Agenda

PLANNING COMMISSION SPECIAL MEETING
THURSDAY, October 21, 2021 at 5:30 P.M.
Virtual Meeting

I. Commission Pre-Meeting (Agenda discussion(s))
Beginning: 5:00 p.m.
Location: (Electronic/Virtual)

II. Commission Regular Meeting
Beginning: 5:30 p.m.
Location: (Electronic/Virtual)

A. MATTERS TO BE PRESENTED BY THE PUBLIC NOT ON THE FORMAL AGENDA

B. CONSENT AGENDA
(Items removed from the consent agenda will be considered at the end of the regular agenda)

i. Site Plan & Subdivision – Grove Street PUD

III. JOINT MEETING OF COMMISSION/ COUNCIL
Beginning: 6:00 p.m.
Continuing: until all public hearings are completed
Format: (i) Staff Report, (ii) Applicant, (iii) Hearing

1. ZM20-00003, SP21-00002, & P21-0023 - 1613 Grove Street – Landowner Lorven Investments, LLC has submitted applications seeking a Rezoning, a Special Use Permit, and a Critical Slope Waiver for approximately 0.652 acres of land, including multiple lots identified within 2021 City real estate records by Real Estate Parcel Identification Numbers 23013000, 230134000, and 230135000 (collectively, "Subject Property"). The Subject Property has frontage on Valley Road Extended and the unimproved section of Grove Street Extended. The applications propose to change the zoning district classification of the Subject Property from R-2 (Residential Two-Family) to R-3 (Residential Multifamily Medium Density) subject to certain proffered development conditions ("Proffers") and development plan. The Proffers include: (1) prior to the issuance of a certificate of occupancy for the seventh (7th) dwelling on the Subject Property, the Owner shall contribute Forty-Eight Thousand Dollars ($48,000.00) to the City as a cash contribution to support the City's construction of pedestrian improvements within the Fifeville Neighborhood, and (2) twenty-eight percent (28%) of all dwellings constructed onsite shall be affordable units (AUs), as follows: 14% will be for-rent such that the monthly cost of rent, including tenant paid utilities, does not exceed 125% of the Fair Market Rent (FMR) established by HUD by unit bedrooms for the Charlottesville MSA ,and 14% will be for rent AUs such that the monthly cost of rent, including any tenant paid utilities, does not exceed the FMR by unit bedrooms for the Charlottesville MSA. All of the required AUs shall be reserved as such throughout a period of at least 10 years from the date on which the unit receives a certificate of occupancy. The proposed development plan indicates restoration of a portion of Rock Creek that runs through the Subject Property. The Special Use Permit application seeks to increase allowed density from 21 Dwelling Units per Acre (DUA), or 13.692 units within the Subject Property, up to 43 DUA, or 28.026 units, per, City Code Sec. 34-420 (Use Matrix, R-3 District). The proposed development consists of four apartment (multifamily dwelling) buildings with (4) one-bedroom units and (24) two-bedroom units. The total number of units would not exceed (28) units. The Comprehensive Land Use Map for this area calls for Low Density Residential. The proposed development calls for disturbance of land within a Critical Slopes area, so a waiver is requested per City Code Sec. 34-

1120(b)(6). Information pertaining to this application may be viewed online at www.charlottesville.gov/agenda. Persons interested in the Rezoning, Special Use Permit or Critical Slopes applications may contact NDS Planner Matt Alfele by e-mail (alfelem@charlottesville.gov) or by telephone (434-970-3636).

IV. COMMISSION'S ACTION ITEMS

Continuing: until all action items are concluded.

1. Critical Slope Waiver & Site Plan – Lyman Street
2. Preliminary Discussion – 2005 Jefferson Park Avenue

V. FUTURE MEETING SCHEDULE/ADJOURN

Tuesday November 9, 2021 – 5:00 PM	Pre-Meeting	
Tuesday November 9, 2021 – 5:30 PM	Regular Meeting	Minutes - May 11, 2021, June 8, 2021, July 13, 2021

Anticipated Items on Future Agendas

Zoning Text Amendments –Off-street parking facilities requirements along streets designated as "framework streets" (initiated May 8, 2018), Site Plan Requirements, Accessory Dwelling Unit, Middle Density zoning and Affordable Dwelling Unit , 12th and Rosser/CH Brown Historic Conservation District (six properties)
Rezoning – 0 Nassau
Rezoning, Critical Slope Waiver, Sidewalk Waiver - Park Street Christian Church
Rezoning – MAACA site
Site Plan – Flint Hill PUD
Critical Slope Waiver – Coleman Court
Site Plan, Critical Slope Waiver - 1223 Harris
Special Use Permit – Fire Station on 250 Bypass
Future Entrance Corridor

- 916 E High Street - Comprehensive Sign Plan Request (*Sentara*)
- 2005 JPA – New apartment building, requires SUP (Mitchell Matthews Architects)
- 1252 N Emmet – New medical office building (*Aspen Dental*)
- 1815 JPA - New apartment building (Wassenaar+Winkler Architects)
- 1150 5th Street SW – new convenience store and gas canopy (*Wawa*, Riverbend)
- 1801 Hydraulic Road – revised Comp Sign Plan, revised design review (*Hillsdale Place*, Riverbend)

PLEASE NOTE: THIS AGENDA IS SUBJECT TO CHANGE PRIOR TO THE MEETING.

PLEASE NOTE: We are including suggested time frames on Agenda items. These times are subject to change at any time during the meeting.

Individuals with disabilities who require assistance or special arrangements to participate in the public meeting may call the ADA Coordinator at (434) 970-3182 or submit a request via email to ada@charlottesville.gov. The City of Charlottesville requests that you provide a 48 hour notice so that proper arrangements may be made.

During the local state of emergency related to the Coronavirus (COVID19), City Hall and City Council Chambers are closed to the public and meetings are being conducted virtually via a Zoom webinar. The webinar is broadcast on Comcast Channel 10 and on all the City's streaming platforms including: Facebook, Twitter, and www.charlottesville.gov/streaming. Public hearings and other matters from the public will be heard via the Zoom webinar which requires advanced registration here: www.charlottesville.gov/zoom . You may also participate via telephone and a number is provided with the Zoom registration or by contacting staff at 434-970-3182 to ask for the dial in number for each meeting.

