicable requirements.
- ✔ ENERGY STAR Checklists fully verified and complete.

ERI (HERS) Index Target

Reference Home ERI (HERS)	51
As Designed Home ERI (HERS)	41
As Designed Home ERI (HERS) w/o PV	41

Normalized, Modified End-Use Loads (MBtu / year)

	ENERGY STAR	As Designed
Heating	8.1	3.1
Cooling	2.4	1.8
Water Heating	4.7	5.6
Lights and Appliances	13.1	12.2
Total	28.2	22.7

This home MEETS or EXCEEDS the energy efficiency requirements for designation as an EPA ENERGY STAR Qualified Home under Version Multifamily V1.2

Pollution Prevented

Type of Emissions	*Reduction*
Carbon Dioxide (CO_2) - tons/yr	0.1

Energy Cost Savings $/yr

Heating	54
Cooling	-1
Water Heating	-36
Lights & Appliances	33
Generation Savings	0
Total	49

The energy savings and pollution prevented are calculated by comparing the Rated Home to the ENERGY STAR Version Multifamily V1.2 Reference Home as defined in the ENERGY STAR Qualified Homes ERI (HERS) Target Procedure for National Program Requirements, Version Multifamily V1.2 promulgated by the Environmental Protection Agency (EPA). In accordance with the ANSI/RESNET/ICC 301 Standard, building inputs affecting setpoints infiltration rates, window shading and the existence of mechanical systems may have been changed prior to calculating loads

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ENERGY STAR MF V1.2 Home Report

Property
TBD
Leesburg, VA 20175
Community: Village at Clear Springs

Village at Clear Springs Phase 1 - B3 LL
Initial House Design

Organization
Dominion Due Diligence Gr
Kevin Robicheau
804-380-3924

Builder

Inspection Status
Results are projected

UNCONFIRMED

Mandatory Requirements

- ✔ Duct leakage at post construction better than or equal to applicable requirements.
- ✔ This dwelling unit's thermal envelope UA meets or exceeds 2021 IECC Residential requirements.
- ✔ Slab on Grade Insulation must be > R-5, and at IECC 2009 Depth for Climate Zones 4 and above.
- ✔ Envelope insulation achieves RESNET Grade I installation, or uses exceptions in footnote 5.
- ✔ Total window thermal properties meet or exceed the applicable requirements
- ✔ Duct insulation meets the EPA minimum requirements of R-6.
- ✔ Mechanical ventilation system is installed in the home.
- ✔ Measured infiltration is better than or equal to applicable requirements.
- ✔ ENERGY STAR Checklists fully verified and complete.

ERI (HERS) Index Target

Reference Home ERI (HERS)	53
As Designed Home ERI (HERS)	46
As Designed Home ERI (HERS) w/o PV	46

Normalized, Modified End-Use Loads (MBtu / year)

	ENERGY STAR	As Designed
Heating	9.9	7.3
Cooling	0.7	0.7
Water Heating	4.8	5.7
Lights and Appliances	13.8	11.8
Total	29.1	25.5

This home MEETS or EXCEEDS the energy efficiency requirements for designation as an EPA ENERGY STAR Qualified Home under Version Multifamily V1.2

Pollution Prevented

Type of Emissions	*Reduction*
Carbon Dioxide (CO_2) - tons/yr	-0.0

Energy Cost Savings

	$/yr
Heating	4
Cooling	-21
Water Heating	-35
Lights & Appliances	71
Generation Savings	0
Total	18

The energy savings and pollution prevented are calculated by comparing the Rated Home to the ENERGY STAR Version Multifamily V1.2 Reference Home as defined in the ENERGY STAR Qualified Homes ERI (HERS) Target Procedure for National Program Requirements, Version Multifamily V1.2 promulgated by the Environmental Protection Agency (EPA). In accordance with the ANSI/RESNET/ICC 301 Standard, building inputs affecting setpoints infiltration rates, window shading and the existence of mechanical systems may have been changed prior to calculating loads

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ENERGY STAR MF V1.2 Home Report

Property
TBD
Leesburg, VA 20175
Community: Village at Clear Springs

Village at Clear Springs Phase 1 - B3 TL
Initial House Design

Organization
Dominion Due Diligence Gr
Kevin Robicheau
804-380-3924

Builder

Inspection Status
Results are projected

UNCONFIRMED

Mandatory Requirements

- ✔ Duct leakage at post construction better than or equal to applicable requirements.
- ✔ This dwelling unit's thermal envelope UA meets or exceeds 2021 IECC Residential requirements.
- ✔ Slab on Grade Insulation must be > R-5, and at IECC 2009 Depth for Climate Zones 4 and above.
- ✔ Envelope insulation achieves RESNET Grade I installation, or uses exceptions in footnote 5.
- ✔ Total window thermal properties meet or exceed the applicable requirements
- ✔ Duct insulation meets the EPA minimum requirements of R-6.
- ✔ Mechanical ventilation system is installed in the home.
- ✔ Measured infiltration is better than or equal to applicable requirements.
- ✔ ENERGY STAR Checklists fully verified and complete.

ERI (HERS) Index Target

Reference Home ERI (HERS)	49
As Designed Home ERI (HERS)	45
As Designed Home ERI (HERS) w/o PV	45

Normalized, Modified End-Use Loads (MBtu / year)

	ENERGY STAR	As Designed
Heating	7.9	6.6
Cooling	3.3	2.9
Water Heating	4.7	5.7
Lights and Appliances	12.3	11.5
Total	28.2	26.6

This home MEETS or EXCEEDS the energy efficiency requirements for designation as an EPA ENERGY STAR Qualified Home under Version Multifamily V1.2

Pollution Prevented

Type of Emissions	*Reduction*
Carbon Dioxide (CO_2) - tons/yr	-0.1

Energy Cost Savings

	$/yr
Heating	-8
Cooling	-8
Water Heating	-37
Lights & Appliances	29
Generation Savings	0
Total	-26

The energy savings and pollution prevented are calculated by comparing the Rated Home to the ENERGY STAR Version Multifamily V1.2 Reference Home as defined in the ENERGY STAR Qualified Homes ERI (HERS) Target Procedure for National Program Requirements, Version Multifamily V1.2 promulgated by the Environmental Protection Agency (EPA). In accordance with the ANSI/RESNET/ICC 301 Standard, building inputs affecting setpoints infiltration rates, window shading and the existence of mechanical systems may have been changed prior to calculating loads

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ENERGY STAR MF V1.2 Home Report

Property
TBD
Leesburg, VA 20175
Community: Village at Clear Springs

Village at Clear Springs Phase 1 - C1 LL
Initial House Design

Organization
Dominion Due Diligence Gr
Kevin Robicheau
804-380-3924

Builder

Inspection Status
Results are projected

UNCONFIRMED

Mandatory Requirements

- ✔ Duct leakage at post construction better than or equal to applicable requirements.
- ✔ This dwelling unit's thermal envelope UA meets or exceeds 2021 IECC Residential requirements.
- ✔ Slab on Grade Insulation must be > R-5, and at IECC 2009 Depth for Climate Zones 4 and above.
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- ✔ Measured infiltration is better than or equal to applicable requirements.
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ERI (HERS) Index Target

Reference Home ERI (HERS)	53
As Designed Home ERI (HERS)	46
As Designed Home ERI (HERS) w/o PV	46

Normalized, Modified End-Use Loads (MBtu / year)

	ENERGY STAR	As Designed
Heating	11.3	8.2
Cooling	1.0	1.0
Water Heating	5.8	7.2
Lights and Appliances	15.4	13.1
Total	33.5	29.5

This home MEETS or EXCEEDS the energy efficiency requirements for designation as an EPA ENERGY STAR Qualified Home under Version Multifamily V1.2

Pollution Prevented

Type of Emissions	*Reduction*
Carbon Dioxide (CO_2) - tons/yr	-0.0

Energy Cost Savings $/yr

Heating	7
Cooling	-24
Water Heating	-53
Lights & Appliances	80
Generation Savings	0
Total	10

The energy savings and pollution prevented are calculated by comparing the Rated Home to the ENERGY STAR Version Multifamily V1.2 Reference Home as defined in the ENERGY STAR Qualified Homes ERI (HERS) Target Procedure for National Program Requirements, Version Multifamily V1.2 promulgated by the Environmental Protection Agency (EPA). In accordance with the ANSI/RESNET/ICC 301 Standard, building inputs affecting setpoints infiltration rates, window shading and the existence of mechanical systems may have been changed prior to calculating loads

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ENERGY STAR MF V1.2 Home Report

Property
TBD
Leesburg, VA 20175
Community: Village at Clear Springs

Village at Clear Springs Phase 1 - C1 TL
Initial House Design

Organization
Dominion Due Diligence Gr
Kevin Robicheau
804-380-3924

Builder

Inspection Status
Results are projected

UNCONFIRMED

Mandatory Requirements

- ✔ Duct leakage at post construction better than or equal to applicable requirements.
- ✔ This dwelling unit's thermal envelope UA meets or exceeds 2021 IECC Residential requirements.
- ✔ Slab on Grade Insulation must be > R-5, and at IECC 2009 Depth for Climate Zones 4 and above.
- ✔ Envelope insulation achieves RESNET Grade I installation, or uses exceptions in footnote 5.
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- ✔ Measured infiltration is better than or equal to applicable requirements.
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ERI (HERS) Index Target

Reference Home ERI (HERS)	49
As Designed Home ERI (HERS)	46
As Designed Home ERI (HERS) w/o PV	46

Normalized, Modified End-Use Loads (MBtu / year)

	ENERGY STAR	As Designed
Heating	9.2	7.5
Cooling	4.0	3.4
Water Heating	5.8	7.2
Lights and Appliances	13.8	12.8
Total	32.7	31.0

This home MEETS or EXCEEDS the energy efficiency requirements for designation as an EPA ENERGY STAR Qualified Home under Version Multifamily V1.2

Pollution Prevented

Type of Emissions	*Reduction*
Carbon Dioxide (CO_2) - tons/yr	-0.1

Energy Cost Savings $/yr

Heating	-8
Cooling	-9
Water Heating	-55
Lights & Appliances	32
Generation Savings	0
Total	-40

The energy savings and pollution prevented are calculated by comparing the Rated Home to the ENERGY STAR Version Multifamily V1.2 Reference Home as defined in the ENERGY STAR Qualified Homes ERI (HERS) Target Procedure for National Program Requirements, Version Multifamily V1.2 promulgated by the Environmental Protection Agency (EPA). In accordance with the ANSI/RESNET/ICC 301 Standard, building inputs affecting setpoints infiltration rates, window shading and the existence of mechanical systems may have been changed prior to calculating loads

All results are based on data entered by Ekotrope users. Ekotrope disclaims all liability for the information shown on this report.

DOE ENH Reports

U.S. DEPARTMENT OF ENERGY

Certified Efficient New Home

SPECIFICATION

Multifamily Version 2

U.S. DEPARTMENT of ENERGY

UNCONFIRMED

ADDRESS

TBD, Leesburg, VA 20175

CERTIFICATION ID NUMBER (OPTIONAL ENTRY)

BUILDER OR DEVELOPER OF RECORD

PARTNER ID

1

ENERGY RATING COMPANY

Dominion Due Diligence Group

RATER OF RECORD

Kevin Robicheau

CERTIFIED UNDER DOE-RECOGNIZED HCO

RESNET

DATE UNIT CERTIFIED

SOFTWARE USED TO CALCULATE ENERGY RATING INDEX (ERI) SCORE

Ekotrope RATER - Version 5.0.2.3779

	UNIT'S ERI SCORE (WITHOUT ONSITE POWER PRODUCTION)	UNIT'S ERI SCORE (INCLUDING ONSITE POWER PRODUCTION)	TARGET ERI SCORE
SCORES	47	N/A	50

U.S. DEPARTMENT OF ENERGY

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SCORES	46	N/A	48

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SCORES	46	N/A	53

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SCORES	46	N/A	49

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SCORES	45	N/A	48

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SCORES	44	N/A	47

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	UNIT'S ERI SCORE (WITHOUT ONSITE POWER PRODUCTION)	UNIT'S ERI SCORE (INCLUDING ONSITE POWER PRODUCTION)	TARGET ERI SCORE
SCORES	42	N/A	49

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SCORES	45	N/A	47

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SCORES	41	N/A	51

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SCORES	46	N/A	51

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SCORES	46	N/A	47

Tab G:

Zoning Certification Letter (MANDATORY)

Zoning Certification

NOTE TO DEVELOPER: You are strongly encouraged to submit this certification to the appropriate local official **at least three weeks in advance of the application deadline** to ensure adequate time for review and approval

General Instructions:

1. The Local Certification section **must** be completed by the appropriate local official or Civil Engineer.
2. The Engineer **must** be registered in the Commonwealth of Virginia.
3. 'Development Description' should be provided by the Owner.
4. 'Development Address should correspond to I.A.2 on page 1 of the application.
5. 'Legal Description' should correspond to the site control document in the application.
6. 'Proposed Improvements' should correspond with I.B & D and III.A of the application.
7. 'Other Descriptive Information' should correspond with the information in the application.
8. Any change in this Certification may result in disqualification of the application.

If you have any questions, please contact the Tax Credit Allocation Department at:

taxcreditapps@virginiahousing.com

Zoning Certification

DATE: December 4, 2025

TO: Virginia Housing
601 South Belvidere Street
Richmond, VA 23220

RE: ZONING CERTIFICATION

Name of Development: Clear Springs Apartments Phase I

Name of Owner/Applicant: Clear Springs Apartments I, LLC

Name of Seller/Current Owner: CLEAR SPRINGS DEVELOPMENT GROUP LP

The above-referenced Owner/Applicant has asked this office to complete this form letter regarding the zoning of the proposed Development (more fully described below). This certification is rendered solely to confirm proper zoning for the site of the Development. It is understood that this letter will be used by the Virginia Housing Development Authority solely to determine whether the Development qualifies for points available under VHDA's Qualified Allocation Plan for housing tax credit.

DEVELOPMENT DESCRIPTION:

Development Address:

In and around approximately 41350 Springfield Ln, Leesburg, VA 20175.
Please see attached legal description and site map.

Leal Description:

Please see attached legal description and site map.

Proposed Improvements:

Construction

New Construction:	# Units	97	# Buildings	1	Total Floor Area	109833
Adaptive Reuse	# Units		# Buildings		Total Floor Area	
Rehabilitation:	# Units		# Buildings		Total Floor Area	

Zoning Certification, cont'd

Current Zoning: R-16 (PER LEGI-2023-0017) allowing a density of 19.2 units per acre, and the following other applicable conditions: LEGI-2023-0017 & LEGI-2025-0054

Other Descriptive Information:

LOCAL CERTIFICATION:

Check one of the following a appropriate:

☑ The zoning for the proposed development described above is proper for the proposed residential development. To the best of my knowledge, there are presently no zoning violations outstanding on this property. No further zoning approvals and/or special use permits are required.

☐ The development described above is approved for non-conforming use. To the best of my knowledge, there are no zoning violations outstanding on this property, and no further zoning approvals and/or special use permits are required.

Signature

Gregory Brush Digitally signed by Gregory Brush DN: C=US, E=gbrush@j2atwork.com, O=J2, CN=Gregory Brush Date: 2026.01.05 15:46:09-05'00'

Printed Name

Principal

Title of Local Official or Civil Engineer

(703) 361-1550

Phone

January 5, 2026

Date

NOTES TO LOCALITY:

1. Return this certification to the developer for inclusion in the tax credit application package.
2. Any change in this form may result in disqualification of the application.
3. If you have any questions, please contact the Tax Credit Allocation Department at taxcreditapps@virginiahousing.com.

Proposed Phase 1
On Lots 3 & 4
Dal-Shar Estates
Catoctin Election District
Loudoun County, Virginia

Commencing at a point in the western right-of-way line of Dulles Greenway – VA Route 267 (a variable width right-of-way), also being the northeastern corner of Proposed Phase 2; thence departing Dulles Greenway and running the following two (2) courses and distances:
N 46°59'34" W, a distance of 217.43' to a point; thence
S 87°29'40" W, a distance of 181.69' to a point to the point of Beginning, being the northeastern corner of the land herein described; thence

Running through Lots 3 & 4 the following seventeen (17) courses and distances:
S 03°22'22" E, a distance of 582.14' to a point; thence
S 28°53'11" W, a distance of 30.01' to a point; thence
S 86°52'22" W, a distance of 68.96’ to a point; thence
S 35°57'04" W, a distance of 56.83' to a point; thence
N 53°46'18" W, a distance of 32.00' to a point; thence
S 35°57'04" W, a distance of 57.89' to a point; thence
N 50°02'56" W, a distance of 12.97' to a point; thence

181.65' along a curve to the right, with a radius of 170.00', with a chord bearing of N 20°08'16" W, with a chord length of 173.13' to a point; thence

N 10°28'25" E, a distance of 151.92' to a point; thence

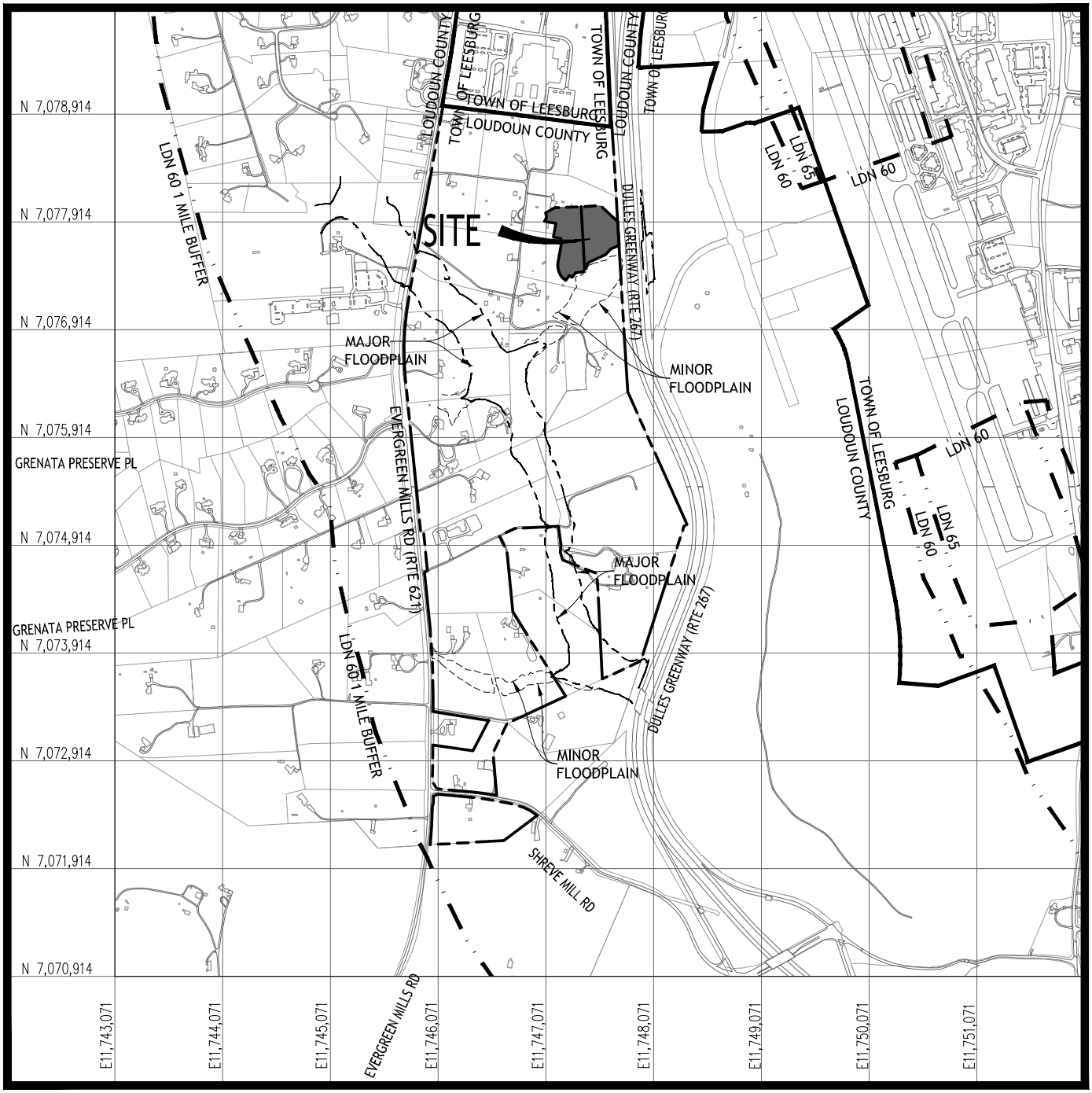
36.25' along a curve to the left, with a radius of 150.00', with a chord bearing of N 03°33'02" E, with a chord length of 36.16' to a point; thence

N 03°22'22" W, a distance of 32.50' to a point; thence
N 79°29'20" W, a distance of 71.85' to a point; thence
N 10°28'34" E, a distance of 130.46' to a point; thence
N 79°31'26" W, a distance of 108.71' to a point; thence

83.04' along a curve to the left, with a radius of 64.46', with a chord bearing of N 06°38'47" E, with a chord length of 77.42' to a point; thence

N 60°51'41" E, a distance of 97.80' to a point; thence
N 87°29'40" E, a distance of 243.55' to the point of beginning.

Having an area of 158,682 Square Feet or 3.64284 Acres of land.



VICINITY MAP

CONDITIONS OF APPROVAL
ZMOD 2021-0035, ZMOD 2021-0036,
ZMOD-2021-0091, ZMOD-2022-0036,
& ZMOD-2022-0037

Village at Clear Springs

April 4, 2024

1. **Zoning Modifications.** ZMOD 2021-0035, ZMOD 2021-0036, ZMOD-2021-0091, ZMOD-2022-0036, ZMOD-2022-0037, approve the following modification(s) for the parcels designated by Parcel Identification Number (the "PIN") 234-16-2147, PIN 234-15-8988, PIN 234-16-3996, PIN 234-16-9543, PIN 234-17-2596, PIN 234-27-2750, PIN 234-17-4554, PIN 234-17-7032, PIN 234-26-4049, PIN 234-36-2207, PIN 234-36-3057, PIN 234-36-6701, PIN 234-36-7151, PIN 234-37-0852, PIN 234-37-2906, PIN 234-37-4941, PIN 235-16-3062, PIN 235-16-4213, PIN 235-26-2866, PIN 235-26-8067, PIN 235-36-3533, PIN 235-37-7793, PIN 235-37-8420, PIN 235-46-0891, PIN 235-46-0954, PIN 235-46-5476, PIN 235-46-5737, PIN 235-46-7000, PIN 235-47-5463 (the "Property"). The boundary of the Property is more particularly identified on Sheet 05 of the CDP (defined in Condition 2 below) as "APPLICATION AREA."

   This application was processed pursuant to the ZOR Grandfathering Resolution dated December 13, 2023.

REVISED 1993 ZONING ORDINANCE SECTION	PROPOSED MODIFICATION
§7-803(B)(2), R-8 Single Family Residential, Lot and building Requirements, Lot Width.	Reduce end unit lot width from 24 feet to 20 feet.
§3-511(A), R-8 Single Family Residential, Development Setback and Access from Major Roads, Private Streets.	To allow single family detached dwellings to front and receive access from a private road.
§1-205(A), Interpretation of Ordinance, Limitations and Methods for Measurement of Lots, Yards and Related Terms, Lot Access Requirements.	To allow single family detached dwellings to front and receive access from a private road.
§4-110(B), Site Planning-Internal Relationships.	To allow single family detached dwellings to front and receive access from a private road.

REVISED 1993 ZONING ORDINANCE SECTION	PROPOSED MODIFICATION
§7-903(B)(2), R-16 Townhouse/Multi-family District, Lot and Building Requirements, Lot Width.	Reduce lot width from 28 feet to 16 feet.
§5-1404(B), Landscaping, Buffer Yards, Screening, and Landscape Plans, Buffer Yards, Use Buffer Yard Matrix, Table 5-1404(B).	To eliminate buffer yards for civic and residential uses within the community.
§5-1303(B)(4), Tree Planting and Replacement, Canopy Requirements, For development requiring a plan of subdivision, but not a site plan, property not zoned A-3, A-10, AR-1, AR-2, i.e. single family and duplex dwellings.	To eliminate the street tree requirement for alleyways used for vehicular access.
§5-1303(A)(3)(4), Tree Planting and Replacement, Canopy Requirements, Site Planning.	To permit the calculation of minimum tree canopy to be tabulated overall for the entire development area.

2. **Conditions.** The approval of ZMOD-2021-0035, ZMOD-2021-0036, ZMOD-2021-0091, ZMOD-2022-0036, ZMOD-2022-0037, shall be subject to the following conditions:

   a. **Substantial Conformance.** Development of the Property in accordance with the approved zoning modifications shall be in substantial conformance with Sheets 01, 05, 06, 07, 08, 09, 09A, 10, 11, 12, 13, 14, 16, 16A and 17 of the plan set titled "VILLAGE AT CLEAR SPRINGS ZONING MAP AMENDMENT / SPECIAL EXCEPTIONS AND ZONING MODIFICATIONS LEGI-2023-0017 ZMAP-2021-0008, SPEX-2021-0028, SPEX-2021-0029, SPEX-2021-0030, SPEX-2022-0044, ZMOD-2021-0035, ZMOD-2021-0036, ZMOD-2021-0091, ZMOD-2022-0036, ZMOD-2022-0037" dated "June 2021" and revised through April 1, 2024 , prepared by J2 Engineers, Inc. (the "CDP"), the applicable requirements of the Loudoun County Zoning Ordinance ("Zoning Ordinance"), and these Conditions. Approval of these applications shall not relieve the applicant or the owners of the Property, their successors, or parties developing, using or operating the Property in accordance with the approved modifications (collectively, the "Applicant") from the obligation to comply with and conform to any other applicable Zoning Ordinance, Codified Ordinance, or regulatory requirement.

CONDITONS OF APPROVAL
SPEX-2021-0028
Village at Clear Springs

April 4, 2024

1. **Special Exception.** This application approves the Special Exception use (the "SPEX Use") identified in Condition 2 below for the approximately 19.30-acre portion of the parcels designated by Parcel Identification Number (the "PIN") 234-36-6701, PIN 234-36-7151, PIN 234-37-0852, PIN 234-37-2906, and PIN 234-37-4941 (the "Property"). The boundary of the Property is more particularly identified on Sheet 17 of the SPEX Plat (defined in Condition 2 below) as "APPROXIMATE LOCATION AND EXTENT OF RECREATIONAL FACILITY WITH LIGHTED COURTS".

2. **Use Permitted.** Pursuant to Section 3-604(H)of the Revised 1993 Zoning Ordinance Playing Fields and Courts, Lighted are permitted in the R-16 Townhouse/Multifamily Residential zoning district on the Property. This application was processed pursuant to the ZOR Grandfathering Resolution dated December 13, 2023.

3. **Substantial Conformance.** Development shall be in substantial conformance with Sheet 17 of the plan set titled "VILLAGE AT CLEAR SPRINGS ZONING MAP AMENDMENT / SPECIAL EXCEPTIONS AND ZONING MODIFICATIONS LEGI-2023-0017 ZMAP-2021-0008, SPEX-2021-0028, SPEX-2021-0029, SPEX-2021-0030, SPEX-2022-0044, ZMOD-2021-0035, ZMOD-2021-0036, ZMOD-2021-0091, ZMOD-2022-0036, ZMOD-2022-0037," dated "June 2021" and revised through April 1, 2024, prepared by J2 Engineers, Inc. (the "SPEX Plat"), the applicable requirements of the Loudoun County Zoning Ordinance (Zoning Ordinance), and these Conditions. Approval of this application shall not relieve the applicant or the owners of the Property, their successors, or parties developing, establishing or operating SPEX Use (collectively, the "Applicant") from the obligation to comply with and conform to any other applicable Zoning Ordinance, Codified Ordinance, or regulatory requirement.

4. **Lighting**. All lighting for the outdoor courts must meet the following conditions:

   a. Lighting for outdoor courts shall not exceed 20 tennis courts and 12 pickleball courts.

   b. The total number of light poles utilized for lighting outdoor courts may not exceed 110. Such poles may be no taller than 50 feet.

   c. All lighting shall comply with the lighting standards of the Zoning Ordinance and shall be designed and constructed as follows to preclude light trespass onto adjacent properties, glare to passersby, skyglow, and deterioration of the nighttime environment:

      i. Outdoor lighted playing courts shall be directed inward and downward toward the courts and away from public and private streets and adjacent properties and shall incorporate a reflector technology system that directs light onto the courts and minimizes glare and spillage onto adjacent properties.

      ii. Illumination levels for the outdoor courts shall be no greater than necessary for

the intended purpose.

iii. Light pole and light fixture typical details shall be shown on each site plan.

d. Outdoor court lighting shall only be used to light organized activities occurring on the courts. Lighting shall be extinguished no later than 10:00 p.m., except for occasional planned tournaments when the lights shall be extinguished no later than 11:00 p.m., or within 15 minutes of the end of any sporting event, whichever occurs first. Court lighting shall not be illuminated between 11:00 p.m. and noon the following day. Security lighting may remain illuminated during overnight hours.

CONDITONS OF APPROVAL
SPEX-2021-0029
Village at Clear Springs

April 4, 2024

1. **Special Exception.** This application approves the Special Exception use (the "SPEX Use") identified in Condition 2 below for the approximately 19.30-acre portion of the parcels designated by Parcel Identification Number (the "PIN") 234-36-6701, PIN 234-36-7151, PIN 234-37-0852, PIN 234-37-2906, and PIN 234-37-4941 (the "Property"). The boundary of the Property is more particularly identified on Sheet 17 of the SPEX Plat (defined in Condition 2 below) as "APPROXIMATE LOCATION AND EXTENT OF RECREATIONAL FACILITY WITH LIGHTED COURTS".

2. **Use Permitted.** Pursuant to Section 3-604(J) of the Revised 1993 Zoning Ordinance a maximum 165,000 square foot Private Club or Lodge is permitted in the R-16 Townhouse/Multifamily Residential zoning district on the Property. This application was processed pursuant to the ZOR Grandfathering Resolution dated December 13, 2023.

3. **Substantial Conformance.** Development shall be in substantial conformance with Sheet 17 of the plan set titled "VILLAGE AT CLEAR SPRINGS ZONING MAP AMENDMENT / SPECIAL EXCEPTIONS AND ZONING MODIFICATIONS LEGI-2023-0017 ZMAP-2021-0008, SPEX-2021-0028, SPEX-2021-0029, SPEX-2021-0030, SPEX-2022-0044, ZMOD-2021-0035, ZMOD-2021-0036, ZMOD-2021-0091, ZMOD-2022-0036, ZMOD-2022-0037," dated "June 2021" and revised through April 1, 2024, prepared by J2 Engineers, Inc. (collectively and hereinafter referenced as, the "SPEX Plat"), the applicable Loudoun County Zoning Ordinance (Zoning Ordinance) requirements, and these Conditions. Approval of this application shall not relieve the applicant or the owners of the Property, their successors, or parties developing, establishing or operating the SPEX Use (collectively, the "Applicant") from the obligation to comply with and conform to any other applicable Zoning Ordinance, Codified Ordinance, or regulatory requirement.

4. **Traffic Operations Plan.** The applicant will be required to provide a Traffic Operations Plan for events with anticipated attendance of 350 or more participants/attendees.

5. **Access**. All residents of the Village of Clear Springs shall have access to the private lodge as described in Proffer 2.a.ii for ZMAP-2021-0008 ("Proffer"). Resident access and usage shall be no different than any other member of the private lodge. The private lodge is identified in the Proffer as Tennis Clubhouse.

6. **Hours of Operation.** Hours of operation for the private lodge shall begin no earlier than 6:00 a.m. and may extend no later than 11:00 p.m. The private lodge may operate 7 days a week.

CONDITONS OF APPROVAL
SPEX-2021-0030
Village at Clear Springs

April 4, 2024

1. **Special Exception.** This application approves the Special Exception (the "SPEX")identified in Condition 2 below for portions of the parcels designated by Parcel Identification Number (the "PIN") 234-16-3996, PIN 234-16-9543, PIN 234-17-2596, PIN 234-27-2750, PIN 234-17-4554, PIN 234-17-7032, PIN 235-37-7793, PIN 235-37-8420, PIN 235-47-5463, PIN 234-16-2147, PIN 234-26-4049, PIN 234-36-2207, PIN 234-36-6701, PIN 235-46-0891, PIN 235-46-5737 , PIN 235-46-5476,, PIN 235-36-3533 , PIN 235-26-2866 , and PIN 235-26-8067, (the "Property"). The boundary of the Property is more particularly identified on Sheets 06, 07, and 08, of the CDP (defined in Condition 3 below) as "SE3".

2. **SPEX Permitted**. To modify Section 7-803 of the Revised 1993 Zoning Ordinance, pursuant to the provisions of Section 7-803(C)(4), as provided in the table below. This application was processed pursuant to the ZOR Grandfathering Resolution dated December 13, 2023.

REVISED 1993 ZONING ORDINANCE SECTION	PROPOSED MODIFICATION
§7-803(C)(1)(b), R-8 ADU, Yards.	To reduce the minimum side yard for single family detached units from 8 feet to 5 feet.

3. **Substantial Conformance.** Development shall be in substantial conformance with Sheets 01, 05, 06, 07, 08, 09, 09A, 10, 11, 12, 13, 14, 16, 16A and 17 of the plan set titled "VILLAGE AT CLEAR SPRINGS ZONING MAP AMENDMENT / SPECIAL EXCEPTIONS AND ZONING MODIFICATIONS LEGI-2023-0017 ZMAP-2021-0008, SPEX-2021-0028, SPEX-2021-0029, SPEX-2021-0030, SPEX-2022-0044, ZMOD-2021-0035, ZMOD-2021-0036, ZMOD-2021-0091, ZMOD-2022-0036, ZMOD-2022-0037," dated "June 2021" and revised through April 1, 2024, prepared by J2 Engineers, Inc. (the "CDP"), the applicable Loudoun County Zoning Ordinance requirements (Zoning Ordinance), and these Conditions. Approval of this application shall not relieve the applicant or the owners of the Property, their successors, or parties developing, establishing or operating the Property in accordance with the approved SPEX (collectively, the "Applicant") from the obligation to comply with and conform to any other applicable Zoning Ordinance, Codified Ordinance, or regulatory requirement.

