

TOWN OF HAYMARKET PLANNING COMMISSION

REGULAR MEETING ~ AGENDA ~

Emily Lockhart, Town Planner http://www.townofhaymarket.org/

15000 Washington Street, Suite 100 Haymarket, VA 20169

Wednesday, May 22, 2019

7:00 PM

Council Chambers

I. Call to Order

II. Pledge of Allegiance

III. Minutes Approval

- 1. Planning Commission Work Session Apr 22, 2019 6:30 PM
- 2. Planning Commission Public Hearing/Regular Meeting Apr 22, 2019 7:00 PM

IV. Citizen's Time

V. Agenda Items

1. Morais Vineyard, Aroma II Site Plan Review

VI. New Business

1. SUP#2019-003, Wonderful Haymarket, LLC - 14901 Washington Street -- Informational Purposes

VII. Old Business

1. SUP#2019-001 - Williams Holdings 6604 & 6608 Jefferson Street, Mixed Use Development

VIII. Architectural Review Board Update

IX. Town Council Update

X. Adjournment

Minutes Acceptance: Minutes of Apr 22, 2019 6:30 PM (Minutes Approval)



TOWN OF HAYMARKET PLANNING COMMISSION

WORK SESSION ~ MINUTES ~

Emily Lockhart, Town Planner http://www.townofhaymarket.org/

15000 Washington Street, Suite 100 Haymarket, VA 20169

Monday, April 22, 2019

6:30 PM

Council Chambers

A Work Session of the Planning Commission of the Town of Haymarket, VA, was held this evening in the Council Chambers, commencing at 6:30 PM.

called the meeting to order.

I. Call to Order

Chairman Matt Caudle: Present, Councilman Steve Shannon: Present, Commissioner Nicholas Pulire: Present, Commissioner Tony James: Absent, Commissioner Aayush Kharel: Present.

II. Walk to Town Park

After calling the meeting to order, Chairman Caudle invites the Commissioners to walk up to the town park to look at and discuss placement of the playground.

At this time, the Commission leave the Council Chambers to walk to the park.

The Chairman asks Ms. Lockhart to request a joint meeting with the Town Council to discuss playground location.

III. Adjournment

1. Motion to Adjourn

RESULT:	ADOPTED [UNANIMOUS]
MOVER:	Matt Caudle, Chairman
SECONDER:	Steve Shannon, Councilman
43/50	M ((O O O

AYES: Matt Caudle, Steve Shannon, Nicholas Pulire, Aayush Kharel

ABSENT: Tony James

Submitted:	Approved:
Shelley M. Kozlowski, Clerk of the Council	Matt Caudle, Chairman



TOWN OF HAYMARKET PLANNING COMMISSION

PUBLIC HEARING/REGULAR MEETING ~ MINUTES ~

Emily Lockhart, Town Planner http://www.townofhaymarket.org/

15000 Washington Street, Suite 100 Haymarket, VA 20169

Monday, April 22, 2019

7:00 PM

Council Chambers

A Public Hearing/Regular Meeting of the Planning Commission of the Town of Haymarket, VA, was held this evening in the Council Chambers, commencing at 7:00 PM.

Chairman Matt Caudle called the meeting to order.

I. Call to Order

Chairman Matt Caudle: Present, Councilman Steve Shannon: Present, Commissioner Nicholas Pulire: Present, Commissioner Tony James: Absent, Commissioner Aayush Kharel: Present.

II. Pledge of Allegiance

III. Town Planner Updates

Ms. Lockhart discusses with the Commission regarding public notice and the public hearing process. She states that in the evening's packet is the Town Ordinances and State Code referencing these issues. It is the consensus of the Commission to receive an email prior to the public notice.

1. Public Hearing Process and Notifications

IV. Minutes Approval

1. Planning Commission - Regular Meeting - Mar 18, 2019 7:00 PM Councilman Shannon moves to accept the minutes from the March 18, 2019 Planning Commission meeting. Commissioner Pulire seconds the motion.

RESULT: ACCEPTED [UNANIMOUS]

MOVER: Steve Shannon, Councilman

SECONDER: Nicholas Pulire, Commissioner

AYES: Matt Caudle, Steve Shannon, Nicholas Pulire, Aayush Kharel

ABSENT: Tony James

V. Public Hearing -- SUP#2019-001, Williams Holdings, 6604 & 6608 Jefferson Street

Chairman Caudle opens the public hearing.

Maria Turner, 6791 Fayette Street, addresses the Commission. Likes the look of the project, however, shares concerns with traffic, infill and lack of sidewalks with this proposed development.

Bob Weir, 6853 St. Paul Drive, questions why they are deviating from past practice. He feels that this process for this application is not best practice or transparent. Feels the application is not ready for prime time and incomplete. Shares concerns with the dimensions of the building, traffic impact and a special use permit definition for the proposed use. Recommends returning this to the applicant and scheduling a new public hearing after it is complete and Planning staff comments are addressed.

Joseph Pasanello, former Councilman and Vice Mayor, agrees with most of the comments made this evening and feels the process is backwards. He asks that the Commission take their time with this proposed development.

With no one else to speak, the Chairman closes the public hearing.

1. SUP#2019-001, Williams Holdings 6604 & 6608 Jefferson Street, Mixed Use Development

VI. Citizen's Time

Maria Turner, expresses concerns with the proposed two houses on the corner of Fayette and Jefferson specifically traffic and parking. Also shares concerns with the Quiet Zone being dropped from the budget and should look at developments in close proximity to subsidize the Quiet Zone as well as clean up the creek. She also states that she would like to remind Chief Lands that Fayette is a no thru truck road. She concludes that if the homes are not demolished before Zip Trip, she recommends canceling.

Joe Pasanello, thanks the Planning Commission for keeping the Quiet Zone in the CIP and discusses some funding options.

Bob Weir, St. Paul Drive, also shares concerns about the Quiet Zone expenditures and grants and references town minutes from January 6, 2014.

Dottie Leonard, 14801 Washington Street, expresses to the commission to use their sound wisdom when making a decision on tonight's proposed development.

With no one else to speak, Chairman Caudle closes Citizen's Time.

VII. Agenda Items

1. Crossroads Village Center Final Site Plan Review

Town Planner, Emily Lockhart, addresses questions that she received from Commissioner Pulire.

Mike Massey from the engineering firm of Ross France, addresses the Commission to discuss the pedestrian access and community speed limit as well as pump station regarding landscaping and buffering, odor and noise. He also addresses a question concerning playgrounds in the commercial area. Mr. Massey states that it is not conducive, however, there will be outdoor seating areas. He also addresses questions about pad site 1, 2, and 3. He states that right now they are just pad sites with no defined users. Commissioner Pulire shares concerns with pedestrian/vehicle interaction in the B-2 zone.

Igor Levine, applicant, speaks more on the pump stations stating that they will sit back roughly a couple hundred feet or more from Sherwood Forest and there will be a 6 foot fence.

Commissioner Kharel moves the Haymarket Planning Commission approve the Crossroads Village Center Final Site Plan with a conditional approval. The approval shall be conditional on the following items being addressed and approved by the Town Planner and Town Engineer; outstanding landscape comments, additional screening and buffering for the pump station and traffic calming. Councilman Shannon seconds the motion.

There is no discussion on the motion.

RESULT: ADOPTED [UNANIMOUS]

MOVER: Aayush Kharel, Commissioner

SECONDER: Steve Shannon, Councilman

AYES: Matt Caudle, Steve Shannon, Nicholas Pulire, Aayush Kharel

ABSENT: Tony James

2. Haymarket Diner Site Plan, 6608 James Madison Highway

Ms. Lockhart gives a brief history of the property and explains plans for the parking lot.

Councilman Shannon moves the Haymarket Planning Commission approve the Haymarket Diner Site Plan for 6608 James Madison Highway. Commissioner Kharel seconds the motion.

There is no discussion on the motion.

Minutes Acceptance: Minutes of Apr 22, 2019 7:00 PM (Minutes Approval)

RESULT: ADOPTED [UNANIMOUS]

MOVER: Steve Shannon, Councilman

SECONDER: Aayush Kharel, Commissioner

AYES: Matt Caudle, Steve Shannon, Nicholas Pulire, Aayush Kharel

ABSENT: Tony James

VIII. New Business

1. SUP#2019-001 - Williams Holdings, 6604 & 6608 Jefferson Street Special Use Permit

Ms. Lockhart shares concerns with the number of units proposed as well as the size of the building. Regarding the second concern, she indicates that there is a revised submission that is in the agenda packet.

The applicant, Michelle Williams, addresses the Commission. She introduces her team and describes her plan for her proposed building. She states that this is a mixed use development. She adds that the building will be 4 stories with 5 retail spaces on the ground level and 28 condominiums (1 and 2 bedrooms) with a large terrace and 63 parking spaces. She further adds that they plan on building the building to the property line in the front and a 10 foot buffer in the back. She further describes the elevations of the building and landscaping. She concludes that there are 3 special exceptions that she is asking from the town which include parking space exceptions, landscape buffer exception and building to the lot line in the front.

Questions and concerns from the Commission include traffic congestion, setback requirements and overflow parking.

Ms. Lockhart recommends to defer a decision this evening until some of the questions concerning the project can be addressed.

2. Morais - Aroma II Site Plan Review

Ms. Lockhart gives a brief overview of the applicant's site plan.

Lee Baines, Civil Engineer for Morais properties, addresses the Commission. He discusses parking, exit/entrances on the property, landscape buffer, lighting and hours of operation with the Commission and Town Planner. The Commission defers action until the next meeting.

Chairman Caudle asks the Town Planner to reach out to the neighbors to update them on the plans.

IX. Old Business

1. McDonald's Site Plan Review, 6740 Lea Berry Way

Ms. Lockhart shares the proposed revisions to the McDonald's site plan. She states that one of the conditions was that they return to the Planning Commission. She adds that they are closing the first entrance to help resolve some of the stacking issues and that there will only be one exit and entrance into the parking lot. She further adds that she and the Town Engineer are still addressing some comments, however, she states that if the Commission feels ready she recommends a conditional approval.

Councilman Shannon moves that the Haymarket Planning Commission approve the McDonald's site plan as presented with a conditional approval. The conditions would be to address all outstanding Town Engineer and Town Planner comments. Commissioner Pulire seconds the motion.

There is no discussion on the motion.

2. Motion

Minutes Acceptance: Minutes of Apr 22, 2019 7:00 PM (Minutes Approval)

RESULT: ADOPTED [UNANIMOUS]

MOVER: Steve Shannon, Councilman

SECONDER: Nicholas Pulire, Commissioner

AYES: Matt Caudle, Steve Shannon, Nicholas Pulire, Aayush Kharel

ABSENT: Tony James

X. Architectural Review Board Update

Commissioner Kharel, ARB Liaison, states that the ARB had just a few typical COAs at the last meeting.

XI. Town Council Update

Councilman Shannon, Town Council Liaison, states that they voted on the Crepe Myrtle trees and discussed the Town Center, Proposed Budget and Sherwood Forest.

Ms. Lockharts adds that due to a scheduling conflict with a Town Council meeting, the Planning Commission May meeting will need to be rescheduled. The Commission agrees on May 22, 2019.

XII. Adjournment

1. Motion to Adjourn

RESULT: ADOPTED [UNANIMOUS]

MOVER: Steve Shannon, Councilman

SECONDER: Aayush Kharel, Commissioner

AYES: Matt Caudle, Steve Shannon, Nicholas Pulire, Aayush Kharel

ABSENT: Tony James

Submitted:	Approved:	
Shelley M. Kozlowski, Clerk of the Council	Matt Caudle Chairman	



Emily K. Lockhart

Town Planner and Zoning Administrator

MEMORANDUM

TO: Planning Commission

FROM: Emily K. Lockhart

DATE: May 16, 2019

SUBJECT: Aroma II, Morais Vineyard, 14871 Washington Street

The applicant, Morais Vineyard has addressed the Town Engineer's comments and other outside agency comments. I am awaiting the Town Engineer's second comment sheet and will present it at the Planning Commission meeting.

Per discussion with the Planning Commission and the Architectural Review Board, the applicant has supplied a revised Landscape Plan to address the concerns. The new landscaping plan adequately addresses the concerns.

Town Planner recommends Conditional Approval for the Morais Site Plan. The approval is conditional on all outstanding comments are addressed and shown to the Town Planner prior to final signatures.

Draft Motion:

"I move the Planning Commission to approve the Aroma II Site Plan with the condition that all outstanding comments from the Town Engineer be addressed prior to the final approval."

Or Alternate Motion.

3. No title report was furnished. However, this property is subject to any existing easements, covenants and servitudes of record.

4. All erosion and sediment control practices shall be constructed and maintained in accordance with the minimum standards and specifications of the 1992 Virginia Erosion and Sediment Control Handbook and County ordinances. Removal of said controls shall be authorized by the County inspector but, at least, shall not be removed until permanent vegetative cover is established on all

5. Construction should be sequenced so that grading operations can begin and end as quickly as possible. Sediment trapping measures, such as silt fences, shall be installed and made functional before any land disturbing activity begins.

6. Prior to development, the limits of clearing shall be clearly marked on the property and suitable protective barriers shall be erected five (5) feet outside the dripline of any tree or stand of trees to be preserved within 100 feet of the construction footprint. The barriers shall remain erected throughout all phases of construction. The storage of equipment, materials, debris or fill shall not be allowed with the area protected by the barrier.

7. Engineered fill and backfill shall be approved select materials and shall be placed in six to eight inch layers and compacted at optimum moisture, plus or minus two percent, to a density of not less than 95 percent in accordance with A.A.S.H.T.O. T-99 or A.S.T.M. D-698.

8. No subsurface investigation has been performed by Hinchey and Baines, plc. to attest to the soil conditions or the presence of toxic or contaminated waste.

9. It shall be the responsibility of the contractor or developer to have sufficient soils and foundation testing performed to determine that the support values and C.B.R. 's are adequate for the standards shown on this plan.

10. All construction involving problem soils must be performed under the full-time inspection of a professional geotechnical engineer.

11. The contractor shall perform necessary grading to preclude the ponding of water on roadways and buildable areas.

12. There are no known gravesites on this site. In the event gravesites are discovered during construction, the Town Planning Office should be notified immediately. All activities must cease and shall not resume until authorization to proceed is granted by the Town Planning Office. Gravesites shall be protected in accordance with state law.

13. Prior to clearing and grading on slopes 25% or greater, all surface drainage will be routed away from the area to be graded.

14. All fill materials and their subgrade will be approved by the soils engineer for this site.

15. No portion of the land hereon is located in A 100-year floodplain area.

16. All wetland permits required by federal, state, and local laws and regulations shall have been obtained prior to initiating grading or any other on-site land disturbing activity.

17. The developer shall be responsible for the relocation of any utilities which may be required as a result of this project. The relocation should be done prior to construction.

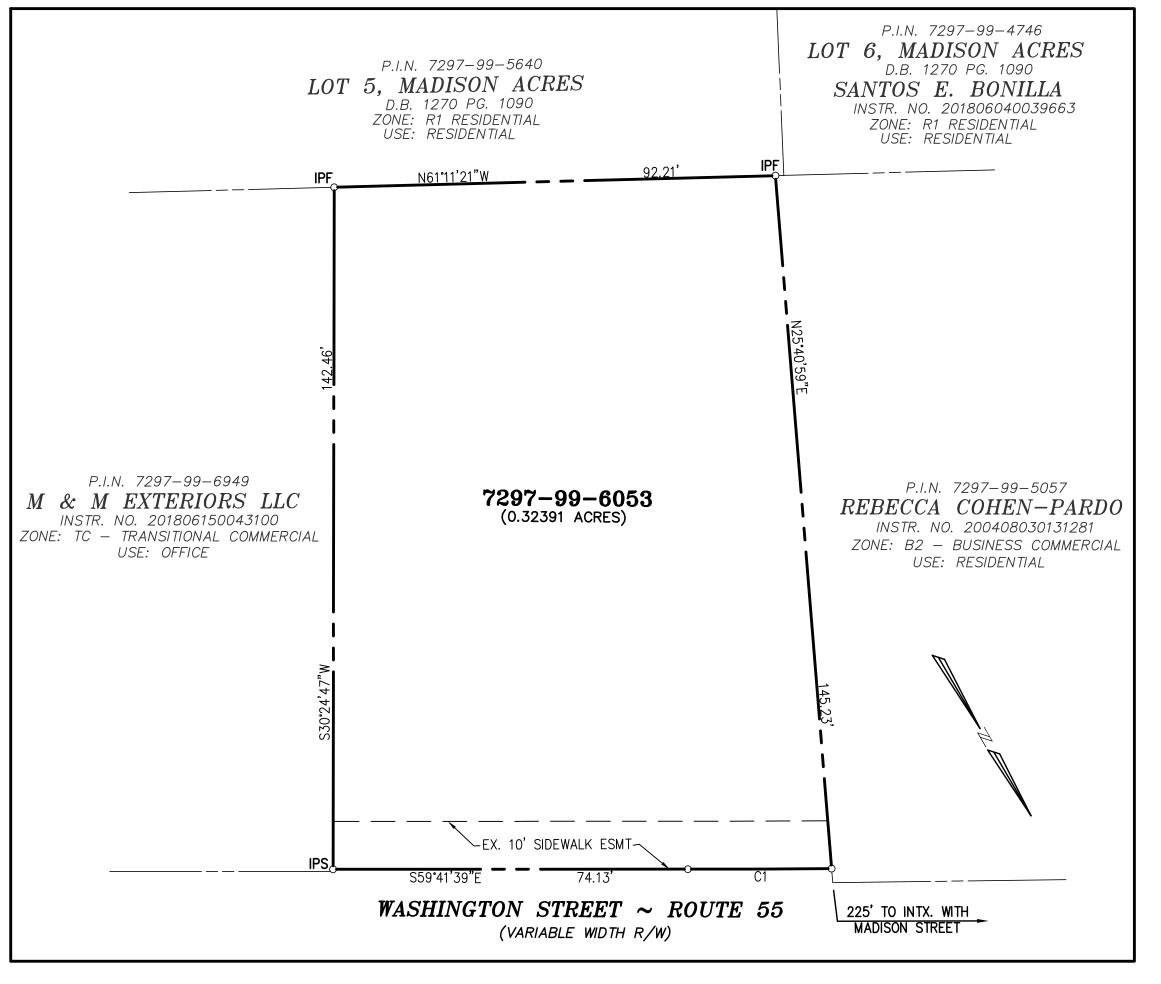
18. The developer shall be responsible for any damage to the existing streets and utilities which occurs as a result of this project within or contiguous to the existing right-of-way.

19. All construction in street right-of-way shall be in conformance with standards and specifications of the Virginia Department of Transportation and the Town of Haymarket.

20. There are no known historic buildings or features on site.

SITE DEVELOPMENT PLAN AROMA II

TOWN OF HAYMARKET, VIRGINIA



BOUNDARY INFORMATION

SCALE: 1" = 20'

		(CURVE TA	BLE		
CURVE	DELTA	RADIUS	ARC	TANGENT	CHORD BEARING	CHORD
C1	0°27'09"	3800.72°	30.02	15.01	N59°54'22"W	30.02

APPROVAL BLOCK

ENGINEER'S CERTIFICATION

THE PROPERTY SHOWN HEREON IS IN THE NAME OF MORAIS LAND RECORDS OF THE PRINCE WILLIAM COUNTY, VIRGINIA.

017596 LICENSE NUMBER

NOTICE REQUIRED

CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION OR BLASTING AT LEAST TWO WORKING DAYS, BUT NOT MORE THAN TEN WORKING DAYS, PRIOR TO COMMENCEMENT OF CONSTRUCTION.

PROPERTIES INC. IN INSTRUMENT 201812210090638 AS FOUND IN THE 4-17-2019



VICINITY MAP 1'' = 1000'

SITE PLAN NOTES

1. SITE IDENTIFICATION: 7297-99-6053

14871 WASHINGTON STREET HAYMARKET, VA 20169

2. OWNER/APPLICANT: MORAIS PROPERTIES, INC.

10123 RESIDENCY RD. MANASSAS, VA 20110

AL MORGAN (571) 436-1096 (OWNER'S REPRESENTATIVE)

3. TOTAL SITE AREA: 0.3256 ACRES

4. PROPOSED DEVELOPMENT: 356 SF ADDITION TO AN EXISTING DWELLING, CONVERSION OF THE DWELLING TO A WINE TASTING ROOM WITH ASSOCIATED PARKING. GROSS FLOOR AREA WITH ADDITION = 1585 SF.

5. BOUNDARY AND TOPOGRAPHICAL INFORMATION PROVIDED BY DODD & ASSOCIATES, PLLC ON A PLAT DATED DECEMBER 20, 2018.

6. ZONING: TRANSITIONAL COMMERCIAL

CURRENT USE: RESIDENCE PROPOSED USE: RESTAURANT (SMALL)

SETBACKS: FRONT: 10' MINIMUM FROM ALL STREET RIGHTS-OF-WAYS REAR YARD: 0' ABUTTING COMMERCIAL, 25' ABUTTING RESIDENTIAL SIDE YARD: 0' ABUTTING COMMERCIAL, 25' ABUTTING RESIDENTIAL

MAX. LOT COVERAGE: 85% (12,056 SF)

MAX. BUILDING HEIGHT: 35' - 2-STORIES

PROPOSED BUILDING HEIGHT: 13'-2" - 1 STORY

7. REQUIRED PARKING - SMALL RESTAURANT: 1 SPACE PER 100 SF GFA = 1585/100 = 16 SPACES

PROPOSED PARKING: 14 SPACES INCLUDING 1 HANDICAP SPACE

8. VEHICLE TRIP GENERATION:

ITE CODE: 925 (DRINKING PLACE) PEAK HOUR: PM TRIPS IN = 12PM TRIPS OUT = 6 $TOTAL\ TRIPS = 18$

9. THE PROPOSED BUILDING IS TO BE SERVED BY PRINCE WILLIAM COUNTY SERVICE AUTHORITY. WATER AND SANITARY SEWER CONNECTIONS SHALL BE MADE TO EXISTING SERVICE LINES.

10. LIGHTING AT THE ENTRANCES SHALL BE PROVIDED BY THE TWO EXISTING STREET LAMPS. ADDITIONAL LIGHTING SHALL BE PROVIDED BY WALL-MOUNTED LIGHTS.