CITY OF CHARLOTTESVILLE

DEPARTMENT OF NEIGHBORHOOD DEVELOPMENT SERVICES

STAFF REPORT

PLANNING COMMISSION MEETING

APPLICATION FOR APPROVAL OF A FINAL SITE PLAN

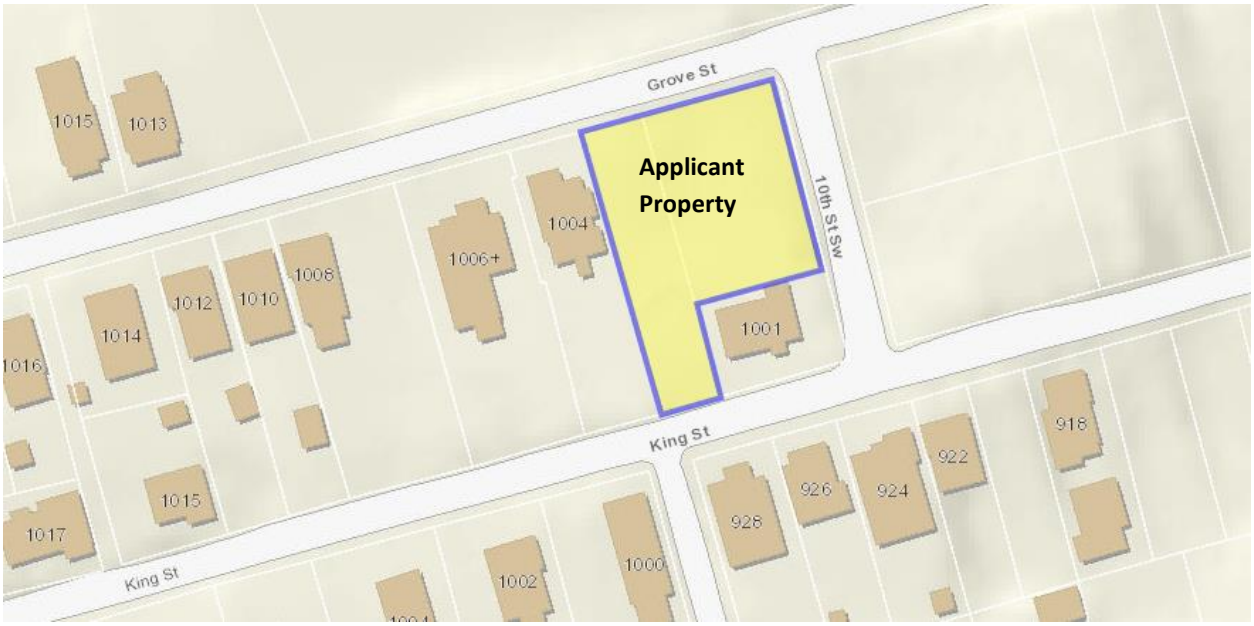
APPLICATION NUMBER: SP20-0037

DATE OF MEETING: October 21, 2021

Project Planner: Matt Alfele
Date of Staff Report: October 6, 2021

Applicant: A Joseph Homes, LLC
Applicant's Representative(s): Dustin Greene, PE of Roudabush, Gale & Assoc., Inc.
Current Property Owner: A Joseph Homes, LLC
Property Street Address: 1000 and 1002 Grove Street ("Subject Properties")
Tax Map & Parcel: 230051000 and 230052000
Current Zoning Classification: Planned Unit Development (PUD)
Overlay District: None
Reason for Planning Commission Review: Final site plans within a PUD shall be reviewed by the Planning Commission per Sections 34-820(d)(1) and 34-822.

Vicinity Map



Standard of Review

Site plan approval is a ministerial function of Planning Commission in which no discretion is involved. If this final site plan contains all required information, then it must be granted approval. If Planning Commission disapproves this plan, it shall set forth in writing the specific reasons therefor. As per Section 34-823(c), the reasons for disapproval shall identify deficiencies in this plan which cause the disapproval, by reference to specific ordinances, laws, or regulations. If this plan is disapproved, Planning Commission must also generally identify modifications or corrections that will permit approval of this plan.

Applicant's Request (Summary)

Mr. Dustin Greene of Roudabush, Gale & Assoc., Inc. Engineering, on behalf of A Joseph Homes, LLC, is seeking Planning Commission approval for the Grove Street PUD Final Site Plan. This final site plan proposes four (4) single family detached units and two (2) single family attached units for a total of six (6) residential units. On October 2, 2006 City Council approved the rezoning of the Subject Properties from R-1S to PUD with the following proffers:

1. To offer, through a PHA or similar program, one or more of the six units represented in the site plan to a buyer whose family gross income represents 80% or less of the gross median income in the city of Charlottesville for the most recent calendar year for which the figure is available;
2. To install environmental features shown on the site plan designed to retain as much storm water as possible, including but not limited to rain gardens, rain barrels, and green roofs on the one-story section of the buildings;
3. To achieve Energy Star or higher efficiency ratings for all units including insulation, appliances, hot water heaters, and HVAC systems;
4. To make every possible effort to save existing trees shown on the site plan, and replace any significant trees lost with native species such as white ash, Appalachian serviceberry, American dogwood, or similar.

As per the City's Zoning Ordinance, Planning Commission shall review this final site plan because it reflects the proposed development of property that is within a PUD.

Site Plan Requirements

A. Compliance with the City's Erosion and Sediment Control ordinance (Chapter 10)

Staff has determined that this final site plan complies with the City's Erosion and Sediment Control ordinance. Erosion and Sediment Control plans are included as site plan Sheets 12 through 15, and Stormwater Management Plans are included as site plan Sheets 16 through 20.

B. Compliance with applicable Zoning District Regulations (PUD)

The Subject Properties are zoned PUD. The project complies with the PUD development plan and applicable proffers. It should be noted that some proffers (1 and 3) cannot be fulfilled during site plan review.