CONDITIONS OF APPROVAL
SPEX-2022-0044
Village at Clear Springs

April 4, 2024

1. **Special Exception.** This application approves the Special Exception (the "SPEX")- identified in Condition 2 below for a portion of the parcel designated by Parcel Identification Number (the "PIN") 235-46-0954, (the "Property"). The location of the Property is more particularly identified as "SE4" on Sheets 06 and 07 of the CDP (defined in Condition 3 below)."

2. **SPEX Permitted**. To modify Section 3-104 of the Revised 1993 Zoning Ordinance, as provided in the table below. This application was processed pursuant to the ZOR Grandfathering Resolution dated December 13, 2023.

REVISED 1993 ZONING ORDINANCE SECTION	PROPOSED MODIFICATION
§3-104(C) (4), R-1 Single Family Residential District, Yards.	Reduce the minimum rear yard for a single-family detached unit from 35 feet to 0 feet to accommodate existing lot line of existing residential unit.

3. **Substantial Conformance.** Development shall be in substantial conformance with Sheets 01, 05, 06, 07, 08, 09, 09A, 10, 11, 12, 13, 14, 16, 16A and 17 of the plan set titled "VILLAGE AT CLEAR SPRINGS ZONING MAP AMENDMENT / SPECIAL EXCEPTIONS AND ZONING MODIFICATIONS LEGI-2023-0017 ZMAP-2021-0008, SPEX-2021-0028, SPEX-2021-0029, SPEX-2021-0030, SPEX-2022-0044, ZMOD-2021-0035, ZMOD-2021-0036, ZMOD-2021-0091, ZMOD-2022-0036, ZMOD-2022-0037," dated "June 2021" and revised through April 1, 2024, prepared by J2 Engineers, Inc. (the "CDP"), the applicable Loudoun County Zoning Ordinance requirements (Zoning Ordinance), and these Conditions. Approval of this application shall not relieve the applicant or the owners of the Property, their successors, or parties developing, establishing or operating the Property in accordance with the approved SPEX (collectively, the "Applicant") from the obligation to comply with and conform to any other applicable Zoning Ordinance, Codified Ordinance, or regulatory requirement.

PROFFER STATEMENT

VILLAGE AT CLEAR SPRINGS

LEGI-2023-0017
ZMAP-2021-0008

December 13, 2021
May 26, 2022
October 26, 2022
January 11, 2023
May 12, 2023
August 18, 2023
November 30, 2023
February 23, 2024
April 4, 2024
October 7, 2025

Pamela Packard owner of property identified as Loudoun County PIN 234-16-2147 (Tax Map #/60///3/////9/)**, Cesar A. Villatoro and Silfida Villatoro**, owners of property identified as Loudoun County PIN 234-15-8988 (Tax Map #/60/////////5A), **Roy K. Mathur and Karin H. Mathur**, owners of property identified as Loudoun County PIN 234-16-3996 (Tax Map #/60///3////10/), **Dennis M. Pettit and Debra W. Pettit**, owners of property identified as Loudoun County PIN 234-16-9543 (Tax Map #/60///3/////7/), **Robert M. Wilkins and Mary Lou Wilkins**, owners of property identified as Loudoun County PIN 234-17-2596 (Tax Map #/60///3/////5/) and PIN 234-27-2750 (Tax Map #/60///3/////4), **Darrell Quesenberry and Cynthia Quesenberry**, owners of property identified as Loudoun County PIN 234-17-4554 (Tax Map #/60///8/////6B) and PIN 234-17-7032 (Tax Map #/60///8/////6A), **41383 Springfield LLC,** owner of property identified as Loudoun County PIN 234-26-4049 (Tax Map #/60///3////11/), **Gary N. Saylor and Nancy M. Saylor,** owners of property identified as Loudoun County PIN 234-36-2207 (Tax Map #/60///3////12A), **Dennis C. Welsh and Deborah C. Welsh,** owners of property identified as Loudoun County PIN 234-36-3057 (Tax Map #/60///3/////1A), **Gregg M. Stewart as Trustee of The Gregg Michael Stewart Revocable Trust, dated September 28, 2022** owner of property identified as Loudoun County PIN 234-36-6701 (Tax Map #/60///3////12B), **Michael Troy Fields and Michelle Vaughn Fields,** owners of property identified as Loudoun County PIN 234-36-7151 (Tax Map #/60///3/////1B), **James L. Petrucelli and Mary Jane Petrucelli,** owners of property identified as 234-37-0852 (Tax Map #/60///3/////2A), **Syed Ishaq and Tammie Umbel Ishaq (also known of record as Tammie Umbel),** owners of property identified as Loudoun County PIN 234-37-2906 (Tax Map #/60///3/////3/), **James L. Petrucelli and Mary Jane Petrucelli and Edward L. Gardner and Judith A. Gardner,** owners of property identified as Loudoun County PIN 234-37-4941 (Tax Map #/60///3/////2B), **Free Life Church, Inc. (previously known of record as Chesapeake Church International, Inc.),** owners of property identified as Loudoun County PIN 235-16-3062 (Tax Map #/60///1////10A), **Ronald Wolfe and Kristy Lynne Wolfe,** owners of property identified as Loudoun County PIN 235-16-4213 (Tax Map #/60/////////4/), **George Callaghan,** owner of property identified as Loudoun County PIN 235-26-2866 (Tax Map

#/60///1/////4/), **Brian A. MacDonald and Tracy M. MacDonald,** owners of property identified as Loudoun County PIN 235-26-8067 (Tax Map #/60///1/////5/), **0 Evergreen Mills Road, LLC,** owners of property identified as 235-36-3533 (Tax Map #/60///1/////3/), **Michael Warter and Susan Warter,** owners of property identified as Loudoun County PIN 235-37-7793 (Tax Map #/60///1/////8/), **Michael Warter and Susan A. Warter and Jeffery Warter,** owners of property identified as Loudoun County PIN 235-37-8420 (Tax Map #/60///1////13/), **Ronald Dale Conklin Jr. and Tiana L. Conklin,** owners of property identified as Loudoun County PIN 235-46-0891 (Tax Map #/60///3/////8A), **Michael Chamberlin and Shari A. Chamberlin,** owners of property identified as Loudoun County PIN 235-46-0954 (Tax Map #/60///3/////8C), **Gregory E. Wigfield and Pamela A. Wigfield as Trustees for the Wigfield Family Trust u/t/d of February 23, 2006,** owners of property identified as 235-46-5476 (Tax Map #/60///3/////8B), **Eric D. Zelsdorf and Barbara C. Zelsdorf,** owners of property identified as Loudoun County PIN 235-46-5737 (Tax Map #/60///1/////1/), **Bethel Orthodox Presbyterian Church Inc.,** owner of property identified as Loudoun County PIN 235-46-7000 (Tax Map #/60///1/////2/), **and Robert L. Gift and Tammy R. Gift,** owners of property identified as Loudoun County PIN 235-47-5463 (Tax Map #/60///1/////9/) (the foregoing owners hereinafter collectively referred to as the "Owners" and portions of the foregoing parcels, as more particularly identified on Sheet 05 of the CDP as "APPLICATION AREA" hereinafter collectively referred to as the "Property") hereby voluntarily proffer on behalf of themselves, and on behalf of their successors and assigns, pursuant to Section 15.2-2303 of the Code of Virginia (1950) as amended, and the land use provisions of the Revised 1993 Loudoun County Zoning Ordinance, as authorized by the ZOR Grandfathering Resolution dated December 13, 2023, that in the event the Board of Supervisors of Loudoun County approves ZMAP-2021-0008 to rezone the Property from the Agricultural Rural-1 ("AR-1") zoning district to the PD-H6 (Planned Development – Housing) zoning district to be administered as R-1 Single Family Residential ("R-1") pursuant to Section 3-100 et. seq. of the Revised 1993 Zoning Ordinance, R-8 Single Family Residential administered as an affordable dwelling unit district under Section 7-800 of the Revised 1993 Zoning Ordinance ("R-8 ADU"), and R-16 Townhouse/Multifamily Residential administered as an affordable dwelling unit district under Section 7-900 of the Revised 1993 Zoning Ordinance ("R-16 ADU"), in accordance with the Concept Development Plan described in Proffer 1 below, together with, ZMOD-2021-0035, ZMOD-2021-0036, ZMOD-2021-0091, ZMOD-2022-0036, and ZMOD-2022-0037, and the special exceptions identified in SPEX-2021-0028, SPEX-2021-0029, SPEX-2021-0030, and SPEX-2022-0044, development of the Property shall be in substantial conformance with the conditions set forth in this Proffer Statement ("Proffers"). These Proffers are the only development conditions that govern this Property, provided that these Proffers shall become effective only upon final approval of this ZMAP-2021-0008. All proffers made herein are contingent upon the approval by the County of this ZMAP-2021-0008 and the accompanying applications, SPEX-2021-0028, SPEX-2021-0029, SPEX-2021-0030, SPEX-2022-0044, ZMOD-2021-0035, ZMOD-2021-0036, ZMOD-2021-0091, ZMOD-2022-0036, and ZMOD-2022-0037 (collectively, the "Application").

All references in these Proffers to subdivision, subdivision plat, or record plat shall be deemed to include condominium or condominium plat or any other document or mechanism that legally divides the Property into separately transferable units of ownership. Any obligation imposed herein that must be performed prior to, in conjunction with, or concurrently with first or other subdivision or record plat approval shall be deemed to be required to be performed prior to the recordation of

any such condominium declaration or plat or other similar document that would have the legal effect of dividing the Property into separately transferable units of ownership.

When any plan submission, signal justification study submission, noise or other impact study submission, bonding, dedication, conveyance, construction, commencement or completion of construction, opening of a facility or infrastructure to traffic or use, payment of cash, or any other act or activity required in these Proffers is required to be performed, submitted, recorded, paid, commenced and/or completed prior to the issuance of a certificate of occupancy, the said certificate of occupancy shall not be issued until the Owner has provided written documentation from the Loudoun County Building and Development ("B&D") or Zoning Administration staff that the said requirement has been satisfied, or documentation from Zoning Administration staff that the said requirement is no longer a prerequisite for issuance of such certificate of occupancy.

As used herein, the term site plan shall include an application for approval of a site plan or site plan amendment in accordance with applicable County ordinances. As used herein, the term "County" refers to the Board of Supervisors of Loudoun County, Virginia, or to the applicable Loudoun County government department, staff, or official enabled with authority to act on the County's behalf, within the context of the particular proffer provision.

CONCEPT DEVELOPMENT PLAN & DEVELOPMENT SCOPE

1. Concept Development Plan. Development of the Property shall be in substantial conformance with Sheets 01, 05, 06, 07, 08, 09, 09A, 10, 11, 12, 13, 14, 16, 16A and 17 of the plan set titled "VILLAGE AT CLEAR SPRINGS ZONING MAP AMENDMENT / SPECIAL EXCEPTIONS AND ZONING MODIFICATIONS LEGI-2023-0017, ZMAP-2021-0008, SPEX-2021-0028, SPEX-2021-0029, SPEX-2021-0030, SPEX-2022-0044, ZMOD-2021-0035, ZMOD-2021-0036, ZMOD-2021-0091, ZMOD-2022-0036, ZMOD-2022-0037," dated "June 2021" and revised through April 1, 2024, prepared by J2 Engineers, Inc. (collectively and hereinafter referenced as, the "CDP") (included by reference as Exhibit A). The CDP shall control the general development, layout, and configuration of the Property. Adjustments to the locations of the proposed uses, facilities, and improvements shown on the CDP shall be permitted as reasonably necessary to address grading; drainage; environmental, cultural, and natural features; development ordinance requirements; other final engineering considerations; and to accommodate the recommendations of archaeological studies, if any, provided that any such minor adjustments shall be in substantial conformance with the CDP. All land development applications, including zoning permit applications, for development of all or any portion of the Property shall identify the Property as being subject to these Proffers.

    a. Parking Requirements. The Parking Requirements for "MULTIFAMILY (AHU) UNITS" listed on Sheet 09 of the CDP shall be superseded by the Parking Requirements included on the Parking Tabulations sheet in the Village at Clear Springs, Land Bay 2c Zoning Concept Plan Amendment Plan Set, dated October 7, 2025, prepared by J2 Engineers, Inc.

~~1.~~2. Development Scope. In addition to any related parking, civic space, open space, stormwater management, recreational, and other community facilities and amenities as shown on the CDP or described in these Proffers, the Property shall be developed as follows and as stated on Sheet 09 or Sheet 09A of the CDP, as applicable:

a. Landbay 1. Landbay 1 shall be developed as follows:

i. Landbay 1 shall be created as a separate parcel of record. Within 90 days after approval of the plat creating Landbay 1 as a separate parcel of record, Owner shall offer Landbay 1 for conveyance by deed of gift or comparable mechanism to USTA Mid-Atlantic Tennis Center LLC, a wholly owned subsidiary of USTA/Mid-Atlantic Foundation, a Virginia nonstock Corporation ("USTA MAS") or its assigns (jointly, "USTA") for the development of a Tennis Facility (defined below). The recreational improvements, as described more fully in subparagraph ii below, may count toward the active recreation requirements of the development constructed on the Property subject to the requirements of subparagraph ii, below. The Owner shall confirm to the Zoning Administrator that it has offered to convey Landbay 1 to USTA, as required by this proffer.

ii. If USTA accepts the conveyance of Landbay 1 as described in subparagraph i above, the Tennis Facility will contain a minimum of 6 and a maximum of 20 lighted outdoor tennis courts, a minimum of 4 and a maximum of 12 lighted outdoor pickleball courts, and a "Tennis Clubhouse" (as defined below) (collectively, the "Tennis Facility"). The Tennis Clubhouse will include a combination of indoor recreation and community uses, which shall include a minimum of 16 indoor tennis and/or pickleball courts, a minimum of 2,000 square feet of office space for USTA and the Master Property Owners' Association ("Master POA") (see Proffer 4), a minimum of 800 square feet of indoor fitness and exercise facilities, a minimum of 400 square feet of retail space, and a minimum of 2,300 square feet of classroom/community/meeting space. The exact features of the Tennis Facility will be determined prior to site plan approval and shall be in substantial conformance with these Proffers and the CDP. The land area of Landbay 1 shall be aggregated into the Property's overall site area for density purposes, and the outdoor sports courts, indoor sports courts, and workout facilities associated with the Tennis Facility may count towards the Property's active recreation space calculations pursuant to Sections 7-803(E) and 7-903(E) of the Revised 1993 Zoning Ordinance, provided the Zoning Administrator determines that the facility and Residents' access thereto satisfies the requirements of those sections. Residents of any and all residential units on the Property ("Residents") shall have the right to use the Tennis Facility in Landbay 1 of the Property, including the Tennis Clubhouse, at no additional cost to the Residents aside from Master POA dues. Such use rights shall be defined by and provided through a shared-use

agreement (the "Shared Use Agreement") between USTA and the Master POA, which shall provide, at a minimum that Residents in good standing shall have the same daily access to all publicly accessible areas of the Tennis Facility, including indoor and outdoor tennis and pickleball courts, during the Tennis Facility's operational hours that is afforded to non-Resident members. For the purposes of this Proffer, "publicly accessible areas" shall be defined as all areas, including tennis and pickleball courts, which are not associated with USTA office space, mechanical operations, management, or maintenance for the Tennis Facility. The proposed Shared Use Agreement shall be provided to the County for Zoning Administrator review and approval for compliance with this Proffer prior to approval of the first zoning permit for the Property and to confirm_that the use rights granted to Residents therein satisfy the Zoning Ordinance active recreation space requirement for the residential development. Once approved by the Zoning Administrator, the Shared Use Agreement shall be in place prior to the approval of the first certificate of occupancy for the Property. Nothing herein shall prevent USTA from promulgating reasonable rules and regulations governing the operation and maintenance of the Tennis Facility, including hours of operation, fees or charges imposed for individual or group lessons/classes, fitness or training programs, or similar offerings made available to both Residents and non-Residents, and the conduct of members, to include Residents, while utilizing the Tennis Facility, provided that such rules shall be applied equally to all members regardless of Resident status, and provided such rules do not conflict with these Proffers or the terms of the Shared Use Agreement as approved by the Zoning Administrator.

The Tennis Facility shall be bonded prior to approval of the first record plat or site plan for Landbay 1, whichever one comes first, other than the record plat that will create Landbay 1 as a separate parcel of record for conveyance to the USTA, and shall be constructed and issued a certificate of occupancy prior to the approval of the 700th zoning permit on the Property. .

iii. If the Tennis Facility is constructed on Landbay 1 in accordance with subparagraph ii above, the Overall Amenity Plan depicted on Sheet 16 of the CDP shall apply to the Property, and Landbay 1 shall be developed in accordance with Section 2.2 of the Design Guidelines referenced in Proffer 6. If the Tennis Facility is not constructed on Landbay 1, the Alternate Amenity Plan shown on Sheet 16A of the CDP shall apply to the Property, and Landbay 1 shall be developed in substantial conformance with subparagraph iv below and Section 2.2A of the Design Guidelines.

iv. In the event that USTA refuses conveyance of Landbay 1, Landbay 1 shall be developed in substantial conformance with Sheet 16A of the CDP, including at a minimum the following amenities designated as

"Recreational Use" on Sheet 16A: 6 tennis courts, 4 pickle ball courts, a minimum 60,000 square foot multi-turf sports field, a minimum 1,300 square foot tot lot, 2 off-leash dog areas consisting of a minimum 30,000 square feet each, trails, a minimum 500 square foot covered pavilion, and a minimum 65 parking spaces. The amenities shall be installed by the Owners prior to approval of the 800th zoning permit on the Property and conveyed to the Master POA, and shall be bonded concurrently with the site plan or CPAP showing said improvements.

In addition, a clubhouse, consisting of a minimum of 2,000 square feet and containing, at minimum, work out facilities and offices for the Master POA shall be developed in Landbay 1 as shown on Sheet 16A of the CDP as "Community Clubhouse", and shall be maintained by the Master POA as described in Proffer 4 below. The Community Clubhouse shall be constructed and issued a certificate of occupancy prior to approval of the 800th zoning permit for the Property, and shown on and bonded concurrently with the site plan showing the facility.

b. Landbay 2a. If Affordable Housing Building(s) are developed in Landbay 2c as described in subparagraph d below, Landbay 2a shall be developed with a maximum of 55 market rate single family attached duplex, triplex and/or quadruplex residential units ("SFA Units").

If Affordable Housing Building(s) are not developed in Landbay 2c, Landbay 2a shall be developed with a maximum of 55 SFA Units, including a minimum of 7 Affordable Dwelling Units (ADUs).

c. Landbay 2b. If Affordable Housing Building(s) are developed in Landbay 2c as described in subparagraph d below, Landbay 2b shall be developed with a maximum of 69 market rate SFA Units.

If Affordable Housing Building(s) are not developed in Landbay 2c, Landbay 2b shall be developed with a maximum of 69 SFA Units, including a minimum of 9 ADUs.

d. Landbay 2c. Landbay 2c shall be developed with a maximum of 54 market rate SFA Units.

Landbay 2c shall also be developed with a minimum~~-~~ of 180 Affordable Housing Units ("AHUs") as defined by Article 8 of the Revised 1993 Zoning Ordinance in one or more three-story multi-family attached elevator-serviced residential buildings (the "Affordable Housing Building(s)").

The affordability requirements identified in this Proffer 2.d. ("Locality's Set-Aside") may survive a foreclosure and be binding upon a successor in interest,

however, if the Virginia Housing Development Authority ("VHDA") as first lienholder is the successful bidder at foreclosure and becomes the successor in interest, the Locality's Set-Aside must terminate other than: i. twenty percent (20%) of the units in the development may remain at sixty percent (60%) of the Washington Primary Metropolitan Statistical Area Median Income ("AMI") following such a foreclosure; and ii. VHDA may permit additional units at sixty percent (60%) of AMI to survive such a foreclosure, provided that VHDA projects that the development will achieve a targeted Debt Service Coverage Ratio of at least 1.25 while subject to such an additional set-aside. This determination of additional units at sixty percent (60%) AMI will be made by VHDA in its sole discretion.

~~Upon foreclosure of any AHU, the rent and/or sales price restrictions applicable to such unit shall terminate if required by, and in accordance with, the applicable funding program requirements. The foreclosing party shall provide to the Zoning Administrator written verification from the applicable funding program, that a foreclosure has occurred and that termination of the rent and/or sales price restrictions (with respect to the foreclosed unit(s)) is required in accordance with the program requirements. The affordability provisions of this proffer shall remain in force and effect with respect to each AHU unless and until the Zoning Administrator has received such written verification. For purposes of this paragraph, the term foreclosure shall include execution and delivery of a deed in lieu of foreclosure.~~

If Affordable Housing Building(s) are not developed as described above, Landbay 2(c) shall be developed with a maximum of 121 SFA Units, including a minimum of 15 ADUs.

e. If AHUs are developed on Landbay 2c as described above, the Zoning Tabulations & Modifications identified on Sheet 09 of the CDP shall apply to the Property. If AHUs are not developed on Landbay 2c, the Alternate Zoning Tabulations & Modifications identified on Sheet 09A of the CDP shall apply to the Property. All AHUs or ADUs, as applicable, shall be developed in accordance with the requirements of Article 7 of the Revised 1993 Zoning Ordinance.

f. Landbay 2d. Landbay 2d shall be developed with a maximum of 36 market rate single family detached residential units ("SFD Units") and a maximum of 108 market rate SFA Units.

If Affordable Housing Building(s) are not developed in Landbay, Landbay 2d shall be developed with a maximum of 36 market rate SFD Units and a maximum of 108 SFA Units, including a minimum of 35 ADUs.

In addition to the 144 SFD and SFA units described above, Landbay 2d shall also be developed with a minimum of 4 single family attached duplex, triplex, or quadruplex residential dwelling units for the purposes of providing for-sale affordable residential units (hereinafter referred to as "Non-Profit Units"). The

Non-Profit Units will be constructed and administered by a non-profit entity such as but not limited to Loudoun Habitat for Humanity, who will offer the Non-Profit Units as available for purchase by qualified buyers who earn between 30% and 60% of the Washington Metropolitan Statistical Area Median Income ("AMI") as published by HUD. Each Non-Profit Unit shall be a minimum of 1,200 square feet.

g. Landbay 3. Landbay 3 shall be developed with a maximum of 121 market rate single family detached age-restricted residential units ("Age-Restricted SFD Units") and a maximum of 153 market rate single family attached age-restricted triplex and/or quadruplex residential units ("Age-Restricted SFA Units") (collectively "Age-Restricted Single Family Units").

i. Age Restriction for Age-Restricted Single Family Units. The dwelling units identified in Proffer 2(g) shall be occupied by households with at least one full-time resident 55 years of age or older (an "Independent Adult"). All other residents of any Age-Restricted Single Family unit ("Permitted Occupant") on the Property shall reside with an Independent Adult, and each such Permitted Occupant shall be: (a) a spouse or a cohabitant of an Independent Adult; or (b) the child of an Independent Adult residing therein or the child of a person residing therein who qualifies as a Permitted Occupant under this paragraph, such child being at least 18 years of age or older; or (c) a person who provides primary physical or economic support to the Independent Adult residing therein. Such qualifications for occupancy and corresponding requisite minimum ages applicable to each Age-Restricted Single Family Unit shall be set forth in the POA Documents (see Proffer 4). Notwithstanding the foregoing limitations: (1) a person not within the above categories may be hired to provide live-in, long-term or terminal health care to an Independent Adult residing therein for compensation; or (2) if an Independent Adult, while maintaining residency of an Age-Restricted Single Family Unit, is compelled by law or court order to take custody of a child under 18 years of age, the Independent Adult and any such child shall be allowed to continue to occupy the residential unit. The restrictions of occupancy set forth in this proffer shall be in conformance with the State and Federal Fair Housing Acts and the Federal Housing for Older Persons Act of 1995 (Pub. L. 104–76, 109 Stat. 787, approved December 28, 1995), as amended, and as implemented by HUD regulations at 24 CFR part 100 (collectively, "Fair Housing Regulations"). Prior to the approval for a zoning permit for each Age-Restricted Single Family Unit, the Owner shall demonstrate compliance with applicable Fair Housing Regulations.

ii. Guests For Age-Restricted Single Family Units. POA Documents shall provide that guests under the age of 55 are permitted to occupy the Age-Restricted Single Family Units for periods of time not to exceed 30

consecutive days nor a cumulative 60 days total for each such guest in any calendar year.

iii. Successor Owners for Age-Restricted Single Family Units. If title to any dwelling described in Proffer 2(g) becomes vested in any person under the age of 55 by reason of descent, distribution, foreclosure or operation of law, the said age restriction shall not result in a forfeiture or reversion of title, but rather, such person thus taking title shall not be permitted to reside in such dwelling unit until such unit shall be also occupied by the requisite Independent Adult in accordance with subparagraph i above and as set forth in the POA Documents. Notwithstanding the foregoing, a surviving spouse shall be allowed to occupy an Age-Restricted Single Family Unit consistent with the Federal Fair Housing Act and the Virginia Fair Housing Law, as may be amended.

iv. Enforcement of Age Restriction Requirements. Appropriate rules and regulations allowing the Property Owner Association, as defined in Proffer 4 below, to enforce the age-restriction requirements included in subparagraphs g.i through g.iii, above shall be included in the POA Documents.

v. Dedication Area. The approximately 4 acre area within Landbay 3 identified on Sheet 6 of the CDP as "LINEAR PARK" shall be dedicated to the County as described in Proffer 32.a, below. The final location and acreage of this area shall be shown at the time of site plan, provided that the total area within Landbays 3 and 4a dedicated to the County for a Liner Park shall be a minimum of 22 acres.

h. Landbay 4a. Landbay 4a shall be developed with a maximum of 24 market rate SFD Units, and a maximum of 105 Market Rate SFA Units.

If Affordable Housing Building(s) are not developed in Landbay 2c, Landbay 4a shall be developed with a maximum of 24 Market Rate SFD Units and a maximum of 105 SFA Units, including a minimum of 35 ADUs.

In addition to the 129 SFD and SFA units described above, Landbay 4a shall also be developed with a minimum of 4 Non-Profit Units as defined and described in subparagraph f above.

The approximately 18 acre area within Landbay 4a identified on Sheet 6 of the CDP as "LINEAR PARK" shall be dedicated to the County as described in Proffer 32.a, below. The final location and acreage of this area shall be shown at the time of site plan, provided that the total area within Landbays 3 and 4a dedicated to the County for a Linear Park shall be a minimum of 22 acres.

i. Landbay 4b. Landbay 4b shall consist of an existing church.

j. Landbay 4c. Landbay 4c shall consist of one existing single family detached unit.

k. Landbay 5. Landbay 5 shall be developed with a maximum of 48 market rate SFD Units and a maximum of 111 market rate SFA Units.

If Affordable Housing Building(s) are not developed in Landbay 2c, Landbay 5 shall be developed with a maximum of 48 market rate SFD Units and 111 SFA Units, including a minimum of 20 ADUs.

In addition to the 159 SFD and SFA units described above, Landbay 5 shall also be developed with a minimum of 4 Non-Profit Units as defined and described in subparagraph f above.

l. Landbay 6a. Landbay 6a may be developed as a church and other accessory uses. If Landbay 6a is not developed as a church, it shall develop with other Civic Uses and/or Open Space that meet the applicable Loudoun County Zoning Ordinance ("Zoning Ordinance") definitions and requirements for said uses.

m. Landbay 6b. Landbay 6b shall be conveyed to the County and reserved exclusively for a Neighborhood Park, including children play area and other improvements described in Proffer 31.b. The area of Landbay 6b shall be aggregated into the Property's overall site area for density purposes and counted towards the Property's open space and civic space calculations as shown on Sheet 10.

n. Lot Size Variation. The following lot size restrictions shall apply to all lots for dwelling units on the Property, regardless of landbay:

i. Each SFD Unit, whether age-restricted or not, shall be constructed on a lot containing a minimum of 3,500 square feet, and maximum of 10,035 square feet. In addition to the foregoing, the following lot size standards shall apply to SFD units on the Property:

a. A minimum of 15% of the SFD Units shall be constructed on lots containing a minimum of 3,500 square feet, and a maximum of 5,500 square feet;

b. A minimum of 10% of SFD units shall be constructed on lots containing a minimum of 5,501 square feet, and a maximum of 6,500 square feet; and

c. A maximum of 5% of SFD units shall be constructed on lots containing no less than 8,000 square feet and no more than 10,035 square feet.

ii. Each market rate SFA Unit, SFA ADU, and Non-Profit Unit, whether age restricted or not, shall be constructed on a lot containing a minimum of 1,235 square feet and a maximum of 3,400 square feet. In addition to the foregoing, the following lot size standards shall apply to market rate SFA Units on the Property:

a. A minimum of 10% shall be constructed on lots containing a minimum of 1,235 square feet and a maximum of 1,600 square feet; and

b. A minimum of 10% shall be constructed on lots containing a minimum of 1,601 square feet and a maximum of 2,400 square feet.

~~2.~~3. Water and Sewer. The Property shall be served by public central water supply and public central sanitary sewer systems. The Owner shall construct and install water and sewer lines necessary to serve the Property in those areas where additional water and sewer lines and connections are necessary to develop and serve the Property, and which lie beyond the limits of the Loudoun County Sanitation Authority's ("Loudoun Water") planned extension of the central water supply and central sewer system, at no cost to the County or Loudoun Water. Such lines and connections shall be constructed and installed in accordance with Loudoun Water standards. The Owner shall acquire, at no public cost, any off-site easements, if needed, to extend public water and/or sanitary sewer lines to the Property and shall dedicate such easements to Loudoun Water at no cost to the County or Loudoun Water. Unless otherwise approved by the Loudoun County Health Department, any existing wells and drainfields located on the Property within each Landbay shall be abandoned prior to approval of the first zoning permit for that Landbay, in accordance with Loudoun County Health Department standards and requirements then in effect, unless otherwise agreed to.

~~3.~~4. Property Owner Association. With the exception of the AHUs, a~~A~~ll property owners on the Property shall be members of a Master Property Owners Association ("Master POA") established to regulate use and provide standards for construction and landscaping within the Property, and to provide maintenance and other services described in these Proffers. The entire Property shall be subject to one Master POA. The Owner shall establish the Master POA as an overall umbrella association and may also establish one or more sub-associations as needed, without limitation. Concurrent with the submission of the first record plat or site plan for any portion of the Property, whichever is first in time, the Owner shall submit to the County, for review and approval, a declaration of covenants, conditions, and restrictions, and related governance documents (together, the "POA Documents") creating the Master POA and any sub-association(s). All property owners shall be subject to the POA Documents for the Master POA. The Master POA and any sub-association(s) shall be established, and the associated POA Documents and sub-association documents shall be recorded, in the land records of Loudoun County Circuit Court, prior to the approval of the first record plat or site plan for any portion of the Property, whichever is first in time.

a. General Responsibilities. The Master POA, and/or its assigned sub-association(s), as applicable, shall maintain all common areas, open space areas, and active recreation areas; provide for trash removal and recycling services throughout the Property; and provide for snow removal from private streets, parking areas, and pedestrian facilities. The Master POA shall be responsible for the maintenance of any Bus Stop Easement and Bus Shelter on the Property. The Master POA and/or its assigned sub-associations(s) shall also be responsible for the maintenance of all common recreational facilities on the Property not maintained by the County, all storm drainage easements and stormwater management facilities on the Property not maintained by the County, all private streets and street lights internal to the Property, and all pedestrian facilities on the Property not otherwise maintained by the County or the Virginia Department of Transportation ("VDOT").

b. Garage Restriction. The POA Documents shall include a provision prohibiting any garage space from being converted to habitable and/or living space or to any other use that precludes the parking of operable vehicles. Notwithstanding the foregoing, this exclusion shall not apply to model homes and/or marketing offices utilized by the Developer or its agent(s) for the marketing of units for sale.

~~4.~~5. Recreational Amenities. As depicted on Sheets 09, 09A, 16, and 16A of the CDP, the Owner shall provide a minimum of 162,300 square feet, or 151,500 square feet if AHUs are not developed, of active recreation space on the Property. The Owner shall install those minimum improvements reflected on Sheet 16 or Sheet 16A of the CDP, as applicable. Any such active recreation space(s)shall be owned and maintained by the Master POA, and/or its assigned sub-association(s), established pursuant to Proffer 4. Active recreation space(s) and the facilities and amenities to be constructed or placed within said areas shall be bonded prior to the approval of the first record plat or site plan for landbay where said amenity is located and constructed according to the timing described in Proffer 5.a.

a. Timing of Recreation Amenities. The recreational amenities referenced in this Proffer 5.a. shall be shown on, and bonded for construction prior to approval of, the first site plan or subdivision plat for the associated Landbay.

i. Construction of a minimum four hundred (400) square foot Children Play Area including a range of accessible play equipment for multiple ages in Landbay 2a shall occur concurrently with the construction of the residential dwelling units within Landbay 2a and shall be completed prior to the issuance of the 35th certificate of occupancy for a residential dwelling unit in Landbay 2a.

ii. Construction of the recreational amenities in Landbay 2c shall occur concurrently with the construction of the residential dwelling units within Landbay 2c and shall be completed as follows:

1. The construction of the Gathering Node as defined in the Design Guidelines referenced in Proffer 6 below shall be completed prior to the issuance of the 115th certificate of occupancy for a residential dwelling unit in Landbay 2c if Affordable Housing Building(s) are constructed in Landbay 2c. If Affordable Housing Building(s) are not constructed in Landbay 2c, the Gathering Node shall be completed prior to the issuance of the 30th certificate of occupancy for a residential dwelling unit in Landbay 2c. The Gathering Node shall be a minimum of three hundred (300) square feet and shall include, at a minimum, seating for ten (10) people, which may consist of benches, chairs, seat walls, or similar seating options.

2. The construction of the Children Play Area shall be completed prior to the issuance of the 115th certificate of occupancy for a residential dwelling unit in Landbay 2c if Affordable Housing Building(s) are constructed in Landbay 2c. If Affordable Housing Building(s) are not constructed in Landbay 2c, the Children Play Area shall be completed prior to the issuance of the 30th certificate of occupancy for a residential dwelling unit in Landbay 2c. The Children Play Area shall consist of a minimum of four hundred (400) square feet and shall include a range of accessible play equipment for multiple age groups.

iii. Construction of the recreational amenities in Landbay 2d shall occur concurrently with the construction of the residential dwelling units within Landbay 2d and shall be completed as follows:

1. The construction of the Pollinator Garden shall be completed prior to the issuance of the 68th certificate of occupancy for a residential dwelling unit in Landbay 2d. The plantings in the Pollinator Garden shall incorporate Virginia native pollinator plantings consisting of the following plant types: shrubs, ornamental grasses, and perennials, to provide nectar and/or pollen during all four flowering periods (spring, early summer, late summer, and fall). Local Virginia ecotypes shall be selected where available and shall include a variety of plant types and species to foster biodiversity and support a variety of native pollinators. The pollinator plant species within the pollinator garden must be provided as follows: (1) diversity must be provided so that no one plant type may exceed 50% of the total plant units required and a minimum of 3 different species is required for each plant type, (2) all plant material shall be installed and maintained in conformance with the Zoning Ordinance, and (3) container plants shall be a minimum of 3 gallons for shrubs and a minimum of 1 gallon for perennials and ornamental grasses. The POA documents shall include a provision for the ongoing

maintenance of the pollinator garden. The pollinator garden will consist of, at a minimum, 1 bench and a minimum of 500 square feet of planting area.

