# A G E N D A JAMES CITY COUNTY DEVELOPMENT REVIEW COMMITTEE REGULAR MEETING

Building A Large Conference Room 101 Mounts Bay Road, Williamsburg, VA 23185 March 28, 2018 4:00 PM

- A. CALL TO ORDER
- B. ROLL CALL
- C. MINUTES
  - 1. January 24, 2018 Meeting Minutes
  - 2. February 21, 2018 Meeting Minutes
- D. OLD BUSINESS
- E. NEW BUSINESS
  - 1. C-0006-2018. 7250 Otey Off-Site Drain Field
  - 2. S-0037-2012/SP-0071-2012. Walnut Grove
- F. ADJOURNMENT

#### **AGENDA ITEM NO. C.1.**

#### **ITEM SUMMARY**

DATE: 3/28/2018

TO: The Development Review Committee

FROM: Paul D. Holt, III, Secretary

SUBJECT: January 24, 2018 Meeting Minutes

#### **ATTACHMENTS:**

Description Type

January 24, 2018 Meeting Minutes Minutes

#### **REVIEWERS:**

Department	Reviewer	Action	Date
Development Review Committee	Cook, Ellen	Approved	3/7/2018 - 9:37 AM
Development Review Committee	Holt, Paul	Approved	3/7/2018 - 6:17 PM
Publication Management	Burcham, Nan	Approved	3/8/2018 - 7:30 AM
Development Review Committee	Secretary, DRC	Approved	3/8/2018 - 8:00 AM

# M I N U T E S JAMES CITY COUNTY DEVELOPMENT REVIEW COMMITTEE REGULAR MEETING

Building A Large Conference Room 101 Mounts Bay Road, Williamsburg, VA 23185 January 24, 2018 4:00 PM

#### A. CALL TO ORDER

Mr. Rich Krapf called the meeting to order at 4:00 p.m.

#### B. ROLL CALL

Present:

Rich Krapf, Acting Chair

John Wright

Absent:

Tim O'Connor

Danny Schmidt

Staff:

Ellen Cook, Principal Planner Savannah Pietrowski, Planner Tom Leininger, Community Development Assistant

#### C. MINUTES

1. October 18, 2017 Meeting Minutes

Action on the minutes was deferred until the next meeting.

#### D. OLD BUSINESS

There was no old business.

#### E. NEW BUSINESS

1. SP-0130-2017, Berkeley's Green Recreation Area Amendment

Mr. Rich Krapf opened the discussion.

Ms. Savannah Pietrowski stated that Ms. Melinda Harris, Chesapeake Bay Management, has submitted a request to convert one of the two existing tennis courts in the Berkeley's Green development to a basketball court. She stated that the proposal is before the Development Review Committee (DRC) for consideration due to two separate Special Use Permit conditions for Berkeley's Green. Ms. Pietrowski stated that Condition No. 6 required that the development have a minimum of a one swimming pool, two regulation tennis courts and picnic areas. She stated that the alternate facilities may be provided upon approval of the Planning Commission. She stated that all of these amenities are currently existing, plus an additional basketball court. Ms. Pietrowski stated that Condition No. 7 required that the Planning

Commission review and approve site plans for recreation facilities in the development. She stated that the requested change would not decrease the total number of recreational amenities provided and that staff recommends the DRC recommend approval for this request.

Ms. Harris stated that the asphalt area where the basketball court is located has two poles that would be removed. She stated that the area would be used as a recreational area and include additional picnic tables. She stated that the community consists of both families with younger children as well as aging members. She stated that the tennis courts are not fully utilized.

Mr. Krapf asked how the proposal process began.

Ms. Harris stated that the proposal began approximately five years ago. She stated that Berkeley's Green has a recreation committee. She stated that Chesapeake Bay Management had sent out several proposals. She stated that a survey had been sent out to the community and the respondents were in favor of the proposal. She stated that the current courts have aged and need repairs and the new court would have a 16-year warranty.

Mr. John Wright asked if the Homeowners Association (HOA) needs to approve the action before moving forward.

Ms. Harris stated that the HOA did not.

Mr. Krapf asked if there were any other questions.

Mr. Wright stated that his only concern was notifying the residents.

Mr. Krapf asked if there has been any pushback from residents.

Ms. Harris stated that the only concern has been regarding the expense. She stated that the proposals can be flexible if they needed to be.

Mr. Wright asked if there would be a need for a special assessment.

Ms. Harris stated that there would not be

Mr. Krapf stated that the proposal is clear and does not alter the amount of recreational facilities. He stated that the new courts could see more use. He stated that he does not see an issue.

Mr. Wright made a motion to approve the proposal.

The motion passed 2-0.

#### F. ADJOURNMENT

Mr. Wright motioned to adjourn.

Mr. Krapf adjourned the meeting at 4:10 p.m.

Mr. Danny Schmidt, Chair

Mr. Paul Holt, Secretary

#### **AGENDA ITEM NO. C.2.**

#### **ITEM SUMMARY**

DATE: 3/28/2018

TO: The Development Review Committee

FROM: Paul D. Holt, III, Secretary

SUBJECT: February 21, 2018 Meeting Minutes

#### **ATTACHMENTS:**

Description Type
February 21, 2018 Meeting Minutes Minutes

#### **REVIEWERS:**

D

Department	Reviewer	Action	Date
Development Review Committee	Cook, Ellen	Approved	3/7/2018 - 9:39 AM
Development Review Committee	Holt, Paul	Approved	3/7/2018 - 6:19 PM
Publication Management	Burcham, Nan	Approved	3/8/2018 - 7:30 AM
Development Review Committee	Secretary, DRC	Approved	3/8/2018 - 8:00 AM

# M I N U T E S JAMES CITY COUNTY DEVELOPMENT REVIEW COMMITTEE REGULAR MEETING

Building A Large Conference Room 101 Mounts Bay Road, Williamsburg, VA 23185 February 21, 2018 4:00 PM

#### A. CALL TO ORDER

Mr. Danny Schmidt called the meeting to order at 4:04 p.m.

#### B. ROLL CALL

Present:

Danny Schmidt, Chair

Tim O'Connor

Frank Polster

Absent:

Rich Krapf

Staff:

Ellen Cook, Principal Planner

Alex Baruch, Planner

Tom Leininger, Community Development Assistant

#### C. MINUTES

1. October 18, 2017 Meeting Minutes

Mr. Tim O'Connor made a motion to approve the minutes.

The minutes were approved by a vote of 2-0-1, with Mr. Frank Polster abstaining as he was not present at that meeting.

2. January 24, 2018 Meeting Minutes

Action on the minutes was deferred until the next meeting.

#### D. OLD BUSINESS

There was no old business.

#### E. NEW BUSINESS

1. SP-0003-2018. Chickahominy Riverfront Park Dumpster Pad and Fence

Mr. Danny Schmidt opened the discussion.

Mr. Alex Baruch stated that Mr. Alister Perkinson of James City County Parks and Recreation has submitted a site plan to construct a 30 x 10 wooden fence and an 825 square-foot

dumpster pad. He stated that the existing dumpster pad is located in the Resource Protection Area (RPA) and Federal Emergency Management Agency (FEMA) flood zone. He stated that the proposed fence and dumpster pad would replace the existing dumpster area and is located outside of the RPA and FEMA flood zone. He stated that the adopted Special Use Permit conditions require the Planning Director and Development Review Committee's (DRC) approval of any tree clearing on the Chickahominy Riverfront Park property. He stated that the Planning Director finds the proposal acceptable and staff recommends that the DRC find the tree clearing for this project to be acceptable.

Mr. Schmidt asked if anyone had anything they wanted to discuss.

Mr. Poster stated that he was happy that the dumpster was being moved out of the RPA and FEMA flood zone.

Mr. Schmidt stated that the pictures of the trees that would be removed were very helpful in making him feel comfortable with the project.

Mr. Poster made a motion to approve the proposal.

The motion passed 3-0.

2. SP-0129-2017. Williamsburg Honda Parking Lot Expansion

Mr. Danny Schmidt opened the discussion.

Mr. Baruch stated that Mr. C. Michael Apperson of AES Consulting Engineers has submitted a site plan to construct a parking lot on the property located at 7059 Richmond Road adjacent to the existing car dealership. He stated that applicant has stated that this parking area would be used for the storage of vehicles for sale. He stated that the adopted Master Plan for Williamsburg Honda shows a landscaped area where this site plan shows drive aisle connections into the adjacent lot for the parking area. He stated that the Special Use Permit Condition No. 1 states that "Minor changes to the Master Plan may be permitted by the DRC, as long as they do not change the basic concept or character of the Project." He stated that staff recommends that the DRC find the proposal meets the criteria listed in Section 24-23 of the Zoning Ordinance and recommends that the DRC finds the proposal does not change the basic concept or character of the development.

Mr. Schmidt asked if anyone had anything they wanted to discuss.

Mr. O'Connor asked if the three buildings on the parking lot site would be removed.

Mr. John Dodson, owner of Williamsburg Honda, stated that two of the buildings would be removed and one is being relocated.

Mr. O'Connor asked if there is a landscape plan.

Mr. Baruch stated that there is a landscape plan for the project that is being reviewed against the Zoning Ordinance and will need to meet Ordinance requirements prior to approval.

Mr. O'Connor stated that he is not concerned with the expansion, but is concerned with the visual impact from Richmond Road with all of the parking areas next to each other.

Mr. Dodson stated that the landscaping along the 50-foot Community Character Buffer would be similar landscaping to what already exists at Williamsburg Honda.

Mr. Schmidt stated that the 15-foot landscape buffer between the Econo Lodge and the subject property did not seem like a large landscape area.

Mr. Baruch stated that the 15-foot width is what the Zoning Ordinance requires.

Mr. Schmidt asked about the lighting that is proposed for this site.

Mr. Dodson stated that the lighting will be consistent with the existing Williamsburg Honda and will not extend past property lines. Mr. Dodson stated that the lights will be on for the hours of operation and most of the lights will be turned off after hours with one or two lights staying on for security purposes.

Mr. O'Connor asked if this proposal would allow for the delivery trucks to do their deliveries on-site.

Mr. Dodson stated that the delivery trucks would continue to deliver cars in the turn lane on Richmond Road.

Mr. O'Connor stated that there are times that delivery trucks unload in the middle of Richmond Road at night.

Mr. Dodson stated that has occurred in the past; however, whenever he is able to catch the driver prior to the driver beginning the unloading process they are told to move to the turn lane in front of Williamsburg Honda.

Mr. Polster asked if staff could bring up the site plan layout sheets on the screen. Mr. Polster asked if the bioretention ponds were an open area or underground.

Mr. Baruch stated that they are underground.

Mr. Polster asked how any overflow drainage would be handled.

Mr. Baruch stated that any overflow drainage would move through the pipes to the regional Best Management Process (BMP) in the rear of the property.

Mr. Polster asked if the BMP in the rear of the property handles the drainage from the condominiums on the adjacent site.

Mr. Baruch stated that is correct.

Mr. Polster asked where the water was being released.

Mr. Baruch stated downstream to the Yarmouth Creek watershed.

Mr. Polster stated that this was another feeder stream that feeds back to the Yarmouth and drainage from the proposed parking area will feed into that creek.

Mr. Schmidt asked if this case would be a public hearing case at the Planning Commission.

Mr. Baruch stated that it would be a consent agenda item not a public hearing at the Planning Commission.

Mr. Schmidt stated he felt comfortable with the Community Character Corridor buffer.

Mr. Poster made a motion to approve the proposal.

The motion passed 3-0.

#### F. ADJOURNMENT

Mr. O'Connor motioned to adjourn.

Mr. Schmidt adjourned the meeting at 4:19 p.m.