C. Compliance with general standards for site plans (Sections 34-827 - 34-828)
Staff has determined that this site plan contains the following information as required:

1. General site plan information, including but not limited to project, property, zoning, site, and traffic information: **Found on Sheet 1.**
2. Existing condition and adjacent property information: **Found on Sheet 2.**
3. Phasing plan: **The project will be constructed in one phase per Sheet 1.**
4. Topography and grading: **Found on Sheet 5.**
5. Existing landscape and trees: **Found on Sheet 2.**
6. The name and location of all water features: **N/A.**
7. One hundred-year flood plain limits: **N/A.**
8. Existing and proposed streets and associated traffic information: **No new streets are being proposed.**
9. Location and size of existing water and sewer infrastructure: **Found on Sheet 2.**
10. Proposed layout for water and sanitary sewer facilities and storm drain facilities: **Found of Sheets 4.**
11. Location of other existing and proposed utilities and utility easements: **Found on Sheet 4.**
12. Location of existing and proposed ingress to and egress from the property, showing the distance to the centerline of the nearest existing street intersection: **Found on Sheet 3.**
13. Location and dimensions of all existing and proposed improvements: **Found on Sheets 3, 4, 5, and 6.**
14. All areas intended to be dedicated or reserved for public use: **Found on Sheet 3 and attachment A**
15. Landscape plan: **Found on Sheet 6.**

D. Additional information to be shown on the site plan as deemed necessary by the director or Commission in order to provide sufficient information for the director or Commission to adequately review the site plan.
The PUD Development Plan and proffers calls for additional information.

1. **To offer, through a PHA or similar program, one or more of the six units represented in the site plan to a buyer whose family gross income represents 80% or less of the gross median income in the city of Charlottesville for the most recent calendar year for which the figure is**

available; The applicant is currently working with the City's Housing Department to fulfill this requirement and it shall be met prior to issuance of certificates of occupancy (COs).

2. **To install environmental features shown on the site plan designed to retain as much storm water as possible, including but not limited to rain gardens, rain barrels, and green roofs on the one-story section of the buildings;** Sheet 3 and 6.
3. **To achieve Energy Star or higher efficiency ratings for all units including insulation, appliances, hot water heaters, and HVAC systems;** Cannot be addressed until building permit application.
4. **To make every possible effort to save existing trees shown on the site plan, and replace any significant trees lost with native species such as white ash, Appalachian serviceberry, American dogwood, or similar.** Sheet 2, 6, and attachment A.
5. **The layout and architectural style:** Sheet 3 and attachment D.

E. Compliance with Additional Standards for Specific Uses (Sections 34-930 - 34-938)

No improvements regulated by these sections are proposed.

Public Comments Received

No comments received.

Recommendation

Staff recommends approval of the final site plan.

Attachments

A. Final Subdivision Plat dated February 12, 2021
B. Final Site Plan dated September 10, 2021
C. Development Plan
D. Conceptual home layout plans

CITY OF CHARLOTTESVILLE

DEPARTMENT OF NEIGHBORHOOD DEVELOPMENT SERVICES

STAFF REPORT

PLANNING COMMISSION MEETING

APPLICATION FOR APPROVAL OF A SUBDIVISION

APPLICATION NUMBER: P20-0097

DATE OF MEETING: October 21, 2021

Project Planner: Matt Alfele
Date of Staff Report: October 6, 2021

Applicant: A Joseph Homes, LLC
Applicant's Representative(s): Dustin Greene, PE of Roudabush, Gale & Assoc., Inc.
Current Property Owner: A Joseph Homes, LLC
Property Street Address: 1000 and 1002 Grove Street ("Subject Properties")
Tax Map & Parcel: 230051000 and 230052000
Current Zoning Classification: Planned Unit Development (PUD)
Overlay District: None

Vicinity Map

Standard of Review

Subdivisions are reviewed for compliance with City codes and standards, in accordance with procedures prescribed by Virginia Code 15.2-2259 and standards and design requirements specified within the City's subdivision, zoning, and water protection ordinances and the City's Standards and Design Manual. The Planning Commission is the "subdivision agent" for the purpose of reviewing and approving a proposed final subdivision plat for a major subdivision.

As "subdivision agent" the Planning Commission is performing an administrative function, and there are only two possible actions: (1) *Approval*--if the proposed subdivision meets all applicable requirements, the Planning Commission must approve it, or (2) if the Planning Commission determines that the proposed subdivision does not meet all applicable requirements, then the Planning Commission must disapprove the plat, and must articulate specific reasons why the subdivision does not meet the requirements—with reference to specific laws, ordinances and regulations.

Summary

Mr. Dustin Greene of Roudabush, Gale & Assoc., Inc. Engineering, on behalf of A Joseph Homes, LLC, is seeking Planning Commission approval of a major subdivision to construct a new seven (7) lot subdivision as part of the Grove Street PUD site plan (application SP20-0037). Per Section 29-3, this subdivision is considered major because it involves the creation of six (6) or more new lots.

The land within the proposed major subdivision is identified on City Real Estate Tax Map Parcels 230051000 and 230052000. The Subject Properties have frontage on Grove Street, King Street, and 10th Street SW. The site contains approximately 0.171 acres. Staff has made a good faith effort to identify all deficiencies (if any) so that the applicant could be in a position to submit an approvable final plat to you for consideration and approval.

Subdivision Requirements

A. Section 29-140 requires all subdivision plats and supporting materials to be in accordance with:

1. Applicable provisions of the Virginia Code
2. The Water Protection Ordinance, Chapter 10 City Code
3. The Fire Prevention Code, Chapter 12 City Code
4. Utilities Ordinance, Chapter 31 City Code
5. Zoning Ordinance, Chapter 34 City Code
6. Charlottesville's Standards and Design Manual

7. Subdivision Ordinance, Chapter 29 City Code, and other applicable City ordinances

B. **Compliance with design standards and improvements (per Sections 29-160 - 29-163)**
   1. Blocks: No new blocks will be created as a result of this subdivision.
   2. Lots: The applicant is proposing to create seven (7) lots.
   3. Parks, Schools, and other Public Land: No new parks or schools will be created with this subdivision.
   4. Preservation of natural features and amenities: No Critical Slopes are located on the Subject Properties.
   5. Items Listed in Section 29-111(b): The applicant has submitted a proposed final site plan for Planning Commission's approval. The documents and information referenced in Section 29-111(b) are included in the site plan (attachment A & B).
   6. Monuments: The subdivision plat demonstrates that the following requirements of Section 29-160 have been satisfied:
      a. All boundaries (exterior and interior) of the original survey for the subdivision have monuments in accordance with the Standards & Design Manual (see Sheet 3).
      b. The applicant has verified that these monuments will be set prior to recordation of the subdivision plat, or prior to conveyance of lots with reference to this plat.

C. Compliance with the Street Standards for Subdivisions (Section 29-180 – 29-183)

The proposed subdivision does not include any new public street.