2. The construction of the Community Pool with a minimum water surface area of 3,500 square feet and Pool House consisting of a minimum of 600 square feet and including a lifeguard room, a pool equipment room, and restroom facilities shall be completed prior to the issuance of the 100th certificate of occupancy for a residential dwelling unit in Landbay 2d.

iv. Construction of the recreational amenities in Landbay 3 shall occur concurrently with the construction of the residential dwelling units within Landbay 3 and shall be completed as follows:

1. The construction of the Age-Restricted Pool with a minimum water surface area of 2,500 square feet and Clubhouse consisting of a minimum of 3,000 square feet, as well as the adjacent Children Play Area shall be completed prior to the 137th certificate of occupancy for a residential dwelling unit in Landbay 3. The Children Play Area shall consist of a minimum of 400 square feet and shall include a range of accessible play equipment for multiple age groups.

2. The construction of the 2 Pocket Parks shall be completed prior to the issuance of the 137th certificate of occupancy for a residential dwelling unit in Landbay 3. Each Pocket Park shall consist of a minimum of 100 square feet and shall include, at a minimum, the following amenities:

a. Seating for four (4) people, which may consist of benches, chairs, seat walls, or similar seating options; and

b. A minimum of 1 unifying theme or focal element which may include, but is not limited to, an art feature, such as a sculpture a minimum of 36 inches in height; enhanced landscaping to include a minimum of 2 small deciduous trees and 50 small shrubs; a specimen tree; decorative inlaid paving; or other similar features.

3. The construction of the Central Green shall be completed prior to the issuance of the 200th certificate of occupancy for a residential dwelling unit in Landbay 3. The Central Green shall include, at a minimum, four (4) benches, 700 square feet of raised planter beds,

1 pergola focal structure, and a minimum of 17,500 square feet of open lawn play area.

4. The construction of the Pollinator Garden shall be completed prior to the issuance of the 200th certificate of occupancy for Landbay 3. The plantings in the Pollinator Garden shall be consistent with Proffer 5.a.iii.1 above. The pollinator garden will consist of, at a minimum, one (1) bench and a minimum of 750 square feet of planting area.

v. Construction of the Pocket Park in Landbay 4a shall be completed prior to the issuance of the 70th certificate of occupancy for a residential dwelling unit in Landbay 4a. The Pocket Park shall consist of a minimum of 100 square feet and shall include:

1. Seating for 4 people, which may consist of benches, chairs, seat walls, or similar seating options; and

2. A minimum of 1 unifying theme or focal feature, which may include, but is not limited to, an art feature such as a sculpture a minimum of 36 inches in height; enhanced landscaping, to include a minimum of 2 small deciduous trees and 50 small shrubs; a specimen tree; decorative inlaid paving; or other similar features.

vi. Construction of the 2 Pocket Parks and 2 Mews Walks, the latter as defined by the Design Guidelines referenced in Proffer 6, in Landbay 5 shall be completed prior to the 80th certificate of occupancy for residential dwelling unit in Landbay 5.

1. Each Pocket Park shall be a minimum of 100 square feet each and shall include the following amenities:

a. Seating for four (4) people, which may consist of benches, chairs, seat walls, or similar seating options; and

b. A minimum of 1 unifying theme or focal element, which may include, but is not limited to, an art feature such as a sculpture a minimum of 36” tall; enhanced landscaping to include a minimum of 2 small deciduous trees and 50 small shrubs; a specimen tree; decorative inlaid paving; or other similar features.

2. Each Mews Walk shall consist of a minimum of 750 square feet and shall include, at a minimum, enhanced landscaping, 1 focal point pergola and 2 benches.

b. Once the required recreation facilities and amenities are constructed or placed within said active recreation spaces on the Property as required pursuant to this Proffer 5, the Owner or the Master POA, established pursuant to Proffer 4, above, as may be applicable, shall be permitted to change, without the need to process a Zoning Concept Plan Amendment, any one or more of the facilities or amenities within said active recreation spaces contemplated by this proffer, so long as the Property continues, as determined by the Zoning Administrator, to meet its minimum Active Recreation Space requirement and the alternative active recreation facility(ies) or amenity(ies), as determined by the Zoning Administrator, meet the Zoning Ordinance definition of active recreation space. . The minimum active recreation space and minimum improvements identified in Proffer 5, shall remain unchanged through the replacement of proffered facilities and amenities with alternative facilities and amenities. Prior to any such change, the Owner or Master POA, as applicable, shall submit the contemplated change to the Zoning Administrator for review in accordance with this proffer.

~~5.~~6. Design Guidelines. Development on the Property shall be consistent with the Design Guidelines titled, "VILLAGE AT CLEAR SPRINGS DESIGN GUIDELINES PREPARED BY J2 LEGI-2023-0017 ZMAP-2021-0008" dated November 28, 2023 (included by reference as Exhibit B). In instances where the Design Guidelines conflict with any provisions proffered herein, including the CDP, for which substantial conformance is required, these Proffers and the CDP shall supersede the Design Guidelines. The Design Guidelines describe general building character, design, and materials, for Landbays 1, 2a, 2b, 2c, 2d, 3, 4a, 5, 6a, and 6b of the Property. The Owner shall develop appropriate design review procedures to ensure Landbays 1, 2a, 2b, 2c, 2d, 3, 4a, 5, 6a, and 6b of the Property are developed consistent with the Design Guidelines. The Design Guidelines shall be enforced by the Master POA. A letter confirming approval by the Master POA shall be included with all site plan or record plat applications submitted to the County for the Property. The buildings shall be similar in character to the elevations depicted in the Design Guidelines, but exact conformity shall not be required. Prior to approval of a site plan or record plat, architectural elevations shall be submitted to the Zoning Administrator to demonstrate conformance with this Proffer 6 and Proffer 7 below.

~~6.~~7. Building Design. The following building design features shall be incorporated into the facades of each dwelling unit building on the Property:

a. The front and side facades of each dwelling unit building shall consist of quality masonry materials, such as brick or brick application, Hardi Plank or Fiber Cement siding, or stone or stone application. The type and amount of masonry materials shall be depicted on the applicable building plans for the dwelling units.

b. There shall be no aluminum siding or vinyl siding permitted on any of the facades of the dwelling unit buildings.

c. The dwelling unit buildings shall not exceed 3 stories in height for all Landbays.

d. Each dwelling unit facade shall include a minimum of 2 of the following design features: window surrounds, decorative masonry designs to differentiate the wall surface, awnings, bay windows, façade recesses, and parapets.

e. The following building design features shall be incorporated into the facades of the Tennis Facility within Landbay 1:

i. The primary facades of all buildings comprising the Tennis Facility shall consist of quality masonry materials, such as brick or brick application, Hardi Plank or Fiber Cement siding, or stone or stone application. For the purposes of this Proffer, a primary façade shall be defined as a façade facing either a public right-of-way, the Dulles Greenway, or residential dwelling unit(s). The type and amount of masonry materials shall be depicted on the applicable building plans for the Tennis Facility.

ii. All buildings housing indoor sports courts for the Tennis Facility shall use a Standing Seam metal roof. Portions of the Tennis Clubhouse not containing indoor sports courts shall use either a flat roof or a Standing Seam metal roof.

f. The following building design features shall be incorporated into the facades of a future civic building within Landbay 6a:

i. The front and side facades of each building comprising any newly constructed civic building shall consist of quality masonry materials, such as brick or brick application, Hardi Plank or Fiber Cement siding, or stone or stone application. The type and amount of masonry materials shall be depicted on the applicable building plans for the civic building.

ii. There shall be no aluminum siding or vinyl siding permitted on any of the facades of the civic building.

~~7.~~8. Universal Design and Age-Restricted Single Family Units Accessibility.

a. For the purposes of this proffer, “First Floor Occupiable Space” shall be defined as livable space on the first floor, where said livable space on the first floor is designated for the purpose of at least one bedroom and one full.

b. Age-Restricted Single Family Units shall contain either First Floor Occupiable Space or elevator service within each unit. The Owner shall provide the Zoning Administrator with documentation demonstrating that one of these options has been provided for each Age-Restricted Single Family Unit prior to the issuance of the certificate of occupancy for each Age-Restricted Single Family Unit.

c. The following Universal Design Features ("Universal Design Features") shall be provided in all Age-Restricted Single Family Units at no cost to the purchaser.

i. Blocking in bathrooms to allow for the future installation of grab bars for commodes, bathtubs, and showers;

ii. Electrical outlets that are a minimum of 18 inches high on the wall;

iii. Light switches and thermostats that are located a maximum of 48 inches high on the wall;

iv. Levered door handles instead of doorknobs;

v. A turning radius of five (5) feet near the first floor bathroom commode; and

vi. A first floor bathroom console sink in lieu of a cabinet-style vanity.

vii. Garage doors of at least eight (8) feet in width to accommodate vans;

viii. Rocker style light switches;

x. Raised bottom pantry shelf;

xi. Showers featuring shower pans instead of bathtubs;

xii. Hard surface flooring for mobility device accessibility; and

xiii. Raised fireplace with no hearth.

d. The Universal Design Features shall be labelled as such on relevant building plans and the units containing Universal Design Features shall be designated as a Universal Design Unit prior to the approval of the zoning permit for each such unit.

e. The Universal Design Features for non-age-restricted market Rate SFA and market Rate SFD Units shall be included within the sales and marketing materials for prospective purchasers of those units as options to be installed at the original purchaser's request for any dwelling unit which contains First Floor Occupiable Space. Any Universal Design Features to be installed by the Owner must be requested prior to the beginning of construction for said dwelling unit but no later than the time of contract ratification by the original purchaser. Universal Design Features agreed to and meeting the criteria as described here within shall be installed by the Owner prior to the issuance of the certificate of occupancy for said dwelling unit on the Property. The Owner shall provide the Zoning Administrator documentation demonstrating the Universal Design Features are provided as an option at the time of initial purchase as required in this Proffer 8 prior to the

approval of the first zoning permit for the Property for any dwelling unit containing First Floor Occupiable Space. Except as provided in Proffer 8.c, Universal Design Features requested and agreed to pursuant to this Proffer 8.e shall be installed by the Owner at the sole cost of the original purchaser for all market-rate dwelling units.

f. Universal Design for Affordable Units. Universal Design Features as identified in 8.c.i., 8.c.ii., 8.c.iii., 8.c.iv., and 8.c.v shall be included and installed as standard for all ADUs prior to the issuance of the certificate of occupancy for said dwelling unit.

~~8.~~9. Mechanical Equipment. All rooftop mechanical equipment shall be screened from view from adjacent public rights-of-way, the Dulles Greenway, and residential dwelling units with materials that blend with the building architecture as described in Proffer 7 above. All ground-mounted mechanical equipment not associated with a residential dwelling unit facing adjacent public rights-of-way, the Dulles Greenway, or residential dwelling units shall be screened with materials that blend with the building architecture as described in Proffer 7 above, or by landscaping that shall include a minimum of 80% native evergreen plant material, a minimum of 30 inches in height at the time of installation.

CAPITAL FACILITIES CONTRIBUTION

~~9.~~10. Capital Facilities Contribution. Owner shall make a one-time capital facilities contribution for each market rate dwelling unit developed on the Property in the amounts identified below:

Non-Age-Restricted SFD Units: Starting with the 28th market rate non-age-restricted SFD Unit, a contribution in the amount of 38,439.10 per unit;

SFA Units: A contribution in the amount of $26,528.35 per unit;

Age-Restricted SFD Units: A contribution in the amount of $9,886.14; and

Age-Restricted SFA Units: A contribution in the amount of $8,081.52.

The amount of the said capital facilities contribution payable for each dwelling unit, adjusted pursuant to Proffer 47 below, shall be calculated at the time of the approval of the zoning permit for each said unit and shall be payable prior to the issuance of the certificate of occupancy for such unit. Said capital facilities contribution funds may be used at the County's discretion for capital facility improvements within the County.

a. Offset for By-Right Development Potential. Capital facilities contributions will not be paid for the first 27 non-age-restricted market rate SFD units, as an offset for the

by-right development potential for the Property prior to approval of ZMAP-2021-0008.

TRANSPORTATION CONTRIBUTIONS

~~10.~~11. Regional Road Contribution. The Owner shall make a one-time regional road cash contribution in the amount of $6,000.00 per market rate dwelling unit. The amount of the said regional road contribution payable for each dwelling unit, adjusted pursuant to Proffer 47 below, shall be calculated at the time of the approval of the zoning permit for each said unit and shall be payable prior to the issuance of the certificate of occupancy for each such unit. Said contributions shall be payable to the County and used by the County for road or transportation improvements in the vicinity of the Property.

~~11.~~12. Transit Contribution. The Owner shall make a one-time cash transit contribution in the amount of $1,000.00 per market rate dwelling unit. The amount of the said transit contribution payable for each dwelling unit, adjusted pursuant to Proffer 47 below, shall be calculated at the time of the approval of the zoning permit for each said unit and shall be payable prior to the issuance of the certificate of occupancy for each such unit. Said contributions shall be payable to the County and deposited in a Transit/Rideshare Trust Fund or otherwise used by the County to support transit services as described in the Countywide Transportation Plan ("CTP").

CONTRIBUTION CREDITS

~~12.~~13. Evergreen Mills Road Improvements Credit. Upon satisfaction of Proffers 20.a and 20.b, the Owner shall receive credit against the cash contributions identified Proffers 10, 11 and 12 in the total amount of Sixteen Million Six Hundred Twenty-Three Thousand Five Hundred Sixty Dollars ($16,623,560.00) for construction of the Evergreen Mills Road Frontage Improvements (as defined in Proffer 20). Applicable credits shall be calculated and applied at the time of zoning permit approval on a per unit basis as described in Proffers 13.a and 13.b, provided that the Owner may not receive credit until the applicable phase of improvements is constructed and available for use, and Owner shall not receive credit in excess of the remaining unpaid contributions. Phases for the Evergreen Mills Road Frontage Improvements are defined in Proffer 20.b.

a. A credit shall be applied against the per unit Regional Road and Transit Contributions identified in Proffers 11 and 12 in the total amount of Six Million One Hundred Eighty-Eight Thousand Dollars ($6,188,000.00), as prescribed below.

i. Phase 1 Credit. When Phase 1 Evergreen Mills Road Frontage Improvements are substantially constructed and available for use as described in Proffer 20.b.i, the Owner shall receive credit against per unit

Regional Road and Transit Contributions in the aggregate amount of Two Million One Hundred Thousand Dollars ($2,100,000.00).

ii. Phase 2 Credit. When Phase 2 Evergreen Mills Road Frontage Improvements are substantially constructed and available for use as described in Proffer 21.b.ii, the Owner shall receive credit against per unit Regional Road and Transit Contributions in an additional aggregate amount of Two Million Thirty Thousand Dollars ($2,030,000.00).

iii. Phase 3 Credit. When Phase 3 Evergreen Mills Road Frontage Improvements are substantially constructed and available for use as described in Proffer 21.b.iii, the Owner shall receive credit against per unit Regional Road and Transit Contributions in an additional aggregate amount of One Million Two Hundred Ninety-Five Thousand Dollars ($1,295,000.00).

iv. Phase 4 Credit. When Phase 4 Evergreen Mills Road Frontage Improvements are substantially constructed and available for use as described in Proffer 21.b.iv, the Owner shall receive credit against per unit Regional Road and Transit Contributions in an additional aggregate amount of Seven Hundred Sixty-Three Thousand ($763,000.00).

v. Application of Credit. Credits calculated pursuant to Proffer 13.a shall be applied against units on the Property for which zoning permits have not yet been approved, and for which Regional Road and Transit contributions have not yet been paid.

b. A credit shall be applied against the per unit Capital Facilities Contributions identified in Proffer 10 in the total amount of Ten Million Four Hundred Thirty-Five Thousand Five Hundred Sixty Dollars ($10,435,560.00),as prescribed below.

i. Phase 1 Credit. When Phase 1 Evergreen Mills Road Frontage Improvements are substantially constructed and available for use as described in Proffer 20.b.i., the Owner shall receive credit against per unit Capital Facilities Contributions in the aggregate amount of Two Million Six Hundred Eight Thousand Eight Hundred Ninety Dollars ($2,608,890.00).

ii. Phase 2 Credit. When Phase 2 Evergreen Mills Road Frontage Improvements are substantially constructed and available for use as described in Proffer 20.b.ii., the Owner shall receive credit against per unit Capital Facilities Contributions in an additional aggregate amount of Four Million One Hundred Seventy Four Thousand Two Hundred Twenty-Four Dollars ($4,174,224.00).

iii. Phase 3 Credit. When Phase 3 Evergreen Mills Road Frontage Improvements are substantially constructed and available for use as described in Proffer 20.b.iii., the Owner shall receive credit against per unit Capital Facilities Contributions in an additional aggregate amount of Two Million Six Hundred Eight Thousand Eight Hundred Ninety Dollars ($2,608,890.00).

iv. Phase 4 Credit. When Phase 4 Evergreen Mills Road Frontage Improvements are substantially constructed and available for use as described in Proffer 20.b.iv., the Owner shall receive credit against per unit Capital Facilities Contributions in an additional aggregate amount of One Million Forty-Three Thousand Five Hundred Fifty-Six Dollars ($1,043,556.00).

c. Application of Credit. Credits calculated pursuant to Proffer 13.b shall be applied against units on the Property for which zoning permits have not yet been approved, and for which Capital Facilities Contributions have not yet been paid.

~~13.~~14. Neighborhood Park Credit. Upon satisfaction of Proffer 31 Neighborhood Park Conveyance/Improvements, the Owner shall receive a credit against the per unit Capital Facilities Contributions identified in Proffer 10 in the amount of Five Hundred Three Thousand Forty Dollars ($503,040.00) for the value of the unimproved park land, and One Million Nine Hundred Ninety-Seven Thousand Two Hundred Fifteen Dollars ($1,997,215.00) for construction of the Neighborhood Park Improvements in satisfaction of Proffer 31.c. The total credit for the Neighborhood Park shall be Two Million Five Hundred Thousand Two Hundred Fifty-Five Dollars ($2,500,255.00). The credit shall be calculated at the time of zoning permit and applied at the time of certificate of occupancy on a per unit basis following satisfaction of Proffer 31; provided, however, Owner shall not receive credit in excess of the remaining unpaid Capital Facilities Contributions.

~~14.~~15. Linear Park with Trail Head Parking Credit. Upon satisfaction of Proffer 32.a, (Landbay 3 and Landbay 4a Linear Park with Trail Head Parking Conveyance), the Owner shall receive a credit against the per unit Capital Facilities Contributions identified in Proffer 10 in the amount of One Million Four Hundred Eight Thousand ($1,408,000.00) for the value of said land. Said credit shall be calculated at the time of zoning permit and applied at the time of certificate of occupancy on a per unit basis following satisfaction of Proffer 32.a. In no event shall Owner receive credit in excess of the remaining unpaid Capital Facilities Contributions.

~~15.~~16. Linear Park with Trail Head Parking Improvements Credit. Upon satisfaction of the Linear Park with Trail Head Parking Improvements in accordance with Proffer 32.b and c, the Owner shall receive a credit against the per unit Capital Facilities Contributions identified in Proffer 10 in the amount of Five Hundred Ninety-Eight Thousand Nine Hundred Nineteen Dollars ($598,919.00) for construction of the Linear Park with Trail Head Parking improvements. Said credit shall be calculated at the time of zoning permit and

applied at the time of certificate of occupancy on a per unit basis following satisfaction of Proffer 32.b and c. In no event shall Owner receive credit in excess of the remaining unpaid Capital Facilities Contributions.

TRANSPORTATION IMPROVEMENTS

~~16.~~17. Roadways. All private streets built on the Property will be designed and constructed in accordance with County standards as set forth in the Loudoun County Facilities Standards Manual ("FSM"), as applicable, or with such modified standards as may be approved by the County. The maintenance of private streets shall not be the responsibility of the County. The Owner shall convey to the County public access easements over such private streets, including the right for Loudoun County to operate bus service over such streets.

a. The private street loop identified as "PUBLIC/PRIVATE STREET (BUS LOOP)" on Sheet 11 of the CDP shall be designed to allow a 40-foot bus to safely operate for the purpose of providing bus service to the development. Such design features will include roadway geometry that permits safe turning of buses.

~~17.~~18. Berms on Evergreen Mills Road Frontage. The Owner shall construct berms along Evergreen Mills Road in approximate locations as shown on Sheet 06 of the CDP as "PROP BERM". Said berms shall be a minimum six feet (6') in height, shown on the first CPAP or site plan for the portion of the Property where said berm is located, and bonded for construction prior to the approval of the record plat or site plan for the portion of the Property where said berm is located. Said berm(s) are to be located completely outside of the VDOT right-of-way and will be designed and constructed in accordance with FSM standards. Said berm(s) adjoining Phase 1 Evergreen Mills Road Frontage Improvements, as defined in Proffer 20.b.i. below, shall be installed concurrently with said improvements and no later than prior to the issuance of the 1st certificate of occupancy on the Property. Said berm(s) adjoining Phase 2 Evergreen Mills Road Frontage Improvements, as defined in Proffer 20.b.ii., below, shall be installed concurrently with said improvements but no later than the issuance of the 300th certificate of occupancy on the Property. Said berm(s) adjoining Phase 3 Evergreen Mills Road Frontage Improvements, as defined in Proffer 20.b.iii. below, shall be installed concurrently with said improvements but no later than the issuance of the 590th certificate of occupancy on the Property. The berm(s) installed shall be maintained and any landscaping along said berm(s) shall be maintained by the Master POA and/or applicable sub association.

~~18.~~19. Access Point 1. The Owner shall dedicate to the County, subject to VDOT approval and at no public cost, sufficient land within the Property, to provide for a minimum sixty-two foot (62') width right-of-way as depicted on Sheet 11 of the CDP as "PU-1 MAIN ACCESS WAY", together with the granting of all related easements outside the dedicated right-of-way, such as slope maintenance, storm drainage, temporary construction and utility relocation easements, necessary to accommodate the construction of the PU-1 MAIN ACCESS WAY. Such dedication shall be made prior to or concurrent with the approval of the first record plat or site plan, whichever is first in time, for the Property. The Owner

shall, subject to VDOT approval and at no public cost, design, bond, and construct those improvements as depicted as "PU-1 MAIN ACCESS WAY" on Sheet 11 of the CDP, to create a four-lane median-divided roadway. Said improvements shall be shown on a CPAP and bonded for construction prior to the approval of the first record plat or site plan, whichever is first in time, for the Property, and be constructed and available for use, but not necessarily accepted by VDOT, prior to the issuance of the first certificate of occupancy on the Property.

~~19.~~20. Evergreen Mills Road Frontage Improvements.

a. Evergreen Mills Road Right-of-Way Dedication. The Owner shall dedicate to the County, subject to VDOT approval and at no public cost, sufficient land along the Property's Evergreen Mills Road frontage, to provide for variable width right-of-way as depicted on Sheet 13 of the CDP as "Proposed Right of Way" together with the granting of all related easements outside the dedicated right-of-way, such as slope maintenance, storm drainage, temporary construction and utility relocation easements, necessary to accommodate the construction of improvements to Evergreen Mills Road as described in Proffer 20.b ("Evergreen Mills Road Frontage Improvements"). Dedication of right-of-way and easements and construction of the improvements shall occur in four phases as shown on Sheet 13 of the CDP and described in Proffer 20.b.i through iv below.

i. Phase 1 and Phase 2 Dedication Timing. The dedication of right-of-way as is necessary to complete Phase 1 and Phase 2 of Evergreen Mills Road Frontage Improvements shall be made prior to or concurrent with the approval of the first record plat or site plan application for the Property.

ii. Phase 3 Dedication Timing. The dedication of right-of-way as is necessary to complete Phase 3 of the Evergreen Mills Road Frontage Improvements shall be made prior to or concurrent with approval of the CPAP associated with the construction of Evergreen Mills Road or prior to the 590th zoning permit on the Property, whichever is first in time. For all portions of the subject right-of-way that are not located on the Property, the Owner shall make good faith efforts to acquire the off-site right-of-way or easements necessary for the construction of this roadway. The Owner shall advise the County of such acquisition efforts and shall, to the best of its ability, attempt to acquire such off-site right-of-way or easements without the need for eminent domain proceedings. Where such right-of-way or easements necessary for this roadway cannot be obtained, despite such good faith efforts, either (i) voluntarily through donation to the County, or (ii) through purchase by the Owner at a fair market value, the Owner shall request that the County acquire such right-of-way or easements by appropriate eminent domain proceedings, with all costs associated with the eminent domain proceedings to be borne by the Owner, including, but not limited to, land acquisition costs and appraisal fees. Upon submission of this request,

certificates of occupancy may continue to be issued beyond the 300th cumulative certificate of occupancy on the Property, but not to exceed the 590th certificate of occupancy on the Property. The initiation of such eminent domain proceedings is solely at the discretion of the County. If the necessary off-site right-of-way or easements cannot be acquired by the Owner, and if the County chooses not to exercise eminent domain within twenty-four (24) months of request by Owner, the Owner shall be released from the obligation to acquire such right-of-way or easements and construct the portion of the Evergreen Mills Road Improvements located within such area. As applied to offsite right-of-way and easement acquisition for the Evergreen Mills Road Frontage Improvements, the provisions of this Proffer 20.a.ii shall control over the general provisions of Proffer 30.

b. Evergreen Mills Road Frontage Improvements. The Owner shall, subject to VDOT approval and at no public cost, design, bond, and construct the Evergreen Mills Road Frontage Improvements as depicted on Sheets 06 and 13 of the CDP, to create a median-divided four-lane section of Evergreen Mills Road with two (2) northbound and two (2) southbound lanes, left- and right-turn lanes, and tapers to a two-lane undivided section of roadway. The Owner shall further, subject to VDOT approval and at no public cost, perform shoulder improvements along the future southbound lanes of Evergreen Mills Road, as depicted on Sheet 13 of the CDP. Northbound lanes of Evergreen Mills Road shall be constructed to the Rural Collector Street System (GS-3) VDOT standard from the southern edge of the Property to Shreve Mill Road, and to the Urban Collector Street System (GS-7) VDOT standard from Shreve Mill Road to the northern border of the Property. The southbound lanes of Evergreen Mills Road shall be constructed to the Urban Collector Street System (GS-7) standard from the Property's northern boundary to Bridges Farm Lane and shall transition to the Rural Collector Street System (GS-3) VDOT standard thereafter to the Property's southern boundary. Such improvements shall include correction of the crown on future southbound lanes of Evergreen Mills Road, and installation of a closed drainage system along both northbound and southbound lanes which shall outfall into ditch sections to allow for drainage of water from the roadway.

Evergreen Mills Road Frontage Improvements shall be shown on a CPAP, bonded for construction, and constructed and available for use, but not necessarily accepted by VDOT, based on the timing described in Proffer 20.b.i, Proffer 20.b.ii, Proffer 20.b.iii, and Proffer 20.b.iv.

i. Phase 1 Evergreen Mills Road Frontage Improvements Timing. Phase 1 Evergreen Mills Road Frontage Improvements as shown on Sheet 13 of the CDP, and as proffered herein, shall be shown on a CPAP, bonded, and approved prior to approval of the first record plat or site plan, whichever is first in time, for the Property, and shall be substantially constructed and available for use, but not necessarily accepted by VDOT, prior to the

issuance of the first certificate of occupancy for the Property. For the purposes of these Proffers, Phase 1 Evergreen Mills Road Frontage Improvements shall include construction of 2 new travel lanes along the Property's western boundary and associated right hand turn lane(s) beginning at the Property's northern boundary, ending no earlier than the point identified on Sheet 13 of the CDP as the point between Phase 1 and Phase 2 improvements. Such improvements shall also include construction of Access Points 1 and 2, and construction of the shared use path identified as "10' TRAIL" on Sheet 13 of the CDP within the geographical area described above. The timing of construction of the proposed traffic signal at Access Point 1 is provided in Proffer 21.a., below.

ii. Phase 2 Evergreen Mills Road Frontage Improvements Timing. Phase 2 Evergreen Mills Road Frontage Improvements as shown on Sheet 13 of the CDP, and as proffered herein, shall be shown on a CPAP, bonded and approved prior to the first record plat or site plan, whichever is first in time, for the Property, and shall be substantially constructed and available for use, but not necessarily accepted by VDOT, prior to approval of the 300th certificate of occupancy for the Property, except that turn lanes associated with Access Point 4 shall be constructed and available for use, but not necessarily accepted by VDOT, prior to the issuance of the first certificate of occupancy for Landbay 3, or issuance of the 300th certificate of occupancy for the Property, whichever is first in time. For the purposes of this Proffer, Phase 2 Evergreen Mills Road Frontage Improvements shall include construction of 2 new travel lanes along the Property's western boundary from the end of Phase 1, identified above, to the point identified on Sheet 13 of the CDP as the point between Phase 2 and Phase 3. Such point is directly to the north of Access Point 4 as identified on Sheet 13 of the CDP. These improvements are further shown on Sheet 13 of the CDP. Such improvements shall also include construction of Access Point 3, and the shared use path identified as "10' TRAIL" on Sheet 13 of the CDP within the geographical area described above.

iii. Phase 3 Evergreen Mills Road Frontage Improvements Timing. Phase 3 Evergreen Mills Road Frontage Improvements as shown on Sheet 13 of the CDP, and as proffered herein shall be shown on a CPAP, bonded, and approved prior to or concurrent with approval of the CPAP associated with the construction of Evergreen Mills Road, or prior to approval of the 590th zoning permit for the Property, whichever is first in time, and shall be substantially constructed and available for use, but not necessarily accepted by VDOT, prior to the issuance of the 590th certificate of occupancy for the Property. For the purposes of this Proffer, Phase 3 Evergreen Mills Road Frontage Improvements shall include construction of 2 new travel lanes along the Property's western boundary from the end of Phase 2, identified above, to the Property's southern boundary, identified as Phase 3 on Sheet

13 of the CDP. These improvements are further depicted on Sheet 13 of the CDP. Such improvements shall also include construction of Access point 4 and Access Point 5, and the shared use path identified as "10' TRAIL" on Sheet 13 of the CDP within the geographical area described above.

iv. Phase 4 Evergreen Mills Road Frontage Improvements Timing. Phase 4 Evergreen Mills Road Frontage Improvements as shown on Sheet 13 of the CDP, and as proffered herein shall be shown on, bonded, and approved prior to or concurrent with the CPAP associated with the construction of Evergreen Mills Road, or prior to approval of the 775th zoning permit for the Property, whichever is first in time, and shall be substantially constructed and available for use, but not necessarily accepted by VDOT, prior to issuance of the 775th certificate of occupancy for the Property. For the purposes of this Proffer, Phase 4 Evergreen Mills Road Frontage Improvements shall include improvements to existing lanes of Evergreen Mills Road, including crown correction and drainage improvements from the Property's northern boundary to the Property's southern boundary. Phase 4 improvements shall also include construction of median division and associated right and left hand turn lanes as shown on Sheet 13 of the CDP.