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Mr. Danny Schmidt, Chair

Mr. Paul Holt, Secretary

#### **AGENDA ITEM NO. E.1.**

#### ITEM SUMMARY

DATE: 3/28/2018

TO: The Development Review Committee

FROM: Roberta Sulouff, Senior Planner

SUBJECT: C-0006-2018. 7250 Otey Off-Site Drain Field

#### **ATTACHMENTS:**

	Description	Type
ם	Staff Report	Staff Report
ם	Location Map	Backup Material
D	<b>Easement Documentation</b>	Backup Material

#### **REVIEWERS:**

Department	Reviewer	Action	Date
Development Review Committee	Cook, Ellen	Approved	3/23/2018 - 3:34 PM
Development Review Committee	Holt, Paul	Approved	3/23/2018 - 3:42 PM
Publication Management	Burcham, Nan	Approved	3/23/2018 - 3:49 PM
Development Review Committee	Secretary, DRC	Approved	3/23/2018 - 3:49 PM

#### Staff Report for the March 28, 2018, Development Review Committee Meeting

#### **SUMMARY FACTS**

Applicant: Mr. Wayne Cooke, HGB, LLC

Land Owner: HGB, LLC

Proposal: To permit an off-site septic field for an

existing lot in Chickahominy Haven.

Reason for Development Review Committee

(DRC)

Review: Section 19-62 of the Subdivision Ordinance

requires all subdivision lots to be served by individual onsite sewage disposal systems where public sewer is not available. The applicant has requested an exception to Section 19-62, Individual Sewer of the Subdivision Ordinance as permitted under

Section 19-18, Exceptions.

Location: 7250 Otey Drive

Tax Map/Parcel No.: 1910600001

Project Acreage:  $\pm 0.65$  acres

Current Zoning: R-2, General Residential

Comprehensive Plan: Rural Lands

Primary Service Area: Outside

Staff Contact: Roberta Sulouff, Senior Planner

#### **FACTORS FAVORABLE**

- 1. Staff finds that the application meets the criteria listed in Section 19-18 to permit exceptions to the Subdivision Ordinance.
- 2. Other such exceptions have been granted for nearby lots in the Chickhominy Haven subdivision.

#### **FACTORS UNFAVORABLE**

Staff finds no unfavorable factors.

#### SUMMARY STAFF RECOMMENDATION

Staff recommends that the DRC recommend approval of this exception request to the Planning Commission with the condition that all development activities located in the Special Flood Hazard Area shall comply with Article V, Floodplain Area Regulations in the James City County Zoning Ordinance and any such development shall receive all required approvals and permits prior to the commencement of such activities.

#### SURROUNDING ZONING AND DEVELOPMENT

- Properties to the south, west, and northwest are zoned R-2, General Residential.
- Properties to the north and east are zoned A-1, General Agricultural.
- All surrounding properties are designated Rural Lands by the adopted Comprehensive Plan.

#### Staff Report for the March 28, 2018, Development Review Committee Meeting

#### **HISTORY**

• The lot at 7250 Otey Drive was platted in 1976 without provision for septic on the approved plat. In 1990, the owners of this lot and the lot located at 7251 Otey Drive, recorded an easement for a remote drain field to be located on 7251 Otey Drive and to serve 7250 Otey Drive (Attachment No. 2). Between 1990 and 2018 the lot at 7250 Otey Drive has remained vacant and the easement has not yet been put to use. The lot at 7251 Otey Drive was developed as a single-family home in the early 1990s and has an existing septic system and drain field. Staff notes that 7250 Otey Drive is located in the 1% annual flood risk floodplain, while the proposed location of the drain fields are located in the 0.2% annual flood risk floodplain.

#### STAFF ANALYSIS

The applicant has requested an exception to Section 19-62, Individual Sewer of the Subdivision Ordinance as permitted under Section 19-18, Exceptions. The Subdivision Ordinance states that the Commission shall not approve any exception unless it first receives a recommendation from the DRC and unless it finds that:

- 19-18 4(a): Strict adherence to the ordinance requirement will cause substantial injustice or hardship;
  - As this is an existing lot, staff finds that strict adherence to the ordinance would cause substantial hardship. An off-site drain field is necessary for residential use of this lot.
- 19-18 4(b): The granting of the exception will not be detrimental to public safety, health, or welfare, and will not adversely affect the property of others;

Per review and approval of the proposed drain field by the Virginia Department of Health, staff finds that the granting of the exception would not be detrimental to public safety, health and welfare.

- 19-18 4(c): The facts upon which the request is based are unique to the property and are not applicable generally to other property so as not to make reasonably practicable the formulation of general regulations to be adopted as an amendment to this chapter;
  - Staff finds that, given that this an approved and platted lot, the circumstances of the request are generally not applicable to other properties.
- 19-18 4(d): No objection to the exception has been received in writing from the Transportation Department, Health Department, or Fire Chief; and
  - Staff consulted with the Fire Department, the Health Department and Virginia Department of Transportation and received no objection to this request.
- 19-18 4(e): The hardship or injustice is created by the unusual character of the property, including dimensions and topography, or by other extraordinary situation or condition of such property. Personal, financial, or self-inflicted hardship or injustice shall not be considered proper justification for an exception.
  - Staff finds that the request is based on a hardship created by the unusual character of the property due to soil type, water table levels and topography.

#### STAFF RECOMMENDATION

Staff recommends that the DRC recommend approval of this exception request to the Planning Commission with the condition that

#### CASE No. C-0006-2018. 7250 Otey Drive Off-Site Drain Field

#### Staff Report for the March 28, 2018, Development Review Committee Meeting

all development activities located in the Special Flood Hazard Area shall comply with Article V, Floodplain Area Regulations in the James City County Zoning Ordinance and any such development shall receive all required approvals and permits prior to the commencement of such activities.

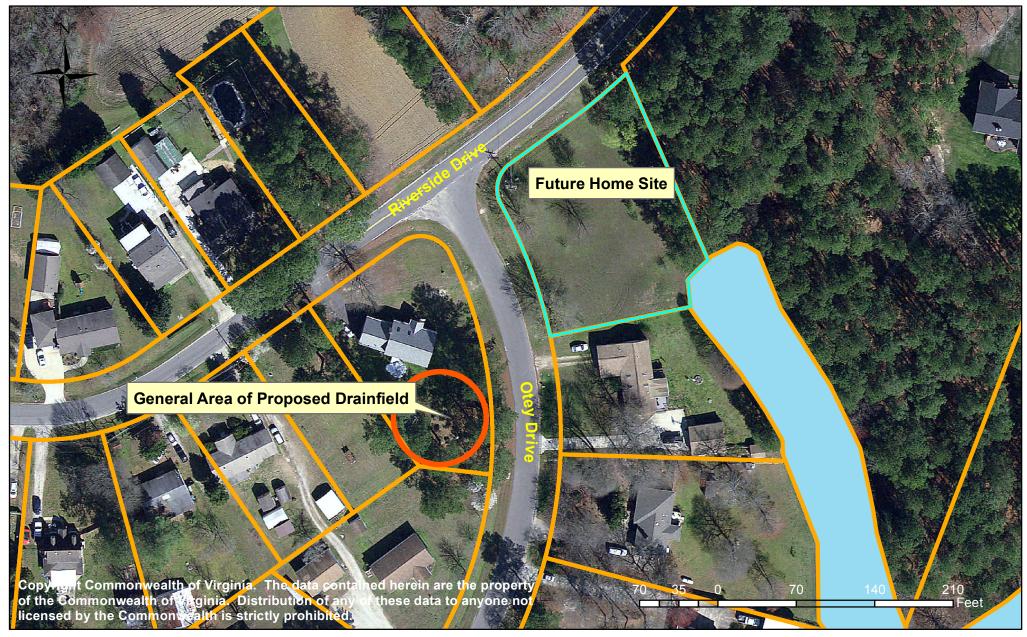
RS/md SRC-0006-2018Otey

#### Attachments:

- 1. Location Map
- 2. Easement Documentation

# C-0006-2018 7250 Otey Off-Site Drain Field





THIS DEED OF EASEMENT, made this \_\_\_\_\_ day of October 1990, by and between GERALD J. OTEX and LUCITLE H. OTEX, hereinafter referred to as "Grantor"; and GERALD J. OTEX and LUCITLE H. OTEX, hereinafter referred to as "Grantee."

#### WITNESSETH:

That for and in consideration of the sum of CNE DOLLAR (\$1.00) and other valuable consideration, cash in hand paid by the Grantee to the Grantor, receipt whereof is hereby acknowledged, the Grantor does grant and convey with General Warranty unto GERALD J. OTHY and LUCILLE H. OTHY the following rights in and to certain real property situate, lying and being in James City County, Virginia, to-wit:

The privilege and easement in perpetuity of right-of-way to construct, lay, maintain, repair, inspect, improve, replace and alter, and at will remove, within the permanent easement areas hereinafter described and referred to, drainfields and lines for the transmission and distribution of sewage, water and related utility services, over, upon, across and under property of the grantor, said permanent easement area being further described and shown as "Drainfield Easement For Lot 1, 0.11 AC." on a certain plat entitled, "IRRAINFIELD EASEMENT FOR LOT 1, LOCATED ON LOT 43, SECTION 5, CHICKAHOMINY HAVEN, STONEHOUSE DISTRICT, JAMES CITY COUNTY, VIRGINIA," dated 9/25/90, made by AES, a professional corporation, which is attached hereto and made a part hereof and which is to be recorded herewith and to which reference is here made for a more accurate description of the easements herein conveyed.

The further terms and conditions of this grant are as follows:

- a. That the Grantee may (but is not required to) trim, cut, remove and clear all trees, limbs, undergrowth, and any and all other obstructions within the said easement area, that may in any manner in the Grantee's judgment endanger or interfere with the proper and efficient operation of the works and systems therein or thereon, and the Grantee shall have all other such rights and privileges as are reasonably necessary or convenient for the full enjoyment and use of the easement herein granted for the aforesaid purposes.
- b. That the Grantee will exercise reasonable care to protect the Grantor's property from damage or injury occasioned in the enjoyment of

BCCK 494 FAT 369

11.769

THIS DEED OF EASEMENT, made this <u>17</u> day of October 1990, by and between GERALD J. OTEY and LUCILLE H. OTEY, hereinafter referred to as "Grantor"; and GERALD J. OTEY and LUCILLE H. OTEY, hereinafter referred to as "Grantes."

#### WITNESSETH:

That for and in consideration of the sum of CNE DOLLAR (\$1.00) and other valuable consideration, cash in hand paid by the Grantee to the Grantor, receipt whereof is hereby acknowledged, the Grantor does grant and convey with General Warranty unto GERALD J. OTEY and LUCILLE H. OTEY the following rights in and to certain real property situate, lying and being in James City County, Virginia, to-wit:

The privilege and essement in perpetuity of right-of-way to construct, lay, maintain, repair, inspect, improve, replace and alter, and at will remove, within the permanent essement areas hereinafter described and referred to, drainfields and lines for the transmission and distribution of sewage, water and related utility services, over, upon, across and under property of the grantor, said permanent essement area being further described and shown as "Drainfield Easement For Lot 1, 0.11 AC." on a certain plat entitled, "DRAINFIELD EASEMENT FOR LOT 1, LOCATED ON LOT 43, SECTION 5, CHICKAHOMINK HAVEN, STONEHOUSE DISTRICT, JAMES CITY COUNTY, VIRGINIA," dated 9/25/90, made by AES, a professional comporation, which is attached hereto and made a part hereof and which is to be recorded herewith and to which reference is here made for a more accurate description of the easements herein conveyed.

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a. That the Grantee may (but is not required to) trim, cut, remove and clear all trees, limbs, undergrowth, and any and all other obstructions within the said easement area, that may in any manner in the Grantee's judgment endanger or interfere with the proper and efficient operation of the works and systems therein or thereon, and the Grantee shall have all other such rights and privileges as are reasonably necessary or convenient for the full enjoyment and use of the easement herein granted for the aforesaid purposes.

b. That the Grantes will exercise reasonable care to protect the Grantor's property from damage or injury occasioned in the enjoyment of the easement and rights herein granted and will promptly repair the said property or reimburse the Grantor for any property damaged beyond repair.