11. ALL CONSTRUCTION TO CONFORM TO TOWN OF HAYMARKET STANDARDS AND

12. THERE IS NO RPA ON THE SITE

SHEET INDEX

1. COVER SHEET

2. GENERAL NOTES & DETAILS

3. EXISTING SITE CONDITIONS AND DEMOLITION PLAN

4. GEOMETRIC LAYOUT

5. GRADING PLAN

6. DRAINAGE MAPS - QUALITY

7. DRAINAGE MAPS - QUANTITY 8. SWM CALCULATIONS - RRM

9. SWM CALCULATIONS - HYDRAGRAPHS

10. EROSION & SEDIMENT CONTROL PLAN

11. EROSION & SEDIMENT CONTROL NOTES & NARRATIVE

Sewer Shed: NB

12. LANDSCAPE PLAN, NOTES & DETAILS

S/A Plan Number: SA2019-0114 Water Service Level: HM

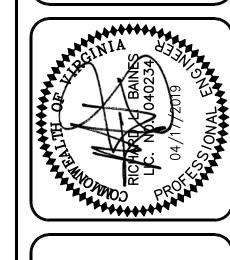
COPYRIGHT 2019 @ HINCHEY & BAINES, PLC

PLANNING (540) 829–2220 (540) 829–2239

AND HIMCHEY

ENGINEERING

125 EAST DAVIS STREET
SUITE 201
CULPEPER, VIRGINIA 227



AROMA

ET

SHE

COVER

SITE

of **12** FILE NO. 1402

SCALE: AS SHOWN

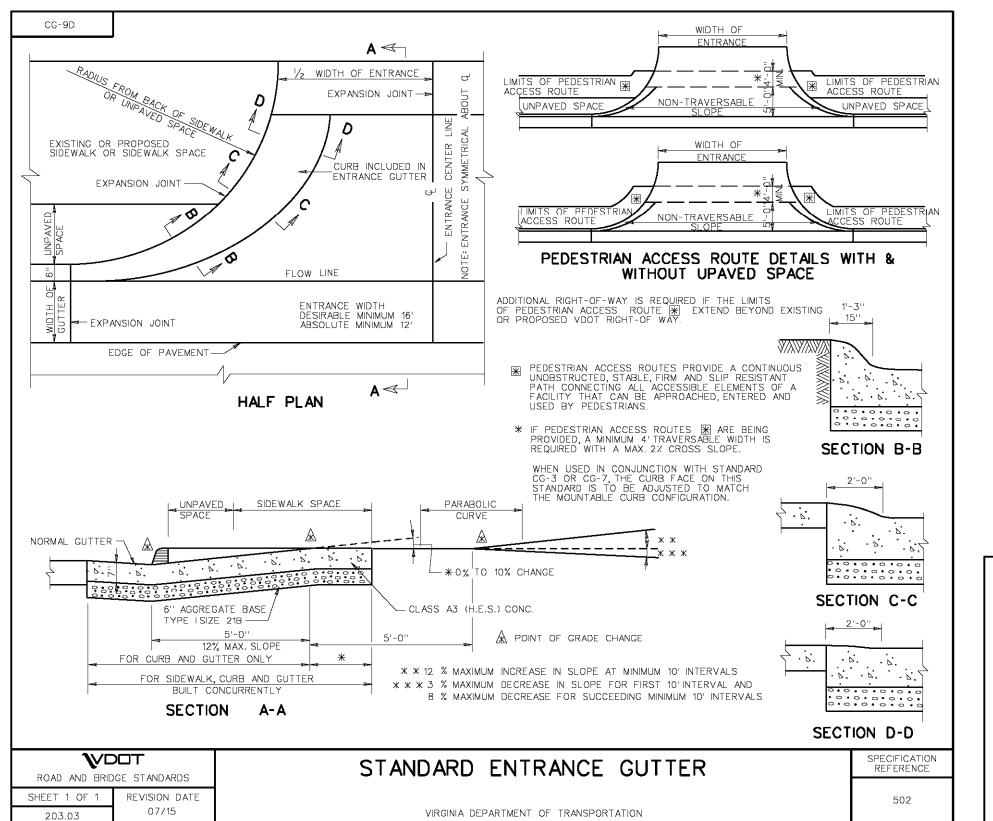
DATE: 3-27-2019

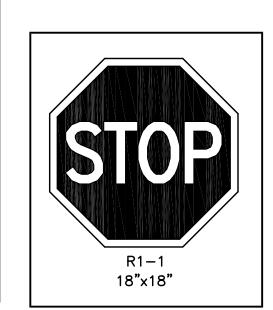
4-17-19 PER COMMENTS

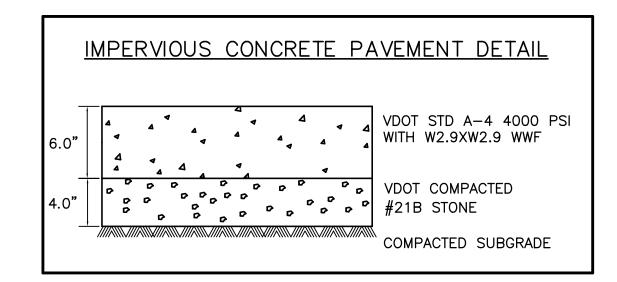
REVISIONS:

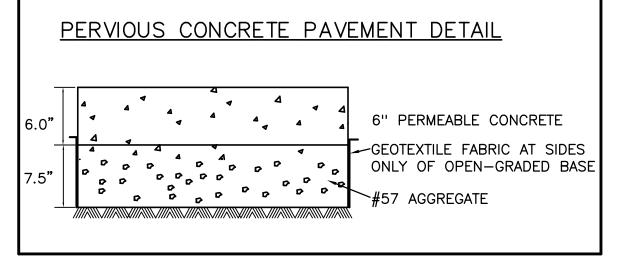
SHEET

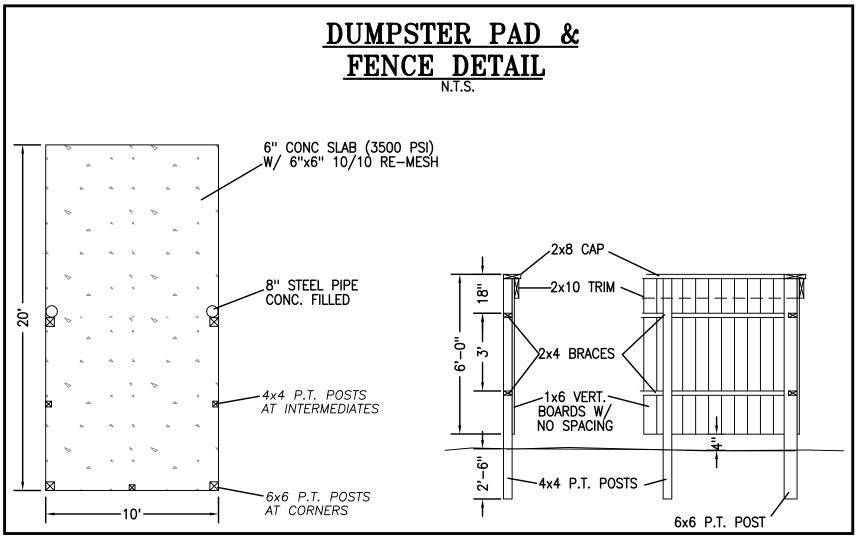
5.1.b











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DETAILS L NOTES &
AROMA I
SITEPLAN GENERAL

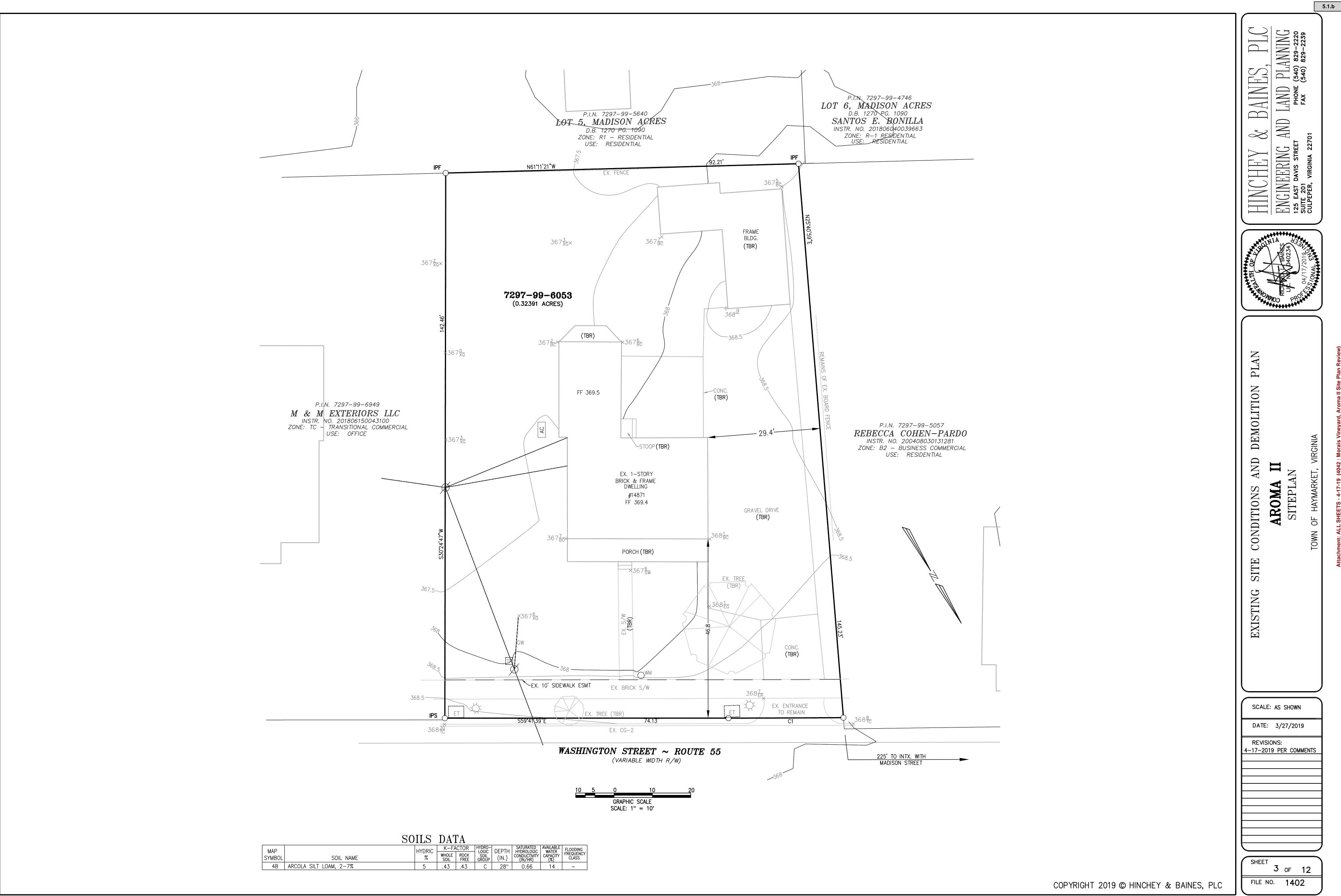
SCALE: AS SHOWN DATE: 3/27/2019

REVISIONS:

4-17-2019 PER COMMENTS

SHEET 2 of 12

FILE NO. 1402



LEGEND

IMPERVIOUS CONCRETE

PERVIOUS CONCRETE

LIMITS OF CONSTRUCTION

GEOMETRIC

REVISIONS:

4-17-2019 PER COMMENTS

DATE: 3/27/2019

4 of 12

FILE NO. 1402

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PWCSA NOTES

GENERAL NOTES

This plan approval is to permit a residential water connection to the existing utilities in Washington Street. This approval is valid until June, 2020. PWCSA does not guarantee the location, condition, or material of the existing utilities. The project is responsible to perform all work necessary to make the desired service connections. Other requirements may be applied pending how utilities and field conditions truly exist.

<u>Pre-Construction Requirements:</u> 1. The property owner must secure the professional services of a qualified contractor to perform the required work. The Service Authority only provided inspection service. Other than the meter, PWCSA does not provide and materials.

Construction Requirements:

1. PWCSA tap fees must first be paid. 2. A PWCSA utility permit will not be required; however the property owner is subject to acquire the necessary permits for the proposed work, including but not limited to, a pluumbing permit from Prince William County and a VDOT permit to work on the road. 3. The contractor shall call 703—898—3433 and schedule a pre—construction meeting with

PWCSA inspection staff prior to executing work. 4. All construction shall comply with applicable PWCSA Utility Standards Manual and Details. 5. All PWCSA punch list items shall be addressed to the satisfaction of the PWCSA Inspector prior to installing a water meter.

6. Information provided in this sketch plan is provided "as—is" without warranties of any kind, expressed or implied, including but not limited to warranties of accuracy for any particular purpose or use. The Service Authority will be held harmless from any direct or indirect claim based on this data. The Service Authority is not responsible for assumptions, calculations, designs or construction activities making use of, or derived from this plan. The Service Authority strongly reccommends that all elements of the existing infrastructure important to the design and construction of a project be checked by a professional engineer or surveyor.

1. The water line from the meter to the house is to be privately owned and maintained. The private service line must be sized appropriately to compensate for pressure losses due

to friction of the line size. 2. The water tap shall be made with a stainless steel saddle.

It is up to the owner to determine if an internal water booster pump is necessary to provide desired water pressure in the house.

It is up to the owner to determine if a pressure reducing valve (PRV) is needed to moderate pressures in the house. The Service Authority recommends use of an expansion tank with internal plumbing to

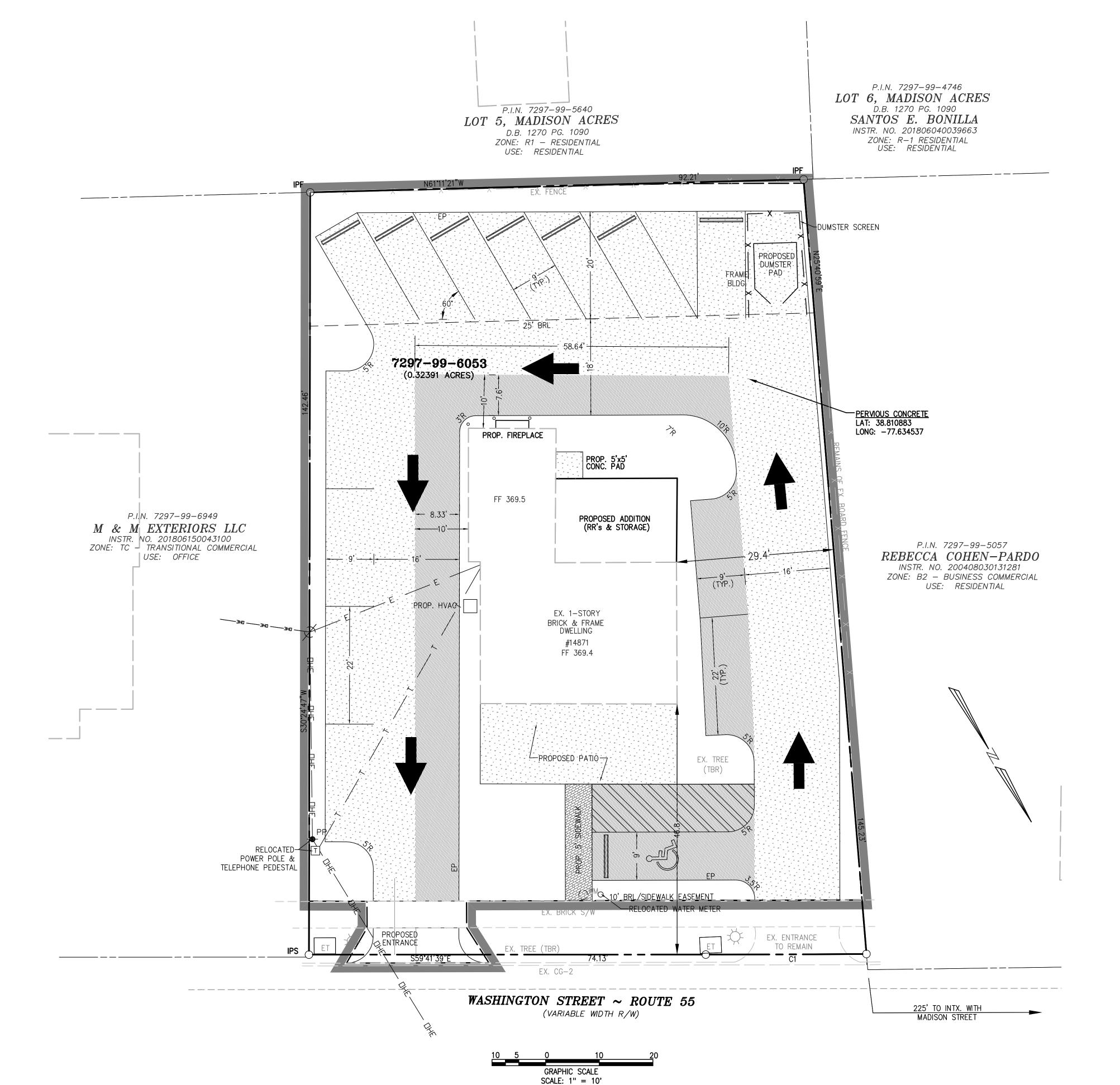
relieve pressure spikes. The Service Authority is not responsible for the effects of water system pressures on the design of private residential fire suppression systems.

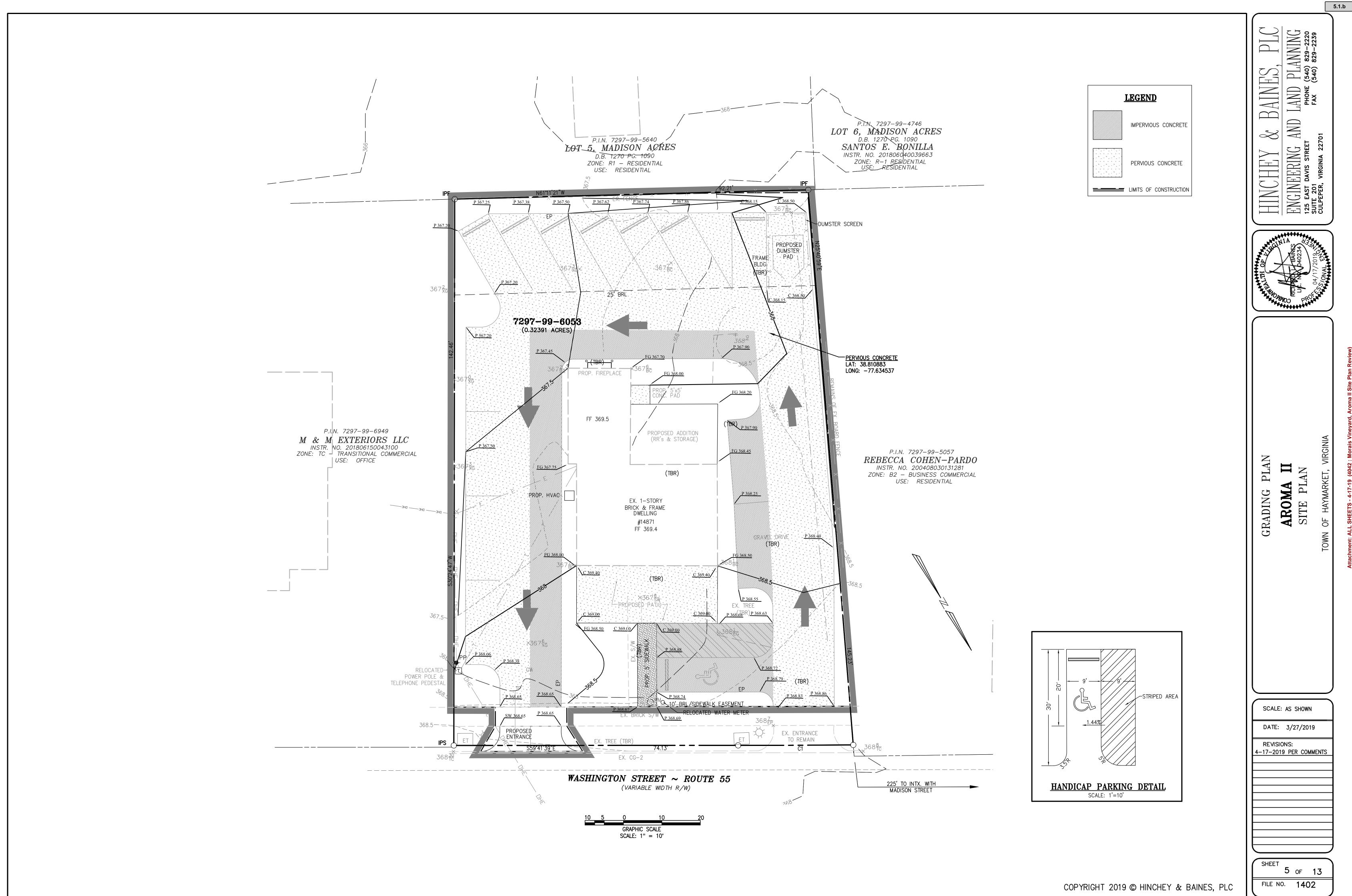
3. The existing well shall be abandoned per state and local requirements within 45 days of connecting the house to the public service.

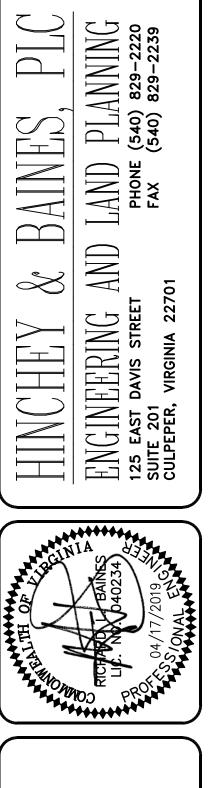
4. If there is an existing well, the well will be disconnected from the house prior to connecting to the public system. There will be no cross connection between the public supply and the well supply.

> WATER METER SIZING CALCULATIONS <u>FIXTURE</u> DISHWASHER <u>WSFU's</u> 1.4 ICEMAKER 2.8 SERVICE SINKS 3.0 BAR SINK 4.0 PANTRY SINK 2.0 2 LAVATORIES, PUBLIC 4.0 1 URINAL, PUBLIC, FLUSH TANK 10.0 30.2 2 WATER CLOSET, PUBLIC, TANK TOTAL: GALLONS PER MINUTE DEMAND = 23.3

METER SIZE REQUIRED: 1"







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5.1.b

PURPOSES QUALITY WATER **AROMA** FOR MAPS DRAINAGE

SITEPLAN

SCALE: AS SHOWN DATE: 3/27/2019

REVISIONS:

4-17-2019 PER COMMENTS

SHEET 6 of 12 FILE NO. 1402

7297-99-6053 (0.32391 ACRES) PROP. 5'x5' FF 369.5 P.I.N. 7297-99-6949

M & M EXTERIORS LLC

INSTR. NO. 201806150043100

ZONE: TC - TRANSITIONAL COMMERCIAL
USE: OFFICE P.I.N. 7297-99-6949

M & M EXTERIORS LLC
INSTR. NO. 201806150043100

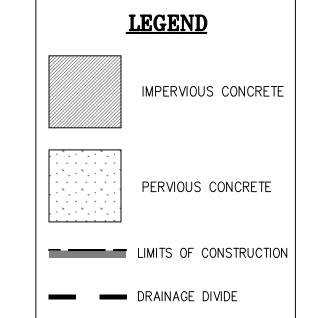
ZONE: TC - TRANSITIONAL COMMERCIAL
USE: OFFICE PROPOSED ADDITION (RR's & STORAGE) P.I.N. 7297-99-5057

REBECCA COHEN-PARDO
INSTR. NO. 200408030131281

ZONE: B2 - BUSINESS COMMERCIAL
USE: RESIDENTIAL EX. 1-STORY
BRICK & FRAME
DWELLING
#14871
FF 369.4 EX. 1-STORY
BRICK & FRAME
DWELLING
#14871
FF 369.4 (TBR) **WASHINGTON STREET ~ ROUTE 55**(VARIABLE WIDTH R/W) WASHINGTON STREET ~ ROUTE 55 225' TO INTX. WITH
MADISON STREET (VARIABLE WIDTH R/W) PRE-DEVELOPMENT DRAINAGE MAP POST-DEVELOPMENT DRAINAGE MAP GRAPHIC SCALE SCALE: 1" = 20' GRAPHIC SCALE SCALE: 1" = 20' **LEGEND** AREA A - TO PERMEABLE PAVEMENT PRE-DEVELOPMENT (ALL 'C' SOILS) (ALL 'C' SOILS) IMPERVIOUS AREA: 0.099 ACRES
PERMEABLE PAVEMENT: 0.132 ACRES
TOTAL PAVED/IMPERVIOUS 0.231 ACRES
TURF: 0.046 ACRES

P.I.N. 7297-99-4746
LOT 6, MADISON ACRES
D.B. 1270 P.G. 1090
SANTOS E. RONILLA
INSTR. NO. 20180640039663
ZONE: R-1 RESIDENTIAL
USE: RESIDENTIAL

IMPERVIOUS AREA: 0.134 ACRES
TURF: 0.190 ACRES
TOTAL: 0.324 ACRES



TO PERMEABLE PAVEMENT

0.277 ACRES

P.I.N. 7297-99-5640

LOT 5. MADISON ACRES

D.B. 1270 PG. 1090

ZONE: R1 - RESIDENTIAL

USE: RESIDENTIAL

TOTAL: 0.277 ACRES

TOTAL: 0.047 ACRES

TOTAL: 0.324 ACRES

<u>AREA B - BYPASS</u>

(ALL 'C' SOILS)

IMPERVIOUS AREA: 0.016 ACRES TURF: 0.031 ACRES

TOTAL POST-DEVELOPMENT

(ALL 'C' SOILS)

IMPERVIOUS AREA: 0.115 ACRES
PERMEABLE PAVEMENT: 0.132 ACRES
TOTAL PAVED/IMPERVIOUS 0.247 ACRES
TURF: 0.077 ACRES

P.T.N. 7297-99-4746

LOT 6, MADISON ACRES
D.B. 1270-PG. 1090

SANTOS E. RONILLA
INSTR. NO. 201806040039663

ZONE: R-1 RESIDENTIAL
USE: RESIDENTIAL

P.I.N. 7297-99-5057

REBECCA COHEN-PARDO
INSTR. NO. 200408030131281

ZONE: B2 - BUSINESS COMMERCIAL
USE: RESIDENTIAL

225' TO INTX. WITH
MADISON STREET

SOILS DATA HYDRIC WHOLE ROCK SOIL GROUP (IN.) SATURATED HYDROLOGIC CONDUCTIVITY (%) FLOODING FREQUENCY CAPACITY CLASS MAP SYMBOL SOIL NAME 5 .43 .43 C 28" 0.66 14 -4B ARCOLA SILT LOAM, 2-7%