~~20.~~21. Evergreen Mills Road Traffic Signals and Turn Lanes

a. Evergreen Mills Road/Access Point 1. Prior to the approval of the first site plan or CPAP, whichever is first in time, for the Property, the Owner shall contact Loudoun County Department of Transportation and Capital Infrastructure ("DTCI") to prepare a traffic signal warrant study (signal justification report) for the intersection of Evergreen Mills Road and "ACCESS POINT 1 – POTENTIAL SIGNALIZED INTERSECTION" as depicted on Sheets 6 and 13 of the CDP, and pay to the County the applicable fee for preparing the signal warrant study. In the event the analysis determines that the signal is warranted and the warrant study is approved by VDOT, the Owner shall design and install the traffic signal in accordance with VDOT standards (including crosswalks with pedestrian-activated crossings) within 24 months of the warrant study approval OR prior to the issuance of the 300th certificate of occupancy on the Property, whichever is later in time. The traffic signal, including crosswalks with pedestrian-activated crossings, shall be bonded prior to the approval of the first site plan or CPAP showing said traffic signal. If VDOT recommends an innovative intersection control at the intersection, the Owner shall bond the innovative intersection control prior to the approval of the site plan or CPAP showing said innovative intersection control. The Owner shall design and install the VDOT recommended innovative intersection control within 24 months of the warrant study approval by VDOT OR prior to the issuance of the

300th certificate of occupancy on the Property, whichever is later in time. If an intersection approval is not warranted as a result of the first warrant study, the Owner shall contact DTCI to prepare a signal justification report for the intersection of Evergreen Mills Road and Site Driveway 1 prior to the approval of the 590th zoning permit on the Property, and shall pay the costs associated with such report. In the event the analysis determines that a signal is warranted and the warrant study is approved by VDOT, the Owner shall design and install the traffic signal in accordance with VDOT standards, including crosswalks with pedestrian-activated crossings, within 24 months of the warrant study approval OR prior to the issuance of the 775th certificate of occupancy on the Property, whichever is later in time. The traffic signal, including crosswalks with pedestrian-activated crossings, shall be bonded prior to the approval of the site plan or CPAP showing said traffic signal. If VDOT recommends an innovative intersection control at the intersection, the Owner shall bond the innovative intersection control prior to the approval of the site plan or CPAP showing said innovative intersection control. The Owner shall design and install the VDOT recommended innovative intersection control within 24 months of the warrant study approval by VDOT OR prior to the issuance of the 775th certificate of occupancy on the Property, whichever is later in time. If the warranted intersection improvements (signal or innovative intersection control) are installed by others, the Owner shall contribute $500,000 to the County within 30 days of written request by the County, which contribution shall be used for other regional road, transportation, or transit projects in the vicinity of the Property. In the event, the signal is not warranted and VDOT does not recommend innovative intersection control as a result of the second warrant study, the Owner shall contribute cash in lieu of construction in the amount of $500,000 to the County prior to the approval of the 775th zoning permit for the Property. If said cash in lieu of construction contribution is paid, the Owner shall no longer be required to install intersection improvements and said contribution shall be used for other regional road, transportation, or transit projects in the vicinity of the Property.

b. Evergreen Mills Road/Access Point 4. Prior to the approval of the first site plan or CPAP, whichever is first in time, for the Property, the Owner shall contact DTCI to prepare a traffic signal warrant study (signal justification report) for the intersection of Evergreen Mills Road and "ACCESS POINT 4 – POTENTIAL SIGNALIZED INTERSECTION" as depicted on Sheets 6 and 13 of the CDP, and pay to the County the applicable fee for preparing the signal warrant study. In the event the analysis determines that the signal is warranted and the warrant study is approved by VDOT, the Owner shall design and install the traffic signal in accordance with VDOT standards (including crosswalks with pedestrian-activated crossings) within 24 months of the warrant study approval OR prior to the issuance of the 300th certificate of occupancy on the Property, whichever is later in time. The traffic signal, including crosswalks with pedestrian-activated crossings, shall be bonded prior to the approval of the first site plan or CPAP showing said traffic signal. If VDOT recommends an innovative intersection control at the intersection, the Owner shall bond the innovative intersection control prior to the approval of

the site plan or CPAP showing said innovative intersection control. The Owner shall design and install the VDOT recommended innovative intersection control within 24 months of the warrant study approval by VDOT or prior to the issuance of the 300th certificate of occupancy, whichever is later in time. If an intersection approval is not warranted as a result of the first warrant study, the Owner shall contact DTCI to prepare a signal justification report for the intersection of Evergreen Mills Road and Site Driveway 4 prior to the approval of the 590th zoning permit on the Property, and shall pay the costs associated with such report. In the event the analysis determines that a signal is warranted and the warrant study is approved by VDOT, the Owner shall design and install the traffic signal in accordance with VDOT standards, including crosswalks with pedestrian-activated crossings, within 24 months of the warrant study approval OR prior to the issuance of the 775th certificate of occupancy on the Property, whichever is later in time. The traffic signal, including crosswalks with pedestrian-activated crossings, shall be bonded prior to the approval of the site plan or CPAP showing said traffic signal. If VDOT recommends an innovative intersection control at the intersection, the Owner shall bond the innovative intersection control prior to the approval of the site plan or CPAP showing said innovative intersection control. The Owner shall design and install the VDOT recommended innovative intersection control within 24 months of the warrant study approval by VDOT OR prior to the issuance of the 775th certificate of occupancy on the Property, whichever is later in time. If the warranted intersection improvements (signal or innovative intersection control) are installed by others, the Owner shall contribute $500,000 to the County within 30 days of written request by the County, which contribution shall be used for other regional road, transportation, or transit projects in the vicinity of the Property. In the event, the signal is not warranted and VDOT does not recommend innovative intersection control as a result of the second warrant study, the Owner shall contribute cash in lieu of construction in the amount of $500,000 to the County prior to the approval of the 775th zoning permit for the Property. If said cash in lieu of construction contribution is paid, the Owner shall no longer be required to install intersection improvements and said contribution shall be used for other regional road, transportation, or transit projects in the vicinity of the Property.

c. Evergreen Mills Road/Shreve Mill Road. Prior to the approval of the first site plan or CPAP, whichever is first in time, for the Property, the Owner shall contact DTCI to prepare a traffic signal warrant study (signal justification report) for the intersection of Evergreen Mills Road and Shreve Mill Road and pay to the County the applicable fee for preparing the signal warrant study. As determined by the traffic signal justification report, the Owner in consultation with DTCI shall determine the Pro Rata Share (the "Pro Rata Share") for future improvements to the intersection of Evergreen Mills Road and Shreve Mill Road. Said Pro Rata Share shall reflect the impact from future development as proposed by the Owner in these proffers and shall be calculated prior to the issuance of the 590th zoning permit on the Property. Regardless of said calculations the Pro Rata Share shall not exceed

$160,000.00 and said Pro Rata Share shall be paid by the Owner to the County prior to the issuance of the 590th certificate of occupancy on the Property.

d. Evergreen Mills Road Turn Lanes. The Owner shall provide as shown on Sheet 13 of the CDP right turn lanes and/or left turn lanes where applicable at the intersections of the ACCESS POINTS 1, 2, 3, 4, and 5 and Evergreen Mills Road. The Owner shall further provide improvements necessary to restrict access at ACCESS POINTS 2 and 5 to right-in, right-out only. The Owner shall bond, construct and open to traffic said turn lanes concurrent with the time the Owner bonds and constructs the applicable Evergreen Mills Road Frontage Improvements as further described in Proffer 20.b.i; Proffer 20.b.ii; Proffer 20.b.iii; and Proffer 20.b.iv, except that the turn lanes associated with Access Point 4 shall be installed prior to the issuance of the first certificate of occupancy for Landbay 3 or the 300th certificate of occupancy for the Property, whichever is first in time.

~~21.~~22. Shreve Mill Road Improvements. The Owner shall perform roadway and frontage improvements to Shreve Mill Road for travel lanes with frontage bordering the Property. Such improvements to Shreve Mill Road, as shown on Sheet 13 of the CDP, shall be designed to meet the Rural Local Road Standard. The improvements shall be bonded and approved prior to or concurrent with approval of the associated CPAP, or prior to the 590th zoning permit for the Property, whichever is first in time, and shall be constructed and available for use, but not necessarily accepted by VDOT, prior to the issuance of the 590th certificate of occupancy for the Property.

PEDESTRIAN & MULTIMODAL IMPROVEMENTS

~~22.~~23. Pedestrian Facilities. The Owner shall construct a minimum five-foot (5') sidewalk in the locations identified as "5' Sidewalk" on Sheet 11 of the CDP. Sidewalks shall be constructed in conjunction with the development of the adjacent lots, streets, infrastructure, and adjacent residential dwelling units; shall be depicted on each applicable record plat, CPAP, or site plan application submitted for the Property; and shall be bonded prior to approval of the applicable site plan or record plat. All public pedestrian facilities shall be located either completely within a dedicated public right-of-way or completely outside of the public right-of-way within a public access easement on the Property, provided that transitions between the public and private rights-of-way may be necessary at road crossings and other areas. Public access easements shall be granted to the County, at no public cost, in deeds approved to form by the County Attorney's Office, cost prior to or concurrent with approval of the applicable record plat, CPAP, or site plan application for the Property. Any pedestrian facilities located outside of the public right-of-way shall be maintained by the Master POA. All pedestrian facilities shall be constructed in accordance with VDOT or FSM standards, unless modified or waived by VDOT or the County, as applicable. All pedestrian facilities provided pursuant to this Proffer 23 shall be constructed and open for use prior to the issuance of the first certificate of occupancy for the dwelling units or other use adjoining said pedestrian facilities.

a. Other Private Pedestrian Connections. The Owner shall be entitled to construct any additional private pedestrian connections internal to the Property in conformance with the Zoning Ordinance, and the FSM. All private pedestrian connections shall be maintained by the Master POA, to be established pursuant to Proffer 4.

~~23.~~24. Shreve Mill Road Shared Use Trail. The Owner shall construct a 10-foot wide asphalt trails along Shreve Mill Road in the locations identified as "10' TRAIL" on Sheets 06, 07, 08 and 11 of the CDP (hereinafter referred to as "Shared Use Trail"). The trail shall be bonded for construction prior to the approval of the first record plat or site plan, whichever is first in time, for the portion of the Property where the Shared Use Trail is located. Said Shared Use Trail shall be located either completely within or completely outside of the VDOT right-of-way, provided that transitions between the public and private right-of-way(s) may be necessary at road crossings and other areas. Any portions of said Share Use Trail located within the VDOT right-of-way shall be designed and constructed in accordance with applicable VDOT standards. Any portions of said Shared Use Trail located outside of the VDOT right-of-way will be designed and constructed in accordance with FSM standards and will be located within a 14-foot public access easement to be approved to form by the County Attorney and granted to the County at no public cost. The Shared Use Trail shall be installed and available for use prior to the issuance of the 590th certificate of occupancy for the Property.

a. The Owner shall make good faith efforts to acquire any off-site right-of-way(s) and/or easement(s) necessary for the trail improvements identified in this Proffer 24. The Owner shall advise the County of such acquisition efforts and shall, to the best of its ability, attempt to acquire such off-site right-of-way(s) and/or easement(s) without the need for eminent domain proceedings. Where right-of-way(s) and/or easement(s) necessary for such proffered trail improvements cannot be obtained despite such good faith efforts, either (i) voluntarily through donation or proffer to the County, or (ii) through purchase by the Owner at a fair market value, the Owner shall request that the County acquire such right-of-way(s) and/or easement(s) by appropriate eminent domain proceedings, with all costs associated with the eminent domain proceedings to be borne by the Owner, including, but not limited to, land acquisition costs and appraisal fees. The initiation of such eminent domain proceedings shall be solely at the discretion of the County. If any necessary off-site right-of-way(s) and/or easement(s) cannot be acquired by the Owner and the County chooses not to exercise eminent domain to acquire said right-of-way(s) and/or easement(s), the Owner shall be released from the obligations to acquire such right-of-way(s) and/or easement(s) and released from the obligations of the proffer for which said right-of-way(s) and/or easement(s) are needed. If the County chooses to defer the exercise of its right of eminent domain to acquire any necessary off-site right-of-way(s) and/or easement(s), the Owner's obligation to complete the improvements identified in the associated Proffer shall be likewise deferred until the said right-of-way(s) and/or easement(s) is available. Notwithstanding the immediately preceding sentence, solely with respect to the improvements described in Proffer 24 if the Owner requests the County to initiate eminent domain

proceedings in accordance with this Proffer 24.e and the County chooses not to initiate such proceedings within five (5) years from approval of this Application, the Owner shall be released from the obligation to provide the improvements described in Proffer 24. As applied to offsite right-of-way and easement acquisition for the Shared Use Trail along Shreve Mill Road, the provisions of this Proffer 24.e shall control over the general provisions of Proffer 30.

~~24.~~25. Site Trail. The Owner shall construct a minimum 8-foot wide trail in the locations identified on Sheets 06, 07, 08, and 11 of the CDP as "8' TRAIL" (the "Site Trail"). This trail shall be bonded for construction prior to the approval of the record plat or site plan, whichever is first in time, for the portion of the Property where said trail is located. This trail shall be completed and open for use as provided below.

a. Landbay 1. The Portion of the Site Trail within Landbay 1 shall be constructed and available for use prior to the issuance of the 700th zoning permit for the Property.

b. Landbay 2a. The portion of the Site Trail within Landbay 2a shall be constructed and available for use prior to the issuance of the 35th certificate of occupancy within said Landbay.

c. Landbay 2b. The portion of the Site Trail within Landbay 2b shall be constructed and available for use prior to the issuance of the 50th certificate of occupancy within said Landbay.

d. Landbay 2c. If Affordable Housing Buildings are developed, the portion of the Site Trail within Landbay 2c shall be constructed and available for use prior to the issuance of the 91st certificate of occupancy for any dwelling unit within said Landbay. If Affordable Housing Building(s) are not developed, the portion of the Site Trail within Landbay 2c shall be constructed and available for use prior to the issuance of the 30th certificate of occupancy for any dwelling unit within said Landbay.

e. Landbay 2d.The portion of the Site Trail located within Landbay 2d shall be constructed and available for use prior to the issuance of the 68th certificate of occupancy for Landbay 2d.

f. Landbay 3. The portion of the Site Trail located within Landbay 3 shall be constructed and available for use prior to the issuance of the 145th certificate of occupancy for Landbay 3.

g. Landbay 4a. The portion of the Site Trail located within Landbay 4a shall be constructed and available for use prior to the issuance of the 70th certificate of occupancy for Landbay 4a.

h. Linear Park. The portion of the Site Trail located within the Linear Park , as defined by Proffer 32.b shall be constructed and available for use at the same time as other improvements within that area, as governed by Proffer 32.b.

i. Landbay 5. The portion of the Site Trail located within Landbay 5 shall be constructed and available for use prior to the issuance of the 81st certificate of occupancy for Landbay 5.

j. Landbay 6a. The portion of the Site Trail located within Landbay 6a shall be constructed and available for use prior to the issuance of the 590th certificate of occupancy for the Property.

k. Landbay 6b. The portion of the Site Trail located within Landbay 6b shall be constructed and available for use at the same time as improvements to Landbay 6b, as governed by Proffer 31.

l. Site Trails within the River and Stream Corridor Resource Area. All portions of the Site Trail constructed within the River and Stream Corridor Resource shall be constructed of permeable surface materials and construction of said portions of the site trail shall comply with the Reforestation requirements of Proffer 37.

m. The Owner shall convey to the County a public access easement over all portions of the Site Trail. Said easement shall be recorded prior to approval of each site plan depicting the Site Trail.

~~25.~~26. Shreve Mill Road Crosswalks. Prior to the approval of the first site plan or CPAP, whichever is first in time, for the Property, the Owner shall contact DTCI to prepare a crosswalk justification report for two crosswalks on Shreve Mill Road, as shown on Sheet 11 of the CDP. The Owner shall pay to the County the applicable fee for preparing the crosswalk justification report prior to the approval of the first record plat or site plan, whichever is first in time, for the Property. In the event that the report concludes, and VDOT concurs, that the crosswalks are warranted, the Owner shall design and install the crosswalks, including other crosswalk related treatments per the VDOT approved warrant study and in accordance with VDOT standards on the asphalt surface of Shreve Mill Road as shown on Sheet 11 of the CDP. These crosswalks, including other crosswalk related treatments as required by VDOT, shall be bonded for construction prior to the approval of the first site plan or CPAP for the Property depicting the crosswalks. If warranted, these crosswalks shall be installed prior to the issuance of the 590th certificate of occupancy on the Property. In the event VDOT does not approve one or both these crosswalks, the Owner shall contribute cash in lieu of construction in the amount of $30,000 per crosswalk to the County prior to the issuance of the 590th certificate of occupancy for the Property. If a cash in lieu of construction contribution is paid in accordance with this proffer, the Owner shall no longer have an obligation to bond or install the crosswalk that did not receive VDOT approval. Said contribution shall be used for other regional road, transportation, or transit projects in the vicinity of the Property.

~~26.~~27. Evergreen Mills Road Access Point Crosswalks. The Owner shall install crosswalk markings at Access Points 1, 2, 3, 4, and 5 shown on Sheets 06, 07, and 08 of the CDP. Such crosswalks shall be shown on the CPAP or site plan including said Access Points and shall be installed concurrently with the improvements associated with said Access Points as provided in Proffer 20.b.i through 20.b.iii, above.

~~27.~~28. Bike Racks. The Owner shall provide for a minimum of fifty (50) bike racks to be dispersed throughout the Property including in areas designated for open space and recreation. In no circumstance shall the Owner provide parking for fewer than one hundred (100) bicycles. Bike racks to be provided shall be bonded prior to the approval of the record plat or site plan for the portion of the Property where said bike racks are to be located. The Owner shall show that the required number of bike racks and parking for a minimum of 100 bicycles have been installed prior to the issuance of the 590th certificate of occupancy for a residential dwelling unit on the Property.

~~28.~~29. Bus Shelter/Stop Easement. The Owner shall provide public access easements, in a form approved by the County Attorney and at no public cost, for a minimum of six bus shelters/stops within the areas identified as "BTS" and "BUS TRANSIT STOP" as depicted on Sheets 06, 07 and 08 of the CDP (the "Bus Stop Easements"). The Bus Stop Easements shall be of sufficient size to accommodate bus shelters for use by, and incorporation into, the Loudoun County Transit Services programming for bus service, and shall comply with the Americans with Disabilities Act ("ADA"). The final dimensions and location for the Bus Stop Easements shall be determined in coordination with General Services Division of Transit and Commuter Services (Transit and Commuter Services), and the Bus Stop Easements shall be granted to the County prior to or concurrent with approval of the record plat or site plan for the portion of the Property where said Bus Stop Easements are to be located. If at the time of approval of the record plat or site plan for that portion of the Property, Transit and Commuter Services declines the construction of any bus shelter(s) on the Property, the Owner shall still provide the public access easement, and the Owner shall pay a cash-in-lieu contribution to the County in the amount of $25,000 per bus shelter that was declined, adjusted pursuant to Proffer 47, prior to the approval of the record plat or site plan for that portion of the Property. Said contribution shall be used toward the construction by the County or others of one or more bus shelters in the vicinity of the Property or transit facilities serving the Property. If said Bus Shelter is installed by Owner, the Bus Shelter, including a bench, shall be installed prior to the issuance of the first certificate of occupancy for the landbay where said Bus Shelter is located. Maintenance of said Bus Stop Easements and/or bus shelters shall be the responsibility of the Master POA and/or assigned sub-association as established in Proffer 4 in perpetuity.

~~29.~~30. Off-Site Right-of-Way Acquisition.

a. The Owner shall make good faith efforts to acquire any off-site right-of-way and/or easements necessary for the road or pedestrian improvements identified in these Proffers. The Owner shall advise the County of such acquisition efforts and shall, to the best of its ability, attempt to acquire such off-site rights-of-way and/or

easements without the need for eminent domain proceedings. Where right-of-way and/or easements necessary for such proffered road or pedestrian improvements cannot be obtained despite such good faith efforts, including through: (i) voluntarily donation or proffer to the County; or (ii) purchase by the Owner at a fair market value, the Owner shall request that the County acquire such right-of-way and/or easements by appropriate eminent domain proceedings, with all costs associated with the eminent domain proceedings to be borne by the Owner, including, but not limited to, land acquisition costs and appraisal fees. The initiation of such eminent domain proceedings shall be solely at the discretion of the County.

b. If any necessary off-site right-of-way and/or easements cannot be acquired by the Owner and the County chooses not to exercise its right of eminent domain to acquire said right-of-way, the Owner shall be released from the obligations to acquire such right-of-way. If the County chooses to defer the exercise of its right of eminent domain to acquire any necessary off-site right-of-way or easements, the Owner's obligation to complete the improvements identified in the associated proffer shall be likewise deferred until the said off-site right-of-way is available.

NEIGHBORHOOD PARK AND TRAIL HEAD

~~30.~~31. Neighborhood Park Conveyance/Improvements.

a. Landbay 6b Neighborhood Park Conveyance. The Owner shall dedicate Landbay 6b to the County, with good and marketable title, free and clear of any encumbrances that would prevent or materially hinder the use of Landbay 6b as the Neighborhood Park as provided for under this Proffer 31, as evidenced by a policy of owner's title insurance provided to the County at Owner's cost. Owner shall construct park, civic, and open space improvements as further described below in Proffer 31.b., at no cost to the County. The dedication of Landbay 6b shall occur prior to approval of the 775th residential zoning permit on the Property, by deed acceptable to the Office of the County Attorney, and in accordance with subparagraph c below. The Owner shall not use Landbay 6b nor permit Landbay 6b to be used for staging, dumping, or similar activities, nor grant, create, or establish any utility easement or other easement on Landbay 6b, without prior approval of the County, which may be withheld in the County's sole discretion. Landbay 6b shall not be subject to, and shall be expressly excluded from imposition of, any property owners association, covenants, and/or restrictions, and shall be withdrawn from any property owners association, covenants, and/or restrictions which may have previously been imposed prior to dedication to the County, and shall not be subject to any owners association fees or assessments nor any proffered monetary conditions.

b. Landbay 6b Neighborhood Park Improvements. As depicted in Section 2.6 of the Design Guidelines referenced in Proffer 6 the Owner shall, in consultation with Parks, Recreation & Community Services ("PRCS"), install improvements at no

public cost on Landbay 6b for use by the general public ("Neighborhood Park Improvements"). The Neighborhood Park Improvements shall include but are not limited to:

i. An impervious surface parking lot containing no fewer than 65 parking spaces;

ii. Trails as depicted in the Design Guidelines. Such trails shall be a minimum of five (5) feet in width and constructed with a combination of pervious and impervious materials, as determined and developed in coordination with PRCS.

iii. An open and level play area, such as, but not limited to a lawn, a minimum 15,000 square feet;

iv. A minimum 10,000 square foot dog park with an off-leash area with a fence at least 4 feet in height featuring a dual gate system for dog safety;

v. A covered pavilion comprising a minimum 500 square feet, designed to PRCS standards, including the following:

1. A minimum of 6 picnic tables,
2. A minimum of 3 trash receptacles,
3. A minimum of 2 charcoal outdoor grills, and
4. Restroom facilities, comprised of a men's room and a women's room which shall comply with PRCS guidelines and be designed for year-round use.

iv. Extension of water and sewer facilities to Landbay 6b;

v. Signage meeting PRCS policy, to be developed in coordination with PRCS;

vi. A minimum 400 square foot children play area including play equipment, which shall comply with PRCS guidelines and be developed in conjunction with PRCS; and

vii. An entrance gate, which shall comply with PRCS guidelines.

c. The Neighborhood Park Improvements shall be depicted on an approved CPAP or site plan and bonded for construction prior to the approval of the first site plan or CPAP depicting the Neighborhood Park, whichever is first in time. The Neighborhood Park Improvements shall be constructed and available for use, subject to County approval, prior to issuance of the 590th residential certificate of occupancy on the Property. Landbay 6b shall be conveyed to the County in accordance with subparagraph a above upon completion of the Neighborhood Park

Improvements and acceptance of such improvements by the County, and in any event prior to the issuance of the 775th residential certificate of occupancy on the Property. The Owner shall have no further obligation to operate or maintain the Neighborhood Park Improvements following their acceptance by the County.

~~31.~~32. Linear Park and Trail Head Parking Improvements.

a. Landbay 3 and Landbay 4a Linear Park and Trail Head Parking Conveyance. As depicted on Sheets 06, 07, and 08 of the CDP, the Owner shall dedicate a minimum 22.0 acre portion of Landbays 3 and 4a ("Linear Park/Trail Head Parking Area") to the County, with good and marketable title, free and clear of any encumbrances that would prevent or materially hinder the area for use as a Linear Park and a Trail Head Parking as provided in this Proffer 32, as evidenced by a policy of owner's title insurance provided to the County at Owner's cost. Owner shall construct park, civic, and open space improvements as further described in Proffer 32.b., at no cost to the County. The dedication of the Linear Park/Trail Head Parking Area shall occur prior to the issuance of the 300th residential certificate of occupancy on the Property upon completion of the improvements described in Proffer 32.b and the County's acceptance of those improvements, by deed acceptable to the Office of the County Attorney. The Owner shall not use the Linear Park/Trail Head Parking Area nor permit that area to be used for staging, dumping, or similar activities, nor grant, create, or establish any utility easement or other easement on the Linear Park/Trail Head Parking Area, without prior approval of the County, which may be withheld in the County's sole discretion. The Linear Park/Trail Head Parking Area shall not be subject to, and shall be expressly excluded from imposition of, any property owners association, covenants, and/or restrictions, and shall be withdrawn from any property owners' association, covenants, and/or restrictions which may have previously been imposed prior to dedication to the County, and shall not be subject to any owners' association fees or assessments nor any proffered monetary conditions.

b. Linear Park and Trail Head Parking Improvements. As depicted on Sheet 16 of the CDP, the Owner shall, in consultation with PRCS, install improvements at no public cost in locations identified as "LINEAR PARK" and "TRAIL HEAD PARKING" for use by the general public. Said improvements shall include but are not limited to an impervious surface parking area featuring no fewer than 19 spaces and an entrance gate, which shall comply with PRCS guidelines. Improvements shall also include trails as depicted on Sheets 06, 07, and 08. Such trails shall be a minimum of eight (8) feet in width, and made of impervious material, except where such trails are located within the floodplain or River and Stream Corridor Resource (RSCR), where trails will be made of pervious materials.

c. The Linear Park and Trail Head Parking Area improvements shall by depicted on a CPAP or site plan, and shall be bonded for construction prior to the approval of the first record plat or site plan application for any residential landbay on the Property,

whichever is first in time. The improvements shall be constructed and available for use, subject to County approval, prior to issuance of the 300th residential certificate of occupancy for the Property. Upon acceptance of the improvements by the County and dedication of the Linear Park and Trial Area to the County in accordance with Proffer 32.a, the Owner shall have no further obligation to operate or maintain the improvements.

ENVIRONMENTAL

~~32.~~33. Noise Impact Study. The Owner will provide a noise impact study to the County that will determine the need for any additional buffering or other noise attenuation measures along the Dulles Greenway and Evergreen Mills Road. The noise impact study shall be based upon traffic volumes for these roadways at a time no less than 10 years after the road corridor is anticipated to be completed to its ultimate condition and open to traffic based upon the most recent, applicable forecast available from DTCI, the ultimate road configuration as defined in the 2019 Countywide Transportation Plan ("CTP"), and the ultimate design speed, pavement type, proposed topography, and lane configurations. This noise impact study will be conducted by a professional engineer or professional acoustical consultant and submitted to the County concurrently with the submission of the first site plan or construction plans and profiles for the Property, whichever is first in time. The noise impact study will be prepared using the latest version of the Federal Highway Administration's Traffic Noise Prediction Model or other industry-accepted highway noise model. Noise impacts shall be deemed to occur if predicted highway noise levels substantially exceed the existing noise levels (a 10 decibel increase over existing levels) or approach (one decibel less than), meet, or exceed the Noise Abatement Criteria identified in the CTP.

Affidavit and Noise Attenuation Measures

The Owner shall submit with all applicable site plans or construction plans and profiles an affidavit or certificate signed by a professional engineer stating whether noise attenuation measures are required by the noise impact study and, if so, identifying the applicable attenuation measures and certifying that said plans are designed in compliance with all attenuation measures identified by the noise impact study. In addition, each site plan and construction plans and profiles shall include a note stating whether there are noise attenuation measures identified by the noise impact study being implemented with the plan, and if so, such plans shall identify and label the noise attenuation measures and reference the noise impact study.

Noise attenuation measures shall result in noise levels less than impact levels (2 decibels less than the Noise Abatement Criteria) and shall result in a noise reduction of at least 5 decibels below predicted highway noise levels. Where noise attenuation measures are determined to be required, priority shall be given to passive measures (to include adequate setbacks, earthen berms, wooden fences, and vegetation). Structural noise attenuation measures (e.g., noise walls) shall be used only if adequate noise attenuation cannot

otherwise be achieved. Notwithstanding the previous sentence, structural noise attenuation measures may be incorporated into the construction of impacted structures to achieve interior noise standards.

All such noise attenuation measures (other than those incorporated into the construction of impacted structures to achieve interior noise standards) shall be located on POA owned property, and the POA Documents shall clearly state that all required noise attenuation measures shall be maintained by the POA and shall not be removed without written approval from the County. All noise attenuation measures identified by the study shall be shown on each applicable site plan or construction plans and profiles and shall be constructed or installed prior to issuance of the first certificate of occupancy for the Property.

~~33.~~34. Tree Conservation Area. Within the areas identified on Sheet 12 of the CDP as "Tree Conservation Areas", the Owner shall preserve healthy trees provided, however, that trees may be removed to the extent necessary for the construction of trails and that are required pursuant to these Proffers and/or shown on the approved construction plans and profiles as lying within such Tree Conservation Areas and for the construction of utilities necessary for development of the Property or for the improvement of utilities which exist on the Property. Notwithstanding the previous sentence, a minimum of eighty (80) percent of the canopy within the cumulative Tree Conservation Areas depicted on the CDP will be preserved, exclusive of stands of Virginia Pine over 25 years in age. In the event that the eighty (80) percent canopy threshold cannot be achieved within the designated Tree Conservation Areas, such lost canopy will be recaptured elsewhere onsite in locations to be designated at the discretion of the Owner in consultation with the County. Boundaries of the Tree Conservation Areas shall be clearly marked in the field prior to land disturbing activities and shall be delineated on each record plat or site plan containing any portion of a Tree Conservation Area.

If, during construction on the Property, it is determined by the Owner's certified arborist and/or the County that any healthy tree located within the boundaries of the Tree Conservation Areas described in this proffer has been damaged during construction and will not survive, then, prior to bond release on any section containing or immediately adjacent to a Tree Conservation Areas, the Owner shall remove each such tree and replace each such tree with two (2) 1-inch caliper native, non-invasive deciduous trees. The species of such replacement trees shall be determined by the Owner's certified arborist or landscape architect in consultation with the County Urban Forester or Zoning Administrator. The placement of the replacement trees shall be proximate to the area of each such damaged tree so removed, or in another area as requested by the County.

The POA Documents shall include a provision that prohibits removal of trees in Tree Conservation Areas, as shown on the record plat, after construction has been completed by the Owner without specific permission of the County Urban Forester or Zoning Administrator except as necessary to accommodate Forest Management Techniques, performed by or recommended by a professional forester or certified arborist, that are

necessary to protect or enhance the viability of the canopy. Such Management Techniques may include such actions as, without limitation, pruning and the removal of vines, invasive species, trees uprooted or damaged by extreme weather conditions, and trees or limbs that are diseased, insect-infested, dead, or are considered a hazard to life or property. The POA Documents shall clearly state that such provisions prohibiting tree removal shall not be amended by the Owner or the POA without written approval from the County Zoning Administrator. The record plat for each portion of the Property containing a Tree Conservation Area shall contain a note stating that the removal of trees within a Tree Conservation Area is prohibited except in accordance with the Declaration of Covenants and these Proffers.

a. Invasive Species Control. Extending at least 25 feet into areas within the Tree Conservation Areas, the Owner shall provide invasive species control on the Property with a minimum of one treatment per year for at least 3 years for a total of at least 3 treatments over 3 consecutive years with the first treatment occurring prior to the issuance of the first certificate of occupancy for the Property. These treatments shall first focus on invasive vines, such as Japanese honeysuckle, then other invasive species using mechanical, chemical or a combination of techniques within the context of an Integrated Pest Management Strategy ensuring labels are followed when and if herbicides are applied. The invasive species treatment strategy must be approved by the County Urban Forester or their designee prior to the approval of the first zoning permit for the Property. The Owner shall provide the Zoning Administrator documentation detailing when the second and third treatments outlined in this Proffer have been completed.

~~34.~~35. Stormwater Management. All stormwater management facilities on the Property shall be designed and constructed consistent with applicable state stormwater regulations and FSM standards, provided that state regulations shall take precedence over the CDP in the event of a conflict. Stormwater management measures may include bioretention areas, underground detention, and manufactured BMPs. All stormwater measures shall be designed and implemented in accordance with the adopted provisions of the latest edition of the Virginia Stormwater Management Handbook and FSM, unless modified or waived by the County, and shall be depicted on the applicable CPAPs and/or site plans for development of each section of the Property. The Owner may provide Low Impact Development ("LID") Best Management Practices to treat stormwater from the Property. Such LID practice(s) may include, but shall not be limited to, water quality swales, bioretention facilities/rain gardens, sheet flow to vegetated buffers, permeable pavement for parking spaces, or any alternative LID practice proposed by the Owner that achieves the volume reduction as specified in the VA Stormwater BMP Clearinghouse and deemed by B&D to be acceptable. In order to ensure the feasibility of providing LID practice(s) on the Property, said LID measures may be of the same type if more than one is provided. The location of the LID practice(s) shall be shown on the first CPAP and/or site plan for the portion of the Property where said LID practice(s) are to be located. Any such LID measure(s) provided shall be designed and implemented in accordance with adopted provisions of the FSM, unless modified or waived by the County. If provided, said LID

measure(s) shall be depicted on the applicable CPAPs and/or site plans for the development of the Property. If provided, said LID measure(s) shall be installed concurrently with the adjacent onsite infrastructure shown on such plans but in no event later than the issuance of the final certificate of occupancy. Irrespective of whether LID measure(s) are provided on the Property, the Owner shall provide for stormwater management on site that achieves the following water quality and water quantity for the Property:

a. a minimum of eighty percent (80%) of the total required phosphorous nutrient reductions on-site before pursuing the use of offsite compliance options; and

b. stormwater quantity criteria measured as the maximum peak flow rate from the post-development one-year 24-hour storm calculated in accordance with the Energy Balance Methodology per the latest VA Stormwater Management regulations, adjusted with an Improvement Factor of 0.75.

~~35.~~36. Lighting. In an effort to minimize nighttime light pollution from the Property, all exterior light fixtures on the Property shall be designed, constructed, and installed to minimize light trespass off-site and to limit the view of lighting from off-site, shall be full cut-off and fully shielded as defined by the Illuminating Engineering Society of North America (IESNA), shall be directed inward and downward away from adjacent properties and streets in addition to meeting light and glare standards set forth in the Zoning Ordinance.~~.~~

~~36.~~37. River and Stream Corridor Resource (RSCR). With the exception of the encroachments depicted on the CDP, only passive recreational uses shall be permitted within the RSCR shown as the 50' RSCR Buffer, Minor Floodplain and Major Floodplain on the CDP. The Owner shall replant open areas adjacent to the Major Floodplain and adjacent to the Minor Floodplain, in an amount equal to the area of the proposed development that encroaches into the RSCR, within the Reforestation Area identified on Sheet 12 of the CDP. The Reforestation Area shown on Sheet 12 may be adjusted as necessary, in coordination with the County, to avoid conflicts with easements, trails, or to mitigate impacts to wetlands. The Owner shall submit a reforestation plan, prepared by a Certified Arborist, Urban Forester, or Landscape Architect, in accordance with the reforestation standards set forth in FSM 7.305 for the Reforestation Area identified on the CDP. Such reforestation plan shall be submitted at the time of submission of the first site plan or construction plan and profiles proposing the development of any area that encroaches into the RSCR for review and approval by the County Urban Forester or Zoning Administrator. The approved reforestation plan shall be implemented in accordance with the reforestation standards of the FSM, including the maintenance and restocking provisions, concurrently with the development of the areas subject to such site plans or construction plans and profiles prior to occupancy. In the event that the targeted stocking is not achieved, the Owner, shall in consultation with the County Urban Forester or Zoning Administrator, provide a one-time supplemental planting within one (1) year to achieve the full, initial stocking.

~~37.~~38. Erosion and Sediment Control. As depicted on Sheet 06 of the CDP as "STEEP SLOPE AREA TO REMAIN UNDISTURBED" the Owner shall install a double layer of super silt

fence in accordance with FSM specifications and as a perimeter control around said very steep slopes to maximize protection to the slopes. The double layer super silt fence shall be shown on the CPAP or site plan application for each applicable section of the Property including the steep slope areas to remain undisturbed and shall be installed upon the issuance of a grading permit for any such applicable section of the Property. If during the CPAP and/or site plan application review process, B&D staff determines that additional areas of double layer super silt fencing should be provided to protect additional very steep slope areas, the Owner shall work with B&D staff to determine the appropriate locations and extent of such double layer super silt fencing. Said double layer of super silt fence shall be installed prior to any land disturbance on the applicable section of the Property.