- c. That if the Grantes does cut or fall any brush, undergrowth or trees, or should excevations be carried on pursuant to this essement and any large size rocks or boulders are unearthed and not buried in said excevation, such brush, undergrowth, trees, large size rocks and boulders shall, at the expense of the Grantes be removed from the Grantor's property.
- d. That the Grantor shall have no right, title, interest, estate or claim whatsoever in or to any of the septic tanks, lines, pipes or other equipment and accessories installed by virture hereof.
- e. This easement is conveyed to the Grantee as owner of Lot 1, Section 5, Chickehominy Haven, James City County, Virginia ("Lot 1") for the benefit of Lot 1 and shall be appurtenant to ownership of Lot 1 by the heirs, successors and assigns of Grantee.

The Grantor further covenants that they have the right to convey the said easement; that the Grantee shall have the quiet and peaceful enjoyment and possession of said easement, and that the Grantor will execute such further assurances of the said grants and easements herein contained as may be requisite.

WITNESS the following signatures and seals:

Serald J. Otey

Serald J. Otey

Licelle H. Otey

Licelle H. Otey

STATE OF VIRGINIA

COUNTY OF JAMES CITY, to-wit:

The foregoing instrument was acknowledged before me this ZTHL day of (1/4, Les . 1990.

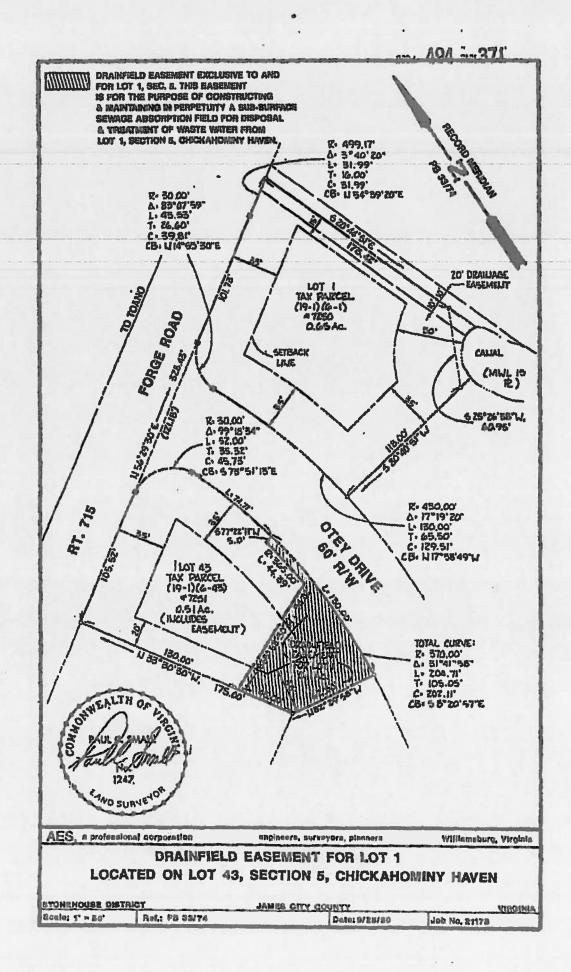
My commission expires: 4-8-199/

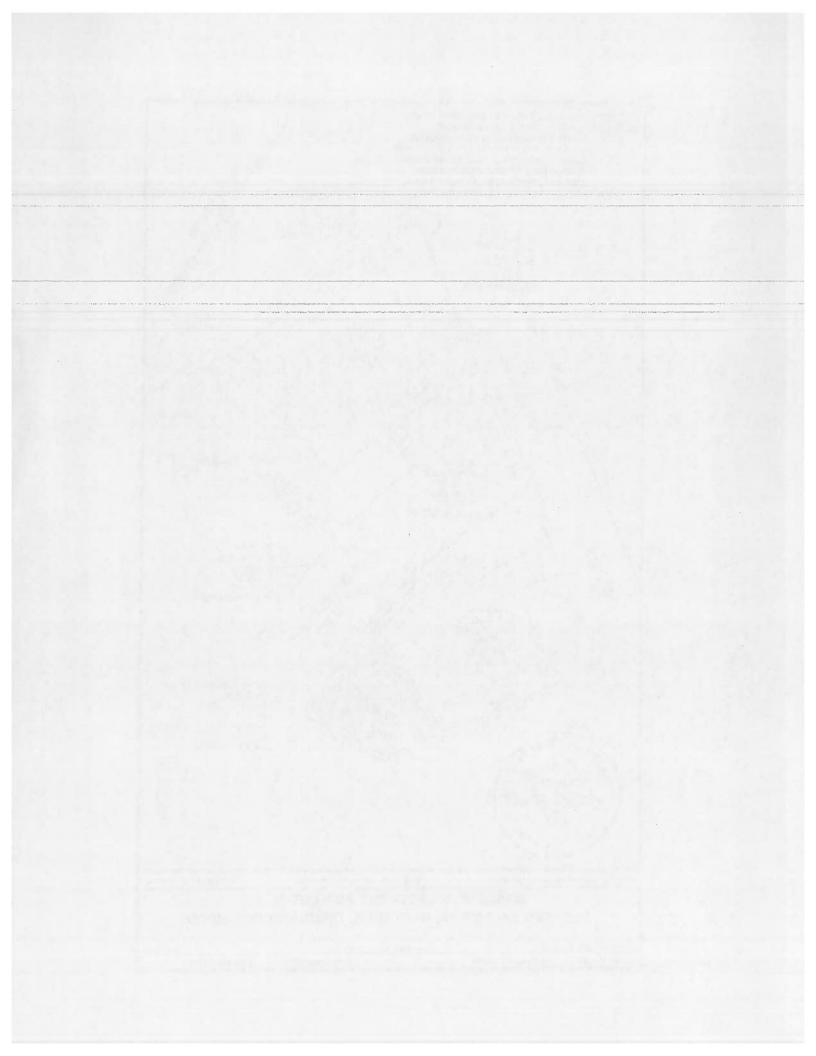
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#### **AGENDA ITEM NO. E.2.**

#### **ITEM SUMMARY**

DATE: 3/28/2018

TO: The Development Review Committee

FROM: Ellen Cook, Principal Planner

SUBJECT: S-0037-2012/SP-0071-2012. Walnut Grove

#### **ATTACHMENTS:**

	Description	Type
۵	Staff Report	Staff Report
D	Attachment 1_Elevations in the Approved Rezoning Application	Backup Material
	Attachment 2_Proposed Elevations	Backup Material
Ъ	Attachment 3 Applicant's Narrative	Backup Material

#### **REVIEWERS:**

Department	Reviewer	Action	Date
Development Review Committee	Cook, Ellen	Approved	3/23/2018 - 9:22 AM
Development Review Committee	Holt, Paul	Approved	3/23/2018 - 11:03 AM
Publication Management	Burcham, Nan	Approved	3/23/2018 - 11:11 AM
Development Review Committee	Holt, Paul	Approved	3/23/2018 - 11:13 AM

#### Staff Report for the March 28, 2018, Development Review Committee

#### **SUMMARY FACTS**

Applicant: Mr. Jay Epstein

Land Owner: Richmond Norge, LLC

Proposal: To build up to 10 townhouses and 75 single-

family units

Development Review Committee (DRC)

Review: Appeal the decision of the Director of

Planning that the proposed architectural elevations are not consistent with the elevations provided with the Rezoning

materials.

Location: 7345 Richmond Road

Tax Map/Parcel No.: 2320100030A

Project Acreage: +/- 27.89

Zoning: R-2, General Residential, Cluster Overlay,

with Proffers

Comprehensive Plan: Low-density Residential

Primary Service Area: Inside

Staff Contact: Ellen Cook, Principal Planner

#### **FACTORS FAVORABLE**

1. There are elements of consistency between the two sets of elevations including general roof pitches, inclusion of porches, variation in roofline and depth of building elements, and use of materials.

#### **FACTORS UNFAVORABLE**

1. Overall, altering or proposing to include several distinctive architectural features modifies the character of the development, as presented during the rezoning process. While the proposed elevations may have distinct advantages to the builder, staff finds the proposed elevations do not resemble the typical elevations of single-family homes or townhomes as depicted in the adopted elevations.

#### STAFF RECOMMENDATION

Staff recommends that the DRC find the proposed architectural elevations to be inconsistent with the elevations approved by the Board of Supervisors (BOS) as part of the application for rezoning for the development.

#### PROJECT DESCRIPTION

The Walnut Grove Development (originally named "Jennings Way") was approved by the BOS in 2006 for up to 85 units. The applicant has submitted architectural elevations for the 10 townhouses and 75 single-family units within the development.

Upon review of the submitted architectural elevations, the Planning Director has determined that they are not consistent with the elevations

#### Staff Report for the March 28, 2018, Development Review Committee

approved by the BOS as part of the rezoning. Therefore, the applicant has appealed this decision to the DRC.

Item No. 7 of the adopted Proffers states: "The architecture and exterior elevations of the dwelling units on the Property shall be generally consistent with the revised Proposed Typical Elevations for Jennings Way dated December 24, 2005, as determined by the Director of Planning."

In addition, Section 24-23 of the Zoning Ordinance states that all development plans shall be consistent with the Master Plan. Development plans may deviate from the Master Plan if the Planning Director concludes that the Plan does not 1) significantly affect the general location or classification of housing units; 2) significantly alter the distribution of recreation or open space areas; 3) significantly affect the road layout; or 4) significantly alter the character of land uses or other features or conflict with any conditions placed on the approval of rezoning.

Staff finds that the proposal does not significantly affect or alter items 1-3 in the list above. However, with regard to the character of the land uses cited in item 4, staff and the Planning Director identified a number of inconsistencies between the two sets of elevations, including the following:

- Many of the proposed elevations show side-door entry versus front-door entry;
- The proposed elevations include a different style and location (second floor) of the bay windows, as compared to the BOS approved elevations which had bay windows on most, but not all, of the elevations;

- One of the proposed elevations has a parapet roofline visible from the front, which was not an element included in the BOS approved elevations; and
- There are some differences in the windows between the proposed elevations and the rezoning elevations in some instances the proposed elevations do not use or have fewer windows with shutters, and the windows themselves have a different number of panes, as compared with the rezoning elevations.

There are also elements of consistency between the two sets of elevations including general roof pitches, inclusion of porches, variation in roofline and depth of building elements and use of materials. The applicant has provided a narrative addressing the similarities between the two sets of elevations and the building design parameters influencing the proposed elevations (Attachment 3).

#### RECOMMENDATION

Given the above inconsistencies, the Planning Director has determined that the proposed elevations are not consistent with the elevations approved by the BOS as part of the application for rezoning, and that the proposed elevations would alter the character of the development as originally proposed and approved during the legislative process. Staff recommends that the DRC find the proposed architectural elevations to be inconsistent with the elevations approved by the Board of Supervisors (BOS) as part of the application for rezoning for the development.