D. Compliance with Utility Standards for Subdivisions (Sections 29-200 – 29-204)

The specific utility configurations and design details were reviewed by the Utilities Department with the Final Site Plan and can be found on attachment B. The utility easements as shown on this final subdivision plat have been approved by the Utilities Department.

E. Compliance with applicable zoning district regulations (Sections 34-350 – 34-420)

Staff believes the lot configuration conforms to the design and development standards within the Grove Street PUD plan.

F. **Compliance with the Water Protection Ordinance (City Code Chapter 10).** Per Section 29-202 every development must be designed to achieve state and local requirements for post-development stormwater management, including measures addressing both the quantity and quality of stormwater, as set forth within Chapter 10 of the City Code (Water Protection).
   1. Stormwater Management Plan: a stormwater management concept has been submitted in the final site plan along with the final plat materials, as required by Section 29-111(a)(2). The applicant has also submitted a proposed final Stormwater

Management Plan for consideration by the City's VESMP Agent. Such improvements, facilities and treatments are identified within the final site plan.

2. Erosion & Sediment Control: the applicant will submit an erosion and sediment control plan as part of the construction plans that are part of the final site plan.

Public Comments Received

No comments received.

Recommendation

Staff recommends approval of the major Subdivision.

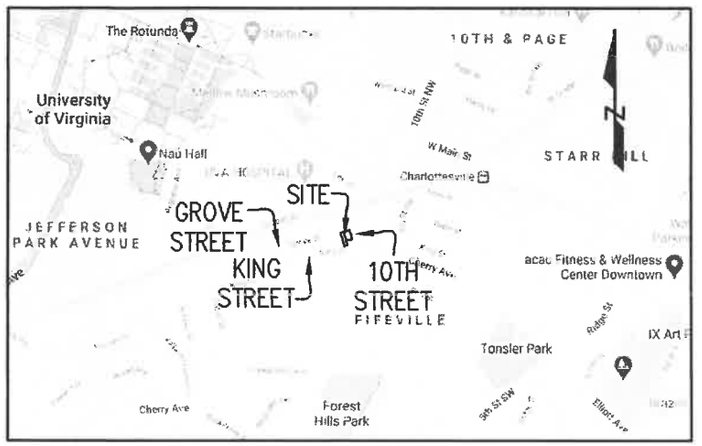
Attachments

A. Final Subdivision Plat dated February 12, 2021
B. Final Site Plan dated September 10, 2021
C. Development Plan

Attachment A

VICINITY MAP

SCALE: 1" = 2000'



FINAL SUBDIVISION PLAT FOR
TENTH & GROVE SUBDIVISION
1000 & 1002 GROVE STREET
TMP 23-51 & TMP 23-52

ROUDABUSH, GALE & ASSOCIATES, INC.
ENGINEERS, SURVEYORS AND LAND PLANNERS
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MAIL: 435 MERCHANT WALK SQUARE, STE 300-159
CHARLOTTESVILLE, VA 22902
PHONE: 434-977-0205 FAX: 434-296-5220
WWW.ROUDABUSH.COM

SIGNATURE BLOCK

SIGNATURE: _____ DATE_____
CITY SUBDIVISION AGENT, OR AUTHORIZED DESIGNEE

SIGNATURE: _____ DATE_____
CHAIR, CITY PLANNING COMMISSION

COMMONWEALTH OF VIRGINIA
BRIAN D CAMISON
No. 3334
02-12-2021
LAND SURVEYOR
DRAFT

INDEX

STATEMENT OF CONSENT:

THE PLATTING OR DEDICATION OF THE FOLLOWING DESCRIBED LAND, KNOWN AS TAX MAP 56K PARCEL A2, ACCORDING TO COUNTY RECORDS, IS WITH THE FREE CONSENT AND IN ACCORDANCE WITH THE DESIRE OF THE UNDERSIGNED OWNERS, PROPRIETORS AND/OR TRUSTEES, IF ANY.

_____
A JOSEPH HOMES LLC
401 E MARKET ST EXEC STE 27
CHARLOTTESVILLE, VA 22902

COMMONWEALTH OF VIRGINIA –
CITY/COUNTY OF:
_____
TO WIT: THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS _____ DAY OF _____ 20___

_____
SIGNATURE OF NOTARY PUBLIC

FINAL SUBDIVISION PLAT
TAX MAP 23 PARCEL 51 & 52
TENTH & GROVE SUBDIVISION
CITY OF CHARLOTTESVILLE, VIRGINIA

COVER

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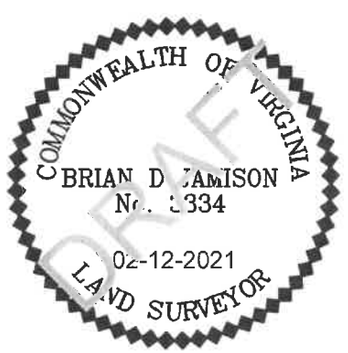
Attachment A

NOTES

1. THIS PLAT HAS BEEN PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND DOES NOT THEREFORE NECESSARILY INDICATE ALL ENCUMBRANCES ON THE PROPERTY SHOWN HEREON.
2. OWNER OF RECORD: A JOSEPH HOMES LLC
3. SOURCE OF TITLE: INSTRUMENT NUMBER 2019:3308.
4. THE AREA SHOWN HEREON IS LOCATED IN ZONE "X" AS SHOWN ON FEMA MAP NO 51003C0288D, EFFECTIVE DATE FEBRUARY 4, 2005. THIS DETERMINATION HAS BEEN MADE BY GRAPHIC METHODS, NO ELEVATION STUDY HAS BEEN PERFORMED AS A PORTION OF THIS PROJECT.
5. BOUNDARY DATA SHOWN IS TAKEN FROM A FIELD SURVEY PERFORMED MAY 21, 2020.
6. SUBJECT PARCELS ARE ZONED PUD, OCTOBER 2, 2006.
7. PROPOSED USE IS SINGLE FAMILY RESIDENTIAL; 4 SINGLE FAMILY DETACHED UNITS AND 2 SINGLE FAMILY ATTACHED UNITS.
8. ALL PROPERTY CORNERS WILL BE MONUMENTED WITH IRON PINS UNLESS NOTED OTHERWISE.
9. PUBLIC UTILITY EASEMENTS ARE PUBLIC AND SHALL BE DEDICATED TO AND MAINTAINED BY THE CITY OF CHARLOTTESVILLE UTILITIES DIVISION.
10. ALL DRAINAGE EASEMENTS ARE PRIVATE AND ARE TO BE MAINTAINED BY THE HOMEOWNERS' ASSOCIATION OF TENTH & GROVE.
11. STORM WATER MANAGEMENT EASEMENTS ARE PRIVATE AND SHALL BE MAINTAINED BY THE HOMEOWNERS' ASSOCIATION OF TENTH & GROVE.
12. EACH PARCEL CREATED BY THIS SUBDIVISION PLAT CONTAINS A BUILDING SITE THAT COMPLIES WITH THE REQUIREMENTS OF THE CITY OF CHARLOTTESVILLE'S ZONING, WATER PROTECTION AND SUBDIVISION ORDINANCES.
13. THERE WERE NO OBSERVED PLACES OF BURIAL DURING THIS SURVEY.
14. LOCATION OF STORM WATER MANAGEMENT EASEMENT BASED ON AS-BUILT LOCATION OF HOUSE. EASEMENT SHALL CONNECT TO EDGE OF HOUSE TO PROVIDE ACCESS TO GREEN ROOFS FOR MAINTENANCE. EASEMENT CURRENTLY SHOWN PER PROPOSED HOUSE LOCATION.
15. PLAT PREPARED BY WILLIAM WHITE.