~~38.~~39. Airport Noise Disclosure Statement. The Owner shall provide, prior to execution of final sale and/or rental agreements for all residents of all residential units, notification in writing regarding the proximity of Leesburg Executive Airport, including the distance to the airport, as well as notification of potential impacts by aircraft overflights and aircraft noise and that the frequency of overflights may increase over time, and that the Property, if applicable, is encumbered by an avigation easement. Such written notification as described here within must be provided within all rental contracts and/or sales contracts, Master POA disclosure statements, and Master POA governing documents so as to give notice to all initial and subsequent residents of all residential units on the Property. The Owner shall provide the Zoning Administrator with documentation demonstrating the Airport Noise Disclosure Statement has been provided as required by this Proffer 39 prior to the issuance of the first certificate of occupancy for any residential unit for the Property.

~~39.~~40. Avigation Easement and Airport Noise Notification. The Owner shall offer to dedicate an avigation easement ("Avigation Easement") to the Town of Leesburg concurrent with submission to the County the first record plat or site plan application for the Property. Said Avigation Easement will be for the benefit of the Leesburg Executive Airport and will cover the entire property. The proposed Avigation Easement shall be in a form approved by the Town Attorney or his designee and will meet all requirements of the Federal Aviation Administration "Suggested Template for Avigation Easements," as well as the requirements set forth in the standard Town avigation easement language. If accepted by the Town, said Avigation Easement shall be recorded prior to the approval of the first record plat for any portion of the Property. Owner shall demonstrate compliance with this Proffer prior to approval of the first record plat on the Property. Further, the POA Documents shall reflect that the Property is or will be subject to an Avigation Easement recorded in fulfillment of this Proffer.

~~40.~~41. Airport Noise Impact Study and Mitigation. The Owner will provide a noise impact study to the County that will determine the need for any noise attenuation measures within dwelling units on the Property due to overflight noise from the Leesburg Executive Airport. The noise impact study shall be based on publicly available flight data for the Leesburg Executive Airport and shall establish the assumed exterior noise level for the purposes of noise attenuation within dwelling units. This noise impact study will be conducted by a professional engineer or professional acoustical consultant and submitted to the County

concurrently with the submission of the first site plan or CPAP for the Property, whichever is first in time.

The Owner shall install acoustical treatments in all residential dwelling units ensuring that interior noise levels do not exceed the yearly interior day-night average sound level (db(A) Ldn) of 45 decibels based upon the exterior noise level as established by the noise impact study. Such noise attenuation measures, if required, shall be identified at the time of zoning permit for each residential unit on the Property. Such required noise attenuation measures shall be installed prior to the issuance of a certificate of occupancy for each residential dwelling unit on the Property. No certificate of occupancy for a residential dwelling unit shall be issued until the Owner has provided written documentation from the Director of the Department of Building and Development or the Zoning Administrator that such required noise attenuation measures have been incorporated into each such residential dwelling unit or that such measures are not required.

~~41.~~42. Native Species. The Owner shall use 80 percent Virginia native species, with emphasis on Northern Virginia natives, or other drought tolerant, regionally appropriate trees in accordance with the FSM, for all landscaping throughout the Property, provided that the Owner reserves the right, in consultation with and approval by the County Urban Forester, to modify as part of site plan approval the exact species to be used in order to meet FSM requirements and/or green building certification standards, or if some plant materials are not available, or not available in the quantities required for the project, or have been deemed by the County Urban Forester to no longer be appropriate. The Owner shall consult with the County Urban Forester to select appropriate native species for said areas prior to approval of any landscape plan for the Property.

~~42.~~43. Soil Volume for Canopy Trees. The Owner shall, for all trees planted in restrictive areas that provide a maximum of one hundred fifty percent (150%) of the FSM minimum required planting area, implement soil remediation techniques to improve the physical and biological characteristics to promote health and growth of such trees. Said soil volume and soil remediation techniques shall be shown on each CPAP or site plan application for the Property. Such procedures shall include:

a. Removal of all foreign materials resulting from construction operations, including stone, gravel, and other construction materials.

b. Spread mature, stable compost to a 4 inch depth over subsoil.

c. Subsoil with a backhoe rear bucket or similar equipment to break up compacted subsoil and mix with the applied compost.

d. Install planting soil per FSM requirements.

ARCHAEOLOGICAL

~~43.~~44. Archaeological Evaluation. Prior to the approval of the first CPAP, record plat, and/or site plan within the respective landbays, as identified further below, the Owner shall conduct further archaeological evaluation as follows:

a. Prior to the approval of the first CPAP, record plat and/or site plan, application for Landbay 2c and/or Landbay 2d, whichever is first in time, the Owner will conduct a Phase II archeological significance evaluation of the site identified as 44LD1981 on the Property. The Phase II archaeological study will be undertaken by an archaeologist who meets the professional qualifications established by the U.S. Secretary of the Interior. The Owner will provide the County Archaeologist with a copy of the findings of the Phase II archaeological study for review and approval prior to approval of such CPAP, record plat, and/or site plan application and the initiation of land-disturbing activities within Landbay 2c and/or Landbay 2d, whichever is first in time. If the Phase II study determines that the identified resources are significant, the Owner will modify project plans to avoid or minimize impacts to the resources or, if avoidance is not possible, then prior to CPAP, record plat, and/or site plan approval, the Owner will undertake Phase III data recovery excavations as a means of mitigating adverse impacts to the resource. The County Archaeologist will be afforded the opportunity to review and approve Phase II and Phase III research designs, as applicable. In the event that significant archaeological resources are identified on the Property, then, following the completion of Phase II and Phase III investigation and reporting, the Owner will transfer ownership, without cost to the County, of all artifacts and copies of all site records to the County for long-term curation in the County's artifact repository.

b. Prior to the approval of the first CPAP, record plat, and/or site plan application for Landbay 3, whichever is first in time, the Owner will conduct a Phase II archeological significance evaluation of the site identified as 44LD1987 on the Property. The Phase II archaeological study will be undertaken by an archaeologist who meets the professional qualifications established by the U.S. Secretary of the Interior. The Owner will provide the County Archaeologist with a copy of the findings of the Phase II archaeological study for review and approval prior to approval of such CPAP, record plat, and/or site plan application and the initiation of land-disturbing activities within Landbay 3. If the Phase II study determines that the identified resources are significant, the Owner will modify project plans to avoid or minimize impacts to the resources or, if avoidance is not possible, then prior to CPAP, record plat, and/or site plan approval, the Owner will undertake Phase III data recovery excavations as a means of mitigating adverse impacts to the resource. The County Archaeologist will be afforded the opportunity to review and approve Phase II and Phase III research designs, as applicable. In the event that significant archaeological resources are identified on the Property, then, following the completion of Phase II and Phase III investigation and reporting, the Owner will transfer ownership, without cost, of all artifacts and copies of all site records to the County for long-term curation in the County's artifact repository.

FIRE & RESCUE CONTRIBUTION

~~44.~~45. Fire and Rescue Contribution. The Owner shall make a one-time contribution of $157.20 for each dwelling unit on the Property to the County for distribution by the County to the volunteer fire and rescue companies providing service to the Property. The amount of said contribution payable for each dwelling unit, shall be calculated at the time of the approval of the zoning permit for each said dwelling unit and shall be payable prior to the issuance of the certificate of occupancy for such dwelling unit. The amount of such contribution shall be adjusted annually from the base year 2024, commencing on January 1 of the year following approval of this ZMAP-2021-0008 and changing effective on January 1 of each year thereafter, in accordance with changes to the Consumer Price Index, for all urban consumers (CPI-U), 1982-1984=100 (not seasonally adjusted) as published by the United States Department of Labor, Bureau of Labor Statistics, for the Washington-Arlington-Alexandria, DC-MD-VA-WV Consolidated Metropolitan Statistical Area ("CPI"). This contribution shall be divided equally between the servicing Fire and Rescue companies, respectively, providing fire and rescue services to the Property. Notwithstanding the preceding, if at the time of the application for any such zoning permit, the primary servicing fire and rescue companies do not utilize, to a significant extent, either volunteer staff or apparatus owned by a volunteer organization, then the Owner may elect to make no contribution. The intent of this proffer is to support volunteer fire and rescue staffing and operations so long as any significant element of the primary provider of fire and rescue services to the Property is volunteer owned or operated. If only one of these services has ceased to utilize volunteer staff and apparatus as outlined above in this Proffer, then the contribution may be halved and shall be provided to the remaining company.

MISCELLANEOUS

~~45.~~46. Severability. Any portion of the Property may be the subject of a Proffer Condition Amendment, Zoning Concept Plan Amendment, Rezoning, Special Exception, Commission Permit, Zoning Modification, Variance or other zoning application without the joinder and/or consent of the owner of the other land areas within the Property, provided: (a) that such application is compatible with these Proffers; (b) that the approval of such application would have no material, adverse impact upon any other land within the Property or the performance of any of these Proffers by the owner of the other land within the Property; (c) that such application complies with all relevant Zoning Ordinance and Virginia Code provisions; (d) that such application includes a proffer audit outlining the status of each commitment in these Proffers; and (e) that such application shall not be approved by the Board of Supervisors unless the application has been presented and considered at such public meetings or hearings as required by law. Previously-approved proffered conditions or development conditions applicable to a particular portion of the Property which are not the subject of such a future application shall remain in full force and effect.

~~46.~~47. Adjustment Clause. Unless otherwise specified, all cash contributions enumerated in these Proffers shall be adjusted on a yearly basis from the base year of 2024 and change effective each January 1st thereafter, in accordance with changes in the CPI.

~~47.~~48. Construction. The improvements and commitments described in these Proffers shall be constructed in accordance with and concurrently with the timing as set forth in said Proffers. Notwithstanding the foregoing, the Zoning Administrator may grant an extension to any dates or events provided in these Proffers if the Zoning Administrator determines that an extraordinary, unforeseeable event or circumstance beyond the control of the Owner prevents the timely fulfillment of the Owner's obligations under the Proffers within the stated time period upon the Owner securing fulfillment of such commitment by providing a bond or other adequate surety deemed satisfactory by the Zoning Administrator.

~~48.~~49.

~~49.~~50. Successors and Assigns. These Proffers shall bind and inure to the benefit of the Owner and their successors and assigns.

The undersigned hereby warrant that all owners with any legal interest in the Property have signed this Proffer Statement, that no signature from any additional party is necessary for these Proffers to be binding and enforceable in accordance with their terms, that they have full authority to bind the Property to these conditions, and that the Proffers are entered into voluntarily.

[SIGNATURES ON NEXT PAGE]

OWNER OF Loudoun County PIN 234-16-2147 (Tax Map #/60///3/////9/)

PAMELA PACKARD

By:_____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by _____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 234-15-8988 (Tax Map #/60////////5A)

CESAR A. VILLATORO & SILFIDA VILLATORO

By: _____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by _____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 234-16-3996 (Tax Map #/60///3////10/)

ROY K. MATHUR & KARIN H. MATHUR

By: _____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by _____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 234-16-9543 (Tax Map #/60///3/////7/)

DENNIS M. PETTIT & DEBRA W. PETTIT

By: _____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by _____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 234-17-2596 (Tax Map #/60///3/////5/)

ROBERT M. WILKINS & MARY LOU WILKINS

By: _____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by _____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 234-17-4554 (Tax Map #/60///8/////6B)

DARRELL QUESENBERRY & CYNTHIA QUESENBERRY

By: _____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by _____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 234-17-7032 (Tax Map #/60///8/////6A)

DARREL QUESENBERRY & CYNTHIA QUESENBERRY

By: _____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by _____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 234-26-4049 (Tax Map #/60///3////11/)

41383 SPRINGFIELD LLC

By: _____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by _____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 234-27-2750 (Tax Map #/60///3/////4/)

ROBERT M. WILKINS & MARY LOU WILKINS

By: _____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by _____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 234-36-2207 (Tax Map #/60///3////12A)

GARY N. SAYLOR & NANCY M. SAYLOR

By: _____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by _____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 234-36-3057 (Tax Map #/60///3/////1A)

DENNIS C. WELSH & DEBORAH C. WELSH

By: _____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by _____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 234-36-6701 (Tax Map #/60///3////12B)

GREGG M. STEWART, TRUSTEE OF THE GREGG MICHAEL STEWART REVOCABLE TRUST, DATED SEPTEMBER 28, 2022

By: _____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by _____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 234-36-7151 (Tax Map #/60///3/////1B)

MICHAEL TROY FIELDS & MICHELLE VAUGHN FIELDS

By: _____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by _____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 234-37-0852 (Tax Map #/60///3/////2A)

JAMES L. PETRUCELLI & MARY JANE PETRUCELLI

By: _____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by _____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 234-37-2906 (Tax Map #/60///3/////3/)

SYED ISHAQ & TAMMIE UMBEL ISHAQ (also known of record as Tammie Umbel)

By: _____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by _____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 234-37-4941 (Tax Map #/60///3/////2B)

JAMES L. PETRUCELLI & MARY JANE PETRUCELLI AND EDWARD L. GARDNER AND JUDITH A. GARDNER

By:_____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by _____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 235-16-3062 (Tax Map #/60///1////10A)

FREE LIFE CHURCH, INC. (previously known of record as Chesapeake Church International, Inc.)

By: _____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by _____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 235-16-4213 (Tax Map #/60/////////4/)

RONALD WOLFE & KRISTY LYNNE WOLFE

By: _____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by _____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 235-26-2866 (Tax Map #/60///1/////4/)

GEORGE CALLAGHAN

By: _____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by _____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 235-26-8067 (Tax Map #/60///1/////5/)

BRIAN A. MACDONALD & TRACY MARIE MACDONALD

By: _____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by_____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 235-36-3533 (Tax Map #/60///1/////3/)

0 EVERGREEN MILLS ROAD, LLC

By: _____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by _____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 235-37-7793 (Tax Map #/60///1/////8/)

MICHAEL WARTER & SUSAN WARTER

By: _____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by_____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 235-37-8420 (Tax Map #/60///1////13/)

MICHAEL WATER & SUSAN A. WARTER & JEFFERY WARTER

By: _____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by _____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 235-46-0891 (Tax Map #/60///3/////8A)

RONALD DALE CONKLIN JR. & TIANA L. CONKLIN

By: _____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by_____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 235-46-0954 (Tax Map #/60///3/////8C)

MICHAEL CHAMBERLIN & SHARI A. CHAMBERLIN

By: _____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by _____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 235-46-5476 (Tax Map #/60///3/////8B)

GREGORY E WIGFIELD & PAMELA A WIGFIELD, TRUSTEES OF THE WIGFIELD FAMILY TRUST U/T/D OF FEBRUARY 23, 2006

By: _____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by _____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 235-46-5737 (Tax Map #/60///1/////1/)

ERIC D. ZELSDORF & BARBARA C. ZELSDORF

By: _____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by _____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 235-46-7000 (Tax Map #/60///1/////2/)

BETHEL ORTHODOX PRESBYTERIAN CHURCH INC.

By: _____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by _____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES CONTINUE NEXT PAGE]

OWNER OF Loudoun County PIN 235-47-5463 (Tax Map #/60///1/////9/)

ROBERT L. GIFT & TAMMY R. GIFT

By: _____

Name: _____

STATE OF _____)
COUNTY/CITY OF _____) to-wit:

The foregoing Proffer Statement was acknowledged before me this ____ day of _____, 2024, by _____, who acknowledged that he/she executed the foregoing Proffer Statement with the full power and authority to do so.

_____
Notary Public

My Commission Expires: _____
Notary Registration # _____

[SIGNATURES END]

Exhibit A
Concept Development Plan

Exhibit B
Design Guidelines

Tab H:

Attorney's Opinion (MANDATORY)

WILLIAMS MULLEN

Direct Dial: 804.420.6915
adomson@williamsmullen.com

January 15, 2026

TO: Virginia Housing
601 South Belvidere Street
Richmond, Virginia 23220

RE: 2026 Tax Credit Reservation Request (30% present value credits to be paired with Tax-exempt bonds)

Name of Development: Clear Springs Apartments Phase I
Name of Owner: Clear Springs Apartments I, LLC

Dear Virginia Housing:

This undersigned firm represents the above-referenced Owner as its counsel. It has received a copy of and has reviewed the completed application package dated January 12, 2026 (of which this opinion is a part) (the "**Application**") submitted to you for the purpose of requesting, in connection with the captioned Development, a reservation of low-income housing tax credits ("**Credits**") available under Section 42 of the Internal Revenue Code of 1986, as amended (the "**Code**"). It has also reviewed Section 42 of the Code, the regulations issued pursuant thereto and such other binding authority as it believes to be applicable to the issuance hereof (the regulations and binding authority hereinafter collectively referred to as the "**Regulations**").

Based upon the foregoing reviews and upon due investigation of such matters as it deems necessary to render this opinion, but without expressing any opinion as to either the reasonableness of the estimated or projected figures or the veracity or accuracy of the factual representations set forth in the Application, the undersigned is of the opinion that:

1. It is more likely than not that the inclusion in eligible basis of the Development of such cost items or portions thereof, as set forth in the Hard Costs and Owners Costs section of the Application form, complies with all applicable requirements of the Code and Regulations.

2. The calculations (a) of the Maximum Allowable Credit available under the Code with respect to the Development and (b) of the Estimated Qualified Basis of each building in the Development comply with all applicable requirements of the Code and regulations, including the selection of credit type implicit in such calculations.

3. The information set forth in the Unit Details section of the Application form as to proposed rents satisfies all applicable requirements of the Code and Regulations.

4. The site of the captioned Development is controlled by the Owner, as identified in the Site Control section of the Application.

5. Based solely upon my review of (i) the Applicant's operating agreement; (ii) any certifications, resolutions, or consents provided to me by the Applicant; and (iii) such operating agreements, partnership agreements, bylaws, or other organizational documents of the Applicant's Principals which I deemed necessary to issue this Opinion (none of which are attached

to this Opinion), the individuals identified on the list attached as Exhibit A are duly authorized to execute documents on behalf of the Applicant, to the best of my knowledge and belief.

Finally, the undersigned is of the opinion that, if all information and representations contained in the Application and all current law were to remain unchanged, upon the placement in service of each building of the Development, the Owner would be eligible under the applicable provisions of the Code and the Regulations to an allocation of Credits in the amount(s) requested in the Application.

This opinion is rendered solely for the purpose of inducing the Virginia Housing Development Authority ("**Virginia Housing**") to issue a reservation of Credits to the Owner. Accordingly, it may be relied upon only by Virginia Housing and may not be relied upon by any other party for any other purpose.

This opinion was not prepared in accordance with the requirements of Treasury Department Circular No. 230. Accordingly, it may not be relied upon for the purpose of avoiding U.S. Federal tax penalties or to support the promotion or marketing of the transaction or matters addressed herein.

Williams Mullen

By: _____
Its: Shareholder

EXHIBIT A
TO
ATTORNEY'S OPINION LETTER

Based solely upon my review of (i) the Applicant's operating agreement; (ii) any certifications, resolutions, or consents provided to me by the Applicant; and (iii) such operating agreements, partnership agreements, bylaws, or other organizational documents of the Applicant's Principals which I deemed necessary to issue this Opinion (none of which are attached to this Opinion or included within this Exhibit), the individuals identified below are duly authorized to execute documents on behalf of the Applicant, to the best of my knowledge and belief.

	NAME	TITLE
1	Thomas J. Ayd, Jr.	Operating Manager of GSH Partners II, LLC, the Co-Manager of Clear Springs Apartments I MM, LLC, sole member/manager of Clear Springs Apartments I, LLC
2	G. Kimball Hart	Manager of Hart Properties VA LLC, Co-Manager of Good Housing VA LLC, Co-Manager of Clear Springs Apartments I MM, LLC, sole member/manager of Clear Springs Apartments I, LLC
3	John T. Pellerito	Managing Member of Cypress Real Estate Company LLC, Co-Manager of Good Housing VA LLC, Co-Manager of Clear Springs Apartments I MM, LLC, sole member/manager of Clear Springs Apartments I, LLC

WILLIAMS MULLEN

Direct Dial: 804.420.6915
adomson@williamsmullen.com

~~[Insert Date]~~
January 15, 2026

TO: Virginia Housing
601 South Belvidere Street
Richmond, Virginia 23220

RE: 2026 Tax Credit Reservation Request (30% present value credits to be paired with Tax-exempt bonds)

Name of Development: Clear Springs Apartments Phase I
Name of Owner: Clear Springs Apartments I, LLC

Dear Virginia Housing:

This undersigned firm represents the above-referenced Owner as its counsel. It has received a copy of and has reviewed the completed application package dated ~~_____~~January 12, 2026 (of which this opinion is a part) (the "**Application**") submitted to you for the purpose of requesting, in connection with the captioned Development, a reservation of low-income housing tax credits ("**Credits**") available under Section 42 of the Internal Revenue Code of 1986, as amended (the "**Code**"). It has also reviewed Section 42 of the Code, the regulations issued pursuant thereto and such other binding authority as it believes to be applicable to the issuance hereof (the regulations and binding authority hereinafter collectively referred to as the "**Regulations**").

Based upon the foregoing reviews and upon due investigation of such matters as it deems necessary to render this opinion, but without expressing any opinion as to either the reasonableness of the estimated or projected figures or the veracity or accuracy of the factual representations set forth in the Application, the undersigned is of the opinion that:

1. It is more likely than not that the inclusion in eligible basis of the Development of such cost items or portions thereof, as set forth in the Hard Costs and Owners Costs section of the Application form, complies with all applicable requirements of the Code and Regulations.

~~2. [Select One]~~
2. The calculations (a) of the Maximum Allowable Credit available under the Code with respect to the Development and (b) of the Estimated Qualified Basis of each building in the Development comply with all applicable requirements of the Code and regulations, including the selection of credit type implicit in such calculations.

~~OR~~
~~Assuming that you designate the buildings in the Development as being in a difficult development area pursuant to Code Section 42(d)(5)(B)(v), the calculations (a) of the Maximum Allowable Credit available under the Code with respect to the Development and (b) of the Estimated Qualified Basis of each building in the Development comply with all applicable requirements of the Code and regulations, including the selection of credit type implicit in such calculations.~~
~~3. [Select One]~~

3. The information set forth in the Unit Details section of the Application form as to proposed rents satisfies all applicable requirements of the Code and Regulations.

OR

The information set forth in the Unit Details section of the Application form as to proposed rents exceeds the Code rent restrictions; however, the Development will satisfy all applicable requirements of the Code and Regulations due to subsidies such that no tenant will pay rents in excess of what is dictated by the Code and Regulations.

4. The site of the captioned Development is controlled by the Owner, as identified in the Site Control section of the Application.

5. Based solely upon my review of (i) the Applicant's [operating agreement / partnership agreement]; (ii) any certifications, resolutions, or consents provided to me by the Applicant; and (iii) such operating agreements, partnership agreements, bylaws, or other organizational documents of the Applicant's Principals which I deemed necessary to issue this Opinion (none of which are attached to this Opinion), the individuals identified on the list attached as Exhibit A are duly authorized to execute documents on behalf of the Applicant, to the best of my knowledge and belief.

6. [Delete if inapplicable] The type of the nonprofit organization involved in the Development is an organization described in Code Section 501(c)(3) or 501(c)(4) and exempt from taxation under Code Section 501(a), whose purposes include the fostering of low-income housing.

7. [Delete if inapplicable] The nonprofit organizations' ownership interest in the development is as described in the Nonprofit Involvement section of the Application form.

8. [Delete if inapplicable] It is more likely than not that the representations made in the Rehab Information section of the Application form as to the Development's compliance with or exception to the Code's minimum expenditure requirements for rehabilitation projects are correct.

9. [Delete if inapplicable] After reasonable investigation, the undersigned has no reason to believe that the representations made under the Rehab Information (Ten-Year Rule) section of the Application form as to the Development's compliance with or eligibility for exception to the ten-year "look-back rule" requirement of Code §42(d)(2)(B) are not correct.

Finally, the undersigned is of the opinion that, if all information and representations contained in the Application and all current law were to remain unchanged, upon the placement in service of each building of the Development, the Owner would be eligible under the applicable provisions of the Code and the Regulations to an allocation of Credits in the amount(s) requested in the Application.

This opinion is rendered solely for the purpose of inducing the Virginia Housing Development Authority ("**Virginia Housing**") to issue a reservation of Credits to the Owner. Accordingly, it may be relied upon only by Virginia Housing and may not be relied upon by any other party for any other purpose.

This opinion was not prepared in accordance with the requirements of Treasury Department Circular No. 230. Accordingly, it may not be relied upon for the purpose of avoiding U.S. Federal tax penalties or to support the promotion or marketing of the transaction or matters addressed herein.

Williams Mullen

(Add)

By: _____

Its: Shareholder

EXHIBIT A
TO
ATTORNEY'S OPINION LETTER

Based solely upon my review of (i) the Applicant's [operating agreement / partnership agreement]; (ii) any certifications, resolutions, or consents provided to me by the Applicant; and (iii) such operating agreements, partnership agreements, bylaws, or other organizational documents of the Applicant's Principals which I deemed necessary to issue this Opinion (none of which are attached to this Opinion or included within this Exhibit), the individuals identified below are duly authorized to execute documents on behalf of the Applicant, to the best of my knowledge and belief.

	NAME	TITLE
1	Thomas J. Ayd, Jr.	Operating Manager of GSH Partners II, LLC, the Co-Manager of Clear Springs Apartments I MM, LLC, sole member/manager of Clear Springs Apartments I, LLC
2	G. Kimball Hart	Manager of Hart Properties VA LLC, Co-Manager of Good Housing VA LLC, Co-Manager of Clear Springs Apartments I MM, LLC, sole member/manager of Clear Springs Apartments I, LLC
3	John T. Pellerito	Managing Member of Cypress Real Estate Company LLC, Co-Manager of Good Housing VA LLC, Co-Manager of Clear Springs Apartments I MM, LLC, sole member/manager of Clear Springs Apartments I, LLC
~~4~~		
~~5~~		
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Summary report: **Litera Compare for Word 11.13.0.54 Document comparison done on 1/13/2026 11:54:38 AM**	
Style name: Default Style	
Intelligent Table Comparison: Active	
Original DMS: iw://williamsmullen.cloudimanage.com/iwovric/150786704/1 - Clear Springs I - VHDA Reservation Application Opinion.docx	
Modified DMS: iw://williamsmullen.cloudimanage.com/iwovric/150786704/2 - Clear Springs I - VHDA Reservation Application Opinion.docx	
Changes:	
Add	15
~~Delete~~	18
~~Move From~~	0
Move To	0
Table Insert	0
~~Table Delete~~	17
Table moves to	0
~~Table moves from~~	0
Embedded Graphics (Visio, ChemDraw, Images etc.)	1
Embedded Excel	0
Format changes	0
Total Changes:	51

Tab I:

Nonprofit Questionnaire (MANDATORY for points or pool)

NOTE: The following documents need not be submitted unless requested by Virginia Housing:

-Nonprofit Articles of Incorporation

-IRS Documentation of Nonprofit Status

-Joint Venture Agreement (if applicable)

-For-profit Consulting Agreement (if applicable)

This deal does not require information behind this tab.

Tab J:

Relocation Plan and Unit Delivery Schedule

(MANDATORY-Rehab)

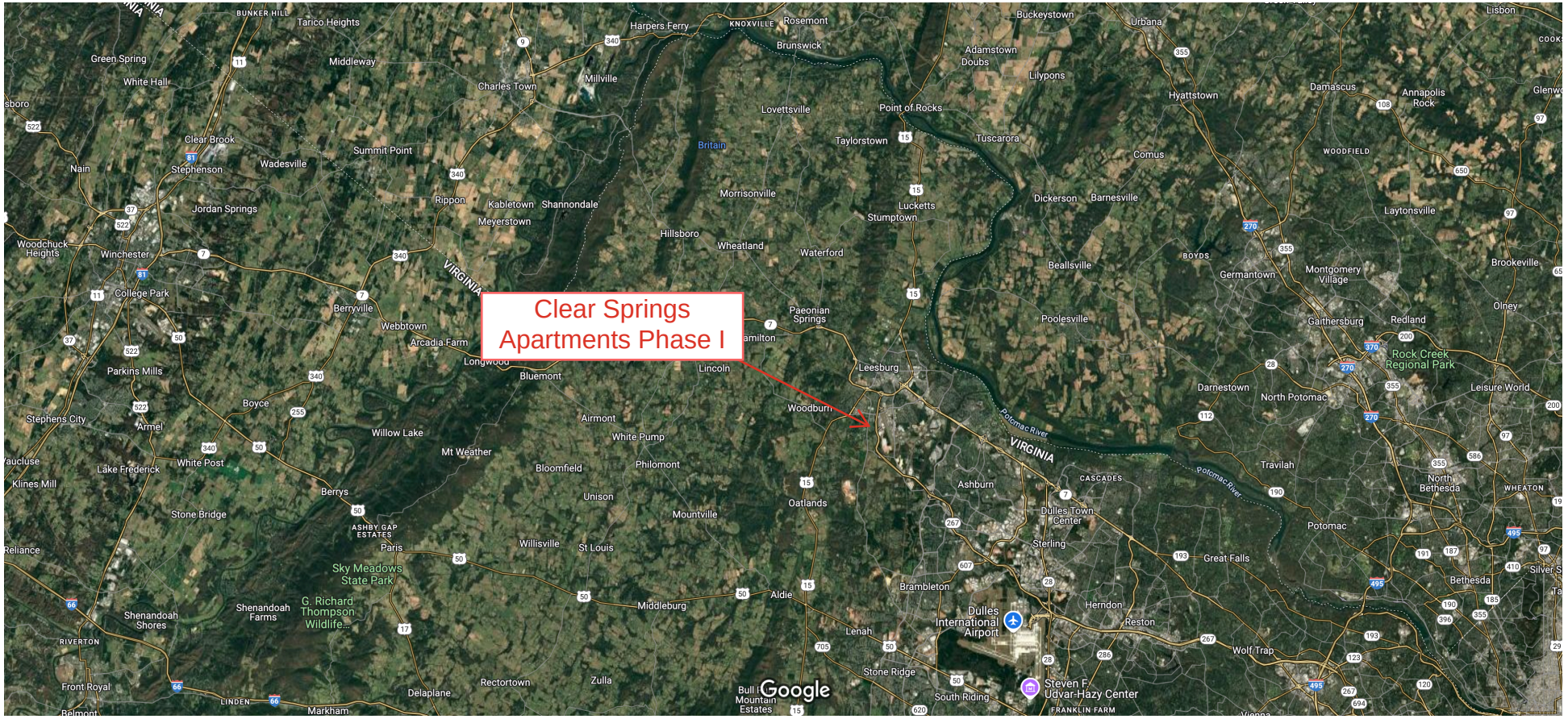
This deal does not require information behind this tab.

Tab K:

Documentation of Development Location:

Google Maps

County View



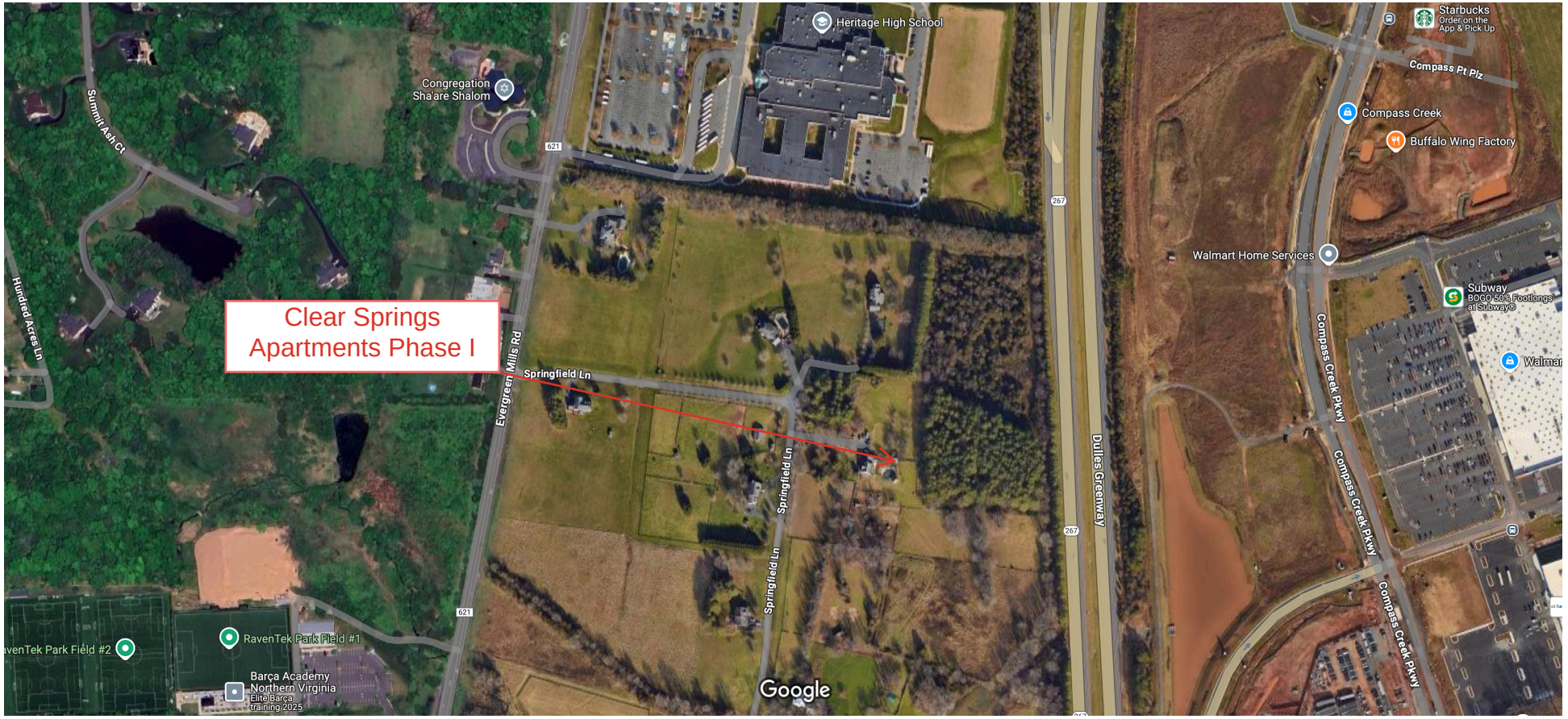
Google Maps

Town View

Imagery ©2025 Airbus, Landsat / Copernicus, Maxar Technologies, Map data ©2025 Google 2000 ft

Google Maps

Neighborhood View



Imagery ©2025 Airbus, Maxar Technologies, Map data ©2025 200 ft

Tab K.1

Revitalization Area Certification

Revitalization Area

General Instructions

To qualify for revitalization area points available under the QAP (13 VAC 180-60(E)(2)(c)), select one of the following and provide sufficient supporting documentation:

1. The development is located in either of the following, as defined by HUD: a Qualified Census Tract; or a Targeted Area, wherein 70% or more of the families have incomes which are ≤ 80% statewide median income [NOTE: these census tracts are included in the definition of Targeted Area for single-family lending purposes but do not include ACEDS].