P.I.N. 7297-99-5640
LOT 5. MADISON ACRES
D.B. 1270 PG. 1090
ZONE: R1 - RESIDENTIAL
USE: RESIDENTIAL

PLANNING (540) 829-2220 (540) 829-2239

LAND PHONE FAX

AND

HIMCHEY

ENGINEERING

125 EAST DAVIS STREET
SUITE 201
CULPEPER, VIRGINIA 227

 \sim

PURPOSES

QUANTITY

WATER

FOR

MAPS

DRAINAGE

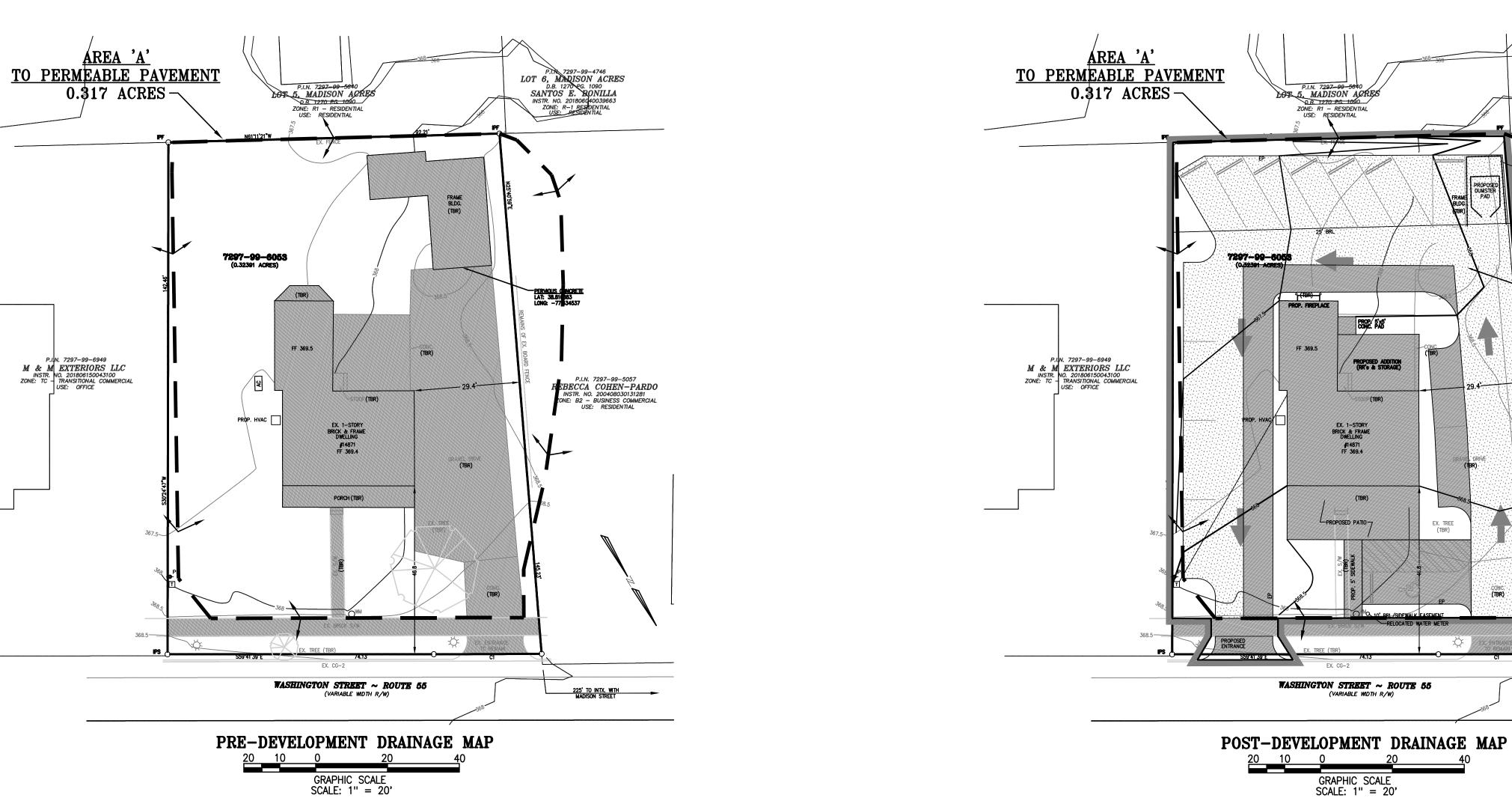
SCALE: AS SHOWN

DATE: 3/27/2019

4-17-2019 PER COMMENTS

REVISIONS:

SHEET



LEGEND IMPERVIOUS CONCRETE PERVIOUS CONCRETE LIMITS OF CONSTRUCTION DRAINAGE DIVIDE

| POST-DEVELOPMENT - AREA 'A'| ON-SITE - TO PERVIOUS PVMT IMPERVIOUS AREA: 0.237 ACRES
TURF: 0.040 ACRES
TOTAL: 0.277 ACRES OFF-SITE TO PERVIOUS PVMT TOTAL TO PERVIOUS PVMT IMPERVIOUS AREA: 0.237 ACRES
TURF: 0.080 ACRES
TOTAL: 0.317 ACRES DISTRUBED BYPASS AREA IMPERVIOUS AREA: 0.006 ACRES
TURF: 0.008 ACRES
TOTAL: 0.014 ACRES TOTAL AREA
IMPERVIOUS AREA: 0.243 ACRES
TURF: 0.088 ACRES
TOTAL: 0.331 ACRES

		SOILS	DAT	ГΑ					
MAP SYMBOL	SOIL NAME	HYDRIC %	K-FA WHOLE SOIL	CTOR ROCK FREE	HYDRO- LOGIC SOIL GROUP	DEPTH (IN.)	SATURATED HYDROLOGIC CONDUCTIVITY (IN/HR)	AVAILABLE WATER CAPACITY (%)	FLOODING FREQUENCY CLASS
4B	ARCOLA SILT LOAM, 2-7%	5	.43	.43	С	28''	0.66	14	_

PRE-DEVELOPMENT - AREA 'A'

(ALL 'C' SOILS)

ON-SITE

OFF-SITE

TURF: 0.040 ACRES

IMPERVIOUS AREA: 0.120 ACRES
TURF: 0.157 ACRES
TOTAL: 0.277 ACRES

IMPERVIOUS AREA: 0.120 ACRES
TURF: 0.197 ACRES
TOTAL: 0.317 ACRES

Packet Pg. 14

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P.T.N. 7297-99-4746
LOT 6, MADISON ACRES
D.B. 1270-PG. 1090
SANTOS E. RONILLA
INSTR. NO. 2018064-0039663
ZONE: R-1 RESIDENTIAL
USE: RESIDENTIAL

P.I.N. 7297–99–5057

REBECCA COHEN-PARDO
INSTR. NO. 200408030131281
CONE: B2 — BUSINESS COMMERCIAL
USE: RESIDENTIAL

225' TO INTX. WITH
MADISON STREET

(ALL 'C' SOILS)

TURF: 0.040 ACRES

7 of 12

FILE NO. 1402

FLANNING (540) 829-2239

LAND PHONE FAX

AND

HIMCHHY
ENGINEER STREET
SUITE 201
CULPEPER, VIRGINIA 227

CALCULATIONS

MANAGEMENT

WATER

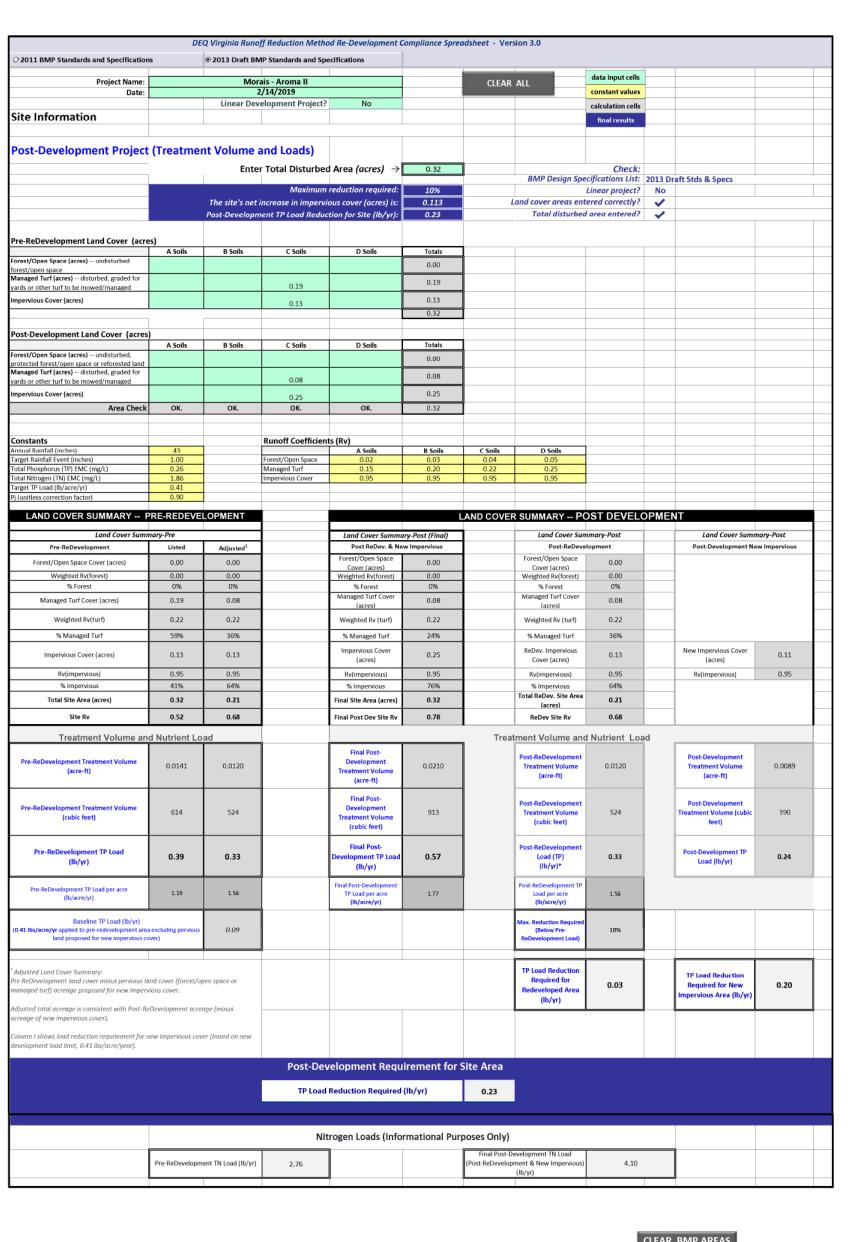
STORM

SCALE: AS SHOWN

DATE: 3/27/2019

4-17-2019 PER COMMENTS

AROMA



[1] The curve numbers and runoff volumes computed in this spreadsheet for each drainage area are limited in their applicability for determining and demonstrating compliance with water quantities requirements. See VRRM User's Guide and Documentation for additional information. [2] Runoff Volume (RV) for pre- and post-development drainage areas must be in volumetric units (e.g., acre-feet or cubic feet) when using the Energy Balance Equation. Runoff measured in water inches and shown in the spreadsheet as RV(watershed-inch) can only be used in the Energy Balance Equation when the pre- and post-development drainage areas are equal. Otherwise RV(waters inch) must be multiplied by the drainage area. [3] Adjusted CNs are based on runoff reduction volumes as calculated in D.A. tabs. An alternative CN adjustment calculation for Vegetated Roofs is included in BMP specification No. 5. Drainage Area Curve Numbers and Runoff Depths* Curve numbers (CN, CNadj) and runoff depths (RV Developed) are computed with and without reduction practices.		AREA CHECK	D.A. E	D.A. D	B D.A. C	A D.A.	hecks D.A.	Area C	
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MANAGED TUBE AREA (et al. 0.00)			_				· /		IMPER
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Site Treatment Volume (It) Site Treatment Volume (It) DAA		OK.							MANAGE
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Forest/Open Space – undisturbed, protected forest/open space or reforested land CN 30 55 70 77 Volume (ft³): Managed Turf – disturbed, graded for yards or other turf to be mowed/managed CN 39 61 74 80 Impervious Cover Area (acres) 0.00 0.00 0.02 0.00 Impervious Cover CN 98 98 98 98 98	e RV(watersh	P specification No.	the Energy Balance Ellopment drainage are: Roofs is included in Bl S* Without reducti D Soils 0.00 77 0.00 80 0.00 98 CN _(D.A. A)	pplicability for determination of the put of	A thttp://hdsc.nws.noa are limited in their ag s (e.g., acre-feet or cocce Equation when the CN adjustment calcus Numbers and eveloped are con B Soils 0.00 55 0.00 61 0.00 98 2-year storm 0.00 0.00	each drainage area armation. e in volumetric unit in the Energy Balan tabs. An alternative e Area Curve ff depths (RV D A Soils 0.00 30 0.00 39 0.00 98 1-year storm 0.00 0.00 0.00	his spreadsheet for n for additional info ainage areas must be the calculated in D.A. Drainage Nadj) and runo Area (acres) CN Area (acres) Area (acres) CN	le and Documentation post-development drit as RV(watershed-inchage area. If reduction volumes a community of the community o	[1] The curve numbers and runoff vor requirements. See VRRM User's Guid [2] Runoff Volume (RV) for pre- and pinches and shown in the spreadsheet inch) must be multiplied by the drain [3] Adjusted CNs are based on runoff Curve in Drainage Area in Forest/Open Space undisturb forest/Open Space or refore Managed Turf disturbed, graded for to be mowed/managed Turf disturbed, graded for to be mowed/managed Turf disturbed graded for the moved/managed Turf disturbed graded for the moved for the m
Managed Turf disturbed, graded for yards or other turf to be mowed/managed Area (acres) 0.00 0.00 0.03 0.00 Limpervious Cover Area (acres) 0.00 0.00 0.02 0.00 CN 98 98 98 98	(acres):	P specification No.	the Energy Balance Elopment drainage are: Roofs is included in Bl S* without reducti D Soils 0.00 77 0.00 80 0.00 98 CN _(D,A,A) 94	pplicability for determination of the put of	A thttp://hdsc.nws.noa are limited in their ag s (e.g., acre-feet or co ce Equation when the CN adjustment calcus Numbers and eveloped are com B Soils 0.00 55 0.00 61 0.00 98 2-year storm 0.00 0.00 100	each drainage area armation. e in volumetric unit in the Energy Balan tabs. An alternative e Area Curve of depths (RV or an armation) A Soils 0.00 30 0.00 39 0.00 98 1-year storm 0.00 0.00 100	his spreadsheet for n for additional info ainage areas must be the calculated in D.A. Drainage Nadj) and runo Area (acres) CN Area (acres) Area (acres) CN	numbers (CN, C) A A Ded, protected ested land or yards or other turf ged r d-inch) with no Ru shed-inch) with Ru	[1] The curve numbers and runoff vor requirements. See VRRM User's Guid [2] Runoff Volume (RV) for pre- and pinches and shown in the spreadsheet inch) must be multiplied by the drain [3] Adjusted CNs are based on runoff Curve in Drainage Area in Forest/Open Space undisturb forest/Open Space or refore Managed Turf disturbed, graded for to be mowed/managed Turf disturbed with the moved of the move
to be mowed/managed CN 39 61 74 80	(acres): (ac	P specification No. 2 In practices. Total Area Runoff R Voli	the Energy Balance Elopment drainage are: Roofs is included in Bl S* without reducti D Soils 0.00 77 0.00 80 0.00 98 CN _(D.A. A) 94 D Soils D Soils	a.gov/hdsc/pfds/) pplicability for determination of the present o	A thttp://hdsc.nws.noa are limited in their age s (e.g., acre-feet or concess Equation when the CN adjustment calcust Numbers and eveloped) are comes B Soils 0.00 55 0.00 61 0.00 98 2-year storm 0.00 0.00 100 B Soils 0.00	each drainage area armation. e in volumetric unit in the Energy Balan tabs. An alternative A Soils 0.00 30 0.00 39 0.00 98 1-year storm 0.00 0.00 100 A Soils 0.00	his spreadsheet for n for additional info ainage areas must be the can only be used as calculated in D.A. Drainage Nadj) and runo Area (acres) CN Area (acres) CN Area (acres) CN Area (acres) CN Area (acres) Area (acres) Area (acres)	numbers (CN, C) A bed, protected ested land or yards or other turf ged r d-inch) with no Ru ched-inch) with Ru bed, protected	[1] The curve numbers and runoff vo requirements. See VRRM User's Guid [2] Runoff Volume (RV) for pre- and pinches and shown in the spreadsheet inch) must be multiplied by the drain [3] Adjusted CNs are based on runoff Curve is Drainage Area is Forest/Open Space undisturb forest/open space or refore Managed Turf disturbed, graded for to be mowed/managed Turf disturbed graded for the moved for the movement of the mo
CN 98 98 98 98	(acres): (ac	P specification No. 2 In practices. Total Area Runoff R Voli	the Energy Balance Elopment drainage are: Roofs is included in Bl S* without reducti D Soils 0.00 77 0.00 80 0.00 98 CN(D.A. A) 94 D Soils 0.00 77	pplicability for determination of the put of	A thttp://hdsc.nws.noa are limited in their age s (e.g., acre-feet or conceeding the conceedin	each drainage area armation. e in volumetric unit in the Energy Balan tabs. An alternative A Soils 0.00 30 0.00 39 0.00 98 1-year storm 0.00 100 A Soils 0.00 30 1-year storm 0.00 30 30 30 30 30 30 30 30	his spreadsheet for n for additional info ainage areas must be the can only be used as calculated in D.A. Drainage Nadj) and runo Area (acres) CN	le and Documentation post-development drit as RV(watershed-inchage area. Freduction volumes a production volumes	[1] The curve numbers and runoff vo requirements. See VRRM User's Guid [2] Runoff Volume (RV) for pre- and pinches and shown in the spreadsheet inch) must be multiplied by the drain [3] Adjusted CNs are based on runoff Curve a Drainage Area a Forest/Open Space undisturb for be mowed/mana, Impervious Cover RV_Developed (watershed RV_Developed (watershed RV_Developed space undisturb forest/Open Space undisturb forest/Op
	(acres): (ac	P specification No. 2 In practices. Total Area Runoff R Voli	the Energy Balance Elopment drainage ares Roofs is included in Bl S* without reducti D Soils 0.00 77 0.00 98 CN(D.A. A) 94 D Soils 0.00 77 0.00 80 0.00 98	a.gov/hdsc/pfds/) pplicability for determination of the pre- and post-development of the pre- and	A (http://hdsc.nws.noa are limited in their ag s (e.g., acre-feet or co ce Equation when the CN adjustment calcu Numbers and eveloped) are con B Soils 0.00 55 0.00 61 0.00 0.00 100 B Soils 0.00 55 0.00 61	each drainage area armation. e in volumetric unit in the Energy Balan tabs. An alternative e Area Curve of depths (RV or an armation) A Soils 0.00 30 0.00 39 1-year storm 0.00 0.00 A Soils 0.00 30 0.00 30 0.00 30 0.00 30 3	his spreadsheet for n for additional info ainage areas must be the calculated in D.A. Drainage Nadj) and runo Area (acres) CN	le and Documentation post-development drit as RV(watershed-inchage area. Freduction volumes a production volumes	[1] The curve numbers and runoff vor requirements. See VRRM User's Guid [2] Runoff Volume (RV) for pre- and prinches and shown in the spreadsheet inch) must be multiplied by the drain [3] Adjusted CNs are based on runoff Curve (Incomplete Complete Comple
	(acres): (ac	P specification No. 2 In practices. Total Area Runoff R Voli	the Energy Balance Elopment drainage are: Roofs is included in Bl S* without reducti D Soils 0.00 77 0.00 80 CN(D.A. A) 94 D Soils 0.00 77 0.00 80 0.00 77 0.00 80 0.00	a.gov/hdsc/pfds/) pplicability for determination of the pre- and post-development of the pre- and	I (http://hdsc.nws.noa are limited in their ag s (e.g., acre-feet or cocce Equation when the CN adjustment calcust Numbers and eveloped) are com B Soils 0.00 55 0.00 61 0.00 B Soils 0.00 100 B Soils 0.00 100	each drainage area armation. e in volumetric unit in the Energy Balan tabs. An alternative e Area Curve of depths (RV or an armation) A Soils 0.00 30 0.00 39 1-year storm 0.00 100 A Soils 0.00 30 0.00 39 0.00 39 0.00	his spreadsheet for n for additional info ainage areas must be the can only be used as calculated in D.A. Drainage Nadj) and runo Area (acres) CN Area (acres) CN Area (acres) CN noff Reduction* noff Reduction* Adjusted CN* See Notes above Area (acres) CN Area (acres) CN Area (acres) CN Area (acres) CN Area (acres)	e and Documentation post-development drit as RV(watershed-inchage area. Freduction volumes a production volumes are production volumes a production volumes a production volumes are production volumes. B production volumes are production volumes are production volumes are production volumes. B production volumes are prod	1] The curve numbers and runoff volequirements. See VRRM User's Guid 2] Runoff Volume (RV) for pre- and process of the spreadsheet numbers and shown in the spreadsheet numbers of the

Prainage Area A Land Cover (acres)		1		1	I	1	I		CLEAR BMP	1112113			
	A Soils	B Soils	C Soils	D Soils	Totals	Land Cover Rv							•
Forest/Open Space (acres)					0.00	0.00							
Managed Turf (acres)			0.05		0.05	0.22							1
Impervious Cover (acres)			0.23		0.23	0.95			Total Phosphorus A	vailable for Remov	al in D.A. A (lb/yr)		
				Total	0.28]			Post Developm	ent Treatment Vol	ume in D.A. A (ft ³)	833	
Stormwater Best Manageme	nt Practices	(RR = Run	off Reductio	nn)									Select from dropd
Practice	Runoff Reduction Credit (%)	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	Volume from Upstream Practice (ft ³)	Runoff Reduction (ft ³)	Remaining Runoff Volume (ft ³)	Total BMP Treatment Volume (ft ³)	Phosphorus Removal Efficiency (%)	Phosphorus Load from Upstream Practices (lb)	Untreated Phosphorus Load to Practice (lb)	Phosphorus Removed By Practice (lb)	Remaining Phosphorus Load (lb)	Downstream Prac
. Permeable Pavement (RR)					·								
3.a. Permeable Pavement #1 (Spec #7)	45			0	0	0	0	25	0.00	0.00	0.00	0.00	
3.b. Permeable Pavement #2 (Spec #7)	75		0.13		341	114	455	25		0.29	0.23	0.05	
				/ER TREATED (ac)		AREA CHECK:							
		TOTALIVIA		TOTAL PH	OSPHORUS REM	IOVAL REQUIRED	ON SITE (lb/vr)	0.23					

	A Soils	B Soils	C Soils	D Soils	Totals	Land Cover Rv	
Forest/Open Space (acres)					0.00	0.00	
Managed Turf (acres)			0.03		0.03	0.22	
Impervious Cover (acres)			0.02		0.02	0.95	Total Phosphorus Available for Removal in D.A
				Total	0.05		Post Development Treatment Volume in D
				TOTAL PHOSP	HORUS REMOV	AL REQUIRED O	N SITE (lb/yr) 0.23
			RVIOUS COVER SED TURF AREA	· · · -	0.00	AREA CHECK: C	I
			TOTA	AL PHOSPHORUS	S AVAII ARLE FO	OR REMOVAL IN	D.A. B (lb/yr) 0.05
	т.	OTAL PHOSPHO		WITHOUT RUN			
		TOTAL PHOS	SPHORUS REMO	OVED WITH RUN	OFF REDUCTIO	N PRACTICES IN	D.A. B (lb/yr) 0.00

SEE WATER QUALITY COMPLIANCE TAB FOR SITE COMPLIANCE CALCULATIONS

NITROGEN REMOVED WITH RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr)

NITROGEN REMOVED WITHOUT RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr)

0.00

NITROGEN REMOVED WITH RUNOFF REDUCTION PRACTICES IN D.A. B (lb/yr)

NITROGEN REMOVED WITHOUT RUNOFF REDUCTION PRACTICES IN D.A. B (lb/yr)

0.00

TOTAL NITROGEN REMOVED IN D.A. B (lb/yr) 0.00

TOTAL NITROGEN REMOVED IN D.A. A (lb/yr) 1.66

Site	Resul	ts (Water C	uality Comp	liance)			
Area Checks	D.A.	A D.A.	B D.A. 0	D.A. D	D.A. E	AREA CHECK	
FOREST/OPEN SPACE (ac)	0.00	0.00	0.00	0.00	0.00	OK.	
IMPERVIOUS COVER (ac)	0.23		2 0.00	0.00	0.00	OK.	
IMPERVIOUS COVER TREATED (ac)	0.13			0.00	0.00	OK.	
MANAGED TURF AREA (ac)	0.05			0.00	0.00	OK.	
MANAGED TURF AREA TREATED (ac) AREA CHECK	0.00 OK.			0.00 OK.	0.00 OK.	OK.	
AREA CHECK	UK.	. OK.	. OK.	UK.	OK.		
Site Treatment Volume (ft ³)	913						
unoff Reduction Volume and TP By Drainage Area							
	D.A.	A D.A.	B D.A.	D.A. D	D.A. E	TOTAL	
RUNOFF REDUCTION VOLUME ACHIEVED (ft ³)	341		0	0	0	341	
TP LOAD AVAILABLE FOR REMOVAL (lb/yr)	0.52			0.00	0.00	0.57	
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.23			0.00	0.00	0.23	
TP LOAD REMAINING (lb/yr)	0.29	0.05	5 0.00	0.00	0.00	0.34	
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	1.66	5 0.00	0.00	0.00	0.00	1.66	
Total Phosphorus							
FINAL POST-DEVELOPMENT TP LOAD (lb/yr)	0.57	7					
TP LOAD REDUCTION REQUIRED (lb/yr)	0.23						
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.23						
TP LOAD REMAINING (lb/yr):	0.34						
REMAINING TP LOAD REDUCTION REQUIRED (lb/yr):	0.00	oad reduction re					
Total Nitrogen (For Information Purposes)	ruier ir i	oad reduction red	quirea				
POST-DEVELOPMENT LOAD (Ib/yr)	4.10						
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	1.66						
REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr)	2.44	1					
			<u> </u>				
	Runo	ff Volume a	nd Curve Nu	ımher Calcu	lations		
	Italio				lations		
		Enter desig	gn storm rainfa				
	→	1-year storm	2-year storm	10-year storm	1 ←		
			4 (http://hdsc.nws.no				
*Notes (see below):							
 [1] The curve numbers and runoff volumes computed in this spread requirements. See VRRM User's Guide and Documentation for addit 			are limited in their a	pplicability for deter	rmining and demonstra	ting compliance with v	vater quantity