AREA SUMMARY

ORIGINAL AREAS:		REVISED AREAS:	
TMP 23-51	0.125 AC	LOTS	0.239 AC
TMP 23-52	0.170 AC	OPEN SPACE	0.056 AC
TOTAL -	0.295 AC	TOTAL -	0.295 AC

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FINAL SUBDIVISION PLAT
TAX MAP 23 PARCEL 51 & 52
TENTH & GROVE SUBDIVISION
CITY OF CHARLOTTESVILLE, VIRGINIA

NOTES

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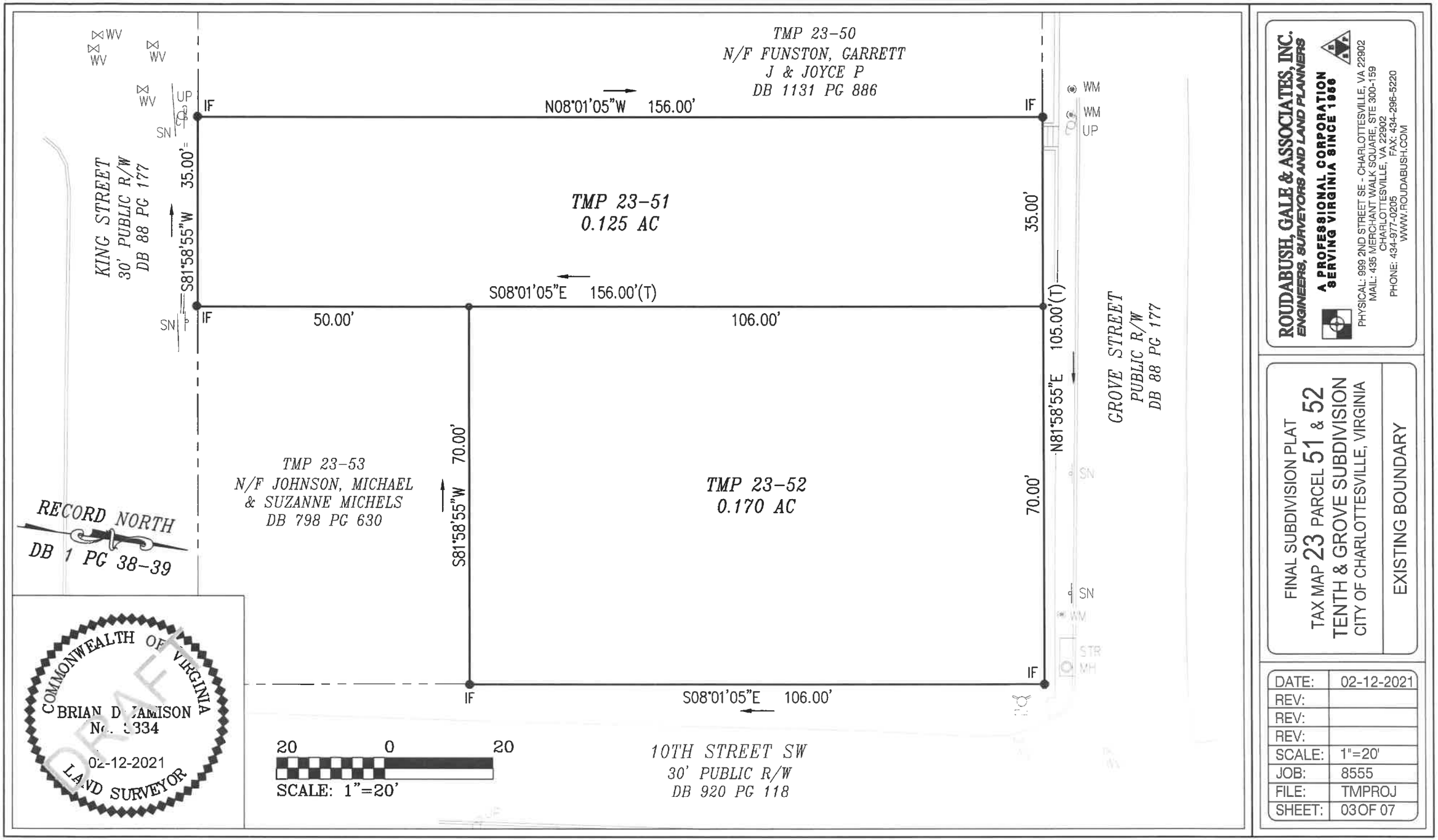
Attachment A