2. The development is located in a redevelopment area, conservation area or rehabilitation district created by a city or county, pursuant to VA Code §36-1 et seq. Documentation must (a) demonstrate that area exists at the time of application; (b) accurately depict area boundaries; and (c) clearly show that the proposed development lies or will lie within those boundaries.

3. The development is located in a revitalization area designated by resolution adopted pursuant to the terms of VA Code § 36-55.30:2 for the purpose of enabling Virginia Housing to provide financing to either a mixed-income or mixed-income/mixed-use development. Documentation must include a resolution from the locality supporting the development's s location within the revitalization area. Please contact Rental Housing development to obtain the appropriate form resolution.

4. The development is located in a Housing Rehabilitation Zone established through an ordinance created by a city, county or town pursuant to VA Code §36-55.64. Documentation must include a copy of the ordinance with support that the development lies within the Rehabilitation Zone.

5. The development is located In an opportunity zone designated by the Commonwealth pursuant to the Federal Tax Cuts and Jobs Act of 2017 (PL 115-97) and has a binding commitment of funding acceptable to Virginia Housing.

6. The development is located in a jurisdiction that confirms that the development, as proposed to be constructed or rehabilitated, will utilize new or existing housing as part of a community revitalization plan. Must use Virginia Housing's Community Revitalization Plan Form Letter.

7. The development is located on land owned by federally recognized or Virginia-recognized Tribal Nations located within the present-day external boundaries of the Commonwealth.

Date of Meeting: December 5, 2017

5

BOARD OF SUPERVISORS
BUSINESS MEETING
ACTION ITEM

SUBJECT: **Resolution Designating Revitalization Area to Support Applications for Low Income Housing Tax Credits**

ELECTION DISTRICT(S): Countywide

CRITICAL ACTION DATE: March 16, 2018

STAFF CONTACT(S): Glenda Blake, Department of Family Services
Sarah Coyle Etro, Department of Family Services
Leo Rogers, County Attorney's Office

PURPOSE: Designation of the Suburban Policy Area and the Leesburg Joint Land Management Area (JLMA) as a revitalization area by resolution to support Low Income Housing Tax Credit (LIHTC) applications in gaining additional points in the competition for tax credits.

RECOMMENDATION(S): **Staff** recommends adoption of the resolution designating the Suburban Policy Area and the Leesburg JLMA as a revitalization area to support LIHTC applications in the competitive tax credit allocation process.

BACKGROUND: The County can provide support for projects that are the subject of an application for Low Income Housing Tax Credit (LIHTC) allocations by adopting a resolution designating a revitalization area (Attachment 1). The revitalization designation can be based on a determination that the area lacks affordable housing to support the large number of workers and businesses within the designated geographic area of the County.

In the LIHTC competition, with application review based on a point system, an application can receive 10 points for its location in a designated revitalization area. These 10 points may make the difference in winning the LIHTC in the application process leading to the development of an affordable rental project. A resolution is required by Virginia Code Section 36-55.30:2 (Attachment 2) in order for the Board of Supervisors to designate a revitalization area.

The designation is proposed based on criteria included in Virginia Code Section 36-55.30:2 :

1. The commercial, industrial or other economic development of the revitalization area will benefit Loudoun County but the area lacks the affordable housing needed to induce manufacturing, industrial, commercial, governmental, educational, entertainments,

community development, healthcare or nonprofit enterprises or undertakings to locate or remain in the area.

2. Private enterprise and investment are not reasonably expected, without assistance, to produce the construction or rehabilitation of decent, safe and sanitary housing and supporting facilities that will meet the needs of low and moderate income persons and families in the revitalization area and will induce other persons and families to live within the area and thereby create a desirable economic mix of residents in the area.

The Board could designate the Suburban Policy Area and the Leesburg JLMA as a revitalization area (Attachment 1; Exhibit A). Properties within this area could be the subject of a LIHTC application and could benefit from the revitalization area designation. This area of the County is the location of the majority of the County's businesses and industry. Affordable housing in this area would house the workforce needed to support those businesses.

Information included in the "Primer on Housing in Loudoun County" presented at the Board of Supervisors' October 16, 2017, Housing Summit identifies that "almost 78,000 workers in Loudoun's workforce are in occupations that earn less than 40% of the Area Median Income (AMI) (2017 AMI is $110,300; 40% AMI is $44,120); that's 48.2% of Loudoun's workforce. Additionally, about 55% of the workforce does not earn annual pay greater than 65% AMI ($71,695). The County works to attract, grow and retain targeted businesses of all sizes. A lack of reasonably-priced housing hinders businesses from attracting and retaining the talent they need, thereby hindering growth and deterring new businesses from moving in. When the workforce can't find or maintain housing expenses, they also explore new options, sometimes driving them away from the community." The Housing Needs Assessment identified an unmet housing need of 8400 rental apartments for households with incomes at 60% AMI and below.

LIHTC applications are required to be submitted to the Virginia Housing Development Authority (VHDA) by March 16, 2018. The Board's adoption of the resolution before the deadline will enable applicants seeking a LIHTC allocation in the upcoming allocation cycle to gain points in the application review competition.

ISSUES: Staff has identified no outstanding concerns relative to the adoption of this resolution.

FISCAL IMPACT: The possibility of gaining additional LIHTC rental units because of successful applications in the LIHTC competition should strengthen Loudoun's economy by housing the workforce supporting businesses and industry.

ALTERNATIVES: The Board could choose not to designate a Revitalization Area to support LIHTC applications or could choose to modify the proposed Revitalization Area boundaries.

DRAFT MOTIONS:

1. I move that the Board of Supervisors approve the resolution designating the Suburban Policy Area and the Leesburg Joint Land Management Area as a Revitalization Area to support Low Income Housing Tax Credit applications in the competitive tax credit allocation process (provided as Attachment 1 to the December 5, 2017, Board of Supervisors Business Meeting Action Item).

OR

2. I move an alternate motion.

ATTACHMENT(S):

1. Resolution designating a portion of Loudoun County, Virginia a Revitalization Area
2. Code of Virginia Section 36-55.30:2. Housing revitalization areas

Loudoun County, Virginia
www.loudoun.gov
Office of the County Administrator
1 Harrison Street, S.E., 5th Floor, P.O. Box 7000, Leesburg, VA 20177-7000
Telephone (703) 777-0200 • Fax (703) 777-0325

At a business meeting of the Board of Supervisors of Loudoun County, Virginia, held in the County Government Center, Board of Supervisors Meeting Room, 1 Harrison Street, S.E., Leesburg, Virginia, on Tuesday, December 5, 2017 at 5:00 p.m.

IN RE: Resolution Designating Revitalization Area to Support Applications for Low Income Housing Tax Credits (Countywide)

Vice Chairman Buona moved that the Board of Supervisors approve the resolution designating the Suburban Policy Area as a Revitalization Area to support Low Income Housing Tax Credit applications in the competitive tax credit allocation process (provided as Attachment 1 to the December 5, 2017, Board of Supervisors Business Meeting Supplemental Action Item).

Seconded by Supervisor Volpe.

Voting on the Motion: Supervisors Buona, Higgins, Letourneau, Meyer, Randall, Saines, Umstattd, and Volpe – Yes; None – No; Supervisor Buffington – Absent for the Vote.

A COPY TESTE:

Jennifer L. Gunnell
DEPUTY CLERK TO THE LOUDOUN COUNTY
BOARD OF SUPERVISORS

RESOLUTION
DESIGNATING A PORTION OF LOUDOUN COUNTY, VIRGINIA
A REVITALIZATION AREA

WHEREAS, pursuant to Section 36-55.30:2.A of the Code of Virginia of 1950, as amended, the Board of Supervisors of the County of Loudoun, Virginia, desire to designate the Suburban Policy Area and the Leesburg Joint Land Management Area as shown on Exhibit A, attached hereto, as a Revitalization Area.

NOW, THEREFORE, BE IT HEREBY DETERMINED as follows:

1. the commercial, industrial or other economic development of the Revitalization Area will benefit Loudoun County but the Revitalization Area lacks the affordable housing needed to induce manufacturing, industrial, commercial, governmental, educational, entertainments, community development, healthcare or nonprofit enterprises or undertakings to locate or remain in the Revitalization Area; and

2. private enterprise and investment are not reasonably expected, without assistance, to produce the construction or rehabilitation of decent, safe and sanitary housing and supporting facilities that will meet the needs of low and moderate income persons and families in the Revitalization Area and will induce other persons and families to live within the Revitalization Area and thereby create a desirable economic mix of residents in the Revitalization Area.

NOW, THEREFORE, BE IT HEREBY RESOLVED that pursuant to Section 36-55.30:2.A of the Code of Virginia of 1950, as amended, the Board of Supervisors of Loudoun County hereby designates the Suburban Policy Area and the Leesburg Joint Land Management Area as shown on Exhibit A, attached hereto, as a Revitalization Area.

Phyllis J. Randall
Phyllis Randall,
Chairman, Board of Supervisors

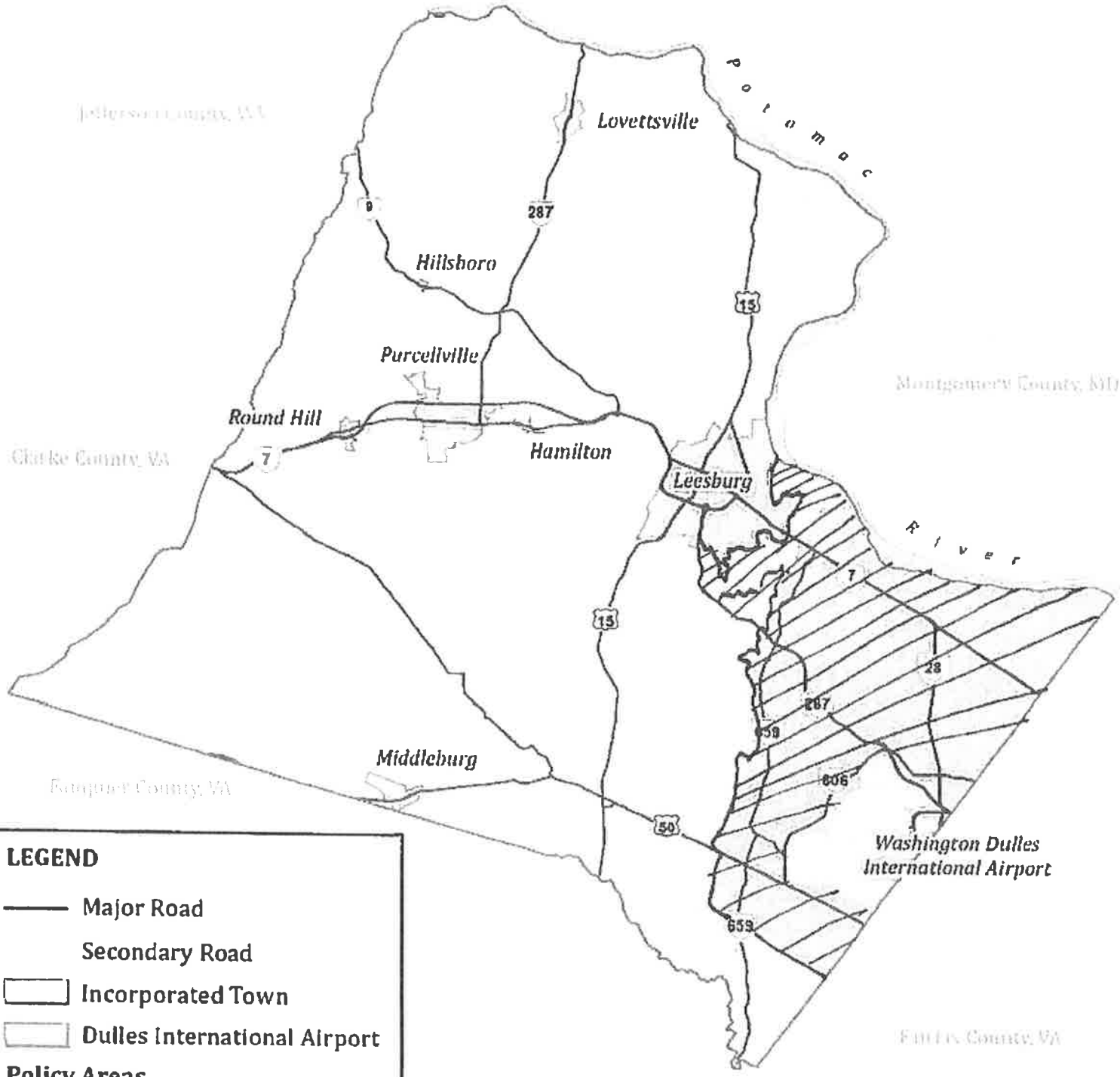
ATTEST: _____
Tim Hemstreet
Clerk to the Board

Adopted by the Board of Supervisors of Loudoun, Virginia, this 5 day of December, 2017.

Attachment 1

PROPOSED REVITALIZATION AREA

LOUDOUN COUNTY



LEGEND

- Major Road
- Secondary Road
- Incorporated Town
- Dulles International Airport

Policy Areas

- Joint Land Management Area
- Rural Policy Area
- Suburban Policy Area
- Transition Policy Area

Exhibit A

Code of Virginia
Title 36. Housing
Chapter 1.2. Virginia Housing Development Authority Act

§ 36-55.30:2. Housing revitalization areas; economically mixed projects.

A. For the sole purpose of empowering the HDA to provide financing in accordance with this chapter, the governing body of any city or county may by resolution designate an area within such city or county as a revitalization area if such governing body shall in such resolution make the following determinations with respect to such area: (i) either (a) the area is blighted, deteriorated, deteriorating or, if not rehabilitated, likely to deteriorate by reason that the buildings, improvements or other facilities in such area are subject to one or more of the following conditions: dilapidation; obsolescence; overcrowding; inadequate ventilation, light or sanitation; excessive land coverage; deleterious land use; or faulty or inadequate design, quality or condition; or (b) the industrial, commercial or other economic development of such area will benefit the city or county but such area lacks the housing needed to induce manufacturing, industrial, commercial, governmental, educational, entertainment, community development, healthcare or nonprofit enterprises or undertakings to locate or remain in such area; and (ii) private enterprise and investment are not reasonably expected, without assistance, to produce the construction or rehabilitation of decent, safe and sanitary housing and supporting facilities that will meet the needs of low and moderate income persons and families in such area and will induce other persons and families to live within such area and thereby create a desirable economic mix of residents in such area. Any redevelopment area, conservation area, or rehabilitation area created or designated by the city or county pursuant to Chapter 1 (§ 36-1 et seq.) of this title, any census tract in which 70 percent or more of the families have incomes which are 80 percent or less of the statewide median income as determined by the federal government pursuant to Section 143 of the United States Internal Revenue Code or any successor code provision on the basis of the most recent decennial census for which data are available, and any census tract which is designated by the United States Department of Housing and Urban Development and, for the most recent year for which census data are available on household income in such tract, either in which 50 percent or more of the households have an income which is less than 60 percent of the area median gross income for such year or which has a poverty rate of at least 25 percent shall be deemed to be designated as a revitalization area without adoption of the above described resolution of the city or county. In any revitalization area, the HDA may provide financing for one or more economically mixed projects and, in conjunction therewith, any nonhousing buildings that are incidental to such project or projects or are determined by the governing body of the city or county to be necessary or appropriate for the revitalization of such area or for the industrial, commercial or other economic development thereof.

B. The HDA may finance an economically mixed project that is not within a revitalization area if the governing body of the city or county in which such project is or will be located shall by resolution determine (i) either (a) that the ability to provide residential housing and supporting facilities that serve persons or families of lower or moderate income will be enhanced if a portion of the units therein are occupied or held available for occupancy by persons and families who are not of low and moderate income or (b) that the surrounding area of such project is, or is expected in the future to be, inhabited predominantly by lower income persons and families and will benefit from an economic mix of residents in such project and (ii) private enterprise and investment are not reasonably expected, without assistance, to produce the construction or rehabilitation of decent, safe and sanitary housing and supporting facilities that will meet the needs of low and moderate income persons and families in such area and will induce other persons and families to live within such area and thereby create a desirable economic mix of residents in such area.

C. In any economically mixed project financed under this section, the percentage of units occupied or held available for occupancy by persons and families who are not of low and moderate income, as determined as of the date of their initial occupancy of such units, shall not exceed 80 percent.

1979, c. 374; 1996, cc. 77, 498; 2004, c. 187; 2006, c. 784.

Attachment 2

Tab K.2

Surveyor's Certification of Proximity to Public Transportation using Virginia Housing template

This deal does not require information behind this tab.

Tab L:

PHA / Section 8 Notification Letter

PHA or Section 8 Notification Letter

If you have any questions, please contact the Tax Credit Department at taxcreditapps@virginiahousing.com.

General Instructions

1. Because of conflicting program requirements regarding waiting list procedures, this letter is not applicable to those developments that have 100% project-based Section 8 or project-based vouchers.
2. This PHA or Section 8 Notification letter (or proof of delivery to the correct PHA/Section 8 Administrator) must be included with the application.
3. 'Development Address' should correspond to the application.
4. 'Proposed Improvements' should correspond with the application.
5. 'Proposed Rents' should correspond with the application.
6. 'Other Descriptive Information' should correspond with information in the application.

NOTE: Any change to this form letter may result in a reduction of points under the scoring system.

PHA or Section 8 Notification Letter

Date: 12/16/2025

To: Eric Keeler
Director of Housing & Community Development
Loudoun County

Re: Proposed Affordable Housing Development

Name of Development: Clear Springs Apartments Phase I

Name of Owner: Clear Springs Apartments I, LLC

I would like to take this opportunity to notify you of a proposed affordable housing development to be completed in your jurisdiction. We are in the process of applying for federal low-income housing tax credits from Virginia Housing. We expect to make a representation in that application that we will give leasing preference to households on the local PHA or Section 8 waiting list. Units are expected to be completed and available for occupancy beginning on June 1, 2028 (date).

The following is a brief description of the proposed development:

Development Address: In and around approximately 41350 Springfield Ln, Leesburg, VA 20175.
Please see attached legal description and site map.

Proposed improvements:

New Construction:	# Units	97	# Buildings	1
Adaptive Reuse	# Units		# Buildings	
Rehabilitation:	# Units		# Buildings	

Proposed Average Rents:

Efficiencies:	$ _____ / month
1 Bedroom Units:	$ $1,682 / month
2 Bedroom Units:	$ $2,043 / month
3 Bedroom Units:	$ $2,236 / month
4 Bedroom Units:	$ _____ / month

Other Descriptive Information:

Clear Springs Apartments – Phase I will be an income-averaged, income-restricted community located in Leesburg, Virginia. This development will serve as the first phase of a two-phase affordable community, offering residents a wide range of amenities both within the affordable community itself and throughout the larger master development.

PHA or Section 8 Notification Letter

We Appreciate your assistance with identifying qualified tenants.

If you have any questions about the proposed development, please call me at (443) 783-8010.

Please acknowledge receipt of this letter by signing below and returning it to me.

Sincerely yours.

Name Chase Powell

Title Director of Development

To be completed by the Local Housing Authority or Sec 8 Administrator:

Seen and acknowledged by: Eric Keeler

Printed Name: Eric Keeler

Title: Director, Loudoun County Dept. of Housing & Community Development

Phone: (571) 627-6450

Date: December 10, 2025

Tab M:

Intentionally Blank

This deal does not require information behind this tab.

Tab N:

Homeownership Plan

This deal does not require information behind this tab.

Tab O:

Plan of Development Certification Letter

This deal does not require information behind this tab.

Tab P:

Zero Energy or Passive House documentation for prior allocation by this developer

This deal does not require information behind this tab.

Tab Q:

Documentation of Rental Assistance, Tax Abatement and/or existing RD or HUD Property

This deal does not require information behind this tab.

Tab R:

Documentation of Utility Allowance calculation

January 7, 2026

Chase Powell
Green Street Housing
212 E Main Street, Suite 200
Salisbury, MD 21804

RE: Utility Allowance Calculations Report
Village at Clear Springs
Leesburg, VA 20175

Dear Chase Powell,

Dominion Due Diligence Group (D3G) respectfully provides the projected Utility Allowance Calculations (UAC) Report for Village at Clear Springs. The Projected Utility Allowance Calculations have been performed by qualified energy professionals using an engineering-based methodology to generate energy consumption based models for each dwelling unit type. The consumption data is being reported using the universally accepted IRS Sec. 42 standard.

Projected Utility Allowance Calculations Report

To complete the utility allowance calculations study the following tasks were performed:

a. Review client provided property information for proposed site details.
b. Confirm utility providers, utility rates and service charges for each applicable utility provider for the dwelling units.
c. Review utility information and metering configuration in the dwelling units.
d. Calculate total energy consumption for each unit type, using approved energy modeling software.

The UACs provided in this report are calculations based on the project design information (plans and specifications) supplied to us by the owner. UACs were performed using the energy consumption modeling method. The UACs are based on engineering calculations, standardized consumption tables, and have been back-tested using in-house research. Using an energy consumption-based methodology, an energy model was developed for each unit type, per floor, and for the entire building. The utility provider rates and the service charge were confirmed on the day the report was issued and used within the energy models to produce UACs for the property. The projected Utility Allowance Calculations methods follow the following standards:

- IRS Section 42
- HUD

Description of Property and Assumptions

Utility allowance calculations for proposed properties require both a review of available construction documents and research-based inputs determined by qualified energy professionals. The following table details the subject property, unit-level energy uses, and utility providers.

Description of Property:	
Name:	Village at Clear Springs
Location:	Leesburg, VA
Type:	(180) units within (2) three-story buildings
Dwelling Unit Utilities:	Electricity
Common Area Utilities:	Electricity Water & Sewer
Types of Homes:	
Multifamily:	1 Bedroom (69) 2 Bedroom (91) 3 Bedroom (20)
Unit Level Energy Use:	
Heating, Ventilation, and Cooling Systems:	Air-source heat-pumps 14.3 SEER2/7.8 & 7.5 HSPF2 Panasonic ERV FV-06VE1
Domestic Hot Water:	Electric 40 & 50 gallon 0.93 UEF
Cooking:	Electric range/oven
Refrigerator:	ENERGY STAR
Clothes Washer:	ENERGY STAR
Clothes Dryer:	ENERGY STAR
Lighting Package:	100% LED
Windows:	ENERGY STAR U-value 0.29/SHGC 0.28
Foundation:	Slab on grade, R-15 perimeter insulation Podium R-10 + R-13, R-3 on the sides
Exterior Wall Insulation:	Wood-framed construction, Insulated sheathing with R-21 batts, grade I installation
Roof Insulation:	R-30 continuous rigid with R-11 batts on the underside of the roof deck
Utility Providers:	
Electricity:	Dominion Energy
Natural Gas:	N/A
Water & Sewer:	Loudon Water

Electric Utility Allowance Calculations – Residential

Our average consumption reflects a reasonable level for an energy-conscious household of modest means. In accordance with HUD Regulations, we establish utility allowance calculations for each dwelling unit category and size. These calculations encompass all services for which the tenant is responsible, as specified by the developer.

Utility Allowance Calculations Schedule:
Analysis of the various unit configurations for electric, natural gas (if any at the property), and water/sewer services (where these services applied to consumption at the dwelling unit level) determined the following projected utility allowance values.

Electric Utility:

Dwelling Unit	Basic Service Charge	Electric Consumption Charge		Monthly Billing
Type	Per Month	Approx. $0.1458/kWh*		Total
1 Bed	$7.58	469 kWh	$72.31	$79.89
2 Bed	$7.58	609 kWh	$93.87	$101.45
3 Bed	$7.58	781 kWh	$120.39	$127.97

**Note - Consumption charges include all applicable riders, fees, and taxes. The approximate rate is calculated considering the seasonal and tiered rate variations.*

Rate Explanation:
Charges for residential electric service include a Basic Service Charge of $7.58 per month. Additionally, the monthly electric billing includes Distribution Related Riders with a total of $0.0053 per kWh, Supply Related Riders with a total of $0.065 per kWh, and Fees and Taxes with a total charge of $0.0005 per kWh.

Electric Utility Allowance Calculations – Shared Spaces

Total Monthly Utility Allowance for Common Spaces:

Building	Basic Service Charge	Electric Consumption Charge		Monthly Billing
Type	Per Month	Per Rate Structure		Total
Bldg 2a & 2b	$16.34	kWh 10,400	$1,301.09	$1,317.43
Bldg 1a & 1b	$16.34	kWh 16,412	$1,824.39	$1,840.73

Rate Explanation:
Charges for commercial electric services include a basic service charge of $16.34 per month. Additionally, the monthly electric billing includes distribution charges for the first 3,000 kWh with a total of $0.015126 per kWh, generation charges with a total of $0.042468 per kWh, and transmission charges with a total charge of $0.0542 per kWh. When usage exceeds 3,000 kWh, monthly electric billing includes distribution charges with a total of $0.010219 per kWh, generation charges with a total of $0.026636 per kWh, and transmission charges with a total charge of $0.0542 per kWh.

Water & Sewer Utility Allowance Calculations – Shared Spaces & Residential

Total Monthly Water & Sewer Utility Allowance for Residential:

Dwelling Unit	Basic Service Charge	Water & Sewer Charge		Monthly Billing
Type	Per Month	Tiered Rate/1,000 Gallons**		Total
1 Bed	$26.75	2,502 Gallons	$21.77	$48.52
2 Bed	$26.75	3,753 Gallons	$32.65	$59.40
3 Bed	$26.75	5,004 Gallons	$43.53	$70.29

Total Monthly Water & Sewer Utility Allowance for Shared Spaces:

Dwelling Unit	Basic Service Charge – Water & Sewer	Water & Sewer Charge		Monthly Billing
Type	Per Month	Tiered Rate per 1,000 Gallons		Total
Bldg 1a & 1b	$26.75	6,552 Gallons	$42.75	$69.51
Bldg 2a & 2b	$26.75	4,914 Gallons	$57.00	$83.76

Rate Explanation:
Water and sewer charges include a basic service charge of $40.15 per quarter for water and $40.11 per quarter for sewer, for a combined base charge of $80.26 per quarter (approximately $26.75 per month).

Usage charges are billed based on the amount of consumption. Tier 1 rates, which apply to 0-25,000 gallons per quarter, are $2.94 per 1,000 gallons for water and $5.76 per 1,000 gallons for sewer.

Fixture usage assumptions are based on EPA WaterSense / RESNET / typical multifamily usage benchmarks. Water consumption modeling for irrigation was not assessed at the time of this report. Irrigation is not noted in the project specifications, nor are any pools, fountains, or other exterior water-using features.

Water & Sewer Utility Allowance Calculations – Estimated Totals

Dwelling Unit	Water & Sewer	Monthly Billing
Type (All Units)	Est. Monthly Consumption	Total
1 bedroom	172,638 Gallons	$3,347.88
2 bedroom	341.523 Gallons	$5,405.40
3 bedroom	100,080 Gallons	$1,405.80
Bldg 1a & 1b	6,552 Gallons	$69.51
Bldg 2a & 2b	4,914 Gallons	$83.76
Estimated Monthly Total		$10,312.35

The Utility Allowance Calculations were completed on January 7, 2026.
The Utility Allowance Calculations effective date is April 7, 2026. (90 Days from completion)

Should you have any questions regarding the contents of this Utility Allowance Calculations report, please feel free to contact D3G at (804) 237-6853.

Sincerely,

Kevin Robicheau, HERS Rater, NGBS Verifier

Sincerely,

Alex Tapia, NGBS Verifier

Attachments:

Attachment 1: Projected Utility Allowance
Attachment 2: HUD Form 52667
Attachment 3: Utility Rate & Information
Attachment 4: Staff Resumes

UTILITY ALLOWANCE CALCULATIONS

PROPERTY NAME: Village at Clear Spring
UAC RECEIVED DATE: 01/07/26
IMPLEMENTATION EFFECTIVE DATE: 4/7/2026

Building	Unit Type	Address	Square Footage	Electric Consumption Charges	Electric Service Charges	UAC Total
Multifamily	1 Bedroom	Leesburg, VA 20175	705	$72.31	$7.58	$79.89
Multifamily	2 Bedroom		991	$93.87	$7.58	$101.45
Multifamily	3 Bedroom		1,183	$120.39	$7.58	$127.97

Utility Allowance Schedule
See Public Reporting and Instructions on back.

U.S Department of Housing and Urban Development
Office of Public and Indian Housing

OMB Approval No. 2577-0169
exp. 04/30/2026

The following allowances are used to determine the total cost of tenant-furnished utilities and appliances.

Locality/PHA	Unit Type	Date (mm/dd/yyyy)
Leesburg VA	1, 2, & 3 bedroom apartments	1/7/2025

Utility or Service	Fuel Type	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR
Heating	Natural Gas						
	Bottled Gas						
	Electric						
	Electric – Heat Pump		14.48	21.23	33.62		
	Fuel Oil						
	Other						
Cooking	Natural Gas						
	Bottled Gas						
	Electric		4.49	4.96	5.44		
	Other						
Other Electric			36.00	42.43	51.35		
Air Conditioning			3.51	6.31	5.52		
Water Heating	Natural Gas						
	Bottled Gas						
	Electric		17.68	22.79	28.31		
	Electric – Heat Pump						
	Fuel Oil						
Water							
Sewer							
Trash Collection							
Other – specify							
Range/Microwave							
Refrigerator			3.73	3.73	3.73		

Actual Family Allowances – May be used by the family to compute allowance while searching for a unit.

Head of Household Name

Unit Address

Number of Bedrooms

Utility/Service/Appliance	Allowance
Heating	
Cooking	
Other Electric	
Air Conditioning	
Water Heating	
Water	
Sewer	
Trash Collection	
Other	
Range/Microwave	
Refrigerator	
Total	

PHAs must maintain a completed HUD Form-52667 Utility Allowance Schedule for each unit type that is typical in the PHA's jurisdiction. The utility allowance schedule is based on the typical cost of utilities and services paid by energy-conservation households that occupy housing of similar size and type in the same locality. In developing the schedule, the PHA must use normal patterns of consumption for the community as a whole and current utility rates.

This form includes the utilities that the PHA must consider: heating (space), cooking, other electric (e.g. lights, appliances, general usage), air conditioning (if the majority of housing units in the market provide centrally air-conditioned units or there is appropriate wiring for tenant-installed air conditioners), water heating, water, sewer, trash, the cost to provide a range, and the cost to provide a refrigerator. This form includes several fuel types, however, the PHA is not required to have a utility allowance for every fuel type listed on the form. The PHA is only required to have an allowance for the fuel types that are typical in the PHA's jurisdiction.

Electric resistance vs. electric heat pump: The most recent update to the HUD-52667 includes "Electric Heat Pump" as a fuel type under "Heating" and "Water Heating". PHAs may choose to provide an allowance on the schedule for electric (resistance), electric heat pump, or both. Heat pumps are more efficient and are associated with lower consumption. By adding this to the form, HUD is not requiring PHAs to consider both. This is up to the PHA, however, the HUD Utility Schedule Model tool available on HUDUser.gov provides an allowance for both electric resistance and electric heat pump.

Determining Allowances: In general, PHAs use local sources of information on the cost of utilities and services, such as:

1. Electric utility suppliers
2. Natural gas utility suppliers
3. Water and sewer suppliers
4. Fuel oil and bottled gas suppliers
5. Public service commissions
6. Real estate and property management firms
7. State and local agencies
8. Appliance sales and leasing firms

PHAs may use the HUD Utility Schedule Model (HUSM) available on HUDuser.org to determine their Utility Allowance Schedules. The tool uses geographic-specific utility consumption rates combined with user entered data on utility rates to determine the overall monthly allowance.

OMB Burden Statement: The public reporting burden for this information collection is estimated to be up to 0.25 hours, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The information collected is required to determine the amount of utility allowance necessary to calculate the family's tenant portion. Assurances of confidentiality are not provided under this collection. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions to reduce this burden, to the Office of Public and Indian Housing, US. Department of Housing and Urban Development, Washington, DC 20410. HUD may not conduct and sponsor, and a person is not required to respond to, a collection of information unless the collection displays a valid control number.

Privacy Notice: The Department of Housing and Urban Development (HUD) is authorized to collect the information required on this form by Section 8 of the U.S. Housing Act of 1937 (42 U.S.C. 1437f). The information collected specifies which utilities and appliances are to be supplied by the owner, and what utilities and appliances are to be supplied to the tenant. The Personally Identifiable Information (PII) data collected on this form are not stored or retrieved within a system of record.

Schedule 1

RESIDENTIAL SERVICE

I. APPLICABILITY AND AVAILABILITY

This schedule is applicable only to Customers (1) who elect to receive separately metered and billed Electricity Supply Service and Electric Delivery Service from the Company or (2) who are eligible for and elect to purchase Electricity Supply Service from a Competitive Service Provider in accordance with Va. Code § 56-577 A for use in and about (a) a single-family residence, flat or apartment, (b) a combination farm and one occupied single-family residence, flat or apartment, (c) a private residence used as a boarding and/or rooming house with no more than one cooking installation nor more than ten bedrooms, or (d) separately metered service to detached accessory buildings appurtenant to residential dwellings unless such buildings use electricity for commercial or industrial purposes.

A combination residence and farm, having more than one single-family residence, flat or apartment served electricity through a single meter, that was being billed under this schedule prior to April 1, 1971, may continue to be supplied electricity under this schedule provided each such dwelling unit is occupied by the owner or by a tenant working on the farm. Such multiple-residence farms connected on and after April 1, 1971, shall not be served under this schedule.

This schedule is not applicable for (a) individual motors rated over 15 HP, and (b) commercial use as in hotels, public inns, motels, auto courts, tourist courts, tourist camps, or trailer camps.