			OSE NOAA ATIOS I	4 (http://hdsc.nws.no	aa.gov/nasc/pjas/)					\perp
*Notes (see below):										
[1] The curve numbers and runoff volu requirements. See VRRM User's Guide				are limited in their a	applicability for deter	mining and demonst	trating comp	liance with water quar	ntity	ŀ
[2] p #1/- /P// f						- 4b - F D-l	- F	D 66 1 !		H
[2] Runoff Volume (RV) for pre- and po										г
inches and shown in the spreadsheet a inch) must be multiplied by the drainag		cn) can only be used	in the Energy Baia	nce Equation when t	ne pre- and post-dev	elopment drainage a	areas are equ	uai. Otnerwise Kviwate	ersnea-	Г
meny must be muluphed by the dramag	ge area.									L
[3] Adjusted CNs are based on runoff re	eduction volumes a	as calculated in D.A.	tabs. An alternative	e CN adjustment cald	ulation for Vegetated	Roofs is included in	BMP specif	ication No. 5.		Н
										4
										+
										\perp
		Drainag	o Aroa Curvo	Numbers and	l Runoff Depti	nc*				
		_								
Curve ni	umbers (CN, C	Nadj) and rund	off depths (RV _l	_{Developed}) are coi	nputed with an	d without redu	ction pra	ctices.		_
										┖
Drainage Area A			A Soils	B Soils	C Soils	D Soils		Total Area (acres):	0.28	
Forest/Open Space undisturbe	d, protected	Area (acres)	0.00	0.00	0.00	0.00		Runoff Reduction		L
forest/open space or refores	ted land	CN	30	55	70	77		Volume (ft³):	341	
Managed Turf disturbed, graded for y	yards or other turf	Area (acres)	0.00	0.00	0.05	0.00				
to be mowed/manage	≟d	CN	39	61	74	80				
Impervious Cover		Area (acres)	0.00	0.00	0.23	0.00				
miperitious corter		CN	98	98	98	98				1
						CN _(D.A. A)				
						94				
				_						
			1-year storm	2-year storm	10-year storm					+
RV _{Developed} (watershed-i	inch) with no Ru	noff Reduction*	0.00	0.00	0.00					
RV _{Developed} (watershe	ed-inch) with Ru	noff Reduction*	0.00	0.00	0.00					Т
Developed 13 2001311		Adjusted CN*	100	100	100					+
			100	100	100					+
	**	See Notes above								
			463	D.C. 11	00.1	D.C.1		Tables (see)	0.05	÷
Drainage Area B			A Soils	B Soils	C Soils	D Soils	 	Total Area (acres): Runoff Reduction	0.05	1
Forest/Open Space undisturbed forest/open space or reforest		Area (acres) CN	0.00 30	0.00 55	0.00 70	0.00 77		_	0	H
Managed Turf disturbed, graded for y		Area (acres)	0.00	0.00	0.03	0.00	1	Volume (ft³):	U	1
to be mowed/manage	-	CN	39	61	74	80				+
		Area (acres)	0.00	0.00	0.02	0.00				+
Impervious Cover		CN	98	98	98	98				†
						CN _(D.A. B)				T
										+
						82				+
	ļ		1-year storm	2-year storm	10-year storm					
	1		- year storm		0.00					+
RV payalogod (watershed-i	nch) with no Ru	noff Reduction*	0.00	0.00						
RV _{Developed} (watershed-i			0.00	0.00						\top
RV _{Developed} (watershed-i RV _{Developed} (watershe	ed-inch) with Ru		0.00 0.00 100	0.00	0.00					I

DEQ Virginia Runoff Reduction Method Re-Development Compliance Spreadsh	eet - Version 3.0
BMP Design Specifications List: 2013 Draft Stds & Specs	

Site Summary Project Title: Morais - Aroma II Date: 43510

Total Rainfall (in):	43
Total Disturbed Acreage:	0.32

Site Land Cover Summary

Pre-ReDevelopment Land Cover (a	acres)					
	A soils	B Soils	C Soils	D Soils	Totals	% of Tot
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.00	0.19	0.00	0.19	59
Impervious Cover (acres)	0.00	0.00	0.13	0.00	0.13	41
					0.22	400

Post-ReDevelopment Land Cover (acres)

Post-ReDevelopment Land Cover (acres)										
	A soils	B Soils	C Soils	D Soils	Totals	% of Total				
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0				
Managed Turf (acres)	0.00	0.00	0.08	0.00	0.08	24				
Impervious Cover (acres)	0.00	0.00	0.25	0.00	0.25	76				
					0.32	100				

Site Tv and Land Cover Nutrient Loads

	Final Post-Development (Post-ReDevelopment & New Impervious)	Post- ReDevelopment	Post- Development (New Impervious)	Adjusted Pre- ReDevelopment
iite Rv	0.78	0.68	0.95	0.68
Гreatment Volume (ft³)	913	524	390	524
「P Load (lb/yr)	0.57	0.33	0.24	0.33

ReDevelopment TP Load per acre (lb/acre/vr)	Final Post-Development TP Load per acre (lb/acre/yr)	Post-ReDevelopment TP Load per acre (lb/acre/yr)
1.56	1.77	1.56

0.03 Total TP Load Reduction Required (lb/yr)

	Final Post-Development Load	Pre-
	(Post-ReDevelopment & New Impervious)	ReDevelopment
TN Load (lb/yr)	4.10	2.76

Site Compliance Summary

Pre-ReDevelopment Lo

Total Runoff Volume Reduction (ft ³)	341	
Total TP Load Reduction Achieved (lb/yr)	0.23	
Total TN Load Reduction Achieved (lb/yr)	1.66	
Remaining Post Development TP Load (lb/yr)	0.34	
Remaining TP Load Reduction (lb/yr) Required	0.00	**No fu

.....

further TP load reduction required

Drainage Area Summary

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0.00
Managed Turf (acres)	0.05	0.03	0.00	0.00	0.00	0.08
Impervious Cover (acres)	0.23	0.02	0.00	0.00	0.00	0.25
Total Area (acres)	0.28	0.05	0.00	0.00	0.00	0.32

Drainage Area Compliance Summary

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
TP Load Reduced (lb/yr)	0.23	0.00	0.00	0.00	0.00	0.23
TN Load Reduced (lb/yr)	1.66	0.00	0.00	0.00	0.00	1.66

Drainage Area A Summary

Land Cover Summary

	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.00	0.05	0.00	0.05	17
Impervious Cover (acres)	0.00	0.00	0.23	0.00	0.23	83
					0.28	

BMP Selections

Practice	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	BMP Treatment Volume (ft³)	TP Load from Upstream Practices (lbs)	Untreated TP Load to Practice (lbs)	TP Removed (Ib/yr)	TP Remaining (lb/yr)	Downstream Treatmen to be Employed
3.a. Permeable Pavement #1 (Spec #7)		0.22	758.67	0.00	0.48	0.28	0.20	
Total Impervious Cover Treated (acres)	0.13	1						

Total Turf Area Treated (acres)

Drainage Area B Summary

Land Cover Summary

	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.00	0.03	0.00	0.03	66
Impervious Cover (acres)	0.00	0.00	0.02	0.00	0.02	34
					0.05	

BMP Selections

Practice	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	BMP Treatment Volume (ft³)	TP Load from Upstream Practices (Ibs)	Untreated TP Load to Practice (lbs)	TP Removed (lb/yr)	TP Remaining (lb/yr)	Downstream Treatment to be Employed
Total Impervious Cover Treated (acres)	0.00	1						
Total Turf Area Treated (acres)	0.00	1						
Total TP Load Reduction Achieved in D.A. (lb/yr)	0.00							
Total TN Load Reduction Achieved in D.A.	0.00]						

Runoff Volume and CN Calculations

	1-year storm	2-year storm	10-year storm			
Target Rainfall Event (in)	0.00	0.00	0.00			
		1				Г
Drainage Areas	RV & CN	Drainage Area A	Drainage Area B	Drainage Area C	Drainage Area D	Drainage Area
CN		94	82	0	0	0
RR (ft³)		341	0	0	0	0
	RV wo RR (ws-in)	0.00	0.00	0.00	0.00	0.00
1-year return period	RV w RR (ws-in)	0.00	0.00	0.00	0.00	0.00
	CN adjusted	100	100	0	0	0
	RV wo RR (ws-in)	0.00	0.00	0.00	0.00	0.00
2-year return period	RV w RR (ws-in)	0.00	0.00	0.00	0.00	0.00
	CN adjusted	100	100	0	0	0
	RV wo RR (ws-in)	0.00	0.00	0.00	0.00	0.00
10-year return period	RV w RR (ws-in)	0.00	0.00	0.00	0.00	0.00
	CN -dimes	100	100			

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PLANNING (540) 829–2220 (540) 829–2239

AND PHONE FAX

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HIMCHEY

ENGINEERING

125 EAST DAVIS STREET

SUITE 201

CULPEPER, VIRGINIA 227

STORMWATER MANAGEMENT NARRATIVE

The Virginia Runoff Reduction Method (VRRM) was used to determine the reduction in runoff volume and the post development pollutant loading. Since the area of development on the site has already been developed the DEQ VRRM Re-Development Compliance Spreadsheet – Version 3.0 was used to calculate the pollutant loading results, treatment volumes, and adjusted CN values.

The entire site was analyzed for water quality and quantity compliance. Permeable pavement has been proposed to provide water quality compliance. The underground gravel reservoir has been sized to retain 100% of the required treatment volume. Additional storage provided in the reservoir allows for the 1-year energy balance equation to be met and for the 10-year discharge flowrate to be decreased from the pre-development condition.

WATER QUALITY ANALYSIS

Permeable pavement was utilized to achieve the required total phosphorous load.

Pre-ReDevelopment Land Cover Site Area = 0.32 AC Impervious cover = 0.13 AC (C Soils) Managed Turf = 0.19 AC (C Soils)

Post Development Land Cover Site Area = 0.32 AC Impervious cover = 0.25 AC (C Soils) Managed Turf = 0.08 AC (C Soils)

Total Load (TP) Reduction Required (lb/yr) = 0.23

WATER QUALITY COMPLIANCE

Stormwater Best Management Practices Area to Facility = 0.13 ACImpervious cover = 0.13 AC Managed Turf = 0.00 AC

The total required phosphorous load reduction of 0.23 pounds has been achieved.

WATER QUANTITY ANALYSIS

The disturbed area and its contributing drainage area were considered in the analysis.

The Energy Balance Equation was used to determine the Allowable Peak Discharge in accordance with the channel protection regulations.

The contributing drainage areas to the disturbed area for this project were analyzed for the 1-yr and 10yr 24-hour storms. Pre- and Post-development Runoff Volumes (Rv) and Peak Discharge (qp) were calculated utilizing Hydraflow Hydrographs. An underground stone reservoir was utilized to detain 1year flows allowing for the energy balance equation to be met and for the 10-year discharge flowrate to be decreased from the pre-development condition.

PRE-DEVELOPMENT

(1.50)	
(AC) 1yr.	In. Ac. ft. 1yr.
DA-A 0.33 83 2.5	1.06 0.03 0.57

FORESTED CONDITION

	DA	CN	P	Rv	l yr.	q _p
	(AC)		1yr.	In.	Ac. ft.	1yr.
DA-A	0.33	70	2.5	0.46	0.01	0.23

POST-DEVELOPMENT

	DA	CN	P	Rv	l yr.
	(AC)		1yr.	In.	Ac. ft.
DA-A	0.33	92	2.5	1.69	0.05

The above results were used in the energy balance equation to determine whether a water quantity volume would be required.

CALCULATE ALLOWABLE DISCHARGE BY ENERGY BALANCE EQUATION:

Calculate Maximum Allowable Discharge.

Max. Allowable Discharge ≤ 0.9 x q_{p-pre} x Rv_{pre} / Rv_{dev} DA-A 0.9 x 0.57 x 0.03 / 0.04 = 0.38

Calculate Minimum Peak Discharge in accordance with 9 VAC 25-870-66 B 3 a. Minimum Peak Discharge = Ratio of Forested Condition to Developed Condition

> Min. Peak Discharge = $[(q_{p-forest} \times Rv_{forest}) / Rv_{dev}]$ DA-A $[(0.23 \times 0.01) / 0.04] = 0.06$

Compare Maximum Allowable Discharge and Minimum Peak Discharge. The Allowable Discharge used shall be the greater of the two.

If the Allowable Discharge is less than the proposed rate, additional water quantity volume is required.

WATER QUANTITY CALCULATIONS FOR CHANNEL PROTECTION

1 YEAR	Allowable Discharge	Routed Post-Development	
IILAK	(cfs)	Discharge (cfs)	
DA-A	0.38	0.02	

WATER QUANTITY CALCULATIONS FOR FLOOD PROTECTION (ROUTED THROUGH FACILITIES)

10 YEAR	Pre-Development Discharge (cfs)	Post-Development Discharge (cfs)
DA-A	1.54	1.32

BMP SIZING CALCULATIONS

Permeable Pavement

Equation 7.1 from DEQ SW Design Spec No. 7 was used to determine the depth of stone reservoir:

Ds depth of stone (ft.)

P rainfall depth (ft.) for Treatment Volume (Level 2 - .09 ft)

Ai Contributing impervious drainfield area (sq. ft.) Rv1 Volumetric runoff coefficient for impervious cover 0.95

Ap Area of permeable pavement (sq. ft.) Nr Porosity of reservoir layer (0.4)

 $Ds = (P \times Ai \times Rv1) + (P \times Ap) / Nr \times Ap$ Ds $(0.09 \times 5742 \times 0.95) + (0.09 \times 5742) / (.4 \times 5742) = 0.44' = 5.5''$

WATER QUANTITY SUMMARY

The site and its contributing drainage areas were analyzed for the 1-year and 10-year 24-hour storm, Post development peak discharge for the 1-year storm was determined to be less than the calculated allowable discharge from the energy balance equation for drainage area "A". Post development peak discharge was determined to be less than pre-development peak discharge during the 10-year storm event in DA-A,

Stormwater from the site is directed to permeable pavement, stored in an underground stone reservoir, and then infiltrates into the ground. As shown in equation 7.1 above, the required treatment volume would be met with 0.44" (5.5") depth of stone beneath the pervious payement. However, per the hydraflow analysis, the actual depth must be 0.62' (7.5") in order to partially retain the 10-year storm to bring the 10-year flow rate below the 10-year pre-development flow rate.

9.2. Maintenance Tasks

It is difficult to prescribe the specific types or frequency of maintenance tasks that are needed to maintain the hydrologic function of permeable pavement systems over time. Most installations work reasonably well year after year with little or no maintenance, whereas some have problems right from the start.

The following tasks **must be avoided** on all permeable pavements:

- sanding
- re-sealing
- re-surfacing
- power washing storage of snow piles containing sand
- storage of mulch or soil materials
- construction staging on unprotected pavement

Table 7.8. Recommended Maintenance Tasks for Permea	ble Pavement Practices.
Maintenance Task	Frequency ¹
 For the first 6 months following construction, the practice and contributing drainage area should be inspected at least twice after storm events that exceed 1/2 inch of rainfall. Conduct any needed repairs or stabilization. 	After installation
Mow grass in grid paver applications	At least 1 time every 1-2 months during the growing season
 Stabilize the CDA to prevent erosion Remove any soil or sediment deposited on pavement. Replace or repair any necessary pavement surface areas that are degenerating or spalling 	As needed
 Vacuum pavement with a standard street sweeper to prevent clogging 	2-4 times per year (depending on use)
Conduct a maintenance inspectionSpot weeding of grass applications	Annually
 Remove any accumulated sediment in pre-treatment cells and inflow points 	Once every 2 to 3 years
Conduct maintenance using a regenerative street sweeperReplace any necessary joint material	If clogged
¹ Required frequency of maintenance will depend on pavement use	, traffic loads, and surrounding

HYDROGRAPHS - 1-YEAR STORM

Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.23

Wednesday, Mar 27, 2019

= 484

Shape factor

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph description
1	SCS Runoff	0.573	2	718	1,150				Pre-development
2	SCS Runoff	0.888	2	716	1,844				To Facility
3	Reservoir	0.000	2	730	0	2	366.51	985	Routing
4	SCS Runoff	0.019	2	718	38				Bypass
5	Combine	0.019	2	718	38	3, 4			Total Post-development
7	SCS Runoff	0.227	2	718	496				Forested Condition

Hydrograph Report

w Hydrographs by Intelisolve v9.23	Wednesday, Mar 27, 2019

Hyd. No. 1

Pre-development

Hydrograph type	= SCS Runoff	Peak discharge	= 0.573 cfs
Storm frequency	= 1 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 1,150 cuft
Drainage area	= 0.320 ac	Curve number	= 83*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 5.00 min
Total precip.	= 2.50 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.120 x 98) + (0.200 x 74)] / 0.320

Hyd. No. 2

To Facility

Drainage area = 0.320 ac	Tc method Total precip.	= USER = 2.50 in	Time of conc. (Tc) Distribution	= 5.00 min = Type II
--------------------------	-------------------------	---------------------	---------------------------------	-------------------------

* Composite (Area/CN) = [(0.240 x 98) + (0.080 x 74)] / 0.320

Hyd. No. 3

Routing

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 1 yrs	Time to peak	= 730 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 2 - To Facility	Max. Elevation	= 366.51 ft
Reservoir name	= Permeable Pavement Resevoir	Max. Storage	= 985 cuft
		_	

Storage Indication method used. Exfiltration extracted from Outflow.

Pond Report

Hydraflow Hy	ydrog	raphs by Intelisolve v9.23
Dand Na	4	Dames alda Davamant Dagavala

Pond No. 1 - Permeable Pavement Resevoir

Pond Data Contours - User-defined contour areas. Average end area method used for volume calculation. Begining Elevation = 366.08 ft. Voids = 40.00%

0.62 1.12 1.22	366.70 367.20 367.30		5,742 00 1,000	!	1,424 574 20	1,9	124 998)18			
Culvert / Or	ifice Structu	res			Weir Structu	ires				
	[A]	[B]	[C]	[PrfRsr]		[A]	[B]	[C]	[D]	
Rise (in)	= 0.00	0.00	0.00	0.00	Crest Len (ft)	= 33.00	0.00	0.00	0.00	
Span (in)	= 0.00	0.00	0.00	0.00	Crest El. (ft)	= 367.20	0.00	0.00	0.00	
No. Barrels	= 0	0	0	0	Weir Coeff.	= 3.33	3.33	3.33	3.33	
Invert El. (ft)	= 0.00	0.00	0.00	0.00	Weir Type	= Rect				

Stage / Stora	/ Dia ab			utflows are analy	zed under inlet (ic) and outle	et (oc) o	ontrol. Weir r	isers checked	for orifice con	ditions (ic) and so	ubmergence
Multi-Stage	= n/a	No	No	No	TW Elev. (ft)	=	0.00				
Orifice Coeff.	= 0.60	0.60	0.60	0.60	Exfil.(in/hr)	=	0.660 (by	Contour)			
N-Value	= .013	.013	.013	n/a							
Slope (%)	= 0.00	0.00	0.00	n/a							
Length (ft)	= 0.00	0.00	0.00	0.00	Multi-Stage	=	No	No	No	No	
Invert El. (ft)	= 0.00	0.00	0.00	0.00	Weir Type	=	Rect				
No. Barrels	= 0	0	0	0	Weir Coeff.	=	3.33	3.33	3.33	3.33	
Span (m)	- 0.00	0.00	0.00	0.00	Crest El. (It)	_	307.20	0.00	0.00	0.00	

Stage ft	Storage cuft	Elevation ft	Clv A cfs	CIv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	366.08					0.00				0.000		0.000
0.62	1,424	366.70					0.00				0.088		0.088
1.12	1,998	367.20					0.00				0.000		0.000
1.22	2,018	367.30					3.47				0.015		3.489

Hyd. No. 4 Bypass

, ·			
Hydrograph type	= SCS Runoff	Peak discharge	= 0.019 c
Storm frequency	= 1 yrs	Time to peak	= 718 mii
Time interval	= 2 min	Hyd. volume	= 38 cuft
Drainage area	= 0.010 ac	Curve number	= 84*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 5.00 mi
Total precip.	= 2.50 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = $[(0.006 \times 98) + (0.008 \times 74)] / 0.010$

Hyd. No. 5

Total Post-development

Total Fust-develop		
Hydrograph type	= Combine	Peak discharge = 0.019 cfs
Storm frequency	= 1 yrs	Time to peak = 718 min
Time interval	= 2 min	Hyd. volume = 38 cuft
Inflow hyds.	= 3, 4	Contrib. drain. area = 0.010 ac

Hyd. No. 7 Forested Condition

Hydrograph type	= SCS Runoff	Peak discharge	= 0.227 cf
Storm frequency	= 1 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 496 cuft
Drainage area	= 0.320 ac	Curve number	= 70*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 5.00 mir
Total precip.	= 2.50 in	Distribution	= Type II

* Composite (Area/CN) = $[(0.120 \times 98) + (0.197 \times 74)] / 0.320$

Storm duration = 24 hrs

HYDROGRAPHS - 10-YEAR STORM

Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9 23

	•				•				Hydraflow Hydrographs by Intelisolve v9.23
yd. o.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph description
l	SCS Runoff	1.544	2	716	3,162				Pre-development
2	SCS Runoff	1.899	2	716	4,135				To Facility
3	Reservoir	1.296	2	722	686	2	367.26	2,009	Routing
ļ	SCS Runoff	0.050	2	716	102				Bypass
5	Combine	1.320	2	722	788	3, 4			Total Post-development
,	SCS Runoff	0 989	2	718	1 978				Forested Condition

Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.23 Wednesday, Mar 27, 2019 Hyd. No. 1 Pre-development Hydrograph type = SCS Runoff = 1.544 cfs Peak discharge Storm frequency = 10 yrs Time to peak = 716 min

= 2 min = 3,162 cuftTime interval Hyd. volume Drainage area = 0.320 ac Curve number = 83* Hydraulic length = 0 ft Basin Slope = 0.0 % = USER Time of conc. (Tc) = 5.00 minTc method = 4.70 in = Type II Total precip. Distribution Shape factor = 484 = 24 hrs Storm duration

* Composite (Area/CN) = $[(0.120 \times 98) + (0.200 \times 74)] / 0.320$

Hyd. No. 2

o Facility			
Hydrograph type Storm frequency Time interval Orainage area Basin Slope To method	= SCS Runoff = 10 yrs = 2 min = 0.320 ac = 0.0 % = USER = 4.70 in	Peak discharge Time to peak Hyd. volume Curve number Hydraulic length Time of conc. (Tc) Distribution	= 1.899 cfs = 716 min = 4,135 cuft = 92* = 0 ft = 5.00 min = Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = $[(0.240 \times 98) + (0.080 \times 74)] / 0.320$

Hyd. No. 3 Routing

Hydrograph type	Reservoir10 yrs2 min2 - To Facility	Peak discharge	= 1.296 cfs
Storm frequency		Time to peak	= 722 min
Time interval		Hyd. volume	= 686 cuft
Inflow hyd. No.		Max. Elevation	= 367.26 ft
Reservoir name	= Permeable Pavement Resevoir	Max. Storage	= 2,009 cuft

Storage Indication method used. Exfiltration extracted from Outflow.