EC/md SP71-12WalnutGrove

#### SUBDIVISION-0037-2012/SITE PLAN-0071-2012. Walnut Grove

#### Staff Report for the March 28, 2018, Development Review Committee

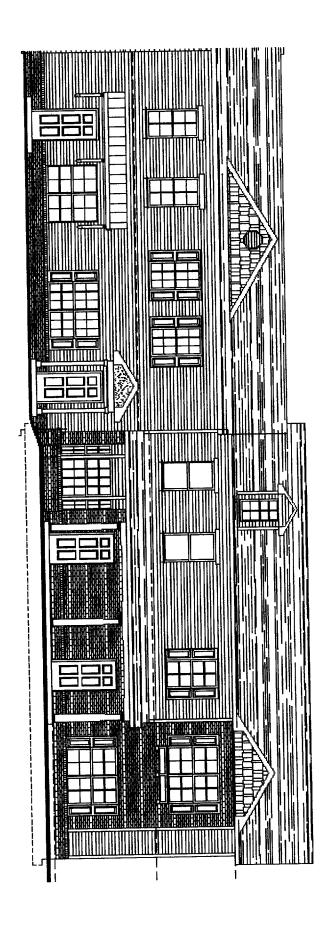
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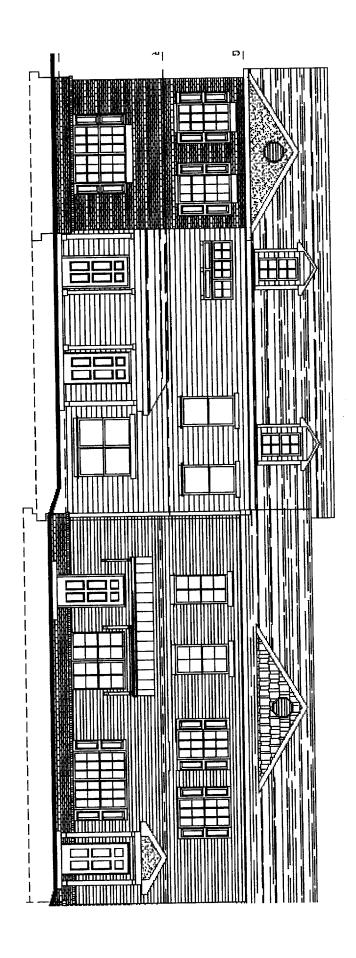
- 1. Elevations included in the approved application for rezoning
- 2. Proposed elevations
- 3. Applicant's narrative

This staff report is prepared by the James City County Planning Division to provide information to the Planning Commission and Board of Supervisors to assist them in making a recommendation on this application. It may be useful to members of the general public interested in this application.

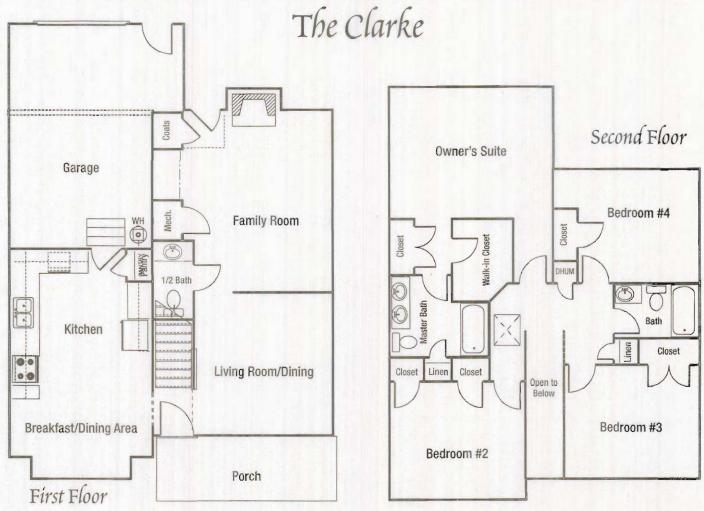
# PROPOSED TYPICAL ELEVATIONS FOR JENNINGS WAY DECEMBER 24, 2005

Jay Epstein 3606 Acorn Avenue, Suite 200 Newport News, Virginia 23607



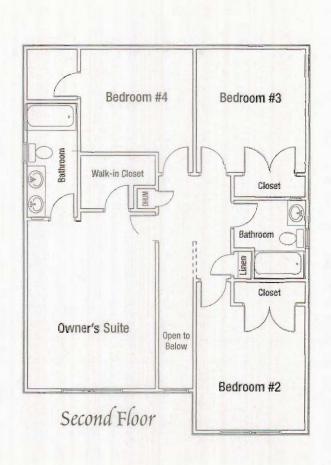






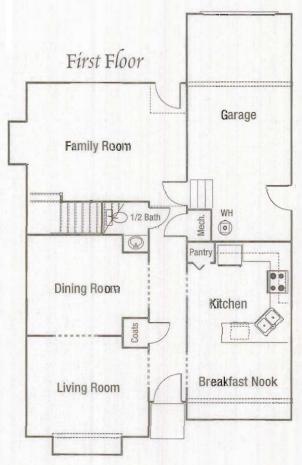


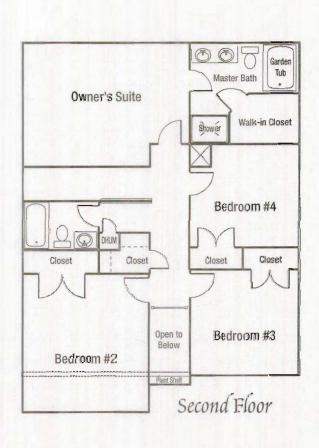






# The Kaitlyn

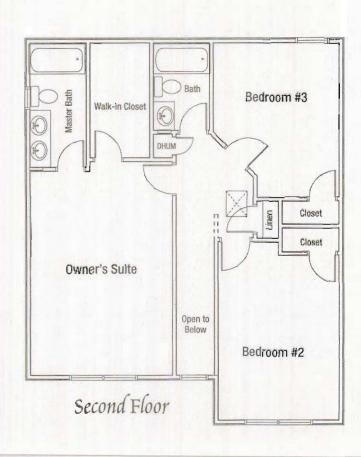






The Davis





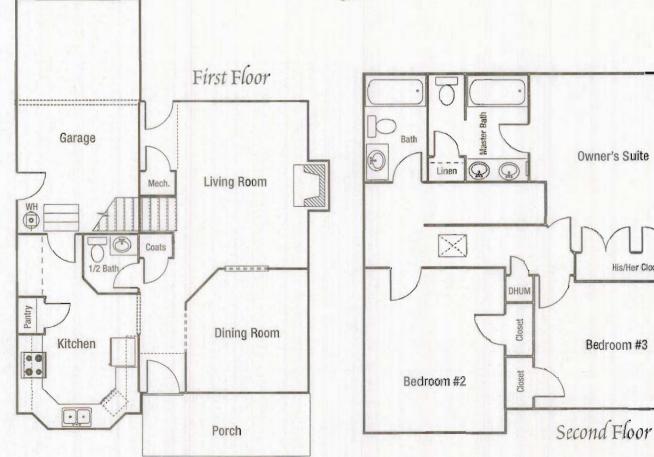


The Jason

Owner's Suite

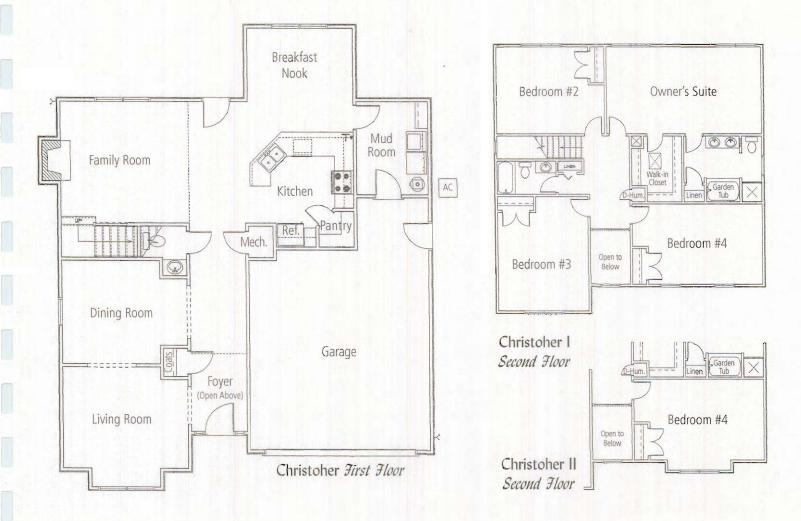
His/Her Closet

Bedroom #3





The Christopher



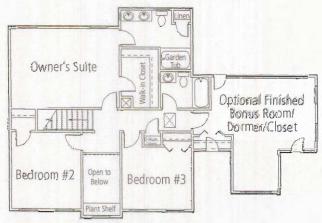


### The Sarah

The Sarah II First Floor



Stoop



The Sarah I & II Second Floor

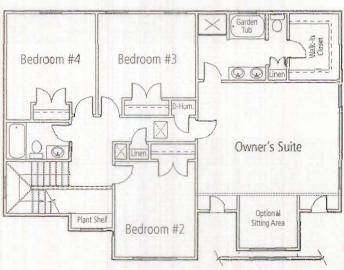


The Joseph



The Joseph First Floor

The Joseph Second Floor





## The Andrew





One Two Three



Four Five Six



Seven Eight Nine Ten





### Walnut Farm "Where Tradition Meets Innovation"

The Community formerly known as Jennings Way was rezoned in 2006. The proffer states that the property shall be divided and developed generally as shown on the Master Plan dated December 27, 2005, with only minor changes thereto that the Development Review Committee determines, which do not change the basic concept or character of the development. It also states that the Architecture and exterior elevations of the dwelling units on the property shall be generally consistent with the revised Proposed **Typical Elevation** for Jennings Way dated December 24<sup>th</sup> 2005 as determined by the Director of Planning.

The Planning Director determined that there were several differences noted, including:

- Side door entry versus front door entry (acknowledging that some units would have doors on the front façade)
- It did not appear that there were bay windows on the proposed units, as compared to the rezoning elevations which had bay windows on most (but not all) of the elevations
- Having a parapet roofline visible from the front was not an element included in the rezoning applications
- Some differences in the windows between the rezoning elevations and the proposed elevations, in some instances use of a different number of divided lights and no shutters

This community was presented to the Board of Supervisors as described in my standard feature sheet as a Traditional Neighborhood Development (see exhibit A) in James City County. **Traditional**Neighborhood Development (TND) refers to the development of a complete neighborhood or town using traditional town planning principles. TND may occur in infill settings and involve adaptive reuse of existing buildings, but often involves all-new construction on previously undeveloped land. To qualify as a TND, a project should include a range of housing types, a network of well-connected streets and blocks, humane public spaces, and have amenities such as stores, schools, and places of worship within walking distance of residences. TND is limited to the scale of neighborhood or town. TND projects incorporate many different architectural styles and are not exclusively traditional in aesthetic.

Since 2005 home building systems have evolved. Building Science has changed the way homes are being built. The Energy Code too has changed. Energy Star homes as proffered in 2005 had a HERS rating of 86. Today under the Zero Energy Ready Home (ZERH) criteria the Home Energy Rating System (HERS) rating drops to the 50's and when solar is added it drops to the teens (see exhibit D) Over this thirteen-year period homes are now more energy efficient with enhanced indoor air quality. The net meter program for solar generated power is now available to offset electric utility costs.

The design team has included for the Design Review Committee:

- 1. The exterior features are stated on the Standard Feature Sheet along with site Plan (See Exhibit A)
- 2. The copy of the typical home elevations submitted in 2005 (see exhibit B)
- 3. Typical Elevations planned for front load and rear load homes at now Walnut Farm (see Exhibit C)

The items listed under Traditional Neighborhood Design in Exhibit A pertaining to exterior are listed below.

- Maintenance free vinyl siding
- Brick Fronts (not shown on elevation put available option)
- Brick Front and side on corner lots
- Maintenance free aluminum exterior trim (in choice of colors)
- Crawl foundation
- Concrete walkways & driveway
- Maintenance-free vinyl windows that tilt in for easy cleaning
- 2 conveniently located exterior water faucets & electrical outlets
- Varied landscaping packages
- 20-year fiberglass Class A fire protected roof shingles
- Continuous ridge vents for superior attic cooling
- Seamless gutters & downspouts

The table below are the similarities associated with the typical elevations and standard feature sheet at now Walnut Farm (formally Jennings Way).