II. MONTHLY RATE

A. Distribution Service Charges

1. Basic Customer Charge
   Basic Customer Charge $7.58 per billing month.

2. Plus Distribution kWh Charge

   a. Billing Months of June – September

First 800 kWh	@	2.6656¢ per kWh
Over 800 kWh	@	1.9708¢ per kWh

   b. Billing Months of October – May

First 800 kWh	@	2.6656¢ per kWh
Over 800 kWh	@	1.9708¢ per kWh

(Continued)

Schedule 1

RESIDENTIAL SERVICE

(Continued)

II. MONTHLY RATE (Continued)

3. Plus each Distribution kilowatt-hour used is subject to all applicable riders in the Exhibit of Applicable Riders, including non-bypassable charges.

4. Plus, where the Customer receives service in accordance with Section XXV – NET METERING of the Company's TERMS AND CONDITIONS and where the alternating current capacity of the Renewable Fuel Generator exceeds 15 kW, the Customer shall be billed a Distribution Standby Charge of $3.42 per kW of demand, minus the charge under II.A.2., above, but not less than zero.

B. Electricity Supply (ES) Service Charges

Paragraph II.B. is not applicable to Customers receiving Electricity Supply Service from a Competitive Service Provider, except for non-bypassable charges in the Exhibit of Applicable Riders, as discussed in Paragraph V., below:

1. Generation kWh Charge

a. Billing Months of June – September

First 800 ES kWh	@	2.8063¢ per kWh
Over 800 ES kWh	@	4.2708¢ per kWh

b. Billing Months of October – May

First 800 ES kWh	@	2.7031¢ per kWh
Over 800 ES kWh	@	2.3430¢ per kWh

2. Plus Transmission kWh Charge

a. All kWh	@	0.970¢ per kWh

b. Plus, where the Customer receives service in accordance with Section XXV – NET METERING of the Company's TERMS AND CONDITIONS and where the alternating current capacity of the Renewable Fuel Generator exceeds 15 kW, the Customer shall be billed a Transmission Standby Charge of $1.32 per kW of demand, minus the charge under II.B.2.a., above, but not less than zero.

3. Plus each Electricity Supply kilowatt-hour used is subject to all applicable riders in the Exhibit of Applicable Riders, including non-bypassable charges, as discussed in Paragraph V., below.

(Continued)

Schedule 1

RESIDENTIAL SERVICE

(Continued)

II. MONTHLY RATE (Continued)

4. Plus, where the Customer receives service in accordance with Section XXV – NET METERING of the Company's TERMS AND CONDITIONS and where the alternating current capacity of the Renewable Fuel Generator exceeds 15 kW, each measured kW of Demand is subject to all applicable riders, included in the Exhibit of Applicable Riders.

C. The minimum charge shall be the Basic Customer Charge in II.A.1., above.

III. DETERMINATION OF DEMAND

Where demand is measured by the Company, such demand will be determined as the highest average kW measured during any 30-minute interval of the current billing month, rounded to the nearest tenth.

IV. METER READING AND BILLING

A. Meters may be read in units of 10 kilowatt-hours and bills rendered accordingly.

B. The Company shall have the option of reading meters monthly or bimonthly. When the meter is read at other than monthly intervals, the Company may render an interim monthly bill based on estimated kWh use during periods for which the meter was not read.

C. When bills are calculated for a bimonthly period, the Basic Customer Charge shall be multiplied by two; the number of kWh specified in the initial block of the Distribution kWh Charge and the Generation kWh Charge shall be multiplied by two before the rates per kWh are applied to the usage for the bimonthly period; the rate specified in II.A.4. shall be multiplied by two before the kW of demand is applied to such modified rate; the rate specified in II.B.2.b. shall be multiplied by two before the kW of demand is applied to such modified rate; and the minimum charge shall be the modified Basic Customer Charge.

V. NON-BYPASSABLE CHARGES

Any Commission approved non-bypassable charges in the Exhibit of Applicable Riders shall apply to all Customers, irrespective of generation supplier pursuant to Virginia Law, unless the Customer meets the statutory requirements for exemption from such charges.

VI. TERM OF CONTRACT

Open order.

LOUDOUN WATER

Customer HANDBOOK

Learn More

LOUDOUNWATER.ORG

DEAR CUSTOMER

The purpose of this Customer Handbook is to provide you, our customer, with a guide to commonly asked questions and needed services as well as to provide basic information that you will need to fulfill your responsibilities.

If you have specific questions or service concerns, please contact our Customer Service Department. Loudoun Water reserves the right to alter, suspend, revise or revoke this Customer Handbook at any time without notice.

Rates, fees and charges will be assessed in accordance with the rate schedules in effect at the time of billing. Customers seeking or receiving service are subject to all Rates, Rules and Regulations which Loudoun Water reserves the right to revise and/or amend to interpret the meaning of all statements. Please visit our website at **www.loudounwater.org** for the most current information.

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Schedule of Rates

FIXED BASIC CHARGES, PER QUARTER						
	WATER			SEWER		
	2022	2023	Current	2022	2023	Current
All Residential Customers	$37.84	$38.98	$40.15	$37.81	$38.94	$40.11
Single Service Charge	$3.50					

VOLUME CHARGES, PER 1,000 GALLONS, PER QUARTER			
	WATER		
	2022	2023	Current
Tier 1 (0 - 25,000 gallons)	$2.77	$2.85	$2.94
Tier 2 (25,001 - 50,000 gallons)	$7.69	$7.92	$8.16
Tier 3 (> 50,000 gallons)	$10.30	$10.61	$10.93
	SEWER		
	2022	2023	Current
Uniform Rate	$5.43	$5.59	$5.76

FLAT RATES, PER QUARTER	
Waterford	$148.00
St. Louis	$82.18
Aldie	$123.50
Willisville	$82.18

ADMINISTRATIVE FEES AND CHARGES	
Account Charge	$30.00
Tenant Advance Payment Fee	$200.00
Return Trip Fee	$45.00
Late Payment Charge	10%
Collection Charge	$45.00
Turn On Charge	$30.00
After Hours Restoration Fee	$45.00
Leak or Pressure Check Fee	$45.00
Returned Check Fee	$35.00
Lien Processing Fee	$20.00
Meter Test Fee	$50.00
Overhead	
Labor	Average Hourly Rate plus Benefits
Materials	115%
Equipment	Varies by type

Fixed Basic Charges

Water and sewer fixed basic charges are based on the size of the water meter serving the property. The fixed basic charge is billed each billing cycle and is designed to cover fixed operational costs associated with providing service to a customer such as customer service and general overheard.

Your water use is metered. All meters are read quarterly based on a 91 day cycle. The metered rates are divided into tiers. For customers with partial billing periods (i.e., less than 75 days for a quarterly bill or less than 25 days for a monthly bill), the consumption amount per tier and the basic charge will be prorated based on the number of days service is rendered during the billing cycle.

Customers receiving a single service will be charged a Single Service Charge in addition to their fixed and volume charges.

Volume Charges

WATER

Customers will be billed quarterly for water and sewer service based on metered water usage. Water usage is billed on a per 1,000 gallons basis under a tiered rate structure. The rate for Tier 1 water usage is set below the cost of water to encourage conservation. The usage threshold established for Tier 2 is intended to cover indoor water usage as well as reasonable discretionary use. Usage in Tier 3 exceeds the capacity purchased in the system and is therefore billed at a higher rate.

SEWER

Sewer usage is billed on a per 1,000 gallons basis under a uniform rate. Customers receiving sewer only service and obtaining water service from a source other than Loudoun Water must install a meter on their water supply to be read as a basis for their sewer volume charges.

SEASONAL SEWER ADJUSTMENT

During the summer months, water demand may be higher due to irrigation. This usage does not enter the sanitary sewer and, because sewer usage is billed based on water consumption, a limit or cap has been established for sewer charges. If a residential customer has an established winter quarter – any billing period based on meter readings obtained or estimated in February through April – the sewer volume charges will be limited to the lesser of (1) actual quarterly usage or (2) the customer's winter quarter average plus 3,000 gallons. If a customer has not established a winter quarter average, sewer volume charges will be limited to the lesser of (1) actual quarterly usage or (2) 25,000 gallons.

Flat Rates (unmetered sewer only customers)

WATERFORD, ST. LOUIS, ALDIE, WILLISVILLE

Unmetered, **sewer only** customers being served by treatment plants in Waterford, St. Louis, Aldie and Willisville will be assessed a flat rate on a quarterly basis. Commercial establishments in these communities will be assessed a flat rate based on their average daily flow in comparison to a residential account.

Administrative Charges

ACCOUNT CHARGE

All customers applying for service and each applicant for transfer of service will be assessed an Account Charge. The Account Charge is set to recover the administrative cost of establishing a new account and will appear on the customer's first bill.

TENANT ADVANCE PAYMENT FEE

Any customer who is not the owner of the property served will be assessed a Tenant Advance Payment Fee. The fee will be equivalent to 125% of the average bill for the corresponding meter size. The Tenant Advance Payment Fee will be applied to the final bill. See Schedule of Rates on page 4.

RETURN TRIP FEE

In order to complete a new service connection and/or install a meter, Loudoun Water staff must inspect and approve the connection. If the connection is not approved during the initial visit, the applicant for service will be charged the Return Trip Fee for each additional inspection visit.

LATE PAYMENT CHARGE

A Late Payment Charge of 10% will be charged and collected on all past due account balances, in accordance with Virginia Code Section 15.2-5136.

COLLECTION CHARGE

All past due accounts that have been identified for further collection efforts will be assessed a non-negotiable Collection Charge. In cases where service disconnection has occurred, the Collection Charge plus any arrears that may be due shall be paid before the water will be turned on.

TURN-ON CHARGE

If a customer has requested temporary discontinuance of service (there must be no outstanding balance on the account), Loudoun Water will collect a Turn-On Charge to reinstate service.

AFTER HOURS RESTORATION FEE

Restoration of service for nonpayment will occur during regular business hours only (8 a.m. to 5 p.m., Monday through Friday). Customers who pay after 5 p.m. and wish to have same-day service restoration will be assessed an After Hours Restoration Fee. See Schedule of Rates on page 4.

PRESSURE CHECK FEE

Pressure Check Fee will be assessed to customers requesting apressure check. The checks will be done by appointment only during normal business hours.

RETURNED PAYMENT FEE

A Returned Payment Fee will be assessed for each returned payment.

LIEN PROCESSING FEE

Any unpaid account that is subject to lien placement will be assessed a Lien Processing Fee.

METER TEST FEE

A customer may request that their meter be tested for accuracy if it has not been tested within the last 12 months. A Meter Test Fee will be assessed to the customer and refunded to them in the event the meter is not registering usage properly. A written report of the results will be provided to the customer.

OVERHEAD CHARGES

Work performed or materials supplied by Loudoun Water will be billed to parties benefiting from the work. Overhead Charges include labor, materials and use of equipment.

Definitions

APPLICANT
Owner or his duly authorized representative, such as builder, developer, or plumber who applies for a service connection.

BUILDING DRAIN
Sewer pipe carrying human and domestic waste only from the building to the grinder pump chamber.

BUILDING SERVICE PIPE
Extension from the end of the water service connection to the inner face of the building wall. Where the meter is located inside the owner's building, building service pipe shall include all service piping between the water service connection and the meter.

BUILDING SEWER
Sewer pipe extension from the residence or building to the Public Sewer; gravity sewer pipe carrying human and other domestic sanitary waste.

BUILDING WATER PIPING
All water lines from the building service pipe to the points of ultimate use where water is exposed to the atmosphere.

CUSTOMER
Party who has applied for continuing service and will be responsible for paying periodic bills. Each customer shall be served by a separate service connection. "Owner-Customer" shall mean the customer who owns the premises to which service is provided. "Tenant-Customer" shall mean the customer who rents the premises to which service is provided. "Customer with Private Water Supply" shall mean the customer who obtains water from sources other than Loudoun Water's system but discharges sewage into Loudoun Water's wastewater system.

CUSTOMER FORCE MAIN
Portion of the pressure sewer pipeline connecting the Grinder Pump Chamber to the Public Force Main. The Customer Force Main includes the pipe and any associated valves and check valves along its length as well as the connection to the Public Force Main.

GRINDER PUMP
Pump that resides in the Grinder Pump Chamber that provides the energy to push sewage flow through the pressure sewer lines.

GRINDER PUMP CHAMBER (CHAMBER)
Buried structure that houses the grinder pump and collects sewer flow from the residence. The Building Drain and Customer Force Main are connected to the Chamber. Access to the Chamber must remain unimpeded at all times.

GRINDER PUMP SERVICE CONNECTION
Portion of a Grinder System typically residing on the customer's property consisting of the Grinder Pump, Grinder Pump Chamber, Pump Control Panel, Pump Power Cable and Customer Force Main.

GRINDER SYSTEM
Low pressure wastewater collection and conveyance system serving more than one residential customer, consisting of individual Grinder Pump Service Connections, valves, flush connections, sewer force mains and related appurtenances.

PREMISES
Each residential dwelling structure.

PRIVATE GRINDER PUMP
Individual connection that employs a grinder pump and force main to convey waste to Loudoun Water's gravity collection system. A Private Grinder Pump serves one connection and is not a part of a Grinder System. A Private Grinder Pump shall be maintained by the property owner.

PUBLIC FORCE MAIN
Portion of the pressure sewer pipeline conveying, or potentially conveying the wastewater flow for more than one residential customer. The Public Force Main typically resides within a Loudoun Water sewer easement or the public right of way. The Public Force Main also includes all associated valves, fittings, and flush connections required to operate and maintain the pipeline.

PUBLIC SEWER
Manhole or common sewer pipe serving more than one property. A Public Sewer is owned and operated by Loudoun Water and is located in an easement or right of way.

PUBLIC WATER MAIN
Water main in which all owners of abutting properties have equal rights and which is controlled by Loudoun Water.

PUMP CONTROL PANEL
Panel that houses the pump controls and usually the alarm system. The Pump Control Panel is generally mounted on the side of the home in close proximity to the Grinder Pump Chamber.

PUMP POWER CABLE
Cable connecting the Pump Control Panel and the Grinder Pump Chamber. This cable also transmits data between the Pump Control Panel and the Grinder Pump. A separate power disconnect switch is required to be installed on the power supply from the customer's power source to the Pump Control Panel, directly adjacent to the Pump Control Panel. The disconnect switch is owned and maintained by the customer.

SEWER SERVICE CONNECTION
The fitting through which the Building Sewer is joined to the Public Sewer and constitutes the point of service for Loudoun Water.

WATER SERVICE CONNECTION
Where meter is installed exterior to structure or building, the water service connection shall include corporation stop, service pipe from the public water main to meter, the meter box and vault. Where meter is installed inside the Customer's building, water service connection shall include corporation stop, service pipe extending to property line or easement line only, and meter.

General

NO FREE SERVICE

There shall be no free service rendered by Loudoun Water. Customers shall apply for and receive service pursuant to the Rules and Regulations herein contained and shall pay for the services at the established rates, fees and charges in effect at the time of billing.

LOUDOUN WATER EMPLOYEES

Loudoun Water employees in the field wear a Loudoun Water uniform and carry an ID badge. Employees never initiate an in-home visit without a scheduled appointment. Loudoun Water employees never conduct financial transactions or ask for personal information in the field.

Employees or agents of Loudoun Water are expressly forbidden to demand or accept any compensation for service rendered to its customers except as covered by the Rates, Rules and Regulations.

No employee or agent of Loudoun Water shall have the right or authority to bind it by any promise, agreement, or representation contrary to the letter or intent of the Rules and Regulations.

Any complaint against the service or employees of Loudoun Water should be made at the office of Loudoun Water and preferably in writing.

UNAUTHORIZED USE

The act of diverting or wasting public water, tampering with a metering device, damaging or intentionally destroying water or wastewater facilities is illegal (Virginia Code Sections 18.2-162 and 163). Additional criminal and civil penalties may apply.

INTERRUPTIONS IN WATER SUPPLY

Loudoun Water may at its own discretion at any time shut off the water in the mains in the case of accident or the purpose of making connections, alterations, repairs, changes, or for other reasons and may restrict the use of water to reserve a sufficient supply for public fire service or other emergencies whenever the public welfare may require it.

While it is the intention of Loudoun Water to give notice in advance of any work which must be done that will necessitate any interruption of the supply, such notice shall be considered a courtesy and not a requirement on the part of Loudoun Water. Property owners shall regulate their installations connected with the water supply system so that damage will not occur if water is shutoff without notice.

Loudoun Water shall not be liable to the customer for failure or interruption of continuous service or pressure surges that occur in the system. Loudoun Water shall not be liable for any act or omission caused directly or indirectly by shutdowns for repairs or adjustments, breakdowns, accidents, labor issues, enemies of the United States, State, Federal or other governmental interference, acts of God or other causes beyond Loudoun Water's control. Loudoun Water will undertake to use reasonable care and diligence in order to prevent and avoid interruptions and fluctuations in service, but it cannot and does not guarantee that such will not occur.

PRESSURE AND CONTINUITY OF SERVICE

Loudoun Water does not guarantee a sufficient or uniform pressure, or an uninterrupted supply of water, and customers are cautioned to provide sufficient storage of water where an absolutely uninterrupted water supply must be assured, such as for steam boilers, evaporative cooling systems, domestic hot water systems, etc.

In areas of high elevation where pressure is low, if the customer desires a higher pressure than furnished at the mains of Loudoun Water, the customer may install at his own expense a privately owned and maintained tank and/or booster pump of a type and installation approved by Loudoun Water to improve water pressure.

Where the pressure to a customer's premise is greater than desires, it shall be the customer's responsibility to install the proper regulating device to reduce the pressure to the extent desired. The responsibility to operate, maintain and repair pressure regulating devices strictly lies with the customer.

Loudoun Water shall have the right to require the adjustment, modification or removal of any quick opening or closing valve or other device installed in a premise, the operation of which results in an unreasonable fluctuation of pressure in Loudoun Water's system.

Establishing and Closing an Account

APPLYING FOR SERVICE

An application for water and sewer service through an existing connection (meter) can be initiated by visiting Loudoun Water's website, by telephone or in person at Loudoun Water's administrative facility in Ashburn. The application must be submitted at least 24 hours before service is to be started Monday through Friday. No service will be initiated on the weekends or holidays. The application process will be expedited if you have the following information readily available:

- Exact service address for which the application is being made
- Full name of person applying for service
- Complete billing address
- Applicants last 4 digits of social security number (optional)
- Federal Tax ID if applicant is a business
- Requested date for service initiation
- Tenants or Property Managers – must provide property owner's name, mailing address and telephone number

Property owners must authorize their tenant or agent/manager to establish service. A completed Homeowner Authorization Form must be submitted to Loudoun Water prior to service initiation. Loudoun Water will send the homeowner an email confirmation once the form has been received with details of the tenants next steps. A listing agreement will be required for bank owned properties before service can be provided to the listing agent.

Tenants must pay an Advance Payment Fee in accordance with the current Schedule of Rates. The Advance Payment Fee will be held until the tenant's account is closed and applied to the final bill. The Advance Payment Fee may be waived by the Homeowner if the tenant receives rental assistance from local, state or federal agencies. The Homeowner must provide the appropriate documentation designating the waiver.

Loudoun Water will deactivate the tenant's account when notified by the tenant of their intent to vacate the property or if the homeowner calls to put service back in their name. Billing will revert back to the property owner. Service is NOT deactivated and the water will remain on. In the event the water has been turned off due to nonpayment, the water will remain off until Loudoun Water is notified by the homeowner that service is to be restored. Billing for basic charges will continue and the homeowner will be responsible for payment.

A non-refundable, one-time Account Charge will be assessed on the first bill.

Loudoun Water may require proof of ownership or additional documentation as needed in instances of disputes between parties claiming rights to a property before service is provided. A Tenant Advance Payment Fee may be required in accordance with the current Schedule of Rates.

CLOSING AN ACCOUNT

Accounts can be closed by visiting Loudoun Water's website, by phone, or in person at Loudoun Water's Administrative facility in Ashburn. It is recommended that customers initiate the disconnection at least 2 business days prior to the closing/settlement date.

A customer is liable for all services furnished at the property until such time as the customer has notified Loudoun Water to discontinue service.

TERMINATION OF SERVICE

Service may be discontinued by Loudoun Water after five (5) days notice by 1) cutting off the supply of water and removing the meter in cases where Loudoun Water supplies water service or 2) in cases where water is furnished by the owner or by other than Loudoun Water, Loudoun Water reserves the right to remove the meter used to measure the water supply to the wastewater facilities or seal the building drain or sewer, or remove the connection to the public sewer. Service may be discontinued for any of the following reasons:

- Willful or indifferent waste of water due to cause
- Failure to protect and maintain the service pipe or plumbing fixtures including the water meter and its protective devices, and drainage system on the customer's property, in a condition satisfactory to Loudoun Water
- Tampering by the customer, or others with knowledge of the customer, with any meter, connection, service pipe, curb stop, seal, drainage system, piping or any other appliance of Loudoun Water controlling or regulating the customer's water supply or sewage flow
- Failure to provide Loudoun Water's employees free and reasonable access to the premises served, or for obstructing the way of ingress to the meter or other appliances controlling or regulating the customer's water supply or sewage flow
- Nonpayment in accordance with billing and collection policies
- Violation of any rule or regulation of Loudoun Water
- Failure to immediately correct cross connection violations as identified by Loudoun Water

Discontinuing service for any reason shall not prevent Loudoun Water from pursuing any lawful remedy by action of law or otherwise for the collection of monies from the customer.

When service has been terminated for any of the above stated reasons, other than temporary vacancy of the premises, it will be restored only after the conditions, circumstances, or practices which caused the service to be discontinued are corrected to the satisfaction of Loudoun Water and upon payment of all charges or damages due and payable by the customer.

REFUSAL OF SERVICE

Loudoun Water reserves the right to refuse requests for service if any of the following conditions exist:

- Applicant has any outstanding or unpaid balances with Loudoun Water
- Applicant has a lien outstanding on any property
- Outstanding lien against the property at which applicant applies for service

Service will be denied until all outstanding balances or liens are paid in full by the applicant or a third party.

Loudoun Water reserves the right to refuse service to a property when it becomes aware of disputes in property ownership.

Loudoun Water reserves the right by unilateral act in its sole discretion to refuse service or to terminate service temporarily or to discontinue service in all instances when conditions exist that would constitute an emergency of public concern or when providing any service would constitute a threat to the safety, health or welfare of the public.

BILLING

A customer who has made application for or received service at a premise shall be held liable for all service furnished to such premises until such time as the customer has properly notified Loudoun Water to discontinue the service for their account.

Bills for service will be rendered monthly or quarterly depending on the class and quantity of service rendered, and are due and payable upon receipt. If a bill is not paid within thirty (30) days of the due date, a ten percent (10%) late fee will be charged on all past due account balances. If a bill remains unpaid, the account will enter the disconnection process (see Delinquent Accounts and Collection Process).

Customers are encouraged to enroll in Loudoun Water's online customer portal – **LW Connect**. Customers can view their account information, pay their bill electronically and elect to receive an email notification when their Loudoun Water bill is ready to be viewed.

LOUDOUN WATER
LWCONNECT

Payments are credited to the customer's account when they are received by Loudoun Water, whether mailed or transmitted electronically. Loudoun Water is not responsible for delays in transit due to the Postal Service or any other third party bill payment service.

Any payment for charges or fees that is returned to Loudoun Water will be subject to a Returned Payment Fee.

If bills are sent to an address other than the premises served, Loudoun Water shall be notified by the customer of any change of address. Customers are responsible for furnishing Loudoun Water with their correct mailing address. Failure to receive bills will not be considered an excuse for nonpayment nor permit an extension of the date when the account will be considered delinquent.

If requested in writing by the owner-customer, Loudoun Water will send bills to and receive payments from agents or tenant-customers. This accommodation will in no way relieve the owner-customers of the liability for all charges, in accordance with provisions of the Virginia Water and Waste Authorities Act.

Loudoun Water reserves the right to correct any bills rendered in error.

If a meter should fail to register for any reason or if the meter reader should be unable to gain admittance to the premises at the time the meter is to be read, an estimated bill will be submitted. Such bill will be based on an average of the consumption shown by three (3) previous consecutive like billing periods, or in the case of a new customer, a reasonable estimate of consumption will be used.

PAYMENT OPTIONS

Loudoun Water offers the following payment options:

- LW Connect (**www.loudounwater.org**) – Loudoun Water's online customer portal offers the option for one-time credit/debit card payments. Customers can also register their account and pay with credit/debit cards, e-check, or automatic bank drafting.
- Check and money order payments can be mailed to or dropped off at Loudoun Water's Administrative Facility located at **44865 Loudoun Water Way** in Ashburn during regular business hours (8:00 a.m. to 4:30 p.m. and closed for lunch 12:00-1:00 p.m.). Cash payments are also accepted at this location. An after-hours dropbox is available at the Administrative Facility.
- Customers can call **1-866-539-1988** to make one-time payments by phone. We use Fiserv as a third-party vendor to accept one-time payments online. They accept Visa, American Express, MasterCard and Discover Card, or they will take a one-time transfer from a checking or saving account. There is no fee to use this service, however payment limits of $1,000 per transaction will apply with three(3) payments within a thirty (30) day period of time. Please have your bill available, as you will need your account number.

DELINQUENT ACCOUNTS AND COLLECTIONS

Accounts with past due balances are subject to service disconnection after proper notice by Loudoun Water. All accounts that enter the collection process will be subject to a non-negotiable collection charge. The full past due balance must be paid before service restoration.

RESTORATION OF SERVICE

Service that was discontinued by turning off the water supply to the premises can be restored after the customer pays a collection charge plus any arrears that may be due Loudoun Water for charges against the customer.

Service that was discontinued by removal of the meter, or by sealing the building drain, or by removal of the connection to the public sewer can be restored by the customer paying the actual cost of restoring the service, including all labor, materials, and overhead plus 100% of said actual costs. This charge will be estimated by Loudoun Water upon application for service restoration and payment must be received before service will be restored. Any adjustments to actual costs will be made upon completion of restoration of service.

Restoration of service for nonpayment will occur during regular business hours only for customers who make payment by 5:00 p.m. on the day of turn-off. Customers paying after 5:00 p.m. and wish to have same-day service restoration are subject to an additional after-hours fee. All after hours requests will be handled at the discretion of Loudoun Water. It is the customer's responsibility to ensure payment has been received by Loudoun Water.

In order to prevent potential flooding when service is restored, it is the customer's responsibility to ensure that all faucets are in the off position and other fixtures are in proper working condition.

If a customer has not paid an Advance Payment Fee (typically assessed to a Tenant) at the time of discontinuance of service for non-payment, Loudoun Water may require an Advance Payment Fee before reinstating service.

If a customer has requested temporary discontinuance of service because of temporary vacancy, where water and sewer service are provided by Loudoun Water, and where all bills have been paid, Loudoun Water will collect a Turn-On Charge for the restoration of both services.

There will be no abatement of the service charges in whole or in part by reason of an extended absence of the customer, unless service has been discontinued at his request. An extended absence is defined as any absence greater than 60 days. An Account Charge will be applied to have service terminated and restarted by reason of an extended absence of the customer.

ACCOUNTS CLOSED FOR NON-PAYMENT

If an account remains unpaid for more than five (5) days after service disconnection, the account is closed and an Advance Payment, if applicable, will be applied to the final bill. The entire bill must be paid in full before service will be restored.

LIEN PLACEMENT

Once an account is closed, a final bill is issued. A property is subject to lien once the due date of the final bill has passed. Active sewer only accounts are also subject to lien once the due date of the active bill has passed.

There shall be a lien upon the real estate for the amount of any rates, fees and other charges made by Loudoun Water to the owner or lessee or tenant of such real estate for the services rendered by Loudoun Water. A lien processing fee will be assessed.

Property Owner Responsibilities

PROPERTY ACCESS AND METERS

The customer shall allow Loudoun Water employees access to their property during all reasonable hours for any purpose related to the supply of water and sewer services. In the event of emergency, access shall be granted at any time.

Customers are responsible for ensuring access to meters and other necessary equipment at all times. Loudoun Water reserves the right to discontinue service if access to the meter or other necessary equipment is restricted. Loudoun Water also reserves the right to bill the customer for any costs associated with gaining access to necessary equipment such as, but not limited to, towing of vehicles or removal of landscaping.

Meters furnished, installed and/or removed will remain the property of Loudoun Water. Meters will be tested for accuracy before installation. Loudoun Water may at any time remove any meter for routine testing, repair or replacement. The customer may request that Loudoun Water test the accuracy of a meter provided the meter has not been tested within one year from the request. A fee will be assessed for the meter testing.

Meters will be maintained by Loudoun Water at its expense insofar as ordinary wear is concerned, but damage to any meter due to hot water, freezing, or other external causes arising out of, or caused by the customer's facilities, operations, negligence or carelessness shall be paid for by the customer, except that Loudoun Water will be responsible for damage to meters due to freezing in outside vaults.

The customer shall promptly notify Loudoun Water of any defect in or damage to the meter or its connection.

No person shall turn the water on or off at any street valve, corporation stop, curb stop, or other street connection, or disconnect or remove any meter without the consent of Loudoun Water. Penalties provided by law for any such unauthorized action will be rigidly enforced.

WATER SERVICE RESPONSIBILITY

Loudoun Water maintains all water mains and water service connections including the corporation stop, service pipe from the public water main to the meter, the meter box and the meter.

The customer is responsible for the water service line on the customer's side of the water service connection.

The customer is responsible for the cost of all metered water lost as a result of an underground leak, but may be eligible for a bill adjustment if conditions described elsewhere in this Customer Handbook are met.

SANITARY SEWER RESPONSIBILITY

Maintenance of the building sewer is the responsibility of the customer. Where the building sewer is located within the public right of way, Loudoun Water will have sole control and jurisdiction to correct defective conditions, materials and workmanship. Maintenance due to faulty materials or workmanship will be billed to the customer.

Any repairs, maintenance, replacement, or relocation necessary on the customer's building service pipe, building water piping, or fixtures in or upon the customer's premises shall be performed by the customer at his expense and risk.

In the event of a sewer stoppage, the customer shall immediately notify Loudoun Water. Loudoun Water will determine whether the stoppage is in the public sewer. If the stoppage is in the public sewer, Loudoun Water will clear the stoppage as quickly as possible. If the stoppage is not in the public sewer, but is within the building sewer, the customer will be notified. The customer will directed to employ a licensed plumber to clear the stoppage. Loudoun Water will not be responsible for payment or reimbursement for any work done on the building sewer.

Loudoun Water does not accept any liability for damage due to a sewage backup. In the event the customer believes Loudoun Water is liable, the customer should call Loudoun Water's Department of General Services and request an investigation. Loudoun Water may file an insurance claim with its insurance company.

GRINDER PUMP RESPONSIBILITY

Loudoun Water shall be responsible to repair and replace all system components of the Grinder Pump Service Connection from the grinder pump chamber to the public force main, at Loudoun Water's expense, insofar as ordinary wear is concerned. Damage due to causes arising out of, or caused by the customer's facilities, operations, negligence or carelessness as further outlined below shall be paid by the customer. The customer shall promptly notify Loudoun Water or its representative of any defect or damage to the Grinder Pump Service Connection. Loudoun Water reserves the right to stop any discharge from a grinder pump service connection in order to prevent contamination from raw sewage.

Cost of equipment and installation of a new grinder pump service connection shall be borne by the customer and shall be turned over to Loudoun Water for future repair and replacement. Grinder pump service connections shall be installed in accordance with Loudoun Water specifications. No more than one dwelling or building may be connected to a single grinder pump service connection. See Loudoun Water's Engineering Design Manual (**http://www.loudounwater.org/engineering-design-manual**) for more information about grinder pump systems.

Installation of any structures over any component of the grinder pump service connection, including the customer force main from the grinder pump to the public force main, is prohibited. If a structure has been installed prior to June 2015, Loudoun Water will make every effort to keep the structure intact. If the structure must be removed or disturbed, the customer shall be responsible for the cost of reinstalling the structure in a way that does not obstruct access to any component of the grinder pump service connection. Loudoun Water will not be responsible for the cost of structures that were deemed to be obstructing access to the system. Customers must call Miss Utility (811) before they dig.

Customer shall be responsible for all damage relating to vehicular or lawn care traffic, unintentional landscaping damage, trees falling or any avoidable act that inflicts damage.

Customer is responsible to maintain the plumbing for the building drain between the home and the grinder pump chamber.

Customer is responsible to provide an adequate supply of electrical power from the house to the pump control panel and grinder pump. In the event of a power outage, the customer is responsible for taking measures to prevent the backup of wastewater on the property by limiting their water usage. Damages resulting from improper power supply or low voltage will be the responsibility of the customer.

Customer should never flush prohibited items including, but not limited to, rags, paper towels, diapers, chemicals, baby wipes, fats, oils, greases and bio hazardous materials.

Customer will be responsible if an excavation reveals problems caused by negligence toward the grinder pump service connection, including the customer force main to the public force main.

Customer is responsible to repair and replace the PVC conduit from the pump control panel to the grinder pump chamber.

Extraneous flows such as from a sump pump, roof or foundation drains and into the grinder pump chamber are prohibited.

RESIDENTIAL - CROSS CONNECTION CONTROL AND BACKFLOW PREVENTION PROGRAM

The Cross-Connection Control & Backflow Prevention Program is a regulated program designed and managed to protect Loudoun Water's Central System and Community Systems potable drinking water distribution systems from contamination and pollutants. This is accomplished by prohibiting and preventing backflow/back-siphonage and cross connections between all potable, non-potable water distribution system, and private well water systems.

The plumbing on all residential premises supplied from Loudoun Water's Central System and Community Systems potable drinking water distribution network distribution system shall include provisions for the control of cross connections, and backflow prevention in conformance with the Virginia Uniformed Statewide Building Code, and any current, applicable plumbing codes. Cross connections shall be controlled at all times following the requirements of applicable residential plumbing codes and the Virginia Department of Health Waterworks Regulations.

Residential Property owners are responsible for scheduling their annual testing for all backflow prevention assemblies by a certified backflow assembly tester. A backflow prevention assembly is required for all residential fire suppression systems, lawn sprinkler/irrigation systems and swimming pools with below grade pool inlet fill lines.

The certified backflow assembly tester must complete the test form available on the Loudoun Water website (http://www.loudounwater.org/residential-customers/cross-connection-backflow) and provide the completed test results to the property owner and Loudoun Water annually.