Hyd. No. 4

Бураѕѕ			
Hydrograph type	= SCS Runoff	Peak discharge	= 0.050 cfs
Storm frequency	= 10 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 102 cuft
Drainage area	= 0.010 ac	Curve number	= 84*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.70 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

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* Composite (Area/CN) = $[(0.006 \times 98) + (0.008 \times 74)] / 0.010$

Hyd. No. 5

Total Post-development

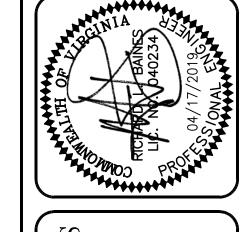
Hydrograph type	= Combine	Peak discharge = 1.320 cfs	
Storm frequency	= 10 yrs	Time to peak = 722 min	
Time interval	= 2 min	Hyd. volume = 788 cuft	
Inflow hyds.	= 3, 4	Contrib. drain. area = 0.010 ac	

Hyd. No. 7

Forested Condition I livedus sussessed for the second

Hydrograph type Storm frequency Time interval Drainage area Basin Slope Tc method Total precip. Storm duration	= SCS Runoff = 10 yrs = 2 min = 0.320 ac = 0.0 % = USER = 4.70 in = 24 hrs	Peak discharge Time to peak Hyd. volume Curve number Hydraulic length Time of conc. (Tc) Distribution Shape factor	= 0.989 cfs = 718 min = 1,978 cuft = 70* = 0 ft = 5.00 min = Type II = 484
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* Composite (Area/CN) = $[(0.120 \times 98) + (0.197 \times 74)] / 0.320$



HYDRAGRAPHS

JLATION

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ATER

STORM

AROMA

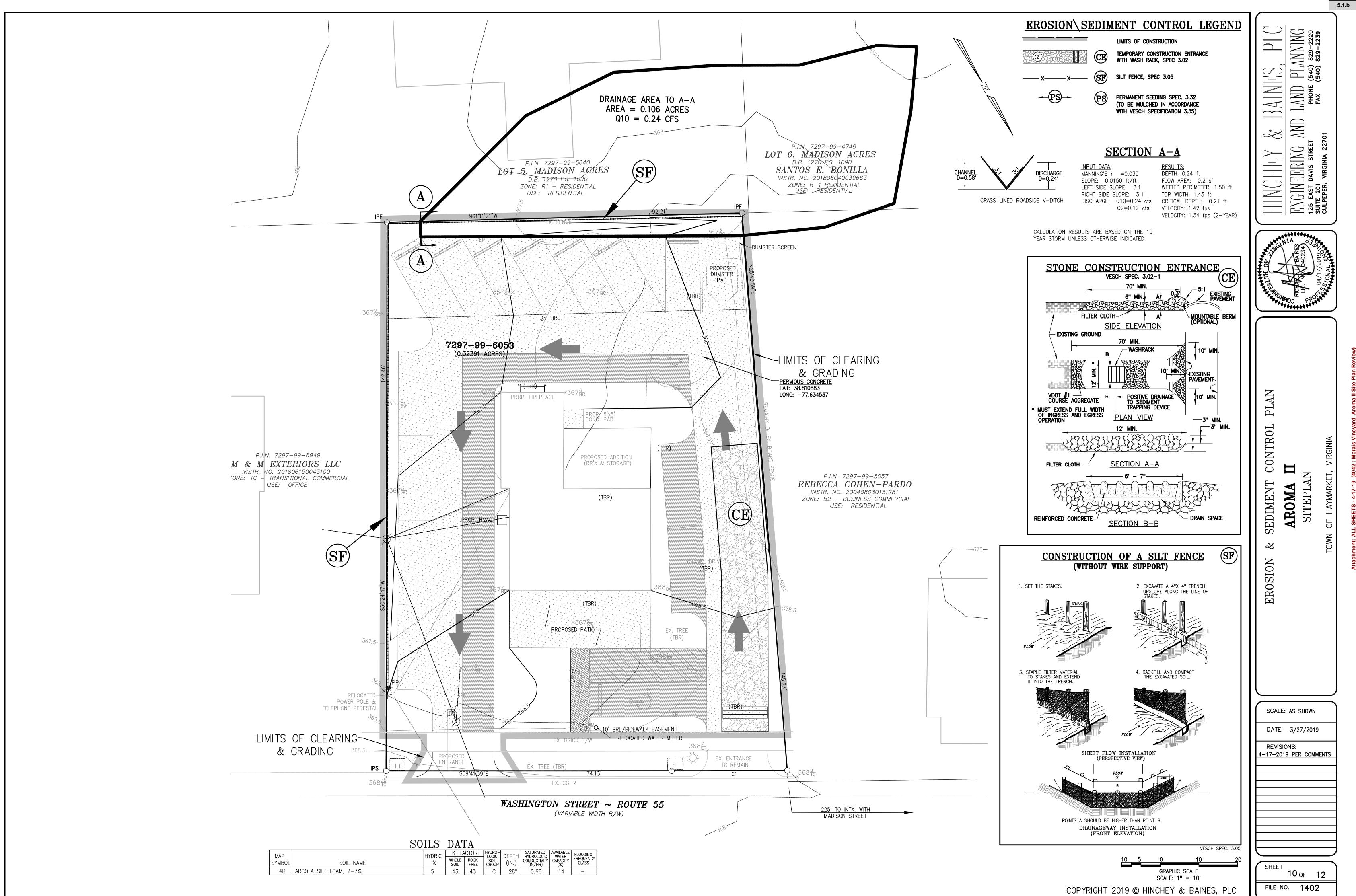
MANAGEMENT

SCALE: AS SHOWN DATE: 3/27/2019

REVISIONS: 4-17-2019 PER COMMENTS

SHEET

9 of 12 FILE NO. 1402



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CONTROL

SEDIMEN

EROSION

AROMA

LEFT DORMANT FOR MORE THAN ONE YEAR. 2. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCK PILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.

3. A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION. 4. SEDIMENT BASINS AND TRAPS. PERIMETER DIKES. SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.

5. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.

6. SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.

A. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT TRAP SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA AND THE TRAP SHALL ONLY CONTROL DRAINAGE AREAS LESS THAN THREE ACRES. B. SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES SHALL BE CONTROLLED BY A SEDIMENT BASIN. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT BASIN SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA. THE OUTFALL SYSTEM SHALL, AT A MINIMUM, MAINTAIN THE STRUCTURAL INTEGRITY OF THE BASIN DURING A 25-YEAR STORM OF 24-HOUR DURATION. RUNOFF COEFFICIENTS USED IN RUNOFF CALCULATIONS SHALL CORRESPOND TO A BARE EARTH CONDITION OR THOSE CONDITIONS EXPECTED TO EXIST WHILE THE SEDIMENT BASIN IS UTILIZED.

CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED. 8. CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE 9. WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE

10. ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR

OTHERWISE TREATED TO REMOVE SEDIMENT. 11. BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL

12. WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY

13. WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL

14. ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.

15. THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.

16. UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:

A. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME. B. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.

C. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.

D. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.

E. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THIS CHAPTER.

Vicinity map - A small map locating the site in relation to the surrounding area. Include any

landmarks which might assist in locating the site.

Indicate north - The direction of north in relation to the site.

areas. Include the size (acreage) of each drainage area,

Existing contours - The existing contours of the site.

Soils - The boundaries of different soil types.

of the E&S Handbook.

protection and stabilization?)

structures should be set forth.

Limits of clearing and grading -. Areas. which to be cleared and graded.

Final contours - Changes to the existing contours, including final drainage patterns.

Existing vegetation - The existing tree lines, grassed areas, or unique vegetation.

Existing drainage patterns - The dividing lines and the direction of flow for the different drainage

<u>Critical erosion areas</u> - Areas with potentially serious erosion problems. (See Chapter 6 for

Site Development - Show all improvements such as buildings, parking lots, access roads, utility

N/A Off-site areas - Identify any off-site land-disturbing activities (e.g., borrow sites, waste areas,

Detail drawings - Any structural practices used that are not referenced to the E&S Handbook or

Maintenance - A schedule of regular inspections and repair of erosion and sediment control

local handbooks should be explained and illustrated with detail drawings.

etc.). Show location of erosion controls. (Is there sufficient information to assure adequate

management practices used on the site. Use the standard symbols and abbreviations in Chapter 3

Location of practices - The locations of erosion and sediment control and stormwater

SITE PLAN

F. APPLICABLE SAFETY REQUIREMENTS SHALL BE COMPLIED WITH. 17. WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL

DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES. 18. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED. UNLESS OTHERWISE AUTHORIZED BY THE VESCP AUTHORITY, TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.

CHECKLIST

FOR EROSION AND SEDIMENT CONTROL PLANS

Minimum Standards - All applicable Minimum Standards must be addressed.

sites, waste or surplus areas, etc.). Will any other areas be disturbed?

(e.g., steep slopes, channels, wet weather/ underground springs, etc.).

unit, erodibility, permeability, depth, texture and soil structure.

stabilized after construction is completed.

the strategy to control stormwater runoff.

Project description - Briefly describes the nature and purpose of the land- disturbing activity, and

Existing site conditions - A description of the existing topography, vegetation and drainage.

Adjacent areas - A description of neighboring areas such as streams, lakes, residential areas, roads, etc., which might be affected by the land disturbance.

Off-site areas - Describe any off-site land-disturbing activities that will occur (including borrow

Soils - A brief description of the soils on the site giving such information as soil name, mapping

<u>Critical areas</u> - A description of areas on the site which have potentially serious erosion problems

Erosion and sediment control measures - A description of the methods which will be used to control erosion and sedimentation on the site. (Controls should satisfy minimum standards in

Permanent stabilization - A brief description, including specifications, of how the site will be

Stormwater runoff considerations - Will the development site cause an increase in peak runoff rates? Will the increase in runoff cause flooding or channel degradation downstream? Describe

Calculations - Detailed calculations for the design of temporary sediment basins, permanent

stormwater detention basins, diversions, channels, etc. Include calculations for pre- and post-

19. PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA. STREAM RESTORATION AND RELOCATION PROJECTS THAT INCORPORATE NATURAL CHANNEL DESIGN CONCEPTS ARE NOT MAN-MADE CHANNELS AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS:

A. CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MAN-MADE RECEIVING CHANNEL, PIPE OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO A PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE PIPE OR PIPE SYSTEM SHALL BE PERFORMED.

B. ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING MANNER: (1) THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS ONE HUNDRED TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE PROJECT IN QUESTION; OR

(2)(a) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A TWO-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS. (b) ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP ITS BANKS AND BY THE USE OF A TWO-YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF CHANNEL BED OR BANKS; AND

(c) PIPES AND STORM SEWER SYSTEMS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL BE CONTAINED WITHIN THE PIPE OR SYSTEM.

C. IF EXISTING NATURAL RECEIVING CHANNELS OR PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL:

(1) IMPROVE THE CHANNELS TO A CONDITION WHERE A TEN-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL, THE BED, OR THE BANKS; OR (2) IMPROVE THE PIPE OR PIPE SYSTEM TO A CONDITION WHERE THE TEN-YEAR STORM IS CONTAINED WITHIN THE APPURTENANCES;

(3) DEVELOP A SITE DESIGN THAT WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TWO-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A NATURAL CHANNEL OR WILL NOT CAUSE THE PRE DEVELOPMENT PEAK RUNOFF RATE FROM A TEN-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MAN-MADE CHANNEL; OR

(4) PROVIDE A COMBINATION OF CHANNEL IMPROVEMENT, STORMWATER DETENTION OR OTHER MEASURES WHICH IS SATISFACTORY TO THE VESCP AUTHORITY TO PREVENT DOWNSTREAM EROSION.

D. THE APPLICANT SHALL PROVIDE EVIDENCE OF PERMISSION TO MAKE THE IMPROVEMENTS. E. ALL HYDROLOGIC ANALYSES SHALL BE BASED ON THE EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT CONDITION OF THE SUBJECT PROJECT.

F. IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION, HE SHALL OBTAIN APPROVAL FROM THE VESCP OF A PLAN FOR MAINTENANCE OF THE DETENTION FACILITIES. THE PLAN SHALL SET FORTH THE MAINTENANCE REQUIREMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR

PERFORMING THE MAINTENANCE. G. OUTFALL FROM A DETENTION FACILITY SHALL BE DISCHARGED TO A RECEIVING CHANNEL, AND ENERGY DISSIPATERS SHALL BE PLACED AT THE OUTFALL OF ALL DETENTION FACILITIES AS NECESSARY TO PROVIDE A STABILIZED TRANSITION FROM THE FACILITY TO THE RECEIVING CHANNEL.

H. ALL ON-SITE CHANNELS MUST BE VERIFIED TO BE ADEQUATE. I. INCREASED VOLUMES OF SHEET FLOWS THAT MAY CAUSE EROSION OR SEDIMENTATION ON ADJACENT PROPERTY SHALL BE DIVERTED TO A STABLE OUTLET, ADEQUATE CHANNEL, PIPE OR PIPE SYSTEM, OR TO A DETENTION

FACILITY J. IN APPLYING THESE STORMWATER MANAGEMENT CRITERIA, INDIVIDUAL LOTS OR PARCELS IN A RESIDENTIAL, COMMERCIAL OR INDUSTRIAL DEVELOPMENT SHALL NOT BE CONSIDERED TO BE SEPARATE DEVELOPMENT PROJECTS. INSTEAD, THE DEVELOPMENT, AS A WHOLE, SHALL BE CONSIDERED TO BE A SINGLE DEVELOPMENT PROJECT. HYDROLOGIC PARAMETERS THAT REFLECT THE ULTIMATE DEVELOPMENT CONDITION SHALL BE USED IN ALL ENGINEERING CALCULATIONS.

K. ALL MEASURES USED TO PROTECT PROPERTIES AND WATERWAYS SHALL BE EMPLOYED IN A MANNER WHICH MINIMIZES IMPACTS ON THE PHYSICAL, CHEMICAL AND BIOLOGICAL INTEGRITY OF RIVERS, STREAMS AND OTHER

L. ANY PLAN APPROVED PRIOR TO JULY 1, 2014, THAT PROVIDES FOR STORMWATER MANAGEMENT THAT ADDRESSES ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS IF SHALL SATISFY THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN THE PRACTICES ARE DESIGNED TO (I) DETAIN THE WATER QUALITY VOLUME AND TO RELEASE IT OVER 48 HOURS; (II) DETAIN AND RELEASE OVER A 24-HOUR PERIOD THE EXPECTED RAINFALL RESULTING FROM THE ONE YEAR. 24 HOUR STORM; AND (III) REDUCE THE ALLOWABLE PEAK FLOW RATE RESULTING FROM THE 1.5, 2, AND 10 YEAR. 24 HOUR STORMS TO A LEVEL THAT IS LESS THAN OR EOUAL TO THE PEAK FLOW RATE FROM THE SITE ASSUMING IT WAS IN A GOOD FORESTED CONDITION, ACHIEVED THROUGH MULTIPLICATION OF THE FORESTED PEAK FLOW RATE BY A REDUCTION FACTOR THAT IS EQUAL TO THE RUNOFF VOLUME FROM THE SITE WHEN IT WAS IN A GOOD FORESTED CONDITION DIVIDED BY THE RUNOFF VOLUME FROM THE SITE IN ITS PROPOSED CONDITION. AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS AS DEFINED IN ANY REGULATIONS PROMULGATED PURSUANT TO § 62.1-44.15:54 OR 62.1-44.15:65 OF THE ACT.

M. FOR PLANS APPROVED ON AND AFTER JULY 1, 2014, THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF § 62.1-44.15:52 A OF THE ACT AND THIS SUBSECTION SHALL BE SATISFIED BY COMPLIANCE WITH WATER QUANTITY REQUIREMENTS IN THE STORMWATER MANAGEMENT ACT (§ 62.1-44.15:24 ET SEQ. OF THE CODE OF VIRGINIA) AND ATTENDANT REGULATIONS, UNLESS SUCH LAND DISTURBING ACTIVITIES ARE IN ACCORDANCE WITH 9VAC25-870-48 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) PERMIT REGULATIONS. N. COMPLIANCE WITH THE WATER QUANTITY MINIMUM STANDARDS SET OUT IN 9VAC25-870-66 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) REGULATIONS SHALL BE DEEMED TO SATISFY THE REQUIREMENTS OF SUBDIVISION 19 OF THIS SUBSECTION.

TEMPORARY SEEDING REQUIREMENTS

50/50 MIX OF ANNUAL RYEGRASS AND CEREAL (WINTER) RYE @ 50-100 LBS/ACRE (SEPT. 1 - FEB. 15)

ANNUAL RYEGRASS @ 60-100 LBS/ACRE (FEB. 15 - APR. 30)

GERMAN MILLET @ 50 LBS/ACRE (MAY 1 - AUG. 31)

FERTILIZER: 10/20/10 MIX @ 600 LBS/ACRE LIME: AGRICULTURAL LIMESTONE @ 2 TONS/ACRE STRAW MULCH: APPLIED @ 1.5-2.0 TONS/ACRE

PERMANENT SEEDING REQUIREMENTS

VESCH - TABLE 3.32-D

COMMERCIAL/RESIDENTIAL MIXTURE @ 175-200 LBS/ACRE KENTUCKY 31 OR TURF TYPE TALL FESCUE (95-100%) IMPROVED PERENNIAL RYEGRASS (0-5%) KENTUCKY BLUEGRASS (0-5%)

FERTILIZER: 10/20/10 MIX @ 1,000 LBS/ACRE LIME: AGRICULTURAL LIMESTONE @ 2 TONS/ACRE STRAW MULCH: APPLIED @ 1.5-2.0 TONS/ACRE

TABLE 3.31-B				
	TEMPORARY SEEDING PLANT			
"QUIC	CK REFERENCE FOR ALL REGIO	NS"		
Planting Dates	<u>Species</u>	Rate (lbs./acre)		
Sept. 1 - Feb. 15	50/50 Mix of Annual Ryegrass (Lolium multi-florum) & Cereal (Winter) Rye (Secale cereale)	50 - 100		
Feb. 16 - Apr. 30	Annual Ryegrass (Lolium multi-florum)	60 - 100		
May 1 - Aug 31	German Millet (Setaria italica)	50		

TARLE 3.32-D

	Total Lbs. Per Acre
Minimum Care Lawn	
- Commercial or Residential	175-200 lbs.
 Kentucky 31 or Turf-Type Tall Fescue 	95-100%
- Improved Perennial Ryegrass	0-5%
- Kentucky Bluegrass	0-5%
High-Maintenance Lawn	200-250 lbs.
- Kentucky 31 or Turf-Type Tall Fescue	100%
General Slope (3:1 or less)	
- Kentucky 31 Fescue	128 lbs.
- Red Top Grass	2 lbs.
- Seasonal Nurse Crop *	20 lbs.
	150 lbs.
Low-Maintenance Slope (Steeper than 3:1)	
- Kentucky 31 Fescue	108 lbs.
- Red Top Grass	2 lbs.
- Seasonal Nurse Crop *	20 lbs.
- Crownvetch **	20 lbs.
	150 lbs.
* Use seasonal nurse crop in accordance with seeding date February 16th through April	Annual Rye Foxtail Millet Annual Rye

seed must be properly inoculated. Weeping Lovegrass may be added to any slope

or low-maintenance mix during warmer seeding periods; add 10-20 lbs./acre in

SOILS DATA

	MAP		HYDRIC	K-FA	CTOR	HYDRO- LOGIC	DEPTH	SATURATED HYDROLOGIC	AVAILABLE WATER	FLOODING
5	SYMBOL	SOIL NAME	%	WHOLE SOIL	ROCK FREE	SOIL GROUP	(IN.)	CONDUCTIVITY (IN/HR)	CAPACITY (%)	FREQUENCY CLASS
	4B	ARCOLA SILT LOAM, 2-7%	5	.43	.43	С	28"	0.66	14	_

MAINTENANCE

1. TEMPORARY CONSTRUCTION ENTRANCE - 3.02

THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR THE WASHING AND REWORKING OF EXISTING STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY. THE USE OF WATER TRUCKS TO REMOVE MATERIALS DROPPED, WASHED, OR TRACKED ONTO ROADWAYS WILL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES.

SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED SILT FENCE RESULTING FROM END RUNS AND UNDERCUTTING. SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.

3. PERMANENT SEEDING - 3.32

WHEN IT IS CLEAR THAT PLANTS HAVE NOT GERMINATED ON AN AREA OR HAVE DIED, THESE AREAS MUST BE RESEEDED IMMEDIATELY TO PREVENT EROSION DAMAGE. HOWEVER, IT IS EXTREMELY IMPORTANT TO DETERMINE FOR WHAT REASON GERMINATION DID NOT TAKE PLACE AND MAKE ANY CORRECTIVE ACTION NECESSARY PRIOR TO RESEEDING THE AREA.

EROSION & SEDIMENT CONTROL NARRATIVE

TOTAL SITE AREA: 0.3239 ACRES. A TOTAL OF 0.31 ACRES WILL BE DISTURBED DURING CONSTRUCTION. THE PURPOSE OF THIS PROJECT IS THE CONVERSION OF AN EXISTING DWELLING INTO A 1,767 SF WINE TASTING ROOM WITH ASSOCIATED PARKING.

THE SITE IS LOCATED IN THE TOWN OF HAYMARKET ON THE SOUTH SIDE OF WASHINGTON STREET

THE PROPERTY IS CURRENTLY USED AS A RESIDENCE. THE TOPOGRAPHY IS OPEN AND FLAT WITH GRADES OF 1-13%. ALL SOIL ON THE SITE CONSISTS OF ARCOLA SILT LOAM - SEE TABLE ON THIS SHEET FOR SOIL CHARACTERISTICS.

FHE SITE IS BOUNDED ON THE NORTH BY WASHINGTON STREET (RT. 55), TO THE EAST AND WEST BY COMMERCIAL PROPOERTIES AND ON THE SOUTH BY RESIDENTIAL PROPERTIES.

NO OFFSITE AREAS SHALL BE AFFECTED BY THIS CONSTRUCTION.

THERE ARE NO CRITICAL EROSION AREAS WITHIN THE LIMITS OF THIS PROJECT.

EROSION AND SEDIMENT CONTROL GENERAL NOTES:

ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE V.E.S.C.H. 3RD ED. 1992 AND SHALL BE ADHERED TO UNLESS OTHERWISE WAIVED OR APPROVED BY A VARIANCE.

THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED PRIOR TO THE INSTALLATION OF ANY EROSION AND SEDIMENT CONTROLS OR START OF ANY LAND DISTURBING ACTIVITY. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.

ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING. PRIOR TO DEVELOPMENT, THE LIMITS OF CLEARING SHALL BE CLEARLY MARKED ON THE PROPERTY AND SUITABLE PROTECTIVE BARRIERS SHALL BE ERECTED 5 FEET OUTSIDE THE DRIP LINE OF ANY TREE OR STAND OF TREES TO BE PRESERVED WITHIN 100 FEET OF THE CONSTRUCTION FOOTPRINT. THE BARRIERS SHALL REMAIN ERECTED THROUGHOUT ALL PHASES OF CONSTRUCTION. THE STORAGE OF EQUIPMENT, MATERIALS, DEBRIS OR FILL SHALL NOT BE ALLOWED WITHIN THE AREA TO BE PROTECTED BY THE BARRIER.

ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED. DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.

THE E&S INSPECTOR HAS THE AUTHORITY TO ADD OR DELETE E&S CONTROLS AS NECESSARY IN THE FIELD AS SITE CONDITIONS CHANGE. NO SEDIMENT BASIN OR TRAP CAN BE REMOVED WITHOUT WRITTEN AUTHORIZATION. RESPONSIBLE LAND DISTURBER REPORTS CAN BE AUDITED BY THE E&S INSPECTOR AT ANY TIME. IF RLD REPORTS ARE NOT PROVIDED, THE E&S INSPECTOR CAN REPORT THIS TO THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ). A FOLLOW UP INSPECTION MAY TAKE PLACE BY DEQ (VIRGINIA EROSION & SEDIMENT CONTROL LAW, SEC. 62.1-44.15:58.)

TEMPORARY AND PERMANENT SOIL STABILIZATION:

ALL CUT AND FILL SLOPES ARE TO BE STABILIZED IMMEDIATELY UPON COMPLETION IN ACCORDANCE WITH MINIMUM STANDARD NO. 5. AREAS NOT TO BE PAVED SHALL RECEIVE PERMANENT SEEDING AND MULCHING IN ACCORDANCE WITH SPEC 3.32. DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR A PERIOD OF MORE THAN 14 DAYS SHALL RECEIVE TEMPORARY SEEDING AND MULCHING IN ACCORDANCE WITH SPEC 3.31. SEE SEEDING REQUIREMENTS, THIS SHEET.

STRUCTURAL PRACTICES:

1. SILT FENCE BARRIER - 3.05

SILT FENCE SEDIMENT BARRIERS WILL BE INSTALLED DOWNSLOPE OF AREAS WITH MINIMAL GRADES TO FILTER SEDIMENT-LADEN RUNOFF FROM SHEET FLOW. 2. TEMPORARY CONSTRUCTION ENTRANCE - 3.02

A TEMPORARY CONSTRUCTION ENTRANCE WITH WASH RACK SHALL BE INSTALLED AT THE SITE ACCESS POINT. DURING MUDDY CONDITIONS, DRIVERS OF CONSTRUCTION VEHICLES WILL BE REQUIRED TO WASH THEIR WHEELS BEFORE ENTERING THE ADJACENT ROADWAY. THE TEMPORARY RIGHT-OF-WAY DIVERSION SHALL BE CONSTRUCTED OF COARSE AGGREGATE ONLY.

VEGETATIVE PRACTICES 1. TOP SOILING (STOCKPILE) - 3.30

TOPSOIL WILL BE STRIPPED FROM AREAS TO BE GRADED AND STOCKPILED FOR LATER USE. STOCKPILE LOCATIONS SHALL BE STABILIZED WITH TEMPORARY VEGETATION OR SEDIMENT TRAPPING MEASURES PRIOR TO LAND-DISTURBING ACTIVITIES, SUBMIT A SUPPLEMENTARY EROSION AND SEDIMENT PLAN TO THE OWNER COVERING THE STOCKPILE AREA WHICH MAY HAVE TO BE APPROVED BY THE PLAN AUTHORITY BEFORE ANY ACTIVITY COMMENCES. NO SOIL IS TO BE TAKEN OFFSITE.

2. TEMPORARY SEEDING - 3.31

ALL DENUDED AREAS WHICH WILL BE LEFT DORMANT FOR EXTENDED PERIODS OF TIME SHALL BE SEEDED WITH FAST GERMINATING TEMPORARY VEGETATION IMMEDIATELY FOLLOWING GRADING. SELECTION OF THE SEED MIXTURE WILL DEPEND ON THE TIME OF YEAR IT IS APPLIED.

1. CONSTRUCTION WILL BE SEQUENCED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS OUICKLY AS POSSIBLE.

2. A TEMPORARY CONSTRUCTION ENTRANCE WITH WASH RACK SHALL BE INSTALLED AT THE ENTRANCE. MUD AND DEBRIS SHALL BE WASHED FROM ALL CONSTRUCTION VEHICLES AND EQUIPMENT BEFORE LEAVING THE SITE. A WATER TANKER TRUCK SHALL BE USED IF PUBLIC WATER IS NOT AVAILABLE.

3. INSTALL PERIMETER CONTROLS.

4. AN INSPECTION OF ALL PERIMETER CONTROLS BY A TOWN E&S INSPECTOR SHALL BE REQUIRED PRIOR TO COMMENCEMENT OF ANY EARTH-DISTURBING ACTIVITIES. GRADING OPERATIONS MAY COMMENCE ONCE PERIMETER CONTROLS, DIVERSIONS AND TRAPPING MEASURES ARE INSTALLED TO THE SATISFACTION OF THE INSPECTOR 5. FILL SLOPE SURFACES SHALL BE LEFT IN ROUGHENED CONDITION TO REDUCE SHEET AND RILL

EROSION OF THE SLOPES. THE CONTRACTOR SHALL REDIRECT CONCENTRATED FLOW AWAY FROM THE FILL SLOPES BY INSTALLING EARTH BERMS AND DIRECT THE RUN-OFF TO STABILIZED OUTLET OR SEDIMENT BASIN AND TRAPPING DEVICES. 6. TEMPORARY SEEDING OR OTHER STABILIZATION WILL FOLLOW IMMEDIATELY AFTER GRADING.