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EXISTING BOUNDARY

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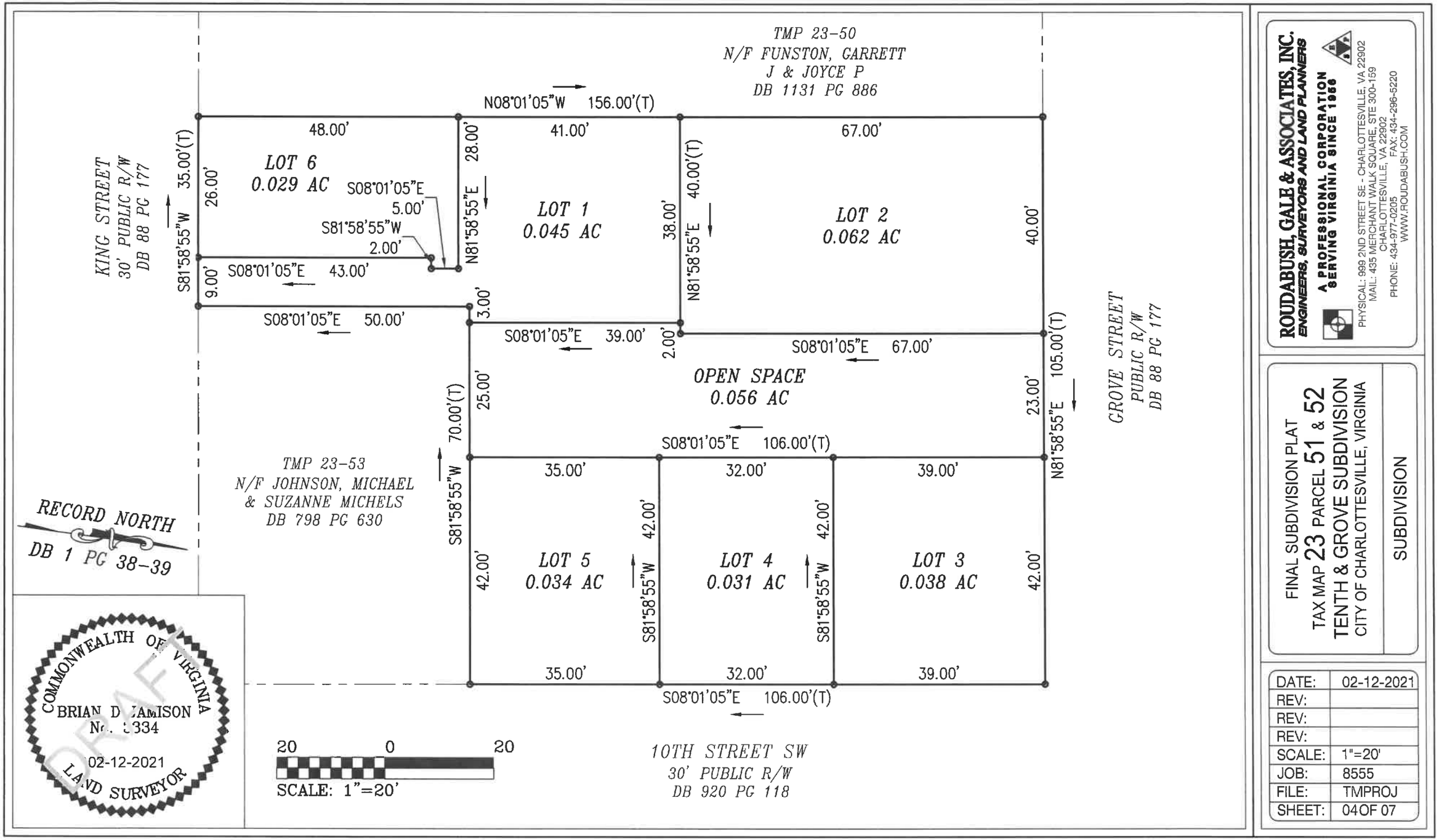

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FINAL SUBDIVISION PLAT
TAX MAP 23 PARCEL 51 & 52
TENTH & GROVE SUBDIVISION
CITY OF CHARLOTTESVILLE, VIRGINIA

SUBDIVISION

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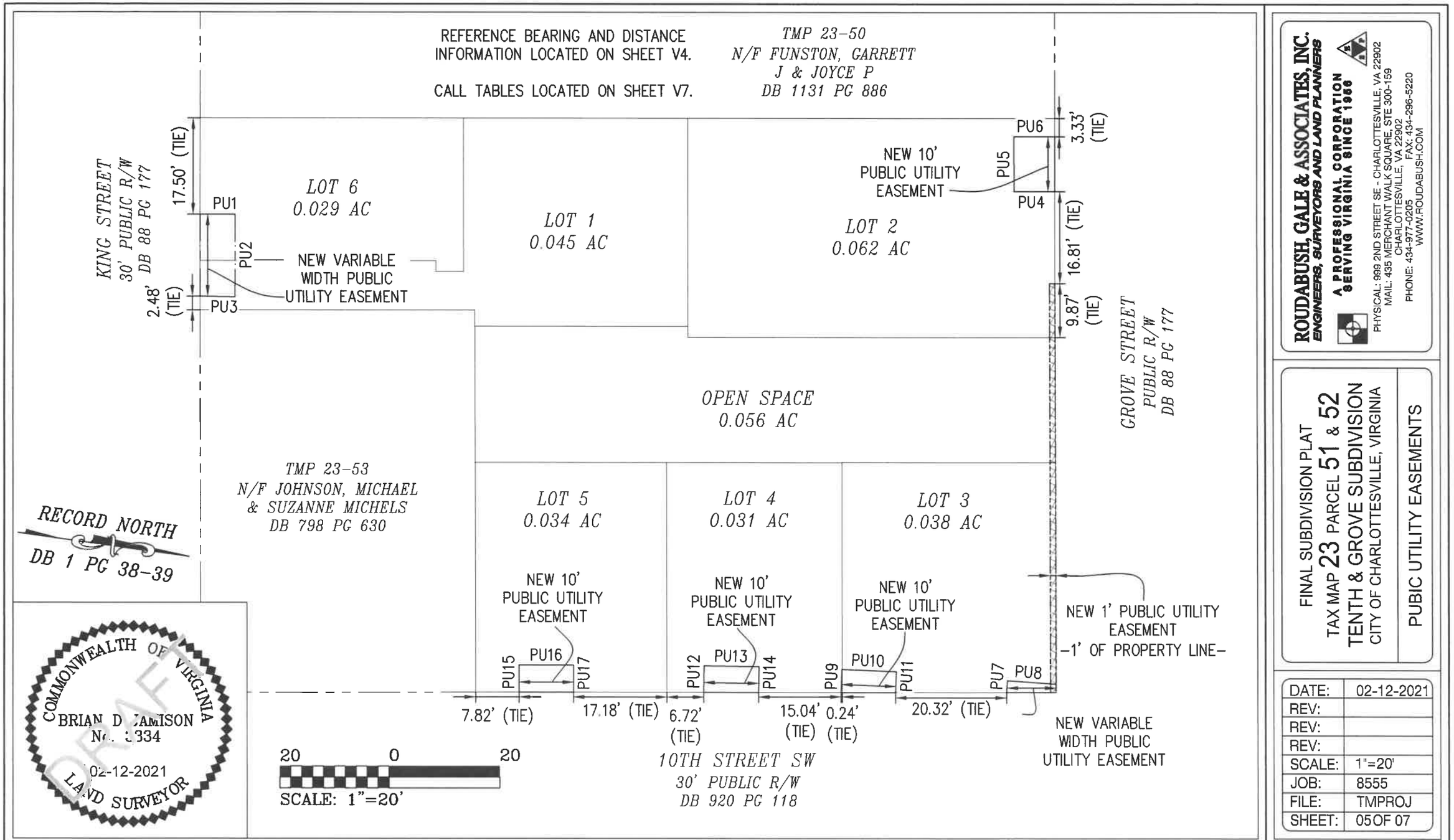