### The Similarities are noted below

- All conditioned crawl space foundation including porch foundation that face street or side street will be brick fronted.
- Crawl foundation will be conditioned
- Concrete walkways & driveways
- Maintenance-free vinyl windows that tilt in for easy cleaning now with panes only in upper window to be more energy efficient while still meeting TND.
- 2 conveniently located exterior water faucets & electrical outlets
- Varied landscaping packages now to the front and side courtyard
- 20-year fiberglass Class A Fir protected roof shingles know upgraded to 30-year architectural shingles
- Continuous ridge vents for superior attic cooling
- Seamless gutter & downspouts with rain chains off the front porches still meeting the TND

### Other similarities as referenced from Typical Elevations (See Elevations attached Exhibit B)

- 14" Heal in Attic for added Insulation from R39 to R49
- 1-foot overhang to allow for additional shading for windows in hot weather
- 7/12 to 8/12 pitch roof on south/southeast side to be dedicated for future solar panels
- Exterior Colors based on siding colors available now with James Hardie siding a coordinated palette of colors for the Traditional Neighborhood Design(TND)
- Front Porch shown on elevations are now available as a secured front porch increased from 4 ft to 8 ft.
- Side Door lights are standard on some homes and are offered as an option as shown on rendering
- Garage Door -Alley on rear now are offered either one car or two cars.
- Garage Door on Front load is offered as a two Car door as shown on Elevations.
- Side yard setback is identical to site plan for front load and Alley lots.
- Bay windows are standard & optional. See Lot 2 as an example
- Brick Steps are the same -Standard on all homes

### Differences as shown on renderings as pointed out by planning staff: (Response in Bold)

- Shows Shutters the new TND plan does not -Shutters will be offered as an option instead of the 3.5" Window wrap that is standard
- Wood burning fireplace The new TND plan will not offer a wood burning fireplace due to the
  effects on the indoor air quality. A Sealed direct vent propane fireplace will be offered. Vented
  off the side of the house instead of thru a two-story chimney. A Two-story chimney if the
  buyer requests will be built.
- Full grid windows are shown are now with panes only in upper window to be more energy efficient while still meeting TND.
- No Solar Shown- Optional Solar is available throughout community under Dominion Power
   Net Metering program if the buyer decides. Dedicated space on roof and prewire are standard under the ZERH program. (See Exhibit D for more information on Zero Energy Ready Home)
- Main front Doors are shown on renderings- The front door has now been moved to Side through a courtyard turning the front porch into secured outdoor living space. Buyer does have the option to access porch on the side with front entry into home under the TND

- Optional conversion of room over Garage as an independent living quarters is allowed under present zoning as long as only one front door faces street
- Roof top terrace not shown on original plans -Roof top garden terrace is an option available to buyer to add additional outdoor living space.

### 3 Key Ingredients of Community Development and "Place Making"

The goal at the Walnut Farm development is to create a sustainable, pedestrian friendly community that promotes a high level of "neighborliness". While there is a myriad of factors that go into creating a great residential environment, there are 3 key ingredients that converge to promote people connecting with people. These ingredients include front porches, reduced front-yard setbacks and side entry doors.

### **Front Porches**

Each of the homes at Walnut Farm will feature a "room-sized" front porch that will serve as additional living space and bring home owners to the front of the home. This is the opposite of the decades long practice associated with suburban sprawl where the typical home design forced people to retreat to their private backyards in the rear of the home. Most often, neighbor's only interaction was seeing each other coming and going from their garages.

Residents will have the option to have the front porch secured with railings on all three sides or to add steps to allow visitors direct access to the front porch.

### **Front-yard Setback**

When people are using a front porch, the goal is to have them easily communicate with passers-by whether they are on foot or bicycle. When these interactions occur, people connect and deeper relationships are formed which enrich the lives of the residents. Another important aspect is that it promotes multi-generational connections. For example, an individual who is aging-in-place at their residence and enjoying time on their front porch, may connect with a young person riding a bike down the street. These types of interactions were common place in years past where neighbors routinely had their "eyes-on-the-street".

### **Side Entry Doors**

By having the main entry door positioned on the side of the home, it allows for the primary room located in the front of the home to be void of a passage hallway. To often, homes with front porches have two small sized rooms located on either side of a center hallway. The problem with that is the rooms are secondary spaces that get seldom use. At Walnut Farm with side entry doors, the front room will be generously sized and "activate" the front of the homes. The kitchen can also be placed in the front room which, as everyone has experienced, is where a variety of engaging family and friend activities occur. The adjacent front porch also extends the "party" to the outdoor space on the front porch thereby further activating the street.

### The "Quiet Wall"

While reducing lot width as designed in 2005 and having front porches to promote a great sense of neighborliness, the development team at Walnut Farm understands the importance of privacy. That is why at Walnut Farm, a "Quiet Wall" will be provided along one side of each home. This will be a wall with either no or limited clearstory windows so that homeowners can enjoy a high level of privacy. Window will not be placed in a manner that a resident could have a view through their neighbor's window.

### The "Fonzie Unit" aka an Accessory Dwelling Unit

The dynamics of American housing and the homes occupants are changing. The development at Walnut Farm acknowledges this fact and will offer its future residents to have the option to have a "Fonzie Unit<sup>1"</sup>. This will be a separate dwelling unit located above the garage. It could serve an aging parent, a long or short-term guest or a boomerang kid<sup>2</sup>. These units could have their own private entry door and include a kitchen and bath.

- [1] For those of you who are not old enough, in the popular American sitcom, Happy Days, Arthur Fonzarelli (Fonzie) lived in a dwelling unit above the Cunningham family's garage.
- [2] A young adult who goes back to live with a parent after a period of independence.

### 2<sup>nd</sup> Floor Decks

A 2<sup>nd</sup> floor deck will be offered as an option for the homes at Walnut Farm. This option will provide the opportunity for private outdoor space for its residents. These spaces will serve as additional outdoor living rooms and could include green roofs, water features, fireplaces and pergolas. It is likely this feature will be highly desirable on the rear-loaded homes because there is only the opportunity for a compact side yard. The community benefit of these outdoor decks is that it will add a greater variety to the architecture and add further interest to the neighborhood.

### **Summary**

The underlying Traditional Neighborhood Development concept for Walnut Farm has not changed since 2005 and still meets all the proffered requirements. The site design as noted in Exhibit A with front load garages on the perimeter lot and rear load on the alley lots is identical to the site plan proposed in 2005.

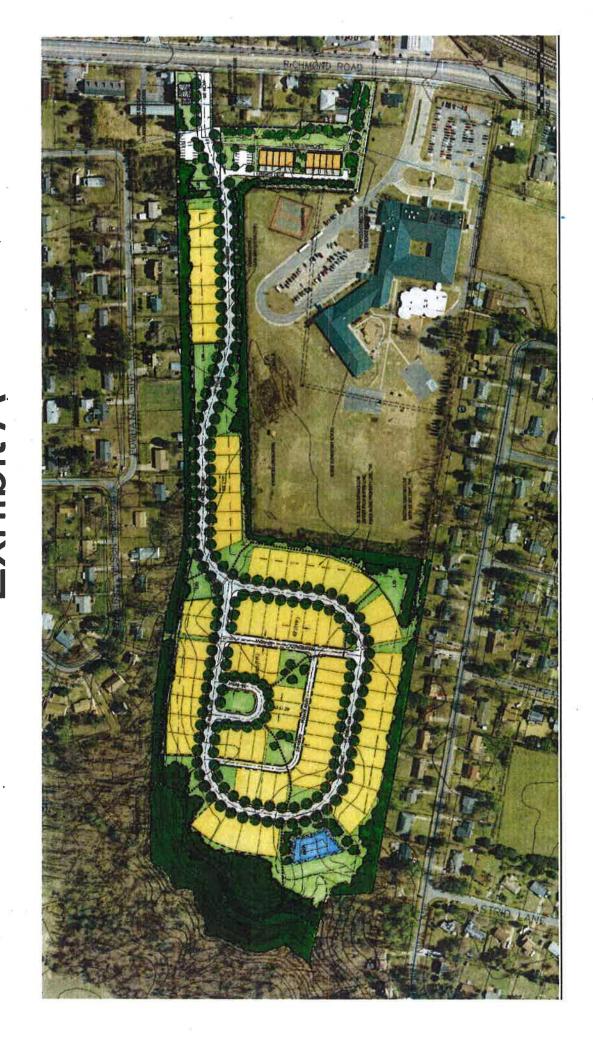
The home designs that staff is comparing too are typical designs as noted on presentation in 2005. The similarities are explained and the differences noted by staff have been answered. The concepts behind the changes are explained in the 3 Key Ingredients of Community Development and Place Making, The Quiet Wall, The Fonzie Unit above garage and The Second Floor Deck. We look forward to building the Homes of the Future today at Walnut Farm.

Walnut Farm has been further enhanced to meet American's evolving housing preferences and embrace advancements in building science and technology. It is where *Tradition Meets Innovation* and the special place the development team will proudly bring the first Zero Energy Ready Home community to Virginia. Walnut Farm will offer its residents an ultra-energy efficient home with enhanced indoor air that meets the demanding requirements for Energy Star, Indoor Air Plus and ZERH certifications performed by expert third-parties. Residents will have the flexibility to install solar panels during the initial construction or very easily during any time of their home ownership.

The developer, Health-E Communities Enterprises of Virginia Inc. is a recognized leader in the housing industry with a long tradition of innovation. This tradition continues by their commitment to apply the most advanced technology in the industry to facilitate building the homes at Walnut Farm. The DIGIBILT technology platform will be deployed which takes Digital Control of the building process. Each home is built twice. First in a digital format using Building Information Modeling (BIM) technology. Consider this being a "digital twin" of the home that allows the development, design and construction team to engineer and coordinate the multitude of details down to a piece or SKU level. A BILTID™ is issued which is the equivalent of a Vehicle Identification Number (VIN) for a car. This provides an unprecedented level of information for the new homeowner about their investment and how to maintain it accordingly. This detailed information will be stored in the Cloud and can be transferred to future owners. During the construction phase, DIGIBILT technology automatically monitors every aspect of the building process to ensure the homes quality and performance. In the end, this building process, facilitated by advanced digital technology, will be certified by Underwriters Laboratories (UL). This is the first project in the country that will have this world-class certification which is a testament to Health-E Communities commitment to innovation.

Finally, the ultimate beneficiary of the Tradition Meets Innovation approach will be the people that call Walnut Farm their home.

# Jennings Way as Presented in 2005 Exhibit A



### Jennings Way

# A Traditional Neighborhood Development in James City

### STANDARD FEATURES

Guaranteeing heating and cooling "Health-E Community" warranty \*Cellulose insulation for greater comfort that is fire resistant and \*Central Air Conditioning and \*Mechanical air ventilation \*Ten year RWC warranty electric hot water heater Costs for 2 years Comfort Features \*De-Humidifier non-toxic

\*Smoke detector(s)on the main living \* Fiberglass bathtubs w/water saver shower heads & anti-scald control \*Ground fault receptacles in shock \* Security lighting on back of the hazard areas - baths & kitchens floor(s) and all bedrooms \*Insulated entry doors Security Features valves

\*Security System pre wired with free 3- month service \*Maintenance-free vinyl windows that \*Maintenance free aluminum exterior \*Brick Front and side on corner lots \*Concrete walkways & driveway \*Maintenance free vinyl siding trim (in choice of colors) tilt-in for easy cleaning \*Crawl foundation Exterior Features \*Brick Fronts

\*2 conveniently located exterior water faucets & electrical outlets \*Continuous ridge vents for superior attic \*20-year fiberglass Class A fire protected \*Seamless gutters & downspouts \*Varied landscaping packages roof shingles cooling

Support and pre-wired in 2 locations for \*Elite 6-panel doors throughout house \*Double stainless steel sink in kitchen \*Vented kitchen exhaust fan \*Ice maker hookup \*Textured ceilings Interior Features ceiling fans

\*Custom cabinets & vanities (choice of finishes) \*Durable, coated metal ventilated shelving

\*Wall-to-wall carpet (choice of colors) and \*Quality interior & exterior paints no wax vinyl floors in all closets

\*Pre-wired for phone & cable services in 2 \*Pre-wired for garage door opener locations

\*Appliances included: Self cleaning range, \*Vanities w/cultured marble tops in all

dishwasher & garbage disposal



















### DESIGN CRITERIA

### SPECIFICATIONS FOR ENERGY EFFICIENT CONSTRUCTION

Prepared for: Health -E-Community

### GOALS

Create a building that ensures a healthy environment for its occupants thereby promoting health for future generations.

Construct a building that has a high level of comfort and a low total energy consumption during its lifetime. Construct a building that is durable thereby reducing future waste and depletion of natural resources.

Design project with approaches that the building team can readily understand and adopt without substantially increasing the cost of construction.