7. AREAS THAT ARE NOT TO BE DISTURBED WILL BE CLEARLY MARKED BY FLAGS, SIGNS, ETC.

. PERIMETER CONTROLS; PERIMETER CONTROLS FROM PHASE 1 WHICH DO NOT INTERFERE WITH CONSTRUCTION SHALL REMAIN IN PLACE DURING PHASE 2. 2. FOR VEGETATIVE STABILIZATION OF ALL DENUDED AREAS SEE EROSION CONTROL MEASURES

AND VEGETATIVE PRACTICES. 3. THE JOB SUPERINTENDENT SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE

OF ALL EROSION AND SEDIMENT CONTROL PRACTICES. 4. AFTER ACHIEVING ADEQUATE STABILIZATION, THE TEMPORARY EROSION AND SILTATION CONTROLS WILL BE CLEANED UP AND REMOVED AT THE DIRECTION OF THE SITE INSPECTOR.

MAINTENANCE PROGRAM: ALL MEASURES ARE TO BE INSPECTED DAILY BY THE SITE SUPERINTENDENT. ANY DAMAGED STRUCTURAL MEASURE SHALL BE REPAIRED BY THE CLOSE OF DAY. SILT FENCE SHALL ALSO BE CHECKED FOR UNDERMINING AND DETERIORATION AND SEDIMENT SHALL BE REMOVED IF IT REACHES HALF WAY TO THE TOP OF THE BARRIER.

PERMANENT STABILIZATION MUST BE MATURE, UNIFORM AND INHIBIT EROSION. ADDITIONAL SEEDING AND/OR SOIL AMENDMENTS MAY NEED TO BE REAPPLIED.

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11 of 12

SCALE: AS SHOWN

DATE: 3/27/2019

4-17-2019 PER COMMENTS

REVISIONS:

FILE NO. 1402

AROM

PLANNING (540) 829–2220 (540) 829–2239 AND PHONE FAX

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HINCHI

ENGINEE

SUITE 201

CULPEPER, VIRG

HTIN

AND

LAND

DATE: 3/27/2019

REVISIONS:

SCALE: AS SHOWN

4-17-2019 PER COMMENTS

GRAPHIC SCALE

SCALE: 1" = 10'

SHEET 12 of 12 FILE NO. 1402

SPECIFICATIONS FOR PLANTING PLANT IDENTIFICATION: ALL PLANTS SHALL BE PROPERLY MARKED FOR IDENTIFICATION AND QUANTITY BOTANICAL NAME TREES:

PROP. FIREPLACE

FF 369.5

5

PROPOSED ADDITION

(RR's & STORAGE)

_STOOP

EX. 1-STORY

BRICK & FRAME DWELLING

#14871

FF 369.4

EX. CG-2

WASHINGTON STREET ~ ROUTE 55

(VARIABLE WIDTH R/W)

7297-99-605/3

IST OF PLANT MATERIAL: THE CONTRACTOR WILL VERIFY PLANT QUANTITIES PRIOR TO BIDDING AND ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER. THE CONTRACTOR SHALL FURNISH AND PLANT ALL PLANTS REQUIRED TO COMPLETE THE WORK AS SHOWN ON THE DRAWINGS. SUBSTITUTIONS SHALL NOT BE MADE WITHOUT THE WRITTEN APPROVAL OF THE OWNER. PLANT QUALITY: ALL SHRUBS SHALL BE DENSE, HEAVY TO THE GROUND, AND WELL GROWN SHOWING EVIDENCE OF HAVING BEEN SHEARED REGULARLY, SHALL BE VIGOROUS, HEALTHY, AND OF GOOD COLOR. ALL PLANTS SHALL BE SOUND, FREE OF PLANT DISEASE OR INSECT EGGS, AND SHALL HAVE HEALTHY NORMAL ROOT SYSTEMS. PLANTS SHALL BE FRESHLY DUG AND NOT HELD-IN STOCK, NOR STOCK FROM COLD STORAGE. ALL PLANTS SHALL BE NURSERY GROWN. PLANTS SHALL TC NOT BE PRUNED PRIOR TO DELIVERY. THE SHAPE OF THE PLANT IN GENERAL SHALL CONFORM TO ITS NATURAL GROWTH PROPORTIONS, UNLESS OTHERWISE SPECIFIED. ALL PLANTS INCLUDING CONTAINER-GROWN SHALL CONFORM TO THE BRANCHING, CALIPER, AND HEIGHT SPECIFICATIONS OF THE MOST CURRENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK. PLANT SPACING: PLANT SPACING IS TO SCALE ON PLAN. NO PLANTS EXCEPT ESPALIERED MATERIAL SOIL MIX: SOIL MIX WILL BE 2/3 EXISTING SOIL, 1/3 LEAF MOLD OR EQUAL ORGANIC MATERIAL, BALL SIZE: THE BALL SIZE SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK. EXCAVATION: HOLES FOR ALL PLANTS SHALL BE 18 INCHES LARGER IN DIAMETER THAN SIZE OF BALL OR CONTAINER, AND SHALL HAVE VERTICAL SIDES. HEDGES SHALL BE PLANTED IN A TRENCH 2 INCHES WIDER THAN BALL DIAMETER. BEDS FOR MASS PLANTING SHALL BE ENTIRELY ROTOTILLED TO A DEPTH OF 8 INCHES AND SHALL BE 18 INCHES BEYOND THE AVERAGE OUTSIDE EDGE OF PLANT BALLS. ORGANIC MATERIAL (I.E., LEAF MOLD) WILL BE INCORPORATED INTO PLANT BED BY TILLING AGAIN. PROPORTIONS OF SOIL TO ORGANIC MATERIAL WILL BE 2 PARTS TO 1 PART. PLANTING: BACKFILLING SHALL BE DONE WITH SOIL MIX, REASONABLY FREE OF STONES, SUBSOIL CLAY, LUMPS, STUMPS, ROOTS, WEEDS, BERMUDA GRASS, LITTER, TOXIC SUBSTANCES, OR ANY OTHER MATERIAL WHICH MAY BE HARMFUL TO PLANT GROWTH OR HINDER GRADING, PLANTING, OR MAINTENANCE OPERATIONS. SHOULD ANY UNFORESEEN OR UNSUITABLE PLANTING CONDITIONS ARISE SUCH AS FAULTY SOIL DRAINAGE OR CHEMICAL RESIDUES, THEY SHOULD BE CALLED TO THE ATTENTION OF THE OWNER FOR ADJUSTMENT BEFORE PLANTING. THE PLANT SHALL BE SET PLUMB AND STRAIGHT AND SHALL BE STAKED AT THE TIME OF PLANTING. BACKFILL SHALL BE WELL WORKED ABOUT THE ROOTS AND SETTLED BY WATERING. PLANTS WILL BE PLANTED HIGHER THAN SURROUNDING GRADE. SHRUBS WILL BE 1 INCH HIGHER AND TREES WILL BE 3 INCHES HIGHER. REMOVE ROPE FROM AROUND TREE TRUNKS AND LAY BACK BURLAP FROM TOP OF B&B MATERIAL NYLON OR VINYL ROPE AND/OR BURLAP WILL BE COMPLETELY REMOVED FROM ALL PLANT FRANSPLANTING TREES BY TREE MACHINES: TREES SHALL BE MOVED BY MACHINES THAT PROVIDE A MINIMUM BALL DIAMETER OF 12 INCHES PER 1 INCH OF TREE CALIPER. HOLES ARE TO BE DUG BY THE SAME SIZE MACHINE AS THE ONE TRANSPORTING THE PLANT. THE PLANT MATERIAL SHALL BE TRANSPLANTED IN APPROXIMATELY THE SAME GROWING CONDITION AS IT IS PRESENTLY GROWING. IN TERMS OF SOIL TYPE AND MOISTURE CONTENT. FERTILIZE AND GUY AS DESCRIBED IN THESE

FRANSPLANTING EXISTING TREES: HARDWOODS SHOULD BE TRANSPLANTED IN THE LATE FALL FOLLOWING THEIR LEAF DROP. EVERGREENS MAY BE TRANSPLANTED BEGINNING WITH THE FALL COOL-DOWN PERIOD (NORMALLY SEPTEMBER) AND MAY CONTINUE INTO SPRING PRIOR TO ELONGATION OF THE NEW GROWTH. PROPER DIGGING OF A TREE INCLUDES THE CONSERVATION OI AS MUCH OF THE ROOT SYSTEM AS POSSIBLE, PARTICULARLY THE FINE ROOTS. SOIL ADHERING TO THE ROOTS SHOULD BE DAMP WHEN TREE IS DUG, AND KEPT MOIST UNTIL PLANTING. THE SOIL (OR ROOT") BALL SHOULD BE 12 INCHES IN DIAMETER FOR EACH INCH OF DIAMETER OF THE TRUNK. THI TREE SHOULD BE CAREFULLY EXCAVATED AND THE SOIL BALL WRAPPED IN BURLAP AND TIED WITH ROPE. SOIL AROUND BALLED AND BURLAPPED TREE ROOTS SHOULD BE DUG WITH THE TREE AND NOT JUST PACKED AROUND BARE ROOTS. BALLED AND BURLAPPED PLANT MATERIAL SHALL BE KEPT

CULTIVATION: ALL TRENCHES AND SHRUB BEDS SHALL BE CULTIVATED, EDGED, AND MULCHED TO A DEPTH OF 3 INCHES WITH FINE SHREDDED HARDWOOD BARK. THE AREA AROUND ISOLATED PLANTS SHALL BE MULCHED TO AT LEAST A 6-INCH GREATER DIAMETER THAN THAT OF THE HOLE. PLANT BEDS ADJACENT TO BUILDINGS SHALL BE MULCHED TO THE BUILDING WALL.

MAINTENANCE: THE CONTRACTOR SHALL BE RESPONSIBLE DURING THE CONTRACT AND, UP TO THE TIME OF ACCEPTANCE, FOR KEEPING THE PLANTING AND WORK INCIDENTAL THERETO IN GOOD CONDITION, BY REPLANTING, PLANT REPLACEMENT, WATERING, WEEDING, CULTIVATING, PRUNING AND SPRAYING, STAKING, AND CLEANING UP, AND BY PERFORMING ALL OTHER NECESSARY OPERATIONS OF CARE FOR PROMOTION OF GOOD PLANT GROWTH, SO THAT ALL WORK IS IN SATISFACTORY CONDITION AT THE TIME OF ACCEPTANCE, AT NO ADDITIONAL COST TO THE OWNER.

FERTILIZER: FERTILIZER SHALL BE A SLOW-RELEASE TYPE CONTAINED IN POLYETHYLENE EQUAL. THE BAGS SHALL CONTAIN 1 OUNCE OF SOLUBLE FERTILIZER ANALYSIS 16-18-16 PER UNIT TO LAST FOR THREE YEARS AND SHALL BE APPLIED DURING PLANTING AS RECOMMENDED BY THE MANUFACTURER. IF FERTILIZER PACKETS ARE NOT USED, THE CONTRACTOR SHALL APPLY GRANULAR FERTILIZER TO THE SOIL MIX OF 10-6-6 ANALYSIS, 50% ORGANIC, AT THE FOLLOWING

TREE PITS: 2-3 LBS. PER CALIPER INCH

3-5 LBS. PER 100 SQ. FT GROUND COVER:

SHRUB BEDS:

SHALL BE CLOSER THAN 30 INCHES TO BUILDINGS.

THOROUGHLY MIXED AND HOMOGENIZED.

MATERIAL PRIOR TO PLANTING.

PLANS AND SPECIFICATIONS.

2-3 LBS. PER 100 SQ.FT.

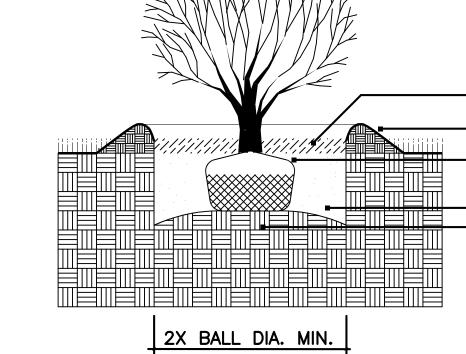
GROUND COVER: ALL AREAS OF GROUND COVER SHALL BE ROTOTILLED TO A DEPTH OF SIX INCHES. APPLY 2 INCHES OF ORGANIC MATERIAL AND ROTOTILL UNTIL THOROUGHLY MIXED. APPLY FERTILIZER AS STATED ABOVE.

OMIT COLLAR AROUND SHRUB WHEN IRRIGATION SYSTEM IS PRESENT.

2. INSTALL TOP OF PLANT BALL 2-3" ABOVE FINISH GRADE.

3. TAMP PLANTING MIX FIRMLY AS PIT IS FILLED AROUND PLANT BALL. 4. SOAK PLANT BALL AND PIT

IMMEDIATELY AFTER INSTALLATION 5. SEE SPECIFICATIONS FOR OTHER PLANTING REQUIREMENTS.



PLANT SHAPE. BARK MULCH 3" MIN. CREATE SAUCER WITH TOPSOIL 6" MIN.

TOP 1/3 OF BURLAP. NON-BIODEGRADABLE MATERÍAL SHALL BE TOTALLY REMOVED. GENTLY COMPACTED TOPSOIL MIXTURE TAMPED ADMIXTURE BACKFILL

THIN BRANCHES BY 1/3 RETAINING NORMAL

—EX. STRÈET LIGHT

3. INSTALL TOP OF BALL 2" ABOVE FINISH 4. SOAK ROOT BALL AND PLANT PIT IMMEDIATELY AFTER INSTALLATION

5. WRAP TREE TRUNK IF SPECIFIED ON PLANS. (SEE SPECS.)

REQUIREMENTS.

1. RUBBER HOSE MAY BE DELETED IF

3/4" NYLON STRAP IS USED.

6. LENGTH OF RUBBER HOSE TO BE 2/3 CIRCUMFERENCE OF TREE.

2. REMOVE WIRE OR NYLON TWINE FROM BALL.

7. PLACE 2 WOOD STAKES PARALLEL TO STREET.

-EX. STREET LIGHT

EX. ENTRANCE

TO REMAIN

8. 4" SAUCER WILL BE OUTSIDE OF BACKFILL. 9. SEE SPECIFICATIONS FOR OTHER PLANTING

SINGLE-STEM TREE PLANTING DETAIL

NOT TO SCALE

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SHRUB PLANTING DETAIL

THIS SHEET IS FOR LANDSCAPE PURPOSES ONLY!

Packet Pg. 19

2.5 X BALL DIA. MIN.

- MULCH: PINE BARK OR WOOD CHIPS 3" MIN.

SOIL SAUCER: USE PREPARED SOIL 6" MIN. WOOD DEADMEN (3)

RUBBER HOSE AT BARK

- SET TREE AT ORIGINAL GRADE

ROPES AT TOP OF BALL SHALL BE CUT. REMOVE TOP 1/3 OF BURLAP. NON-BIODEGRADABLE MATERIAL SHALL BE TOTALLY REMOVED

GUY WIRES (3), WHITE FLAG ON EACH TO INCREASE

TURNBUCKLE (3), GALVANIZED OR DIP-PAINTED

PLANT LIST

Tilia cordata

llex verticillata

Azalea

Fillia cordata/Littleleaf Linden

llex verticillata/Winterberry

Azalea/Evergreen Azalea

Existing Street Lamp

Building-Mounted Light Fixture

SHRUBS:

13

LEGEND

Flowering Shrub:

UMSTER SCREEN

PROPOSED

DUMSTER.

- PAD

COMMON NAME

Littleleaf Linden

Evergreen Azalea

Winterberry

CANOPY/

SPREAD'

N/A

N/A

TOTAL CANOPY AREA OF TREES TO BE PLANTED:

REMARKS

B&B

CALIPER

N/A

N/A

14/10 = 1.4 (2 TREES)

PROVIDED:

 $1.4 \times 3 = 4.2$ (5 SHRUBS)

2 CANOPY TREES

STREET TREE CALCULATIONS

0 TREES

LANDSCAPE ARCHITECT'S CERTIFICATION

LICENSED LANDSCAPE ARCHITECT CERTIFIED BY THE

COMMONWEALTH OF VIRGINIA DPOR.

DEAD AND DYING TREES AND REPLACEMENTS.

EQUIVALENT TO THAT SHOWN ON THE APPROVED PLAN.

REMOVED WITHOUT THE CONSENT OF THE ZONING ADMINISTRATOR.

ENTRANCE AND SIGHT DISTANCE REQUIREMENTS.

THE LANDSCAPE PLAN SHOWN HEREON HAS BEEN PREPARED BY A

THE APPLICANT SHALL REPLACE ANY TREES PLANTED ALONG THE FORESTED BUFFER THAT DIE WITHIN

THREE (3) YEARS OF PLANTING. IF ANY TREES SHOWN ON THE APPROVED SITE PLAN TO BE

PRESERVED OR PLANTED AS PART OF THE PERIMETER BUFFER BECOME DISEASED OR ARE DYING,

SCREENING BUFFER AS SHOWN ON THE APPROVED LANDSCAPE/BUFFER PLAN, THEN THE APPLICANT SHALL REPLACE WITH SUCH NUMBER OF TREES AS ARE NECESSARY TO SATISFY THE SCREENING

THEN THE APPLICANT MAY REMOVE THOSE TREES. IF THE REMOVED TREES ARE PART OF THE

INTENT OF THE APPROVED LANDSCAPE/BUFFER PLAN. THE REPLACEMENT TREES MUST BE

THE APPLICANT SHALL BE RESPONSIBLE FOR AND EMPLOY REASONABLE EFFORTS FOR THE PROTECTION OF THE TOPS, TRUNKS AND ROOTS OF ALL EXISTING TREES, AS WELL AS OTHER

VEGETATION ON THE SITE. PROTECTION DEVICES SHALL BE INSTALLED ALONG THE LIMITS OF

CLEARING AND GRADING, PRIOR TO ANY CONSTRUCTION OCCURRING ON-SITE. SUCH PROTECTION SHALL BE MAINTAINED UNTIL ALL WORK IN THE VICINITY HAS BEEN COMPLETED, AND SHALL NOT BE

4/17/2019

1 TREE PER 30' OF FRONTAGE

REQUESTING WAIVER DUE TO INTERFERENCE WITH PROPOSED

5 SHRUBS

HEIGHT

2-1/2" MIN. | 10' MIN. | 150 SF

24"

ADJOINING PROPERTY SCREENING

REQUIRED: 30' SEMITRANSPARENT SCREEN ALONG REAR PROPERTY

PROVIDED: EXISTING 6' BOARD-ON-BOARD FENCE TO REMAIN AS

REMAIN AND PROVIDE SCREENING FOR ADJACENT RESIDENTIAL

REQUESTING WAIVER DUE TO AREA LIMITATIONS AND EXISTING FENCE TO

INTERIOR PARKING LOT CALCULATIONS

REQUIRED: 1 TREE & 3 SHRUBS PER 10 PARKING SPACES

TOTAL

300 SF

N/A

N/A

300 SF

PREPARED SUBSOIL TO FORM PEDESTAL TO PREVENT

SETTLING

AND

AROM.

ND

DATE: 3/27/2019

4-17-2019 PER COMMENTS

REVISIONS:

- SOIL SAUCER: USE PREPARED SOIL 6" MIN.

ROPES AT TOP OF BALL SHALL BE CUT. REMOVE TOP 1/3 OF BURLAP. NON-BIODEGRADABLE MATERIAL

SHALL BE TOTALLY REMOVED

PREPARED SUBSOIL TO FORM PEDESTAL TO PREVENT

— WOOD DEADMEN (3)

SINGLE-STEM TREE PLANTING DETAIL

NOT TO SCALE

2.5 X BALL DIA. MIN.

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GRAPHIC SCALE

SCALE: 1" = 10'

24'' N/A Evergreen Azalea N/A N/A Prunus laurocerasus 'Otto Luyken' 24'' N/A N/A N/A Otto Luyken Laurel **LEGEND** ADJOINING PROPERTY SCREENING **REQUIRED:** 30' SEMITRANSPARENT SCREEN ALONG REAR PROPERTY illia cordata/Littleleaf Linden PROVIDED: REAR YARD: EXISTING 6' BOARD-ON-BOARD FENCE TO REMAIN AND 10 PROPOSED SKYROCKET JUNIPERS. Juniperus scopulorum 'Skyrocket'/Skyrocket Juniper SIDE YARD: 18 EVERGREEN SHRUBS.

N/A

CALIPER

2-1/2" MIN.

PLANT LIST

COMMON NAME

Littleleaf Linden

Skyrocket Juniper

Winterberry

INTERIOR PARKING LOT CALCULATIONS

CANOPY/

SPREAD'

150 SF

25 SF

N/A

TOTAL CANOPY AREA OF TREES TO BE PLANTED:

REMARKS

B&B

TOTAL

300 SF

250 SF

N/A

550 SF

HEIGHT

10' MIN.

6' MIN.

24''

REQUIRED: 1 TREE & 3 SHRUBS PER 10 PARKING SPACES 14/10 = 1.4 (2 TREES) $1.4 \times 3 = 4.2$ (5 SHRUBS)

PROVIDED: 2 CANOPY TREES

5 SHRUBS

REQUIRED: 1 TREE PER 30' OF FRONTAGE

STREET TREE CALCULATIONS

PROVIDED: 0 TREES

REQUESTING WAIVER DUE TO INTERFERENCE WITH PROPOSED ENTRANCE AND SIGHT DISTANCE REQUIREMENTS.

LANDSCAPE ARCHITECT'S CERTIFICATION

THE LANDSCAPE PLAN SHOWN HEREON HAS BEEN PREPARED BY A LICENSED LANDSCAPE ARCHITECT CERTIFIED BY THE

COMMONWEALTH OF VIRGINIA DPOR. 5/13/2019

DEAD AND DYING TREES AND REPLACEMENTS. THE APPLICANT SHALL REPLACE ANY TREES PLANTED ALONG THE FORESTED BUFFER THAT DIE WITHIN THREE (3) YEARS OF PLANTING. IF ANY TREES SHOWN ON THE APPROVED SITE PLAN TO BE PRESERVED OR PLANTED AS PART OF THE PERIMETER BUFFER BECOME DISEASED OR ARE DYING, THEN THE APPLICANT MAY REMOVE THOSE TREES. IF THE REMOVED TREES ARE PART OF THE SCREENING BUFFER AS SHOWN ON THE APPROVED LANDSCAPE/BUFFER PLAN. THEN THE APPLICANT SHALL REPLACE WITH SUCH NUMBER OF TREES AS ARE NECESSARY TO SATISFY THE SCREENING INTENT OF THE APPROVED LANDSCAPE/BUFFER PLAN. THE REPLACEMENT TREES MUST BE

EQUIVALENT TO THAT SHOWN ON THE APPROVED PLAN. HE APPLICANT SHALL BE RESPONSIBLE FOR AND EMPLOY REASONABLE EFFORTS FOR THE PROTECTION OF THE TOPS, TRUNKS AND ROOTS OF ALL EXISTING TREES, AS WELL AS OTHER VEGETATION ON THE SITE. PROTECTION DEVICES SHALL BE INSTALLED ALONG THE LIMITS OF

CLEARING AND GRADING, PRIOR TO ANY CONSTRUCTION OCCURRING ON-SITE. SUCH PROTECTION SHALL BE MAINTAINED UNTIL ALL WORK IN THE VICINITY HAS BEEN COMPLETED, AND SHALL NOT BE

REMOVED WITHOUT THE CONSENT OF THE ZONING ADMINISTRATOR RUBBER HOSE AT BARK GUY WIRES (3), WHITE FLAG ON EACH TO INCREASE TURNBUCKLE (3), GALVANIZED OR DIP-PAINTED - SET TREE AT ORIGINAL GRADE

3/4" NYLON STRAP IS USED. 2. REMOVE WIRE OR NYLON TWINE FROM BALL. - MULCH: PINE BARK OR WOOD CHIPS 3" MIN.