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FINAL SUBDIVISION PLAT
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PUBIC UTILITY EASEMENTS

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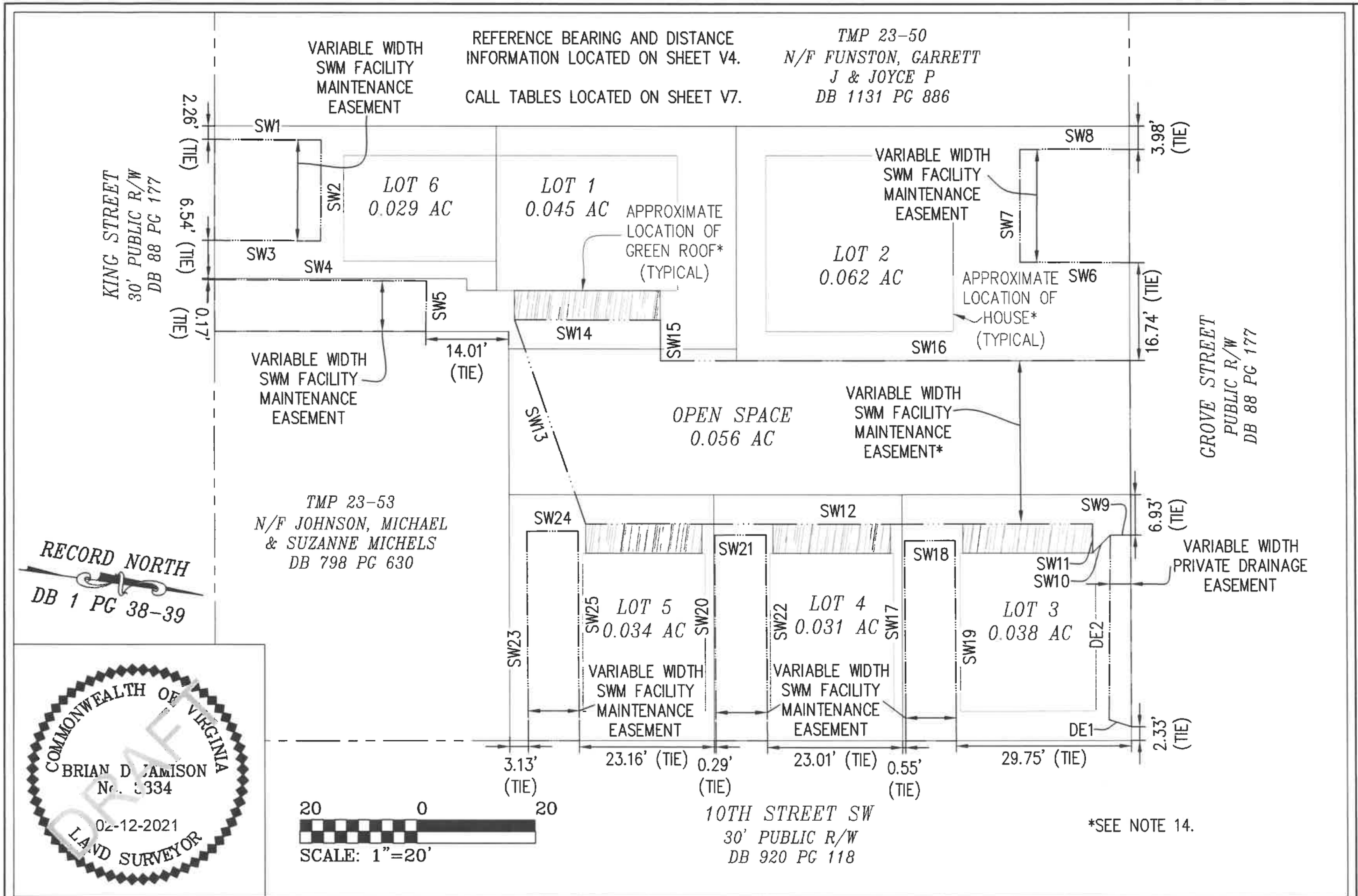
FILE:	TMPROJ
SHEET:	05OF 07

\\RGA2019\Data\RGA\TMPROJ\8555-Grove Street\NEW SITE PLAN - 20191104\DWG\FINAL SUB PLAT\8555 - GROVE STREET - FINAL SUB.dwg

Attachment A



ROUDABUSH, GALE & ASSOCIATES, INC.
ENGINEERS, SURVEYORS AND LAND PLANNERS
A PROFESSIONAL CORPORATION
SERVING VIRGINIA SINCE 1956
PHYSICAL: 999 2ND STREET SE - CHARLOTTESVILLE, VA 22902
MAIL: 435 MERCHANT WALK SQUARE, STE 300-159
CHARLOTTESVILLE, VA 22902
PHONE: 434-977-0205 FAX: 434-296-5220
WWW.ROUDABUSH.COM

FINAL SUBDIVISION PLAT
TAX MAP 23 PARCEL 51 & 52
TENTH & GROVE SUBDIVISION
CITY OF CHARLOTTESVILLE, VIRGINIA

SWM & DRAINAGE EASEMENTS

DATE:	02-12-2021
REV:	
REV:	
REV:	
SCALE:	1"=20'
JOB:	8555
FILE:	TMPROJ
SHEET:	06OF 07

\\RGA2019\Data\RGA\TMPROJ\8555-Grove Street\NEW SITE PLAN - 20191104\DWG\FINAL SUB PLAT\8555 - GROVE STREET - FINAL SUB.dwg