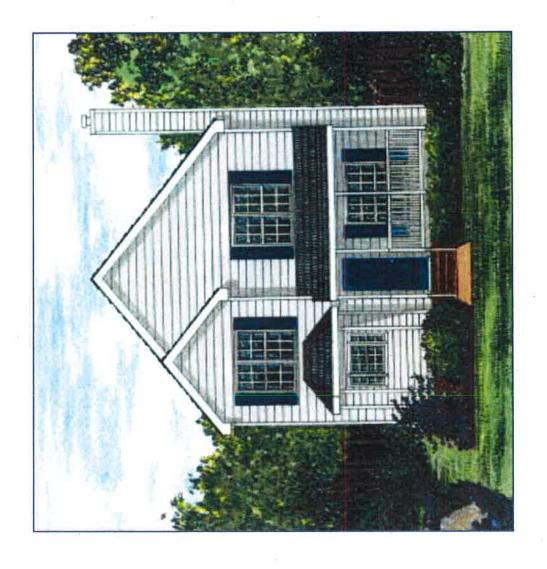
Achieve goals while keeping construction costs not greater than 1% of the same model built to the Model Energy Code.

## Voluntary Proffer

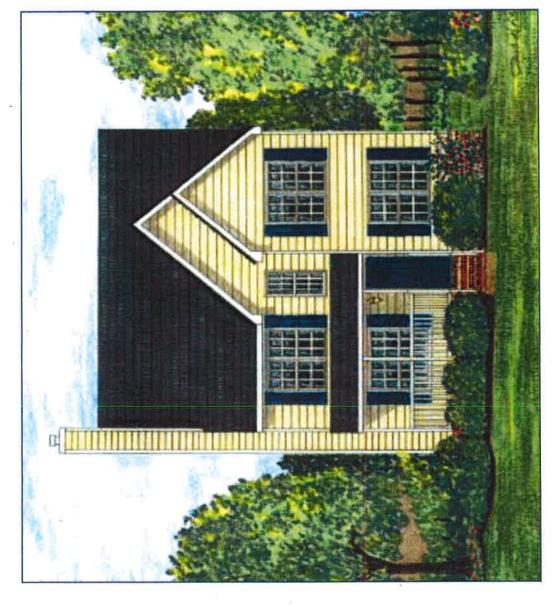
(MEC). The HERS rating results in a score between 0 and 100; with the reference house assigned a score of 80. From this point, each 5% reduction in energy usage (compared to the reference house) results in a one point increase in the HERS score. Thus, an ENERGY STAR nouse of identical size and shape as the rated home that neets minimum requirements of the Model Energy Code single-family homes shall be certified by a HERS rater to meet or exceed the Energy Star Certification. A HERS rating is an evaluation of the energy efficiency of a energy-efficient than the reference house, must achieve All the town homes and qualified new home, required to be significantly more nome, compared to a computer-simulated reference a HERS score of at least 86. **Energy Efficient Homes** 

### Sustainable Building Practices

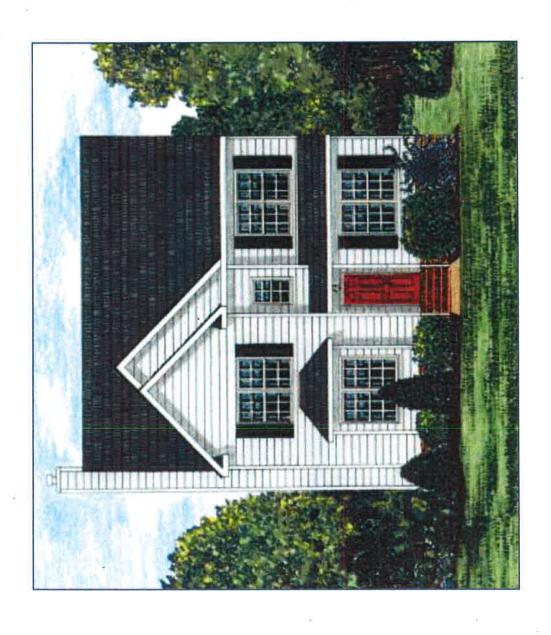
## **Energy Efficient**



### Built To Last



# Enhanced Indoor Air Quality



### Exhibit C 1 of 22



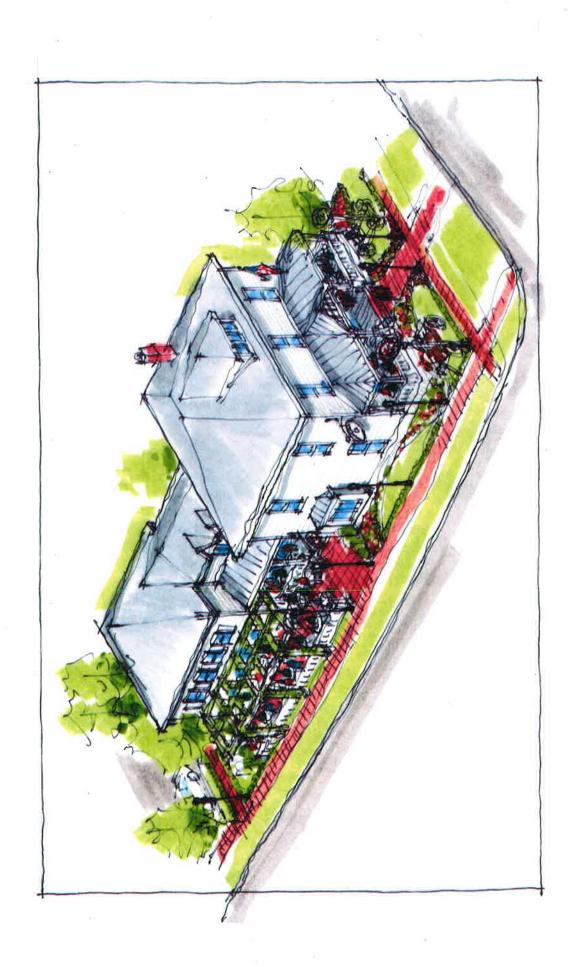


- Opening Virginia's FIRST ZERH Community Walnut Farm in Williamsburg, Virginia
- 75 Single Family Homes
- Homes will be built Zero Energy Ready, the buyer now has the choice to purchase solar panels now... or later!
- ❖ Pre-Sales start May 15, 2018 with delivery in late summer 2018





(I)



# Zero Energy Ready Homes Solar Location for PV if Buyers decides to add PV System

Side PE

Rear PE

Front

4 45 46 47 8

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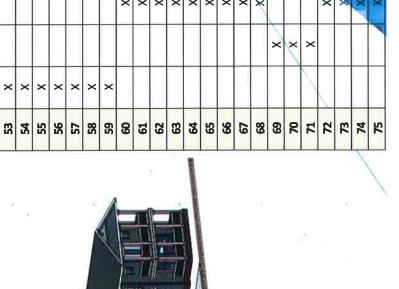
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### outh Elevation Front

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Lot 2





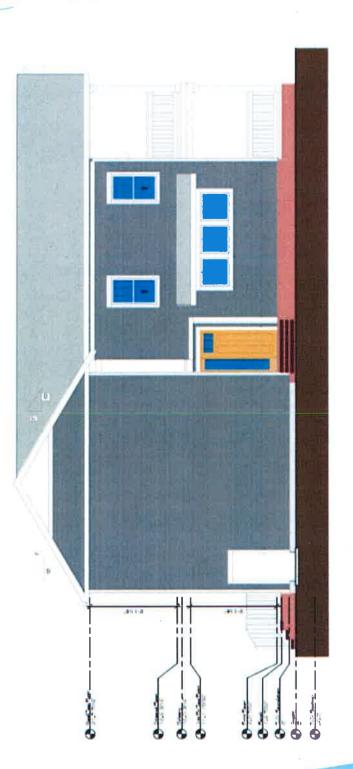
# South Elevation Front



## North Elevation Rear NORTHELEVATION (REAR)

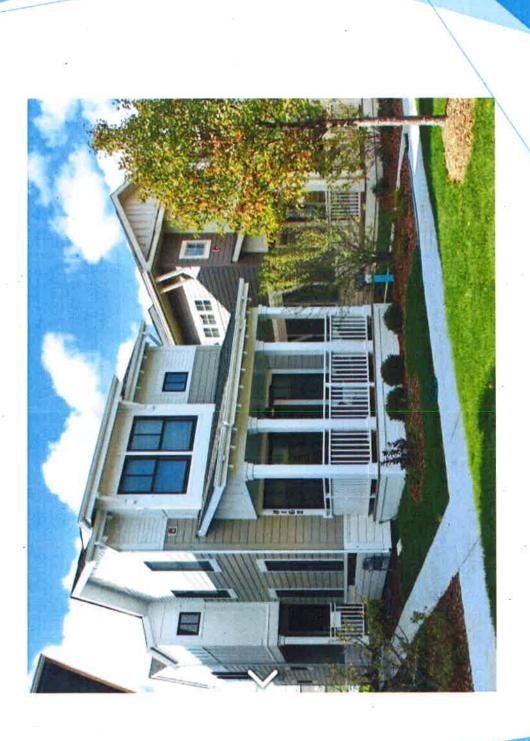
# East Elevation EASTELEVATION

## West Elevation



WESTELEVATION

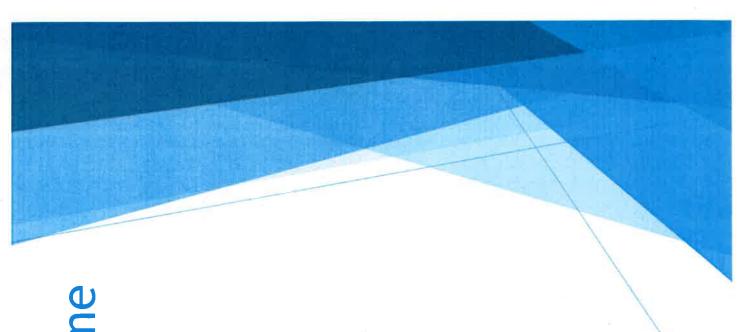
## Built by Streetscape- Floral Avenue -Secured Front Porch with Side Entry