QUANTITY

10

13

TREES:

JS

SHRUBS:

3

BOTANICAL NAME

Tilia cordata

llex verticillata

Juniperus scopulorum 'Skyrocket'

Prunus laurocerasus 'Otto Luyken'/Otto Luyken Laurel

Flowering Shrub

llex verticillata/Winterberry

Building-Mounted Light Fixture

Existing Street Lamp

3. INSTALL TOP OF BALL 2" ABOVE FINISH GRADE.

—EX. STREET LIGHT

EX. ENTRANCE

TO REMAIN

4. SOAK ROOT BALL AND PLANT PIT IMMEDIATELY AFTER INSTALLATION

1. RUBBER HOSE MAY BE DELETED IF

5. WRAP TREE TRUNK IF SPECIFIED ON PLANS. (SEE SPECS.)

6. LENGTH OF RUBBER HOSE TO BE 2/3 CIRCUMFERENCE OF TREE.

7. PLACE 2 WOOD STAKES PARALLEL TO STREET. 8. 4" SAUCER WILL BE OUTSIDE OF BACKFILL.

9. SEE SPECIFICATIONS FOR OTHER PLANTING REQUIREMENTS.

CREATE SAUCER WITH TOPSOIL 6" MIN. ROPES AT TOP OF BALL SHALL BE CUT. REMOVE TOP 1/3 OF BURLAP. NON-BIODEGRADABLE MATERÍAL SHALL BE TOTALLY REMOVED. GENTLY COMPACTED TOPSOIL MIXTURE TAMPED ADMIXTURE BACKFILL

JS

2

TC

18

3

-EX. STRÈET LIGHT

PROP. FIREPLACE

FF 369.5

PROPOSED ADDITION

~STOOP

EX. 1-STORY

BRICK & FRAME

DWELLING

#14871

FF 369.4

EX. TREE (TO BE RELOCATED)

WASHINGTON STREET ~ ROUTE 55

(VARIABLE WIDTH R/W)

EX. CG-2

(RR's & STORAGE)

XLIGHT

WARAMEL DRIVE

IRRIGATION SYSTEM IS PRESENT. INSTALL TOP OF PLANT BALL 2-3" TAMP PLANTING MIX FIRMLY AS PIT IS FILLED AROUND PLANT BALL. IMMEDIATELY AFTER INSTALLATION SEE SPECIFICATIONS FOR OTHER

SPECIFICATIONS FOR PLANTING

SHALL BE CLOSER THAN 30 INCHES TO BUILDINGS.

THOROUGHLY MIXED AND HOMOGENIZED.

MATERIAL PRIOR TO PLANTING.

PLANS AND SPECIFICATIONS.

MOIST.

TREE PITS:

SHRUB BEDS:

2-3 LBS. PER CALIPER INCH

3-5 LBS. PER 100 SQ. FT

2-3 LBS. PER 100 SQ.FT.

APPLY FERTILIZER AS STATED ABOVE.

OMIT COLLAR AROUND SHRUB WHEN

ABOVE FINISH GRADE.

SOAK PLANT BALL AND PIT

PLANTING REQUIREMENTS.

GROUND COVER:

PLANT IDENTIFICATION: ALL PLANTS SHALL BE PROPERLY MARKED FOR IDENTIFICATION AND

LIST OF PLANT MATERIAL: THE CONTRACTOR WILL VERIFY PLANT QUANTITIES PRIOR TO BIDDING AND ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER. THE CONTRACTOR

SHALL FURNISH AND PLANT ALL PLANTS REQUIRED TO COMPLETE THE WORK AS SHOWN ON THE DRAWINGS. SUBSTITUTIONS SHALL NOT BE MADE WITHOUT THE WRITTEN APPROVAL OF THE OWNER.

SHOWING EVIDENCE OF HAVING BEEN SHEARED REGULARLY, SHALL BE VIGOROUS, HEALTHY, AND OF GOOD COLOR. ALL PLANTS SHALL BE SOUND, FREE OF PLANT DISEASE OR INSECT EGGS, AND

SHALL HAVE HEALTHY NORMAL ROOT SYSTEMS. PLANTS SHALL BE FRESHLY DUG AND NOT HELD-IN STOCK, NOR STOCK FROM COLD STORAGE. ALL PLANTS SHALL BE NURSERY GROWN. PLANTS SHALL

NOT BE PRUNED PRIOR TO DELIVERY. THE SHAPE OF THE PLANT IN GENERAL SHALL CONFORM TO ITS

CONTAINER-GROWN SHALL CONFORM TO THE BRANCHING, CALIPER, AND HEIGHT SPECIFICATIONS

PLANT SPACING: PLANT SPACING IS TO SCALE ON PLAN. NO PLANTS EXCEPT ESPALIERED MATERIAL

SOIL MIX: SOIL MIX WILL BE 2/3 EXISTING SOIL, 1/3 LEAF MOLD OR EQUAL ORGANIC MATERIAL,

BALL SIZE: THE BALL SIZE SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK.

EXCAVATION: HOLES FOR ALL PLANTS SHALL BE 18 INCHES LARGER IN DIAMETER THAN SIZE OF BALL OR CONTAINER, AND SHALL HAVE VERTICAL SIDES. HEDGES SHALL BE PLANTED IN A TRENCH

ROTOTILLED TO A DEPTH OF 8 INCHES AND SHALL BE 18 INCHES BEYOND THE AVERAGE OUTSIDE EDGE OF PLANT BALLS. ORGANIC MATERIAL (I.E., LEAF MOLD) WILL BE INCORPORATED INTO PLANT

BED BY TILLING AGAIN. PROPORTIONS OF SOIL TO ORGANIC MATERIAL WILL BE 2 PARTS TO 1 PART.

PLANTING: BACKFILLING SHALL BE DONE WITH SOIL MIX, REASONABLY FREE OF STONES, SUBSOIL

MATERIAL WHICH MAY BE HARMFUL TO PLANT GROWTH OR HINDER GRADING, PLANTING, OR

AND STRAIGHT AND SHALL BE STAKED AT THE TIME OF PLANTING. BACKFILL SHALL BE WELL

SURROUNDING GRADE. SHRUBS WILL BE 1 INCH HIGHER AND TREES WILL BE 3 INCHES HIGHER. REMOVE ROPE FROM AROUND TREE TRUNKS AND LAY BACK BURLAP FROM TOP OF B&B MATERIAL NYLON OR VINYL ROPE AND/OR BURLAP WILL BE COMPLETELY REMOVED FROM ALL PLANT

MAINTENANCE OPERATIONS. SHOULD ANY UNFORESEEN OR UNSUITABLE PLANTING CONDITIONS ARISE SUCH AS FAULTY SOIL DRAINAGE OR CHEMICAL RESIDUES, THEY SHOULD BE CALLED TO THE

ATTENTION OF THE OWNER FOR ADJUSTMENT BEFORE PLANTING. THE PLANT SHALL BE SET PLUMB

WORKED ABOUT THE ROOTS AND SETTLED BY WATERING. PLANTS WILL BE PLANTED HIGHER THAN

TRANSPLANTING TREES BY TREE MACHINES: TREES SHALL BE MOVED BY MACHINES THAT PROVIDE

A MINIMUM BALL DIAMETER OF 12 INCHES PER 1 INCH OF TREE CALIPER. HOLES ARE TO BE DUG BY THE SAME SIZE MACHINE AS THE ONE TRANSPORTING THE PLANT. THE PLANT MATERIAL SHALL BE

TRANSPLANTED IN APPROXIMATELY THE SAME GROWING CONDITION AS IT IS PRESENTLY GROWING, IN TERMS OF SOIL TYPE AND MOISTURE CONTENT. FERTILIZE AND GUY AS DESCRIBED IN THESE

TRANSPLANTING EXISTING TREES: HARDWOODS SHOULD BE TRANSPLANTED IN THE LATE FALL

COOL-DOWN PERIOD (NORMALLY SEPTEMBER) AND MAY CONTINUE INTO SPRING PRIOR TO

FOLLOWING THEIR LEAF DROP. EVERGREENS MAY BE TRANSPLANTED BEGINNING WITH THE FALL

ELONGATION OF THE NEW GROWTH. PROPER DIGGING OF A TREE INCLUDES THE CONSERVATION OF AS MUCH OF THE ROOT SYSTEM AS POSSIBLE, PARTICULARLY THE FINE ROOTS. SOIL ADHERING TO THE ROOTS SHOULD BE DAMP WHEN TREE IS DUG. AND KEPT MOIST UNTIL PLANTING. THE SOIL (OR "ROOT") BALL SHOULD BE 12 INCHES IN DIAMETER FOR EACH INCH OF DIAMETER OF THE TRUNK. THE TREE SHOULD BE CAREFULLY EXCAVATED AND THE SOIL BALL WRAPPED IN BURLAP AND TIED WITH ROPE. SOIL AROUND BALLED AND BURLAPPED TREE ROOTS SHOULD BE DUG WITH THE TREE AND NOT JUST PACKED AROUND BARE ROOTS. BALLED AND BURLAPPED PLANT MATERIAL SHALL BE KEPT

CULTIVATION: ALL TRENCHES AND SHRUB BEDS SHALL BE CULTIVATED, EDGED, AND MULCHED TO A

DEPTH OF 3 INCHES WITH FINE SHREDDED HARDWOOD BARK. THE AREA AROUND ISOLATED PLANTS

MAINTENANCE: THE CONTRACTOR SHALL BE RESPONSIBLE DURING THE CONTRACT AND, UP TO THE

CONDITION, BY REPLANTING, PLANT REPLACEMENT, WATERING, WEEDING, CULTIVATING, PRUNING

SATISFACTORY CONDITION AT THE TIME OF ACCEPTANCE, AT NO ADDITIONAL COST TO THE OWNER.

PERFORATED BAGS WITH MICROPORE HOLES FOR CONTROLLED FEEDING, SUCH AS "EASY GROW" AS

LAST FOR THREE YEARS AND SHALL BE APPLIED DURING PLANTING AS RECOMMENDED BY THE

GRANULAR FERTILIZER TO THE SOIL MIX OF 10-6-6 ANALYSIS, 50% ORGANIC, AT THE FOLLOWING

GROUND COVER: ALL AREAS OF GROUND COVER SHALL BE ROTOTILLED TO A DEPTH OF SIX INCHES.

APPLY 2 INCHES OF ORGANIC MATERIAL AND ROTOTILL UNTIL THOROUGHLY MIXED.

EQUAL. THE BAGS SHALL CONTAIN 1 OUNCE OF SOLUBLE FERTILIZER ANALYSIS 16-18-16 PER UNIT TO

TIME OF ACCEPTANCE, FOR KEEPING THE PLANTING AND WORK INCIDENTAL THERETO IN GOOD

AND SPRAYING, STAKING, AND CLEANING UP, AND BY PERFORMING ALL OTHER NECESSARY OPERATIONS OF CARE FOR PROMOTION OF GOOD PLANT GROWTH, SO THAT ALL WORK IS IN

FERTILIZER: FERTILIZER SHALL BE A SLOW-RELEASE TYPE CONTAINED IN POLYETHYLENE

MANUFACTURER. IF FERTILIZER PACKETS ARE NOT USED, THE CONTRACTOR SHALL APPLY

SHALL BE MULCHED TO AT LEAST A 6-INCH GREATER DIAMETER THAN THAT OF THE HOLE. PLANT

BEDS ADJACENT TO BUILDINGS SHALL BE MULCHED TO THE BUILDING WALL.

CLAY, LUMPS, STUMPS, ROOTS, WEEDS, BERMUDA GRASS, LITTER, TOXIC SUBSTANCES, OR ANY OTHER

12 INCHES WIDER THAN BALL DIAMETER. BEDS FOR MASS PLANTING SHALL BE ENTIRELY

PLANT QUALITY: ALL SHRUBS SHALL BE DENSE, HEAVY TO THE GROUND, AND WELL GROWN

NATURAL GROWTH PROPORTIONS, UNLESS OTHERWISE SPECIFIED. ALL PLANTS INCLUDING

OF THE MOST CURRENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK.

THIN BRANCHES BY 1/3 RETAINING NORMAL PLANT SHAPE BARK MULCH 3" MIN.

2X BALL DIA. MIN.

SHRUB PLANTING DETAIL

Packet Pg. 20

SHEET

12 of 12 FILE NO. 1402



Emily K. Lockhart

Town Planner and Zoning Administrator

MEMORANDUM

TO: Planning Commission

FROM: Emily K. Lockhart

DATE: May 16, 2019

SUBJECT: SUP#2019-003, Wonderful Haymarket, LLC - 14901 Washington Street

Please see the attached Special Use Permit Application and Narrative submitted by Jeffrey Moon, on behalf of Wonderful Haymarket, LLC. The application will be heard at a Joint Public Hearing on June 3, 2019 at 6:00pm. The public notice will run in the local newspaper May 22, 2019 and May 29, 2019. A Staff Report will be posted on the website and sent to the Planning Commission by May 22, 2019.

Please take note that the application is being presented in the packet for informational purposes and as a courtesy for the Planning Commission to have additional review time. If you have any questions or concerns please contact me via email or phone at Town Hall.





SPECIAL USE PERMIT APPLICATION

NOTE: This application must be filled out completely and all submission requirements must be met befor the application can be accepted and scheduled for review/Public Hearing.

Won	derful Haymarket I I C			
NAME OF BUSINESS/APPLICANT: Won				
SITE ADDRESS: 14901 Washington Street, Haymarket, VA 20169				
	1 □ B-2 □ I-1 □ C-1 SITE PLAN PROPOSED: □ Yes ■ No			
PROPOSED USE(S): Dental Office	CODE SECTION(S) #:			
BRIEF DESCRIPTION OF ACTIVITY: In the activity including size and type of proposed/existing to visit the site during an average workday and any	e space below or in an attached narrative, please describe in detail the proposed go structures, hours of operation, type of clientele, number of vehicles anticipated other changes that will affect the nature or appearance of the structure(s) or site tapplication to use the building as a Dental Office Facility			
Supporting Documentation (attached):	Narrative (addressing criteria of Section 58-9(d)) □ Plan/Plat			
ADDITIONAL INFORMATION FOR HOM	E OCCUPATIONS (SUBJECT TO SECTION 58-16):			
TYPE OF STRUCTURE: ☐ SFD ☐ TH TOT	AL FLOOR AREA OF MAIN STRUCTURE:(sq. ft.)			
FLOOR AREA DEVOTED TO HOME OCCUPA	TION:(sq. ft.)			
NUMBER / TYPE OF VEHICLES:				
	HOD OF STORAGE (i.e. garage, accessory storage, etc.):			
FEE: ☐ \$500 Reside	NO. OF EMPLOYEES WORKING FROM SITE: ntial			
APPLICANT/PERMIT HOLDER INFORMA Jeffrey Moon	Jeffrey Moon			
Name 4372 Thomas Brigade Ln	Name 4372 Thomas Brigade Ln			
Address Fairfax VA 22033	Address Fairfax VA 22033			
City State Zip 8042440019	City State Zip 8042440019			
Phone#(s)	Phone#(s)			
jmoon@vcu.edu	jmoon@vcu.edu			
Email Address	Email Address			

	TOWN OF HAYMARKET SPECIAL USE PERMIT APPLICATION
TROUGH S	

S	UF) #	
			 _

APPLICANT / PROPERTY OWNER CONSENT	*****REQUIRED*****	
I, as owner or authorized agent for the above-referenced parcel, do hereby certify that I have the authority to make the foregoing application and that the information provided herein or attached hereto is correct and a true representation of the activity and method of operation described. Construction of any improvements described herein and as shown on the attached plat, plan and/or specifications will comply with the ordinances of the Town of Haymarket, any additional restrictions and/or conditions prescribed by the Planning Commission or the Town Council, and all other applicable laws.		
MATTER	MATT	
Applicant Signature	Property Owner Signature	
4/8/2019	4/8/2019	
Date	Date	
	USE ONLY***	
DATE FILED: APril 11,2019 FEE AMOUNT: \$		
DATE TO ZONING ADMINISTRATOR: April 112,	2019 STAFF REVIEW COMPLETE: May 8, 2019	
APPLICABLE ZONING ORDINANCE SECTION(S) / RECOMM	IENDED CONDITIONS:	
Emily & Lockhar &	May 08, 2019 DATE	
DATE TO PLANNING COMMISSION: May 16, 2019 PUBLIC HEARING DATE: June 3rd, 2019 RECOMMEND APPROVAL RECOMMEND DENIAL NO RECOMMENDATION RECOMMENDED CONDITIONS:		
CHAIRMAN	DATE	
DATE TO TOWN COUNCIL:	PUBLIC HEARING DATE:	
☐ APPROVED ☐ DENIED		
CONDITIONS:		
22		

To: The Planning Commission and the Town Council of Haymarket, Virginia

From: Jeff Moon, member of Wonderful Haymarket LLC

Date: 7 May 2019

Purpose: Application for Special Use Permit - 14901 Washington St. Haymarket, VA 20169

Dear Town of Haymarket Planning Commission and Town Council members,

First, I would like to say that it has been exciting to witness the growth of the town, and feel honored to be able to serve the great community through the years at my current practice. My current office and I are thankful that the community has given us the trust and support we needed to remain a successful business, and friend of the community. Our intent is to continue to provide the best care and service to our growing community in the new, larger location within the town limits.

We applied for Special Use Permit at the location 14901 Washington St, Haymarket VA. The mentioned property is currently in the zoning district of B-1, and the proposed intent is to use the property in its entirety for operating a Dental Office facility upon the receipt of your approval.

14901 Washington St is a beautiful property built in 1987, which we will preserve and maintain. We would like to increase the square footage of the building by enclosing the existing drive-through area at the rear of the building, but the front that faces the main street will remain wholly preserved and untouched. The proposed extension of the back will increase the square footage from approximately 2,834 (current) to approximately 4,755 (proposed).

The property already possesses 28 parking spots, which satisfies and exceeds the 24 required parking spots defined by the Town of Haymarket Zoning Ordinance. We also do not foresee any disruption to current traffic patterns, since the patient appointment times will be staggered throughout the day. There are also two separate entrances to the property from the intersecting roads (one from Washington Street, and a second on Madison Street) to further manage the traffic volume on either street.

We verified that the building already has adequate utility, drainage and other facilities necessary for the operation of the business. The business will only be operational during the daytime (the business hours of operation will be Monday through Saturday, 8AM to 5PM), quiet, and professional and respectful in its presentation of the property; we have no reason to believe there will be any negative impacts to the surrounding area in any way, including the residences nearby. One of the unique aspects of our dental office is our Saturday hours. We are one of the very few dental offices in the area to offer Saturdays hours which addresses the need of our rapidly growing community.

Our business will ensure to protect and enhance the health and general welfare of the community and its neighboring areas by providing exceptional care and sharing overall health related knowledge with everyone.

Thank you for your time, we would love to continue to assist in making the town healthier each day.

Jeff Moon and Staff

7 May 2019



Emily K. Lockhart

Town Planner and Zoning Administrator

MEMORANDUM

TO: Planning Commission

FROM: Emily K. Lockhart

DATE: May 16, 2019

SUBJECT: SUP#2019-001, Williams Holdings, 6604 & 6608 Jefferson Street Special Use

Permit

Please find attached the following documents in regards to application SUP#2019-001, as previously distributed.

SUP#2019-001 Staff Report

Applicant Materials:

SUP Application

Applicant Narrative

Applicant Presentation Slides and Elevations

UPDATED Applicant Presentation Slides and Elevations. – to be presented at the Meeting

Please take note that the original documents have been included for reference and the applicant will provide additional presentation slides and elevations at the May 22^{nd} meeting, to address the comments heard at the Planning Commission Public Hearing April 22, 2019. Due to the significant changes to the application, the applicant has been asked to submit an amendment to the original application. The new application will be readvertised on June 5^{th} , 2019 and June 12^{th} , 2019 for a NEW public hearing on June 17^{th} , 2019 at 7:00 pm, if authorized by the Planning Commission at May 22^{nd} 's regularly scheduled meeting.



Emily K. Lockhart

Town Planner and Zoning Administrator

MEMORANDUM

TO: Planning Commission

FROM: Emily K. Lockhart

DATE: April 9, 2019

SUBJECT: SUP#2019-001 – 6604 Jefferson Street and 6608 Jefferson Street, Williams

Holdings, Mixed-Use Development

Application Summary:

Applicant, Williams Holdings, has submitted the attached Special Use Permit application to construct 45,630 GSF mixed-use building with 28 residential units, at 6604 and 6608 Jefferson Street, Haymarket. The applicant's intent is to meet growing housing needs for adult populations while providing pedestrian friendly retail spaces that encourage access by foot.

The applicant has provided a Development Narrative, Proposed Concept Plan and additional documents to support the mixed-use development.

The Zoning Ordinance requires the following standards are considered and met prior to approval.

- (1) The proposed use at the stipulated location shall be in accordance with the official policies of an adopted comprehensive plan, and with any specific element of such plan.
- (2) The proposed use shall be in accordance with the general purpose and intent of the applicable zoning district requirements.
- (3) The proposed use shall not adversely affect the use or values of surrounding properties and structures.
- (4) The proposed use shall not adversely affect the health, safety or general welfare of persons residing or working in the neighborhood.
- (5) Pedestrian and vehicular traffic generated by the proposed use shall not be hazardous or conflict with the existing and anticipated traffic in the neighborhood.
- (6) Utility, drainage, parking, loading and other necessary facilities provided to serve the proposed use shall be adequate.

In addition, Article XIX, Use & Design Standards (Sec 58 -19.2.)

- h) Additional standards for the B1 district.
 - (1) Any new buildings shall be street-oriented with pedestrian entrances from the street, and compatible with the surrounding development.

- (2) Maximum lot coverage: Forty-five percent including building and all paved areas.
- (t) Retail. The following general standards shall apply to all retail uses:
 - (1) No outdoor display of goods shall be permitted.

Comprehensive Plan Excerpts

Historical Walking Central Portion of Town

This portion of Haymarket houses the old Town Hall, now the Haymarket museum, and the historic old post office. Development here should be carefully considered and should reflect the architecture that lines Washington Street and defines historic Haymarket. Architectural styles and building sizes should include Colonial, Federalist, and Folk Victorian with Greek revival and Italianate architectural details. Visual interest should be encouraged through the use of height variations ranging from one to three stories. Retail and professional buildings should be arranged in a "walk-around" manner, with parking off-site. In essence, development in this area should create a town center with a historical feel in which residents and visitors can walk, shop, eat, conduct business and relax. Restoration of the old post office will be required as part of any development plan. Consideration must be made to the utility of maintaining town hall in this portion of town or moving it to another location. From this point in town, all other structures should begin to look "newer".

Town Planner Analysis of Impacts

(1) The proposed use at the stipulated location shall be in accordance with the official policies of an adopted comprehensive plan, and with any specific element of such plan.

Response: The Comprehensive Plan provides the following statement for the purpose and the intent of the Neighborhood Town Center as proposed in the 2008 Comprehensive Plan:

Neighborhood/Town Center – Development of a center within the Town is proposed to provide a convenient focus for community activities and services such as neighborhood stores, offices and restaurants. A cluster of dwellings, stores, and local institutions has grown at the intersection of Washington Street and Jefferson Street as a result of convenient location, traffic flow, and nearby residential development. In addition, some portions of Washington Street west from the intersection of Washington Street and Hunting Path are proposed as Neighborhood/Town Center commercial areas with a visual connection of brick sidewalks and period street furniture.

Features of community development needed to strengthen Haymarket's Town Center include:

1. Provisions for expansion of retail stores and offices serving Town residents in a manner consistent with an appropriate village character for the Center;

- 2. Provision of additional off-street parking and loading facilities to serve commercial development, including a public parking lot to limit parking needs at individual sites:
- 3. Preservation of architecturally significant structures including older residential and commercial structures as well as the Old Town Hall and Old Post Office buildings;
- 4. Beautification activities including additional landscaping, new street furniture (lights, benches, trashcans) and brick sidewalks;
- 5. The elimination of distracting signs;
- 6. Repair and improve maintenance of sidewalks serving the residents adjacent to the Town Center;
- 7. The construction of new structures that are carefully integrated with older, existing buildings and do not overpower the existing Streetscape or pose a threat to the center's character.

With the above intent in mind, it is the Town Planner's understanding that the proposed mixed-use development will provide an expansion of retail services to the Town, offer off-street parking to service the development, architectural features to celebrate the Town's history, and a walkable destination for current and future residents.

(2) The proposed use shall be in accordance with the general purpose and intent of the applicable zoning district requirements.

Response: The Zoning Ordinance provides the following statement for the purpose and the intent of the Town Center Business District;

ARTICLE X. - TOWN CENTER DISTRICT B-1 Sec. 58-10.1. - Intent.

The Town Center District, B-1, provides primarily for retail shopping and personal services to be developed either as a unit or in individual parcels oriented to attracting pedestrian shoppers, tourism and local convenience. Recognizing the economic value of the existing historical area, it shall further be the intent of the district to encourage the retention and rehabilitation of structures and uses in the district that have historic and/or architectural significance. The range, size, hours of operation, lighting, signs and other developmental aspects of permitted uses may be limited in order to enhance the general character and historic nature of the district.

It is the Town Planner's understanding that the proposed mixed-use development will be in accordance with the general purpose and intent of the B-1 zoning district by providing additional retail shops and services to the Town residents which will also act as attractive pedestrian destinations. The residential portion of the project will provide an opportunity to blend the Town Center district with the surrounding residential district to create a less intrusive blending of the districts.

The Planning Commission shall consider the appropriate number of residential units for the mixed-use development. The applicant has currently proposed 28 units, which will be a combination of one to three-bedroom units.

(3) The proposed use shall not adversely affect the use or values of surrounding properties and structures.

The proposed use fronts Jefferson Street with a commercial business located at 6590 Jefferson Street and a residential use at 6610 Jefferson Street. Across Jefferson Street are several commercial properties with a variety of retail businesses, professional offices and small restaurants. The parcels abutting the property on the rear are three residential lots, currently under development.

The proposed mixed-use structure will have three stories of residential properties above the first-floor retail uses. The structure's elevations will be visually appealing on all sides and conform to all Architectural Review Board requirements and guidelines.

There is no indication the proposed-mixed-use structure will decrease the values of the surrounding properties, however for the most accurate information an additional study on the economic value would need to be performed. There is an indication that the residential property located at 6610 Jefferson Street could be affected by the development's traffic flow and commercial uses during the pm hours. However, the proposed commercial development is a by-right use.

(4) The proposed use shall not adversely affect the health, safety or general welfare of persons residing or working in the neighborhood.

There is no indication of any adverse effects on the health, safety, or general welfare of the persons residing or working in the neighborhood based on the SUP Package submitted for the mixed-use structure.