Backflow Assembly Test Reports can be sent via mail to Loudoun Water "Regulatory Programs" at 44771 Loudoun Water Way, Ashburn, VA 20147 or email to backflow@loudounwater.org and by fax at 703-729-9494.

If the property owner so chooses not to use their lawn sprinkler/irrigation system and abandon the system, the annual testing of the backflow prevention assembly not needed.

However, it is required that the backflow prevention assembly (RPZ) is removed from the potable water piping system and the water piping capped by a certified irrigation contractor or plumber disconnecting the lawn sprinkler/irrigation system. The residential property owner is required to submit these disconnect/Capped Reports/Invoice to Loudoun Water.

An irrigation contractor or plumber must re-install the lawn sprinkler/irrigation system if the property owner has a change of mind. Additionally, the backflow prevention assembly (RPZ) must be tested upon installation, reinstalling, relocation, or repair and not less than on an annual scheduled thereafter.

Other Important Information

RECOMMENDED WATERING SCHEDULE

Loudoun Water recommends the following Schedule of Designated Outdoor Water Use Days that specifies days for outdoor water usage and/or activities.

- Odd home addresses – **Wednesday and Saturday**
- Even home addresses – **Thursday and Sunday**
- Non-Residential – **Monday through Friday consistent usage is encouraged through the use of rotating zones to avoid peaks in usage on any given day**

Loudoun Water will revise and update the Schedule of Designated Outdoor Water Use Days as required by water supply conditions.

FATS, OILS AND GREASES

Pouring fats, oils and greases (FOG) down the drain can lead to sewage backups and overflows into a home. Garbage disposals do not stop these by-products from entering plumbing or the sanitary sewer. To prevent damage related to FOG, customers should adhere to the following practices:

- Scrape and dry dishes with a paper towel before washing
- Pour cooled oils and greases into a covered container and mix with an absorbent material like paper towels, kitty litter or coffee grounds before disposing in the trash
- Minimize garbage disposal use
- Place a basket or strainer over your drain to catch food items and then throw them in the trash

WATER LEAKS AND ADJUSTMENTS

In the event of a water leak, the customer should immediately notify Loudoun Water. Loudoun Water cannot be responsible for payment or reimbursement for any work done on private facilities.

It is Loudoun Water's responsibility to maintain the public water main and water service connection. Maintenance of the building service pipe and building water piping is the responsibility of the property owner.

As soon as Loudoun Water is notified of a water leak, it will determine whether the leak is in the public water main or water service connection. If the leak is in either the public water main or water service connection, Loudoun Water will repair without cost to the customer.

If the leak is found not to be the responsibility of Loudoun Water, the customer will be notified to make arrangements for repair by a registered plumber, at the customer's expense.

Loudoun Water will perform meter or pressure checks by appointment only during normal business hours. A fee will be assessed for the appointment. Loudoun Water staff can help identify a leak but repairs must be performed by the customer or a plumber, at the customer's expense.

LEAK ADJUSTMENTS

As a courtesy, Loudoun Water offers a billing adjustment for unusually high water consumption due to leaks that have been repaired in a timely manner once identified. The customer must submit a letter to the Customer Relations Department requesting a bill adjustment. The letter must include a description of the leak, proof of repair, and other required information.

In the case of underground leaks between the meter and the main service cutoff, as well as inside leaks, a courtesy adjustment of 100% water overage and 100% sewer overage based on the normal use for the same customer and same property address. The adjustment period will not exceed two quarters and includes the billing period in which the leak is repaired as well as the previous quarter, if applicable.

A one-time adjustment per customer, per account will be made for an inside leak or irrigation system leak (not both). If the customer is notified by Loudoun Water of a leak, the customer has 30 days to make repairs to be eligible for an adjustment. Loudoun Water reserves the right to impose a penalty up to and including termination of service if repairs are not made within 30 days.

FROZEN PIPES & METERS

When the weather turns colder, water expands as it freezes and this can put tremendous stress on whatever is containing it, including metal or plastic pipes. Usually pipes that freeze are exposed to severe cold weather, like outdoor hose bibs, water supply pipes in unheated interior areas like basements, garages, or kitchen cabinets. To keep meters from freezing during extreme cold snaps, it is important to have a constant flow of water going through the meter.

During significant cold snaps, follow these tips:

- To prevent your pipes from freezing, allow a faucet to drip cold water slowly. The faucet you choose should be the one that is the greatest distance from your main water shut off valve. This is especially important if your property has experienced frozen meters in the past.
- Open the cabinets beneath any place with a water supply, such as the kitchen and bathroom sinks. This will allow warm air to circulate. (Remove any toxic substances first if there are small children or pets in the home.)
- If your pipes freeze, never thaw a pipe with an open flame. Use warm water to soak towels, then wrap the towels around the frozen pipes.

If you suspect a frozen pipe or meter, you can contact Loudoun Water one of several ways:

- Call 571-291-7880 during regular business hours.
- Call our after hours emergency number at 571-291-7878.

If you recently had your meter thawed by a Loudoun Water staff member, please take care to prevent your meter from refreezing by following the above tips.

HOW TO CONTACT US

loudounwater.org | @loudounwater

ADMINISTRATIVE OFFICES

Loudoun Water
44865 Loudoun Water Way
Ashburn, VA 20147

Open Monday through Friday 8:00 a.m. to 4:30 p.m. and closed for lunch 12:00-1:00 p.m.

MAILING ADDRESS

Loudoun Water
44865 Loudoun Water Way
PO Box 4000
Ashburn, VA 20147

TELEPHONE / FAX

Main Office: 571-291-7700
Customer Service: 571-291-7880
After Hours Emergencies: 571-291-7878

EMAIL

customerservice@loudounwater.org

PAYMENT OPTIONS

MAIL

44865 Loudoun Water Way
PO Box 4000
Ashburn, VA 20147

ONLINE

Visit www.loudounwater.org
and pay using LW Connect

STOP BY

44865 Loudoun Water Way
Ashburn, VA

Between 8:00 a.m. to 4:30 p.m.
and closed for lunch 12:00-1:00 p.m.

CALL

1-866-539-1988

KEVIN ROBICHEAU, NGBS Verifier, HERS Rater, BPI-MFBA

Energy / Green Building Analyst

k.robicheau@d3g.com / 804-380-3924

EDUCATION

Associate of Science, Business Administration, Brockton, MA

CERTIFICATIONS/REGISTRATIONS/TRAINING

- NGBS Green Verifier (2015, 2020)
- HERS Rater – Certification #8611030
- Building Performance Institute (BPI) Certified Multifamily Building Analyst Professional
- ENERGY STAR Multifamily New Construction
- Combustion Appliance Zone Testing (CAZ)
- LEED Green Rater Training
- ENERGY STAR Residential v3
- Intermediate Photovoltaics
- Photovoltaic Design and Installation Lab
- OSHA 10-hour Construction Safety and Health

SUMMARY OF EXPERIENCE

Kevin is an Energy / Green Building Analyst for Dominion Due Diligence Group. He is responsible for preparing Energy Sustainability studies throughout the United States. Kevin is experienced in residential and commercial construction spanning over 15 years. He has worked diligently with builders and developers to assist them in achieving compliance in ENERGY STAR and LEED for Homes verification. He has worked in the sustainability and green building industry for the past eight years. He has experience with on-site and classroom training for trades needing to meet the demands of a multitude of energy program codes. He has worked as a quality assurance designee for other companies nationally. In addition to quality assurance, he has acted as a building analyst for multiple national home builders to assure quality building, performance, and comfort in residential housing. Kevin is responsible for comprehensive energy audit and utility consumption analysis report writing, including energy modeling, energy data analysis and benefit-cost analysis.

SAMPLE PROJECTS

HUD MAP 223(f)

- Platinum Valley Apts. *(Sioux Falls, SD)*
- Echo at the Lights *(West Fargo, ND)*
- Senderos at South Mtn. *(Phoenix, AZ)*
- Redwood Altoona – Phase II *(Altoona, IA)*
- Chalet 1400 Apts. *(Claremore, OK)*
- Penrose Square Apts. *(Arlington, VA)*
- Aliso Apts. *(Los Angeles, CA)*
- Residences at Town Square *Village (Amarillo, TX)*

HUD MAP 221 (d)(4) NC

- Spring Street Apts. *(Greensboro, NC)*
- Brookstone Apts. *(Waldorf, MD)*
- Newtown Woods *(Louisville, KY)*
- Lincoln Station Apts. *(New Lenox, IL)*
- Brighton Farmington Station *(Farmington, UT)*
- Mountain Creek Plaza *(Waynesville, NC)*
- Hanover Flats Apts. *(Bennington, NE)*
- Aura at Spotsylvania Towne *Center (Fredericksburg, VA)*
- The 8801 Apartments *(Lincoln, NE)*

DOMINION
DUE DILIGENCE

ALEX TAPIA, NGBS GREEN VERIFIER

Energy / Green Building Analyst
a.tapia@d3g.com / 541-799-0613

EDUCATION

University of Oregon – M. Architecture, Technology (specialization)

University of Nebraska – B.S. in Design, Psychology (minor)

CERTIFICATIONS/REGISTRATIONS/TRAINING

- National Green Building Standard (NGBS) Green Verifier (2012 / 2015, and 2020)
- Passive House Institute U.S. (PHIUS) Certified Passive House Consultant (CPHC)
- Dangerous Goods Regulations (DGR) Training
- OSHA 10-hour Construction Training
- Red Cross CPR/AED and First Aid Certified (expired)

SUMMARY OF EXPERIENCE

Alex is an Energy / Green Building Analyst for Dominion Due Diligence Group based out of Omaha, Nebraska. His educational background is in sustainable design and high-performance building technology. Prior to joining D3G, he had construction experience in new-build, remodel, and demolition projects. As a part of D3G's Energy and Sustainability team Alex is responsible for consulting, inspecting, and providing green building verifier services for new construction and existing buildings across the mid-west. His current responsibilities to the team nationally also include building energy performance modeling, analyzing building energy consumption, preparing Advanced Energy Studies (AES), Statements of Design Intent (SEDI), and Statements of Energy Performance (SEP).

SAMPLE PROJECTS

NGBS VERIFICATION

- Village West *(Lincoln, NE)*
- Hanover Flats *(Bennington, NE)*
- Salt Creek *(Lincoln, NE)*
- Westline *(Omaha, NE)*
- Northern Lights *(Lincoln, NE)*
- 8801 *(Lincoln, NE)*

ADVANCED ENERGY STUDY

- Claradon Village *(West Haven, UT)*
- Stadium Crossing *(Bloomington, IN)*

STATEMENT OF ENERGY DESIGN INTENT (SEDI)

- Ten Mile Creek *(Meridian, ID)*
- Timbers II *(Sepulpa, OK)*
- Victory Village on Lakeview *(North Platte, NE)*
- North Streams *(Omaha, NE)*
- Goldfinch Meadows I & II *(Kearneysville, WV)*
- Magnolia Hill *(Carthage, NC)*
- Greystone at Mulberry *(Fortson, GA)*

STATEMENT OF ENERGY PERFORMANCE (SEP)

- The Monroe *(Austin, TX)*
- Venue Tower *(Grand Rapids, MI)*
- Encore on Memorial *(Bixby, OK*
- Warris Farms *(Westland, MI)*
- Lake Pointe *(Springfield, IL)*
- Kelley Square *(Worcester, MA)*
- Carisbrooke *(Champaign, IL)*
- Parkway Court I & II *(Normal, IL)*
- Rainbow *(Bloomington, IL)*
- Diamond Ridge *(Janesville, WI)*

Tab S:

Supportive House Mandatory
Certification and Documentation

This deal does not require information behind this tab.

Tab T:

Funding Documentation

This deal does not require information behind this tab.

Tab U:

Acknowledgement by Tenant of the availability of Renter Education provided by Virginia Housing

Clear Springs Apartments I, LLC
212 E. Main Street, Suite 200
Salisbury, MD 21801

RE: Virginia Housing Free Housing Education Acknowledgement

I_____, have read, understand, and acknowledge, I have been presented information regarding the Virginia Housing free renter education to tenants.

I understand that it is my responsibility to review the website link provided here www.virginiahousing.com/renters.

By signing below, I acknowledge that I have read, and understand the terms of all items contained this form.

Resident Name: _____

Resident Signature: _____

Date: _____

Tab V:

Nonprofit or LHA Purchase Option or Right of First Refusal

This deal does not require information behind this tab.

Tab W:

Internet Safety Plan and Resident Information Form

Clear Springs Apartments Phase I Internet Guidelines Acknowledgment

I , have read, understand, acknowledge and agree to be bound by the recommendations, guidelines, terms, and conditions outlined in the Clear Springs Apartments Internet Guidelines Manual (provided to Resident). The Internet Guideline Manual outlines and summarizes the proper use and safety guidelines when using the Internet Services provided at the Clear Springs Apartments common areas.

I understand that the Internet Guideline Manual and handbook contains information that will assist me and my guests in the proper use of the Internet made available by Clear Springs Apartments. I also understand that I will be held accountable for my behavior, as well as for my guests' behavior, and me be subject to legal and/or financial consequences related to any misuses as outlined in the Internet Guideline Manual.

By signing below, I acknowledge that I have read, agree to, and understand the terms of all items contained in Clear Springs Apartments' Internet Guideline Manual.

Resident Name: _____

Resident Signature: _____

Date: _____

CLEAR SPRINGS APARTMENTS

INTERNET SECURITY PLAN

The Internet service at Clear Springs Apartments will have a rotating password that is only accessible to residents. The network router will be in a secure area to which tenants will not have access. The router will have a secure firewall to prevent data breaches.

At move-in, we will provide Tenants with the attached security and safety information and guidelines and will ask Tenants to sign an Acknowledgment of Responsibilities statement to ensure that they are educated in the internet safety and security guidelines.

Internet Safety

Playing it safe while playing online

Hi there kids! I am Charlie Cardinal and this is Speedy the Crime Fighting Hamster. We are here to introduce you to the basics of Internet Safety and some of the villains you need to watch out for. There are some bad characters out there, so you have to protect yourself. Your parents won't always be there to watch out for you, so stay sharp, learn all you can, and stay safe!

Privacy & Personal Information

Privacy is being able to keep things secret or hidden from others.

Personal Information is information about you or your family such as your address, a social security number, your parent's bank account, or how much money they have.

Criminals love to get people's personal information because they can pretend to be you, or use your money to buy things.

They can also make money off of your information by selling it to others. Companies or other criminals will use your info to send you junk mail or spam emails.

Criminals learning your address can be very bad. They may break in and steal from you. Protect your safety and your belongings, by keeping your information a secret.

These bad people may even use your personal information to trick someone else in your circle of friends and family. People sometimes tell criminals things that they shouldn't if they think that they are communicating with someone they know.

Think before you click

Do you know who sent that email?

Passwords

One of the most important things you need to learn is how to create strong passwords. A password is a code you type in to let the computer know it is really you.

Having an easy to guess password could allow someone to snoop around in your private information.

The way to make your password strong is to never use your name or your birthday. Use something hard to guess, but easy for you to remember. Make your password at least 8 characters long, and mixing numbers, symbols, and upper and lower case letters makes the password strong just like Speedy. Avoid using the same password over and over. That way if they do figure out your password, they only gain access to one account. And never leave your passwords written down where someone can find it.

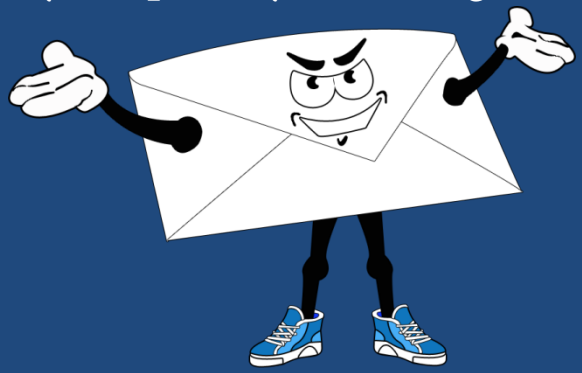
A great tool online that creates kid friendly passwords is the website, www.dinopass.com

Spam

Spam is basically email that you receive from different companies or strangers that you did not sign up for. Most times it isn't from real companies and usually the sender is up to no good.

Spam emails can sometimes be a phishing scam. Phishing emails are emails that look like it is from some trusted source. A place like your bank, the IRS where taxes are collected, or some other business you shop with often. They make their email look like it is the real thing with logos, and they put links in the email baiting you to click them. Once you click the link, you could be launching a program that can damage your computer in some way or collect your personal information.

Spam emails can also use winning a sweepstakes or some other type prize to trick you into trusting the email source. After they hook you in, they inform you that to collect your prize, you must give them your credit card number.



How do you know it is spam?

Spam emails typically have a bunch of spelling and grammar errors or a mention of someone you don't know in the subject line. Don't Open It! Delete those emails right away.

Malware

Malware is a program written with the intent to harm your computer in some way.

Programs such as this, may be waiting for you to do something(a trigger), so that it can run. This could be the clicking of the link or opening an email attachment.

When searching for free downloads online, be very careful. There are a lot of sites out there trying to trick you. They will pay to make their site get returned at the top of the list of search results. Then when you access the page, they use blinking buttons to trick you to click. The result of clicking usually ends up being your computer loaded up with malware.

Once your machine is infected, it can change browser settings, create unusual popup ads on your computer and then pass the malware on to someone else.

Spyware

Spyware is a program that gets onto your computer through a download or a virus and it gathers information about you and sends this back to its creator.

Some of the types of information spyware might send back to home base is email addresses of you or your contacts, passwords, account numbers, and credit card numbers.

Some spyware out there records how you use your computer and what you search for online.

Adware

Adware is software that you are allowed to use by the author because of the advertisements that pop up occasionally during the game. Many of these type games you will find in the form of apps on your phone or devices.

Through the addition of advertisments, the developer gains some income that may supplement a discount to the user, sometimes making the software free.

Often after using the product with the ads,
a consumer will purchase the software to get rid of the ads.

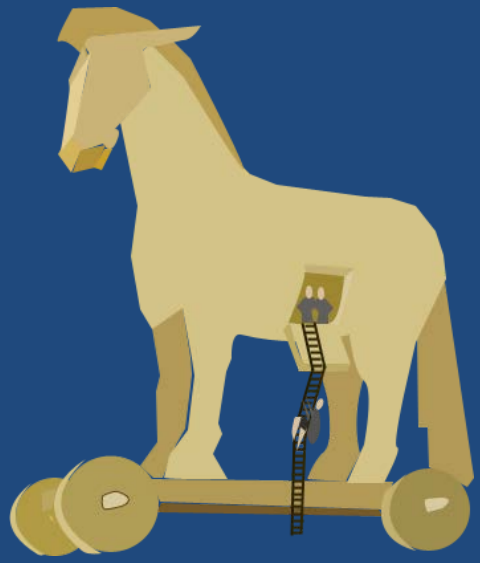
http://www.pctools.com/security-news/what-is-adware-and-spyware/

Trojan Horse

The name for the Trojan Horse virus was derived from tale of the Trojan Horse constructed by the Greeks to gain access to the city of Troy. The wooden horse was left at the gates as an offering to Athena. The horse was then wheeled into the city and out came Greek fighters hiding inside. http://www.britannica.com/topic/Trojan-horse

A Trojan horse virus is a form of malware that is dressed up as something interesting or software from a source we are familiar with. The purpose is to trick the person into installing it. This allows the creator of the Trojan to do damage to data or software on your computer. They also will set up a 'back door' or access point that allows them to access your system.

Trojan viruses don't spread by infecting other files and they cannot duplicate themselves.
http://www.webopedia.com/DidYouKnow/Internet/virus.asp



Worms

Worms are malware that can duplicate itself and spread to other computers. Worms always do something bad, even if it is just slowing things down.

Worms will frequently set up the ability for computers to be taken over by the worm's author by creating backdoors on the host computer. These computers are then called a "zombie computer". "Zombie computers" can be used to send out spam or as a shield to hide the web address of people who want to do bad things.

http://www.webopedia.com/TERM/Z/zombie.html

Virus

A virus is a small program that is created to spread from one computer to the next and to mess up the way your computer works.

Many times viruses hop from computer to computer via email attachments or messages. They can also hide in funny pictures(memes), e-cards, or other desirable file attachments. It can also be sent through an instant message.

A virus can corrupt your data, or worse, delete it. It can also email copies of itself to your friends.

Keeping your anti-virus software up to date is key to protecting against the latest viruses and other security threats.

https://www.microsoft.com/security/pc-security/virus-whatis.aspx

Social Media

Privacy settings on social media accounts are set up as public when you first get one. Unless you want everyone to be able to look at all of your photos and other private stuff, you must go into your account settings and change this.

Something to remember is whatever you post and say on your page can be shared by your friends. Think about what you post online, BEFORE you do it. What you post, could be seen by anyone at any time depending on your settings and the friends you keep. Because we can take pictures of our screens, there is really no setting that can protect you. Think twice about what you are sharing with others, so there are no regrets later.

Make sure you know the people that you accept friend requests from. Sometimes people try to friend you to hack your Facebook account or access your contacts. Once you are hacked they will send out strange messages or friend requests to your contacts. Protect your friends and yourself by being cautious with friends and creating strong passwords for your social media accounts.

Geotagging

Geotagging is the bit of data that your electronic device packages with your picture that has information about where the picture was taken. This is something that can be turned on and off in your device and typically comes turned on until you change the setting.

When your photo is geotagged, this gives people information about your location. Letting outsiders know where you are, can allow them to plan to steal your belongings or vandalize your home.

Consider if you post a photo every Wednesday in your outfit ready to walk to ball practice and geotagging is turned on. This shows you have a routine and gives a rough area you will be in. A predator could come and take you away.

Another issue with allowing the geotagging to occur is you don't have control of your own privacy. Everyone does not need to know where you are all of the time, keep this information private.

http://www.nytimes.com/2010/08/12/technology/personaltech

Be Careful of What You Say!

Defamation: Defamation is the blanket word used for all types of untrue statements made about others. Definition of Defamation on Law.com

Slander: When someone orally tells one or more people an untruth about someone, which will harm the reputation of the person it is about. It is not slander if the untruth is in writing of some sort or if it is broadcast through television or radio. Definition of Slander on Law.com

Libel: This is where someone publishes to print(including pictures), written word, online posts, blogs, articles, or broadcast through radio, television, or film, an untruth about another which will do harm to the person's reputation. Definition of Libel on Law.com

Be Careful of What You Say!

Much of the things people post online may get ignored, and you may get lucky and avoid legal action. But, when someone gets angry and files a lawsuit it can cause a major headache and possibly hit you hard in the wallet.

You might think you should have a right to openly complain about a company and their bad service or lousy product. Well when it comes to this, it is not always that simple. You can get sued for this and even if the judge agrees with you, you still have to pay for a defense attorney. Think twice and make sure that whatever you have to say is worth any headache you may have pop up later.
http://ideas.time.com/2013/01/07/yelp-reviewers-beware-you-can-get-sued/

On social media, people get into the habit of letting their emotions get the better of them and they end up speaking their minds about others online. When that person feels that this damages their character, they may opt to sue the other person for defamation. Even if their case is not successful, the stress, money, and time that you spend defending yourself is not worth it. To read more about defamatory social media posts, click here.

Stranger Danger Online

When you think of being on your computer or other electronic device in your own home, you probably think you are safe. Your mom is in the next room, what could happen?

Well there are people online that are up to no good. They go in chat rooms and pop up on your instant messenger, looking for someone to “groom”.

What is grooming you say? Well, grooming is when a stranger(can be any age) finds someone they are interested in, usually a minor. They act really nice and maybe they pretend they are much younger than they really are, like they are a kid just like you. Then they try to get you to like them and to trust them. They may ask you not to tell anyone you are talking to them. This is not okay and is a warning sign of a possible groomer.

How to Protect Yourself in Online Chats

- Choose chat sites designed for kids, such as www.kidzworld.com. Kidzworld is moderated and its aim is to protect kids from unwanted requests and online bullying.
- Beware of people you don't know. If they are asking too many questions or being too friendly they may be up to no good.
- If someone asks you to send them a picture or sends you a picture or video that is inappropriate, tell an adult or report them to the site moderators.
- Don't give out personal information to strangers online
- Don't tell strangers where you live or give them your telephone number
- Don't send strangers pictures of you or others
- If you are being bullied or threatened online, tell an adult or someone you trust

Cyberbullying

- Cyberbullying is the **willful and repeated harm** inflicted through the use of computers, cell phones, and other electronic devices.
- Using PhotoShop or other tools to create harassing images.
- Posting jokes about another person on the internet
- Using the internet to entice a group to physically harm another person.
- Making threats online using IM, email, social networking sites, or other electronic devices.

Consequences of Cyberbullying

Anything that you write, pictures that you post, or videos that you upload can be used by your school to **suspend** you.

College students have been removed from their athletic teams and lost college funding for writing negative comments about their coach.

When applying to colleges, they will search online to see what kind of person you are. They can deny you access if they don't like what they find.

When businesses are looking at people to hire for a job they will many times use social media to see what kind of person they are. Mean or inappropriate type posts can prevent you from getting the job you desire.

Cyberbullying can also be considered a crime and participating in this type of behavior can land you in big trouble.

Consequences of Cyberbullying

- § 18.2-152.7:1. Harassment by Computer; Penalty makes cyberbullying a crime.
- Carries a $2500 fine and punishable by up to **12 months in prison**.

There are many websites designed to inform and decrease the number of bullying cases we see each year. The U.S. Department of Health and Human Services has created a website with lots of resources to help combat bullying of all kinds - www.stopbullying.gov
If you experience cyberbullying or witness it, tell someone such as a school counselor, teacher, or a parent.

The Effects of Cyberbullying

- Victims feel depressed, sad, angry, and frustrated.
- Victims become afraid and/or embarrassed to attend school.
- Can lead to low self-worth, family problems, academic problems, school violence, and bad behavior.
- Victims can also develop thoughts of killing themselves and possibly act on these feelings.
- There are no positive effects of cyberbullying, only pain and suffering for the victims.
- The affects of being bullied can affect the victim into adulthood and prevent them from being all they can be in the future.

Dealing with Cyberbullying

- Never do the same thing back, 2 wrongs don't make a right
- Tell them to stop
- Block their access to you
- Report it to the site you are on such as Facebook or Twitter
- NEVER pass along messages from cyberbullies, stop the spread of this behavior
- Set up privacy controls and keep the bully out of your friends list
- Don't be a cyberbully yourself
- If you witness someone getting bullied, tell someone so it can be stopped. Many times the person being bullied won't tell out of fear.
- Spread the word that bullying is not cool
- Don't laugh or encourage the bully, it is not funny and it can lead to major trouble for the person doing the bullying.

About Sexting

"Sexting" is when someone sends or receives sexually explicit or non-PG Rated pictures or video electronically, mainly via cell phones or tablets.

The numbers on how many teens say that they have sent/posted nude or semi-nude pictures or videos of themselves is upsetting.
20% of teens between 13 to 19 years of age have engaged in sexting.
22% of teen girls
18% of teen boys
11% of teen girls between 13 to 16 years of age have engaged in sexting.

Did you know that if you forward a picture of a sexual or nude photo of someone underage, you are as responsible for the image as the original sender?? You can be charged with a crime.

Many teens don't realize that if you send a picture of yourself that is inappropriate and that picture ends up online, it could be there forever. You can never fully delete things that end up on the web.

About Sexting

There is no age minimum that protects young people from getting charged with a sexual offense.

Something that you think is okay or just a joke, might land you in a ton of trouble. For example, you might take a picture of your friend naked to embarrass them, but if they are under the age of 18, this is considered production of child pornography.

If you are sent something inappropriate, do not share it and don't delete it. Tell an adult immediately. You may feel like you are getting your friend into trouble, but you are protecting yourself and you are protecting them. They may not be thinking about the consequences or the effect this behavior can have on their future.

Anyone that gets convicted of a sex offense, will have to register as a sex offender. Sex offenders have to keep their address updated and keep a current photo with the police. The information goes on the sex offender registry where anyone can go and see your picture and where you live online.

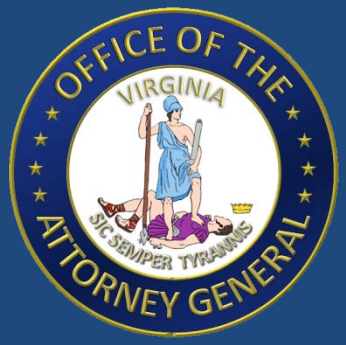
REMEMBER: You can't control what other people do with your photos. Even if you think you are sending it to someone you can trust, they may end up surprising you. You can't trust anyone with something as private as that. Don't Do It!

Legal Consequences of Sexting

- The Virginia Department of Education has an excellent resource with real life examples of the consequences of sexting that can be found here.

- The Attorney General's Virginia Rules website is designed to give Virginia Youth information on all the laws in the state. Virginia Rules has extensive information on sexting and other internet security risks.

- This article in The Virginian-Pilot tells a story of five Virginia teens getting charged with felonies for sexting and being in possession of sexually explicit photos of a minor, read more about it here.



Information Provided By:

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Tab X:

Marketing Plan for units meeting accessibility requirements of HUD section 504

Clear Springs Apartments Phase I
Marketing Plan for Units Which Conform to Section 504 of the Rehabilitation Act

This Marketing Plan for Units Which Conform to Section 504 of the Rehabilitation Act (the "Marketing Plan") has been designed to convey to current and potential residents with disabilities that Clear Springs Apartments will be a new rental housing experience, with a commitment to excellent management and resident service, as well as an expectation of resident responsibility. Therefore, the majority of this plan will address ways in which property management will endeavor to secure qualified tenants, ensure quality tenancy, and effective management and maintenance of the property.

The Management Agent will be responsible for the management of Clear Springs Apartments. TM Associates Management, Inc. (TMAM), the Management Agent, will be responsible for all the traditional management functions, including rent collection, maintenance, record keeping, reports, development of budgets, and monitoring resident income qualifications. Additionally, TMAM will be responsible for the development and management of community and resident services program.

I. Affirmative Marketing

TMAM is pledged to the letter and the spirit of the U.S. policy of the achievement of equal housing opportunity throughout the Nation and will actively promote fair housing in the development and marketing of this project. TMAM, it's Officers, Directors and employees will not discriminate on the basis of race, creed, color, sex, religion, familial status, elderliness, disability or sexual orientation in its programs or housing. They will also comply with all provisions of the Fair Housing Act (42 U.S.C. 3600, et. Seq.).

Any employee who has discriminated in the acceptance of a resident will be subject to immediate dismissal. All persons who contact the office will be treated impartially and equally with the only qualification necessary for application acceptance being income and credit, and conformity with the requirements of the Section 8 Program and Tax Credit programs. All interested parties will be provided a copy of the apartment brochure/flyer. Any resident who has questions not answered by the housing staff will be referred to the Regional Property Manager of TMAM.

II. Marketing and Outreach

Locating people with disabilities to occupy the units which conform to the requirements of Section 504 of the Rehabilitation Act will be accomplished as follows:

1. Networking

TMAM will contact local centers for independent living, disability services boards and other service organizations via phone and printed communication. The contacts will include the following organizations:

- **Area Center for Independent Living (540-433-6513)**
- **Virginia Board for People with Disabilities (804-786-0016)**
- **Virginia Department for Aging and Rehabilitative Services (757-451-7101)**

Centers for Independent Living

Disability Resource Center (540-433-6513)

- **Horizon Behavior Health (434-477-5000)**

Leasing Preference for Target Population Identified in MOU between the Authority and the Commonwealth

- **Unless prohibited by and applicable federal subsidy program.**
- **A "first preference" will be given for person in a target population identified in a memorandum of understanding between the Authority and one or more participating agencies of the Commonwealth.**
- **Will obtain tenant referrals from the Virginia Department of Medical Assistance Services (DMAS) or Virginia Department of Behavioral Health and Developmental Services (DBHDS) or any other agency approved by the Authority.**
- **Will Retain Tenant verification letter, Acknowledgment and Settlement Agreement Target Population Status**
- **Target Population units will be confirmed by VHDA.**
- **Units may be held vacant for 60 days during which ongoing marketing must be documented as required by the Virginia Housing 2026 Housing Tax Credit Manual**

2. Internet Search

Apartments will also be listed on the following websites:

www.virginiahousingsearch.com
www.hud.gov
www.accessva.org
www.dbhds.virginia.gov

3. Print Media

Print media sources will also be identified in the Loudoun County area that cater to people with disabilities as well as the public at large. These sources may include, but are not limited to, rental magazines such as the *Apartment Shoppers Guide*, *Apartments For Rent*, local newspapers, etc. All advertising materials related to the project will contain the Equal Housing Opportunity logo, slogan or statement, in compliance with the Fair Housing Act, as well as the fact that units for people with disabilities are available.

4. Resident Referrals

An effective Resident Referral program will be set up, in which current residents are rewarded for referring friends, coworkers, and others who may have disabilities to the property. These referrals are generally the best form of advertising as it attracts friends who will want to reside together, thus binding the community. ***Residents will be offered incentives, to be determined, for referring qualified applicants who rent at the property.*** Flyers will be distributed to residents along with the resident newsletter announcing the tenant referral program.

5. Marketing Materials

Additional marketing materials are needed in order to further support the specific marketing effort to people with disabilities. All printed marketing materials will include the EHO logo. The marketing will also emphasize the physical and administrative compliance with Americans with Disabilities Act.

These marketing materials include:

- **Brochures or news media coverage** –A simple, two-color brochure may be produced at low cost which will effectively sell the apartments and community. A brochure will include a listing of features and amenities. News media may include the local newspaper and/or the local television station coverage.

- **Flyers** - As mentioned earlier, a flyer campaign can be used effectively to market the community. Each flyer should incorporate graphics as well as a small amount of copy and should be designed to generate traffic.

- **Resident Referral** - The least expensive form of advertising is through Resident Referrals. A flyer should be created and distributed to all residents. ($50 - $100 per referral, paid upon move in). In addition to being distributed to all residents, the referral flyer should be left in the Management office and should be included in the move in packet. (People are most inclined to refer their friends in the first few weeks of their tenancy.) The flyers will be changed to reflect the season or any type of special referral program.

Tab Y:

Inducement Resolution for Tax Exempt Bonds

This deal does not require information behind this tab.

Tab Z:

Documentation of team member's Diversity, Equity and Inclusion Designation or Veteran Owned Small Business certification

This deal does not require information behind this tab.

Tab AA:

Priority Letter from Rural Development

This deal does not require information behind this tab.

TAB AB:

Social Disadvantage Certification or Veteran Owned Small Business Certification

This deal does not require information behind this tab.