# Floral Avenue- Street View

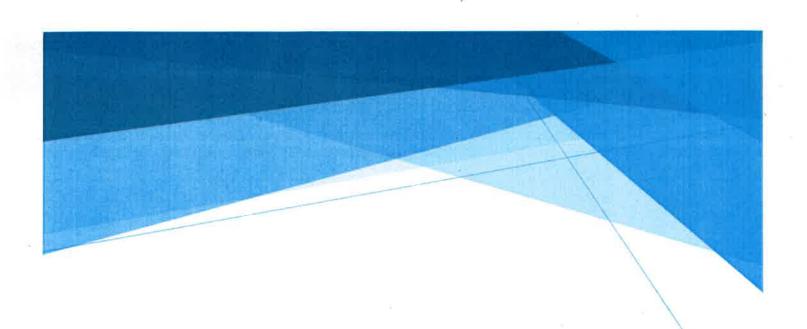
## Floral Avenue- Traditional Home

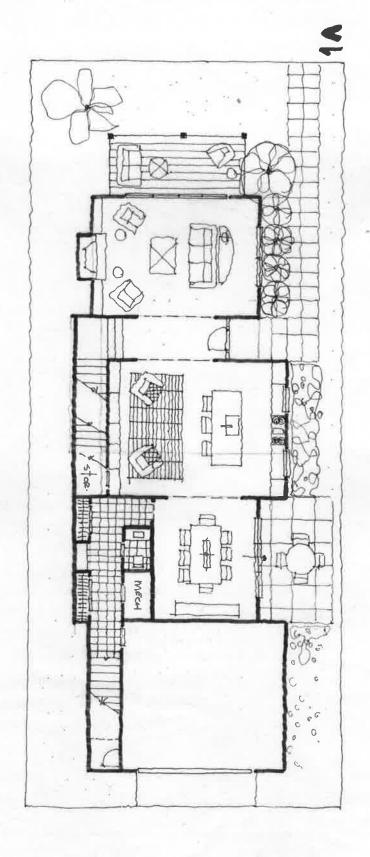


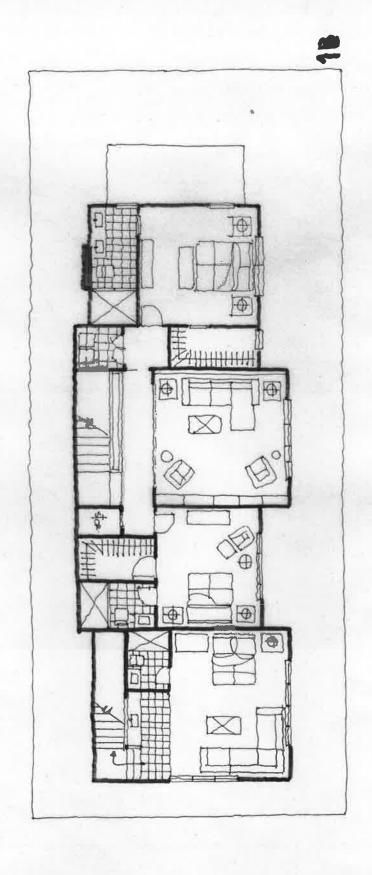


## Floral Avenue- Side Entry with Rain Chain

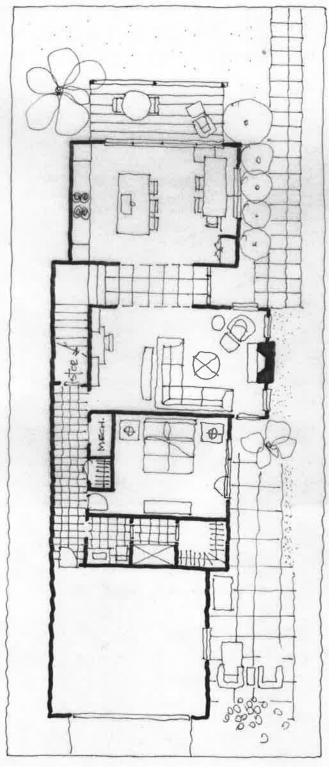


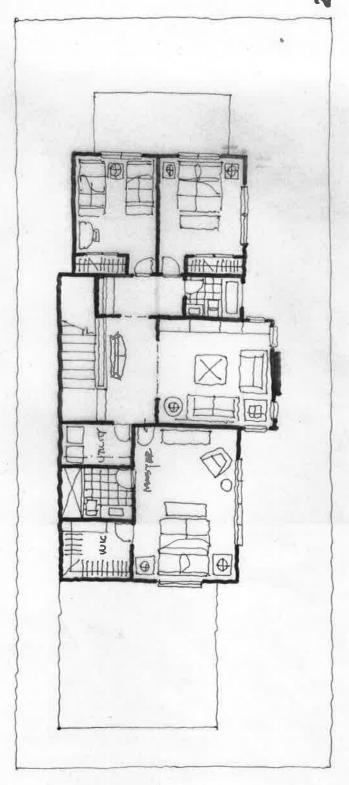


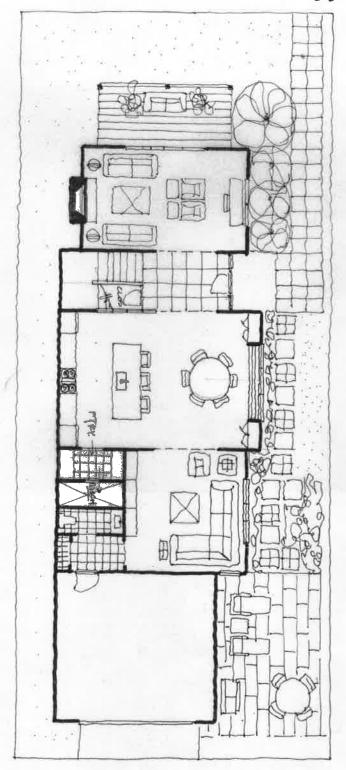


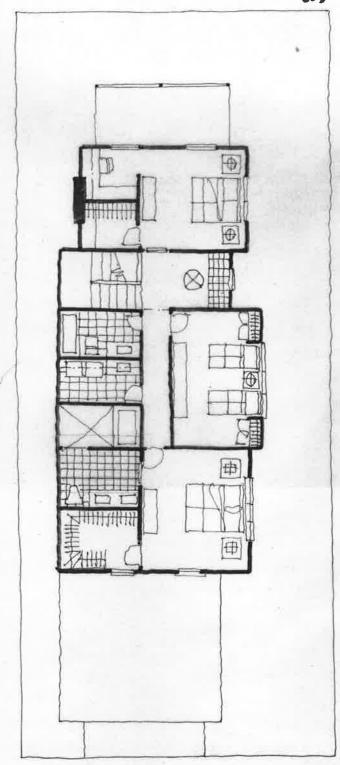




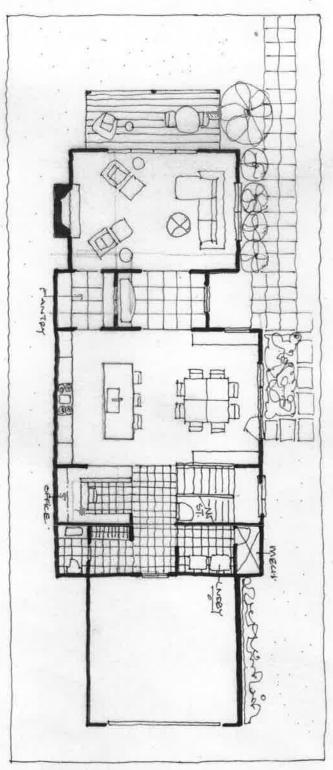


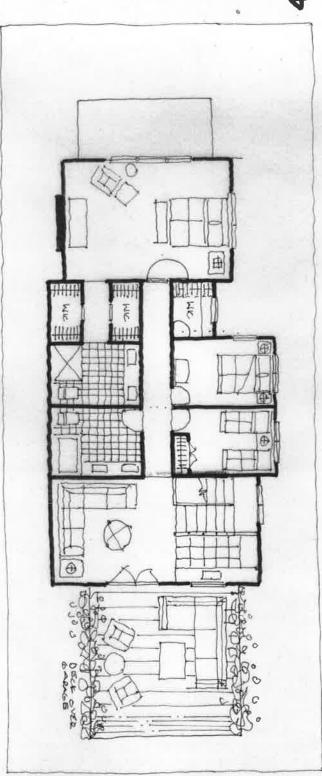


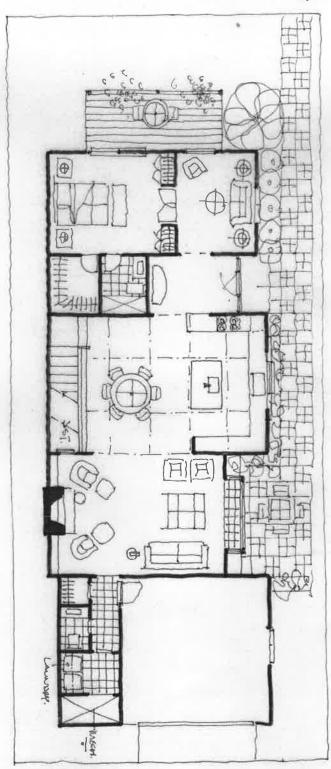














## Exhibit D 1 of 7

- According to the U.S. Department of Energy, Health E Community Enterprise is in a select group
  of top builders in the nation who have certified one or more homes that meet or exceed Zero
  Energy Ready Home guidelines for excellence in performance and energy efficiency.
- As a committed DOE partner who provides certified Zero Energy Ready Homes, Health E
   Community Enterprise is in the top one percent of builders in the country meeting the
   extraordinary levels of excellence in energy and performance specified in the national program
   requirements.
- As a Zero Energy Ready Home Partner, Health E Community Enterprise offers high performance homes that are so energy efficient, all or most of their annual energy consumption can be offset with renewable energy.
- Health E Community Enterprise builds homes certified to rigorous DOE Zero Energy Ready
  Home National Guidelines that are at least 40%-50% more energy efficient than a typical new
  home.
- Healthful environment:

According to the U.S. Department of Energy (DOE), every certified Zero Energy Ready Home has a comprehensive package of measures to help minimize dangerous pollutants, provide continuous fresh air, and effectively filter the air you breathe.

## Comfort Plus:

According to the U.S. Department of Energy (DOE), every certified Zero Energy Ready Home features high-efficiency insulation, windows, air sealing and space conditioning systems that help surround you with even temperatures, low-humidity, and quiet in every room on every floor.

## Advanced Technology:

According to the U.S. Department of Energy (DOE), every certified Zero Energy Ready Home features advanced technologies and practices recommended by leading housing experts from DOE's world-class research program, Building America.

## "Ultra efficient:

According to the U.S. Department of Energy (DOE), every certified Zero Energy Ready Home is so energy efficient a small solar electric system can easily offset most, or all, of its annual energy consumption. This is why it is called as Zero Energy Ready Home.

## Quality Built:

According to the U.S. Department of Energy (DOE), every certified Zero Energy Ready Home features high-efficiency appliances and equipment that are often associated with better quality construction. In addition, overall quality is enhanced with rigorous inspections, diagnostics, and checklists enforced by independent verifiers.

## Durability:

According to the U.S. Department of Energy (DOE), every certified Zero Energy Ready Home features advanced levels of energy savings, comfort, health, durability, quality and future performance that can be expected to stand the test of time and help enhance future value.

- Samuel Rashkin, Chief Architect for DOE Building Technologies Office, said "Zero Energy Ready
  Homes like those constructed by Health E Community Enterprise are the home of the future
  because they live, work, and last better with incredibly low or no energy costs. And what's
  exciting for American homebuyers, they are available today thanks to leading builders across the
  country."
- "Housing Innovation Award winners such as Health E Community Enterprise are leading a major housing industry transformation to zero energy ready homes. This level of performance is the home of the future because it improves the way Americans live by substantially reducing or eliminating utility bills, ensuring engineered comfort way beyond traditional homes, protecting health with a comprehensive package of indoor air quality measures, and helping maximize the largest investment of a lifetime," said Sam Rashkin, Chief Architect at the U.S. Department of Energy's Building Technologies Office.
- "The U.S. Department of Energy (DOE) knows there is one chance during home construction to lock in critical performance measures that can take the homeowner experience to a new level of efficiency, comfort, health, and durability. But it will take housing industry leadership to provide this opportunity to American homebuyers. That's why DOE proudly recognizes [builder name] as one of our nation's select 2015 Housing Innovation Award winning builders paving a path to this home of the future, today." Sam Rashkin, Chief Architect at the US Department of Energy's Building Technologies Office

## Build The Homes of the Future Today





HOUSING INNOVATION AWARD WINNER 2016





ENERGY READY HOME

HOUSING INNOVATION AWARD

WINNER 2017



## DOE ZERO ENERGY READY HOME™



## Health-E-Community **Enterprises**

The Villas at Rocketts Landing Richmond, VA



## BUILDER PROFILE

Health-E-Community Enterprises of Virginia, Williamsburg, VA Jay Epstein, jaye@hec-va.com 757-928-3434, www.vrlhomes.com Rater: Top Build Home Services Eric Bjerre eric.bjerre@topbuild.com

## FEATURED HOME/DEVELOPMENT:

## Project Data:

- Name: The Villas at Rocketts Landing
- Location: Richmond, VA
- Layout: 3 bdrm, 2.5 bath, 2 fl, 2,170 ft2
- Climate Zone: IECC 4A, mixed-humid
- Completion: May 2016
- Category: custom spec

## **Modeled Performance Data:**

- HERS Index: without PV 42, with PV 0
- Projected Annual Energy Costs: without PV \$1,151, with PV \$163
- Projected Annual Energy Cost Savings (vs home built to 2012 IECC): without PV \$1,257, with PV \$2,609
- Projected Annual Energy Savings: without PV 11,425 kW; with PV 21,020 kWh
- Added Construction Cost: without PV \$13,019; with PV \$36,315

Getting acknowledged as builder of the most energy-efficient home in the state was not good enough for Jay Epstein, owner of Health-E-Community Enterprises of Virginia. When he heard about the U.S. Department of Energy Zero Energy Ready Home program from Sam Rashkin in 2015, Epstein jumped on board. His first home constructed to the program specifications, a 2,170-ft<sup>2</sup> two-story in his Villas at Rocketts Landing development in Richmond, achieved a net zero and won Epstein a DOE 2016 Housing Innovation Award. Epstein is so sold on the program that he is already planning to make sure that the 75 homes at his next development, Walnut Farms in Williamsburg, will all be certified as DOE Zero Energy Ready.