(5) Pedestrian and vehicular traffic generated by the proposed use shall not be hazardous or conflict with the existing and anticipated traffic in the neighborhood.

The proposed mixed-use development will provide off-street parking for the retail spaces and the residential units. The applicant is requesting a parking wavier for the on-site parking requirements. The apartments on the second, third and fourth floor require 1.5 spaces per dwelling unit (Sec 58-6.1) and the retail space requirements vary based of the use type from 1 space per 300 GFA (Office/Low Intensity) to 1 space per 100 GFA (restaurant use). The applicant has provided 63 spaces on site to accommodate the uses. Of the 63 spaces, 42 spaces will be required for the residential uses and 21 will remain for the retail spaces. It is recommended by the Town Planner that the applicant develop a shared parking agreement to present to the Planning Commission for the parking wavier to be considered. Pedestrian traffic will have access to the property via the sidewalk improvement project along Jefferson Street.

The vehicular traffic along Jefferson Street will be impacted with the new entry/exit and added vehicular trips. Proper traffic studies and impact analysis shall be prepared along with projected vehicle trips per day. Since Jefferson Street is a high-volume route, it will be pertinent to not impede traffic, rather the improvements shall enhance the movement and flow through the site and intersections.

(6) Utility, drainage, parking, loading and other necessary facilities provided to serve the proposed use shall be adequate.

Utilities, drainage, loading zones and other necessary facilities will be addressed at the site plan phase. The parking shall be addressed by the Planning Commission during the SUP process, as the parking currently proposed may not adequately suffice. It is recommended that the applicant provide a shared parking agreement as a means of justification for the wavier and as a point of discussion for the Planning Commission.

Planner Recommendation:

As the building and parking lot are currently proposed the impervious surfaces will exceed the allotted amount in the Business-1 district. As proposed the Town Planner does not recommend approval of the plan until the lack of adequate green space and parking justifications can be sufficiently provided. In addition, the Town Planner recommends the quantity of the residential units be reduced to better address adequate parking for the retail spaces.

In general, the Town Planner is in support of the project as it will enhance the Town Center and provide a blended mixed-use development to our Town Core. Through the Special Use Permit process and the site plan process, the Town Planner highly recommends the addition of green space, reducing the number of residential units from 28 to 24 or less, to address the building massing, parking and lack of greenspace.

The Town Planner recommends the Planning Commission defer a decision until the May meeting after all public comments can be adequately addressed and the planner's comments can be considered and addressed.

WILLIAMS HOLDINGS

Michelle Williams · 15385 Bull Run Estates Drive **Email: williamsholdings@live.com · Phone: 703-795-9820**

Town of Haymarket Planning Commission 15000 Washington St. Suite 100 Haymarket, VA 20169 4/4/2019

DEAR PLANNING COMMISSION MEMBERS,

Please see the following information for review of the special use permit and certificate of appropriateness for approval to build a 45,630 GSF brick front building with brick gates to enter the parking area. The building intent will be to use new materials reminiscent of older style buildings to meet growing housing needs for adult populations surrounding Haymarket that enjoy small town living. The building design is expected to encourage strolling traffic with retail easy to access by foot, while providing adequate parking for guests outside the town of Haymarket.

BUILDING SCOPE

- Excavate lots in preparation for construction
- Build a mixed use building on Jefferson Street
- Building size 44,640 SF = 6,714 SF (Retail) + 472 SF (Property Mgt Office) + 347 SF (Lobby) + 573 SF (Equipment Room) + 12,178 SF (Floor One Condos) + 12,178 SF (Floor Two Condos) + 10,545 SF (Floor 3 Condos) + 1,633 SF (Terrace)
- Type: Brick front, clapboard, hardboard or wood like siding
- 4 story no higher than 50'
- 28 Condos + 5 Retail Spaces + 1 Property Mgt Office + 1 Equipment Room
- Ingress/egress: Front of Jefferson Street with two entrances
- 63 Parking spaces total for shared use between residential and retail
- Expected population are professionals or over 55 and older population
- Elevator in rear center and stairwell
- Landscaped around perimeter inside parking lot and in the front of building brick entrances
- Expected completion: June 2020

- I have visited the neighbor in 6610 Jefferson Street and discussed the proposed plan. She expressed hope that the property would have some useful and attractive improvements after sitting vacant for many years.
- I met with the Store Manager of the "Details for the Home" store at 6590 Jefferson Street and she loved the concept and thought additional retail on Jefferson would increase her sales with strolling traffic. I have included two slides on these neighbors adjacent to the lots. I have also included a slide on the aerial view of the two properties.

To provide more details of the elevation and building floors, I have included the Architect's sketches to enable the committees to gain understanding of the vision and specifications to be defined. We believe it will compliment the town vision and make the center of town more "cohesive" encouraging interest in the town center.

PROPOSED MATERIALS FOR THE BUILDING

- Brick Front
- Brick Base
- Hardboard, clapboard or wood-look siding (product undetermined at this time)
 consistent in quality and texture or Hardboard Siding on sides and rear
- Metal Awnings over retail spaces and over 4th floor terrace
- Columns on rooftop terrace and iron rails
- Nano type doors on the front of Retail spaces to encourage retail traffic to shop and eat
- Parking lot is asphalt
- Brick entrances to parking area

Planning construction for a building of this size is a very expensive and arduous process for an owner. There are substantive preliminary exercises using skilled engineers prior to purchase and during the purchase process. To minimize our costs and encourage an aesthetic result, we will ensure compliance with the Planning Commission and the Architectural Review Board at each juncture of the construction process.

Williams Holdings requests special exceptions for the project.

- First, the parking lot is expected to hold 63 parking spaces that are intended to be shared amongst residents and retail customers. We request a special exception from the Prince William County standard of 1 parking per 100 SF. We expect to have adequate parking during the day for customers and in the evening, the town parking lot can serve as overflow parking for retail/restaurant parking in the evenings.
- Second, the guidelines require a 25' landscaping edge on the left side where the residential home is currently located. We would request a special exception for a

10' barrier in the rear of the property and 5' on each side of the property. The justification for this is that the 6610 Jefferson St. lot is the only residential lot on this section of Jefferson St. and likely to change to commercial in the future. This would enable us to provide enough parking for the residents and the retail customers. Retail businesses will not rent space if they do not feel their customers have adequate parking.

Finally, to maximize the most efficient use of space for the building and its
residents, we believe the building can be built on the front property line per
guidance but would like to formally request the placement of the building to once
again, maximize the lot's full potential for parking.

We also saw in the easement from the Town of Haymarket that the town agreed to pave the driveway entering the property as part of the easement settlement. This improvement is still be needed.

Thank you for the opportunity to be a part of the town's overall vision. If you have any questions, do not hesitate to contact me. We look forward to working with the town to enhance the town's vision.

Sincerely,

Michelle Williams

Michelle Williams
President, Williams Holdings

• Slides enclosed.

Special Use Permit and Certificate of Appropriateness Application for Williams Holdings

- Williams Holdings, Michelle Williams
- **T** 703-795-9820
- williamsholdings@live.com
- 15385 Bull Run Estates Dr., Haymarket, VA 20169
- Request Special Use Permit with exceptions & Certificate of Appropriateness approval to build a four story mixed use building of 5 retail spaces & one office on the ground floor plus 28 condo units on upper three floors with a roof terrace in the building front

Building Project Scope

- Excavate lots in preparation for construction
- Build a mixed use building on Jefferson Street
- Building size 44,640 SF = 6,714 SF (Retail) + 472 SF (Property Mgt Office) + 347 SF (Lobby) + 573 SF (Equipment Room) + 12,178 SF (Floor One Condos) + 12,178 SF (Floor Two Condos) + 10,545 SF (Floor 3 Condos) + 1,633 SF (Terrace)
- Type: Brick front, clapboard, hardboard or wood like siding
- 4 story no higher than 50'
- 28 Condos + 5 Retail Spaces + 1 Property Mgt Office + 1 Equipment Room
- Ingress/egress: Front of Jefferson Street with two entrances
- 63 Parking spaces total for shared use between residential and retail
- Expected population are professionals or over 55 and older population
- Build building to the front property line
- Elevator in rear center and stairwell
- Landscaped around perimeter inside parking lot and in the front of building brick entrances
- Expected completion: June 2020

6604 & 6608 Jefferson Street Property Photo next to Neighbor 6610 Jefferson Street

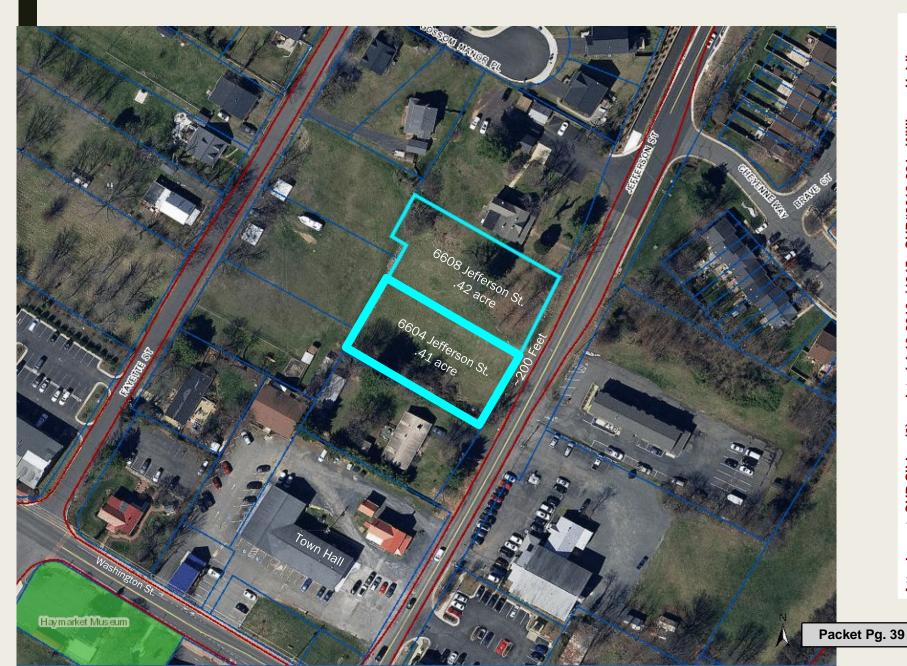


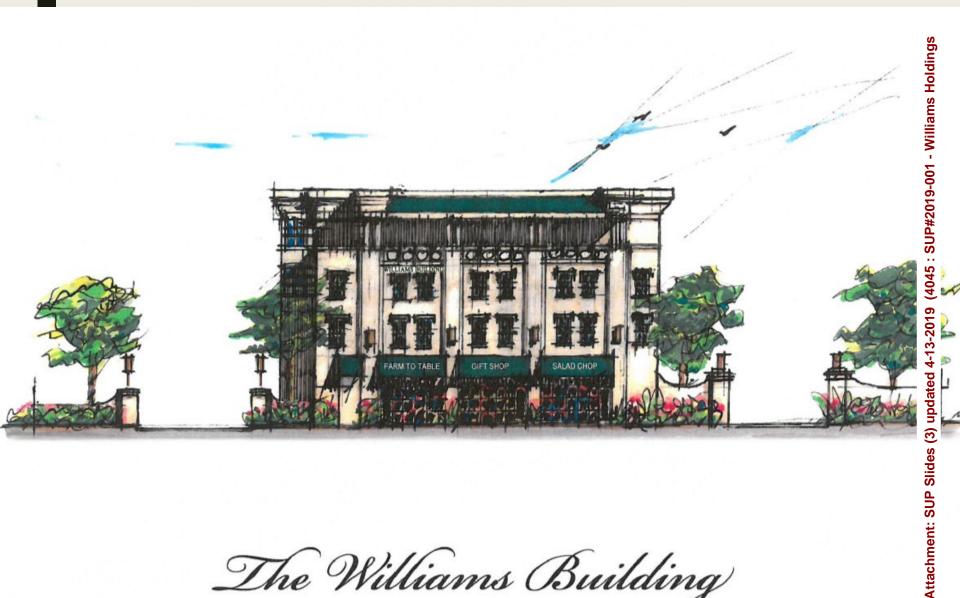


6604 & 6608 Jefferson Street Property Photo next to Neighbor 6590 Jefferson Street









The Williams Building



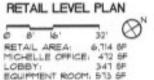
(4045 : SUP#2019-001 - Williams Holdings

(3) updated 4-13-2019

Slides

SUP

Attachment:



28 RESIDENTIAL UNITS:

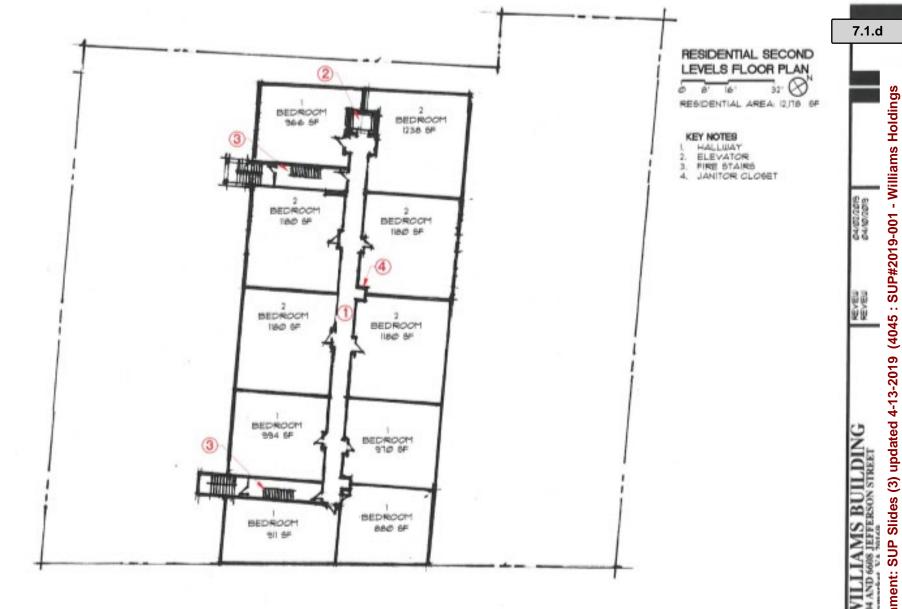
9 ONE BEDROOM UNITS 19 TWO BEDROOM UNITS

KEY NOTES

- RETAIL AREA PORTE-COCHERE
- LOBBY
- MICHELLE OFFICE
- RESTROOM
- STORAGE
- ELEVATOR MAIL BOXES
- EQUIPMENT ROOM, JANITOR CLOSET, ELEVATOR. ELECTRICAL
- SPRINKLE 10. ENTRY PIERS WITH LIGHTS
- ELECTRIC METERS
- TRASH DUMPSTER AREA WITH GATE
- EVERGREEN SCREEN
- PARKING AREA
- STAIRS UP TO RESIDENTIAL IS. PUBLIC TERRACE AND BIDE WALK

JEFFERSON STREET

Packet Pg. 41



Packet Pg. 42

2019003

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Attachment: SUP Slides (3) updated 4-13-2019

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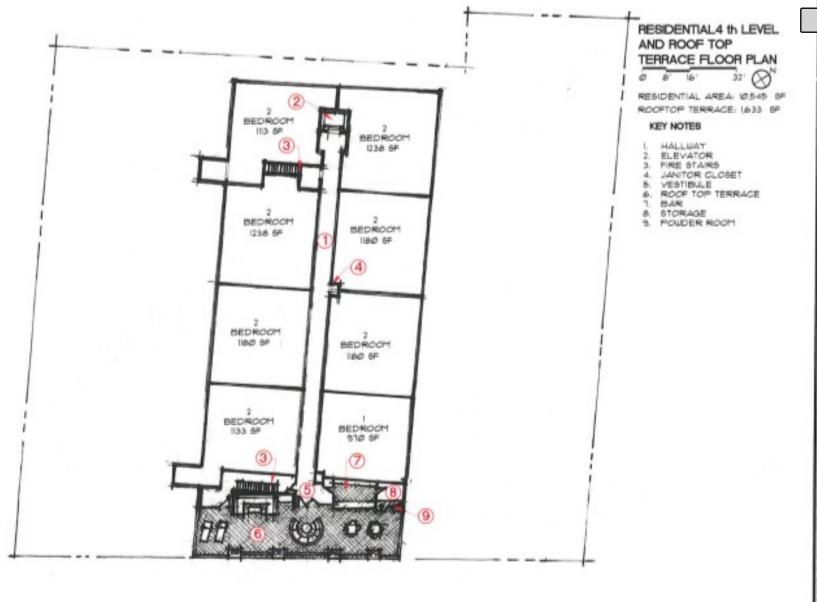
Packet Pg. 43

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Attachment: SUP Slides (3) updated 4-13-2019

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Slides (3) updated 4-13-2019

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Attachment: SUP

Attachment: SUP Slides (3) updated 4-13-2019 (4045 : SUP#2019-001 - Williams Holdings



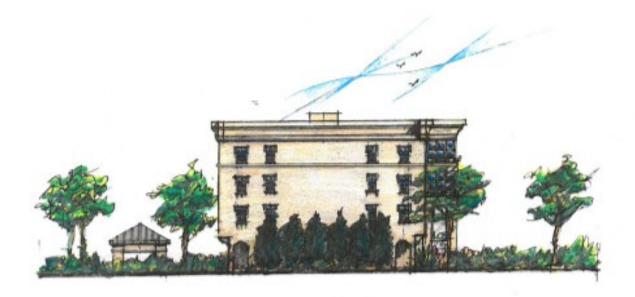
JEFFERSON STREET ELEVATION

Attachment: SUP Slides (3) updated 4-13-2019 (4045 : SUP#2019-001 - Williams Holdings

2019003 P6

SOUTHWEST ELEVATION

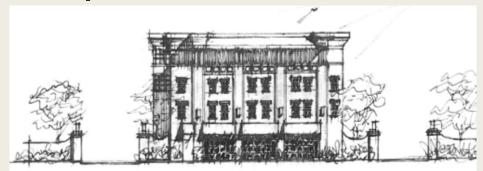
Packet Pg. 46



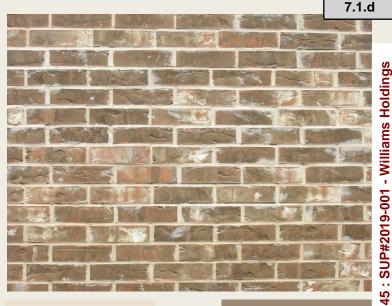
NORTHWEST ELEVATION

Attachment: SUP Slides (3) updated 4-13-2019 (4045 : SUP#2019-001 - Williams Holdings Packet Pg. 47

Proposed Materials



- Brick Front
- Brick Base
- Hardboard, clapboard or wood-look siding (product undetermined at this time) consistent in quality and texture or Hardboard Siding on sides and rear
- Metal Awnings over retail spaces and over 4th floor terrace
- Columns on rooftop terrace and iron rails with flower boxes
- Nano type doors on the front of Retail spaces to encourage retail traffic to shop and eat
- Parking lot is asphalt
- Brick entrances to parking area



Gutters

Martin Senour
Paints™ 45-2 Oriental

Martin Senour
Paints™ 22-4



Silk*

SAMPLE BUILDING ONLY WITH APPLIED COLORS

Attachment: SUP Slides (3) updated 4-13-2019 (4045: SUP#2019-001

Requests for Special Exceptions

- Parking lot will hold 63 parking spaces pending site plan development. Request special exception for parking requirement.
 - 1 space per 1 BR Condo Unit and = 9 spaces
 - 1.5 for 2 BR Condo Unit totaling = 29 spaces
 - 25 spaces remain for retail store parking. For optimal retail use, we request a shared parking agreement.
- If additional parking is needed for retail in the evening, the Town Center parking lot could suffice for overflow

- It is requested that the landscape edge be reduced from guidance of 10' to 5' on each side of the property and 10' (consistent with the neighbor in the rear) in the rear to maximize parking on entire lot for residents and retail around the perimeter.
- Building proposed to be built on property line in front to utilize use of property for maximum parking.

Neighbors

Ms. Williams met Ms. Bailey to the left facing the lot and she expressed positive interest to get the lot front and sides looking better. She shared the architectural designs with her and she commented it will look very nice.

- Ms. Williams spoke to the store Manager, "Details for the Home" and showed her the mixed use concept. She said she thought it would be a nice compliment to her store to add more retail on Jefferson St. with strolling traffic.
- I left my contact information for both neighbors in the event they had any questions or concerns. No concerns were expressed by either neighbor at this time.

Other Information and Questions?

- The town has an easement settlement to repave the driveway. This improvement will still be needed. We would like to work with the town on the design that will fit with our ingress/egress designs.
- We would build the building on the front property line in accordance with the existing town guidelines
- Questions?



The Williams Building

architect michael I. oxman and associates Itd. © 540-668-7445

Attachment: Williams rchite Packet Pg. 53

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SUP#2019-001 - Williams

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associates

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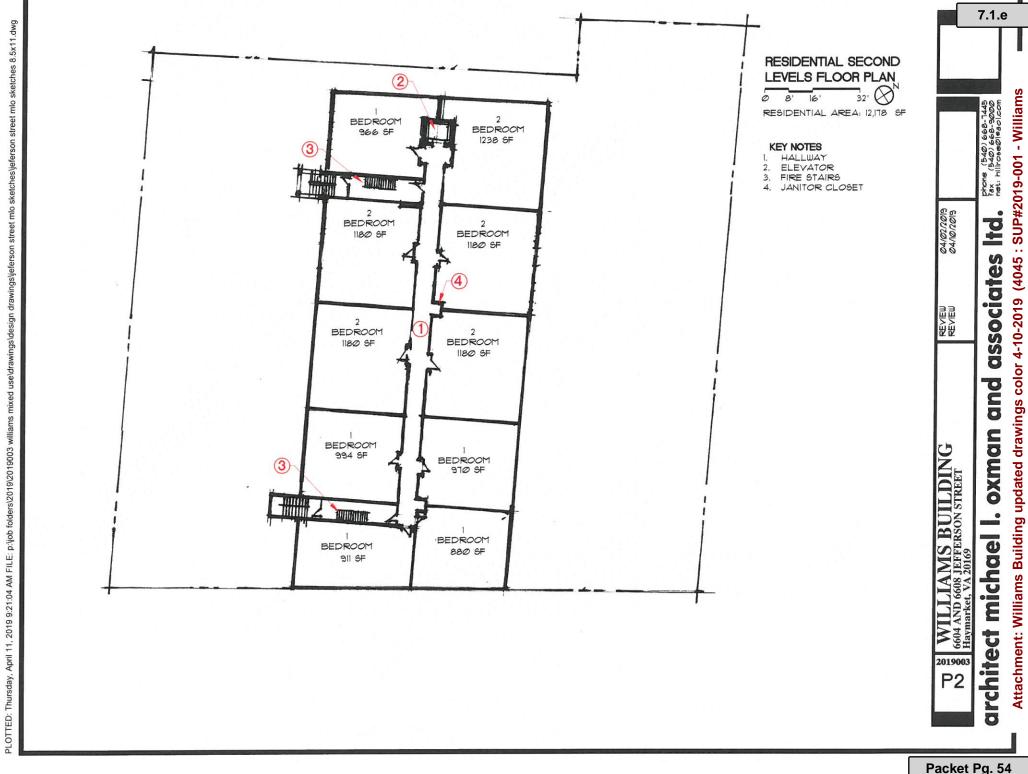
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Building updated drawings color 4-10-2019 (4045

04/02/2019 04/10/2019

REVIEW REVIEW

S BUILDIN FERSON STREET



Attachment: Williams Building updated drawings color 4-10-2019 (4045: SUP#2019-001 - Williams oxman michael architect 2019003 Packet Pg. 56

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associates

and

04/02/2019 04/10/2019

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JEFFERSON STREET ELEVATION 32'

P5

04/02/2019 04/10/2019

REVIEW REVIEW

Attachment: Williams Building updated drawings color 4-10-2019 (4045: SUP#2019-001 - Williams ţ associates architect michael I. oxman and

7.1.e

SOUTHWEST ELEVATION

7.1.e

04/02/2019 04/10/2019

REVIEW REVIEW Attachment: Williams Building updated drawings color 4-10-2019 (4045: SUP#2019-001 - Williams

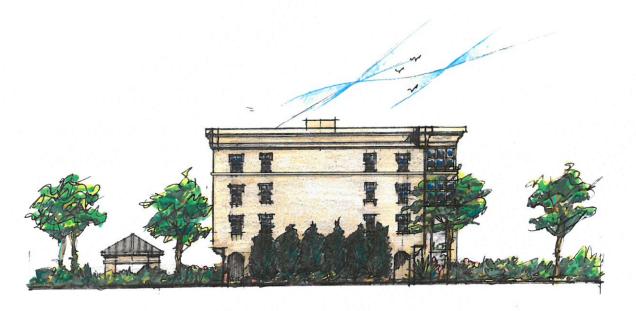
associates ltd.

and

architect michael I. oxman

WILLIAMS BUILDING 6604 AND 6608 JEFFERSON STREET Haymarket, VA 20169

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NORTHWEST ELEVATION 32' 16 8

Attachment: Williams Building updated drawings color 4-10-2019 (4045: SUP#2019-001 - Williams associates ltd. REVIEW REVIEW and architect michael I. oxman WILLIAMS BUILDING 6604 AND 6608 JEFFERSON STREET Haymarket, VA 20169

7.1.e

04/02/2019 04/10/2019