Epstein is no stranger to energy-efficient home construction. He began constructing efficient homes in the 1970s. "I won the first Energy Value Housing Award the first year it came out in 1997, for affordable homes, and I won another EVH award the next year for production homes," said Epstein. He has been an EarthCraft builder since 2002 and it was that organization that acknowledged him as builder of the most efficient home in Virginia in 2014 and builder of seven of the most efficient homes on Virginia's top ten list in 2015. All of those homes, located at the Villas at Rocketts Landing, had Home Energy Rating System (HERS) scores of 16 to 18. With the DOE ZERH home, Epstein achieved a HERS score of 0, meaning the home will produce as much power as it uses in a year.

All DOE ZERH homes must be ENERGY STAR certified homes. The program also requires that homes be certified to the U.S. Environmental Protection Agency's Indoor airPLUS program. In addition, homes must meet the hot water distribution requirements of the EPA's WaterSense program and the insulation requirements of the 2012 International Energy Conservation Code. Homes must also have solar electric panels installed or have the conduit and electrical panel space in place for future installation of solar panels.



The U.S, Department of Energy invites home builders across the country to meet the extraordinary levels of excellence and quality specified in DOE's Zero Energy Ready Home program (formerly known as Challenge Home), Every DOE Zero Energy Ready Home starts with ENERGY STAR Certified Homes Version 3.0 for an energy-efficient home built on a solid foundation of building science research. Advanced technologies are designed in to give you superior construction, durability, and comfort; healthy indoor air; high-performance HVAC, lighting, and appliances; and solar-ready components for low or no utility bills in a quality home that will last for generations to come.



## What makes a home a DOE ZERO ENERGY READY HOME?

**HERS' Index** 

More Energy

Existing

Homes

Standard

**New Home** 

This Home

Zero Energy

Home

Less Energy

148

130

170

100

90

80

70

**F**6

30

20

BASELINE ENERGY STAR Certified Homes Version 3.0

2 ENVELOPE meets or exceeds 2012 IECC levels

- 3 DUCT SYSTEM located within the home's thermal boundary
- 4 WATER EFFICIENCY meets or exceeds the EPA WaterSense

Section 3.3 specs

LIGHTING AND APPLIANCES

ENERGY STAR qualified

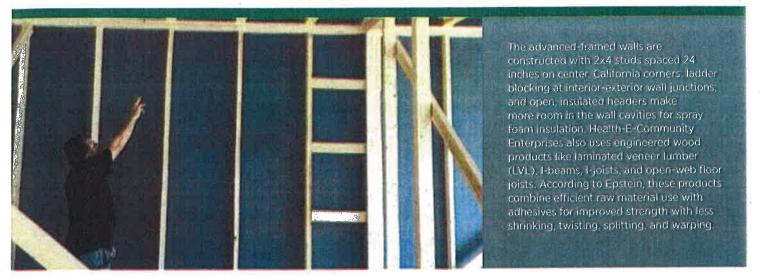


meets or exceeds the EPA Indoor airPLUS Verification Checklist

7 RENEWABLE READY meets EPA Renewable Energy-Ready Home. Epstein installed 6.8 kW of solar panels on the DOE ZERH award-winning home to achieve the HERS 0. What Epstein really likes about the DOE Zero Energy Ready Home program is that every home is energy efficient and ready for solar, even if the solar isn't installed yet. Epstein's plan with the Villas at Rocketts Landing was to put solar panels on every one of the 45 homes. He found that this move limited buyers in the local market. "The appraisers felt we were limiting ourselves to the 1% of the market that wants solar. Sam (Rashkin the DOE chief architect for the Zero Energy Ready Home program) has opened the market place from that 1% to 100%, by getting the baseline raised to HERS 40s. With future communities, I'll build the certified energy-efficient homes and let the buyers decide when they want to add the solar. With the DOE ZER homes we hit 100% of the market because home buyers can choose what level of PV they want at the time of purchase but they will all have a HERS rating in the 40s," said Epstein.

At Rocketts Landing, Epstein sold 28 of the homes with solar panels installed. Buyers had a choice of purchasing a home with a 4.2-kW, 5.4-kW, or 6.8-kW PV system. The 6.8-kW system would yield a net zero energy home while the 4.2-kW or 5.4-kW system (depending on home size) would cut energy costs to less than \$1.50 per day. Epstein is so certain of the bill savings that his company offers home buyers a guarantee—if their energy bills exceed \$1.50 per day averaged over the course of a year, Health-E-Community Enterprises will pay the difference. The award-winning home, built on spec, was the first home built as net zero. At his newest development, Walnut Farms in Williamsburg, all 75 homes will be DOE Zero Energy Ready certified and home owners will have three options: zero energy-ready, \$1.50/day (with 5.4 kW of solar panels installed), or net zero (with 6.8 kW of solar panels installed). Even without the PV installed, all of the homes will have HERS ratings in the 40s.

To achieve these high energy efficiency levels, Health-E-Community Enterprises starts with a highly insulated thermal building envelope. The foundation is a sealed, insulated crawl space that is constructed using all of the water-management techniques required by the EPA's Indoor airPLUS program including good site grading, footing drains, and exterior below-grade water proofing. Health-E-Community Enterprises insulated and air sealed the rim band with closed-cell spray foam and insulated the crawl space sidewalls along the interior with R-11 fiberglass blankets. The crawl space access door is air sealed with a commercially available gasket. "Conditioned crawl spaces virtually eliminate moisture problems experienced with conventional crawl spaces. We bring the crawl space into



the thermal envelope with a supply line from the air handler and a return and essentially convert it into a conditioned shallow basement. The crawl space is now conditioned and dry, winter and summer," said Epstein.

Instead of OSB, Health-E-Community Enterprises sheathed the advanced-framed walls with R-5 graphite-enhanced rigid foam sheathing then filled the wall cavities with 2.5 inches (R-17) of polyurethane closed-cell spray foam, which provides insulation and air sealing, and adds some structural strength to the walls. The sheathing is covered with durable fiber cement siding. These protection layers combined provide a total wall insulation value of R-22.

The first-floor wall studs are aligned with the second-floor wall studs and the 24-inch on-center roof trusses to help transfer roof loads to the ground. The roof is set at an 8:12 pitch, which closely matches the optimal angle for solar power production. The OSB roof decking is covered with 30-lb roofing felt and 30-year architectural shingles, with ice-and-water shield at the eaves and valleys. Soffit vents and a continuous ridge vent provide venting for the attic. The trusses have a 14-inch raised heel, which raises the roof height over the exterior wall top plates allowing the full depth of R-50 blown cellulose. Before installing the blown insulation, the top plates over the exterior walls and interior partition walls were sealed with open-cell spray foam, which both air seals and insulates these wall-to-ceiling junctures. The attic access ladder has an air-sealing zippered cover that is topped with R-50 of batt insulation. Jump ducts were installed in the upper floor ceiling to equalize air pressures between the bedrooms and hallways. Caulk and spray foam were used to carefully seal around these and other penetrations through the ceiling.

The spray foam insulation and air sealing measures contributed to an air-tight draft-free home. As part of the home energy rating assessment, the home was tested for whole-house air tightness and found to have an air leakage rate of only 1.23 air changes per hour at 50 Pascals, well below the 3 ACH 50 required in the 2015 International Energy Conservation Code. To provide fresh air, an energy recovery ventilator (ERV) was installed. The ERV directs outside air to the return side of the heating system air handler where it is filtered with a MERV 13 filter then circulated throughout the house. "Buildings can never be built too tight. However, they can be under ventilated," said Epstein.

## HOME CERTIFICATIONS

DOE Zero Energy Ready Home Program

ENERGY STAR Certified Homes Version 3.0

**EPA Indoor airPLUS** 





Every DOE Zero Energy Ready Home combines a building science baseline specified by ENERGY STAR Certified Homes with advanced technologies and practices from DOE's Building America research program.



Ducts are sealed with mastic and located within the conditioned space of the home in open-web floor joists.

The HVAC system consists of an air-source heat pump with a heating efficiency of 8.5 HSPF and a cooling efficiency of 15.3 SEER.

The home has a 50-gallon heat pump water heater with an efficiency of 3.25 EF. "They are up to 70% more efficient than a standard electric water heater," said Epstein. The heat pump is equipped with a push-button-activated on-demand pump system that delivers hot water to any location in less than 5 seconds. LED lighted buttons indicate when the hot water is ready at each fixture. According to Epstein, besides the energy savings, this provides the

home owner with a yearly savings of \$100 for water and sewage treatment. The system is also expected to save the household 8,000 to 10,000 gallons of water that they don't need to buy and the local municipality doesn't need to treat. "This is a win for the municipality, the home owner, and the environment," said Epstein.

An energy management system was installed that tracks energy usage and solar power production. The system can provide trouble shooting, remote capabilities, and data reporting on past performance, among other features. To help control phantom power losses from cell phone chargers, Epstein installed three USB electric outlets that can accommodate a USB charger directly.

The home's 6.8-kW PV system was sized to meet all of the home's power demand over the course of the year. The grid-tied system uses a new inverter technology that allows it to provide power to the home even if the grid goes down. Standard inverters will shut down if grid power is shut off due to an outage and will stay off until grid power is restored by the utility company. The new inverter realizes that no power is coming in from the grid and comes back on to send the PV power to a dedicated sub-panel for critical uses in the home, without sending power offsite. The inverter is also wired to move power to a storage system, should the home owner wish to add battery storage in the future.

With the PV system and all of the energy-efficiency features installed, power bills should be about \$14 a month. The home owners are expected to save \$2,600 per year in energy costs compared to a home built to the 2012 International Energy Conservation Code.

"The overall objective when designing these homes was to successfully integrate high levels of comfort and indoor air quality with low energy usage enhanced by a PV system. Health-E-Community Enterprises takes pride in building an exceptional home that can perform at this level for middle-income customers," said Epstein.

Photos courtesy of Health-E-Community Enterprises of Virginia

## KEY FEATURES

- DOE Zero Energy Ready Home Path: Performance.
- Walls: R-22 walls of 2x4 24" o.c. studs, advanced framed, house wrap. 2.5" R-17 polyurethane closed-cell spray foam, R-5 graphite-enhanced rigid foam sheathing, fiber-cement siding.
- **Roof:** 30-yr architectural shingles, continuous ridge vent.
- Attic: Vented with R-50 blown cellulose, 14" raised heel trusses. All top plates sealed with open-cell foam, attic stair has air-sealing insulated cover.
- Foundation: Sealed, conditioned crawl space. R-11 fiberglass blanket sidewalls, rim band insulated with closed-cell spray foam.
- Windows: R-5 triple-pane, vinyl-framed, low-e, argon-filled, U=0.20, SHGC=0.24.
- Air Sealing: 1.23 ACH 50.
- · Ventilation: ERV, MERV 13 filters.
- HVAC: Heat pump, 8.5 HSPF, 15.3 SEER, all ductwork between floors, transfer grilles for pressure balancing from bedrooms.
- Hot Water: 50-gal heat pump water heater, 3.25 EF.
- Lighting: 100% LED, two ENERGY STAR ceiling fans.
- Appliances: ENERGY STAR refrigerator, dishwasher, clothes washer & dryer.
- Solar: 6.8-kW PV with storage-capable inverter.
- Water Conservation Features: Push button recirculating pump.