Attachment A

DRAINAGE EASEMENTS		
Line	Direction	Length
DE1	S 09°49'15" W	3.97'
DE2	S 82°35'53" W	31.52'

PU EASEMENTS		
Line	Direction	Length
PU1	N 07°52'56" W	6.28'
PU2	N 82°09'43" E	15.09'
PU3	S 07°10'14" E	6.23'
PU4	S 08°04'52" E	7.39'
PU5	S 81°55'08" W	10.00'
PU6	N 08°04'52" W	7.40'
PU7	S 86°09'59" W	2.14'
PU8	N 03°50'01" W	8.78'
PU9	S 84°11'18" W	4.18'
PU10	N 05°48'42" W	10.00'
PU11	N 84°11'18" E	3.79'
PU12	S 82°45'45" W	4.83'
PU13	N 07°14'15" W	10.00'
PU14	N 82°45'45" E	4.70'
PU15	S 82°08'36" W	4.98'
PU16	N 08°01'05" W	10.00'
PU17	N 82°08'36" E	4.98'

SWM EASEMENTS		
Line	Direction	Length
SW1	N 07°40'14" W	18.09'
SW2	N 82°19'53" E	17.20'
SW3	S 07°40'07" E	17.98'
SW4	N 07°40'07" W	36.05'
SW5	N 82°19'53" E	8.61'
SW6	S 07°38'40" E	18.53'
SW7	S 81°58'55" W	19.17'
SW8	N 07°58'47" W	18.53'
SW9	S 08°01'05" E	3.44'
SW10	S 53°10'26" E	4.33'
SW12	S 08°01'05" E	86.50'
SW13	S 63°03'26" W	37.00'
SW14	N 07°54'59" W	25.00'
SW15	N 81°58'47" E	6.96'
SW16	N 08°01'19" W	80.00'
SW17	S 81°47'38" W	34.13'
SW18	N 08°12'36" W	8.70'

SWM EASEMENTS		
Line	Direction	Length
SW19	N 81°47'21" E	34.16'
SW20	S 81°47'21" W	35.10'
SW21	N 08°12'39" W	8.70'
SW22	N 81°47'21" E	35.13'
SW23	S 81°47'21" W	35.75'
SW24	N 08°12'39" W	8.70'
SW25	N 81°47'21" E	35.78'

COMMONWEALTH OF VIRGINIA
BRIAN D. JAMISON
No. 3334
02-12-2021
LAND SURVEYOR
DRAFT

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FINAL SUBDIVISION PLAT
TAX MAP 23 PARCEL 51 & 52
TENTH & GROVE SUBDIVISION
CITY OF CHARLOTTESVILLE, VIRGINIA

CALL TABLES

DATE:	02-12-2021
REV:	
REV:	
REV:	
SCALE:	1"=20'
JOB:	8555
FILE:	TMPROJ
SHEET:	07 OF 07

\\RGA2019\Data\RGA\TMPROJ\8555-Grove Street\NEW SITE PLAN - 20191104\DWG\FINAL SUB PLAT\8555 - GROVE STREET - FINAL SUB.dwg

1000 & 1002 GROVE STREET

FINAL SITE PLAN & VSMP

* THIS PROJECT FALLS UNDER THE 21-DAY REVIEW CYCLE *

SITE DATA:

OWNER — A. JOSEPH HOMES LLC
401 EAST MARKET STREET ES27
CHARLOTTESVILLE VA, 22902

DEVELOPER — A. JOSEPH HOMES LLC.
C/O AJ AMIGONI
401 EAST MARKET STREET ES27
CHARLOTTESVILLE VA 22902
434-409-0927

PLAN PREPARER: — ROUDABUSH, GALE, & ASSOCS, INC.
999 SECOND STREET SE, SUITE 201
CHARLOTTESVILLE, VA. 22902

TAX MAP PARCEL No: — 230052000, 230051000
D.B. 1050, Page 863

ZONING: — ZONED PUD, OCT. 2, 2006

PROPOSED USE: — SINGLE FAMILY RESIDENTIAL
4 SINGLE FAMILY DETACHED UNITS
2 SINGLE FAMILY ATTACHED UNITS
TOTAL OF 6 UNITS

PARCEL AREA: — 0.171 ACRES & 0.126 ACRES (TOTAL 0.295 ACRES)

RESIDENTIAL DENSITY: — 20 DU/AC

SETBACKS: — (i) 5' BUILDING SETBACK (SIDE YARD) SETBACK BETWEEN UNIT SIX (6) AND THE WESTERN PROPERTY LINE (ii.) FRONT YARD FOR UNIT 2 THAT MATCHES THE FRONT YARD OF THE ADJACENT LOT TO THE WEST (TMP-23-50); (iii) PROVIDE AT MINIMUM A 5' BUILDING SETBACK (SIDE YARD) BETWEEN UNIT 3 AND THE PROPERTY LINE ADJACENT TO GROVE STREET.

MAX BUILDING HEIGHT: — 35'

PARKING: — 6 SPACES REQUIRED (1 SPACE PER UNIT)
12 SPACES PROVIDED ON-SITE (NO ON-STREET PARKING REQUIRED)

WATERSHED: — UNNAMMED TRIBUTARY OF ROCK CREEK HUC#02080204
THIS SITE IS NOT LOCATED WITHIN A RESERVOIR WATERSHED.

TOPOGRAPHY: — PROVIDED BY DAVID WYANT, 4686 GARTH ROAD CROZET, VIRGINIA 22932
ORIGINALLY DATED 4-07-09, AND UPDATED ON 1-5-09
FIELD VERIFIED BY ROUDABUSH, GALE & ASSOCIATES, MAY 2021

BOUNDARY: — FIELD RUN SURVEY - DAVE WYANT 4-07-09

LOCATION — LAT.=38.029632 LONG.=78.497161

DATUM: — VERTICAL - NAVD 88,
HORIZONTAL - VIRGINIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE

CRITICAL SLOPES: — THERE ARE NO CRITICAL SLOPES ONSITE.

FLOODPLAIN: — THIS PROJECT IS NOT LOCATED WITHIN FLOODPLAIN LIMITS AS SHOWN ON FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBER 51003C0288B, EFFECTIVE DATE: FEBRUARY 04, 2005.

DISTURBED AREA: — 0.40 ACRES OF CLEARING, GRUBBING AND HOUSE CONSTRUCTION.

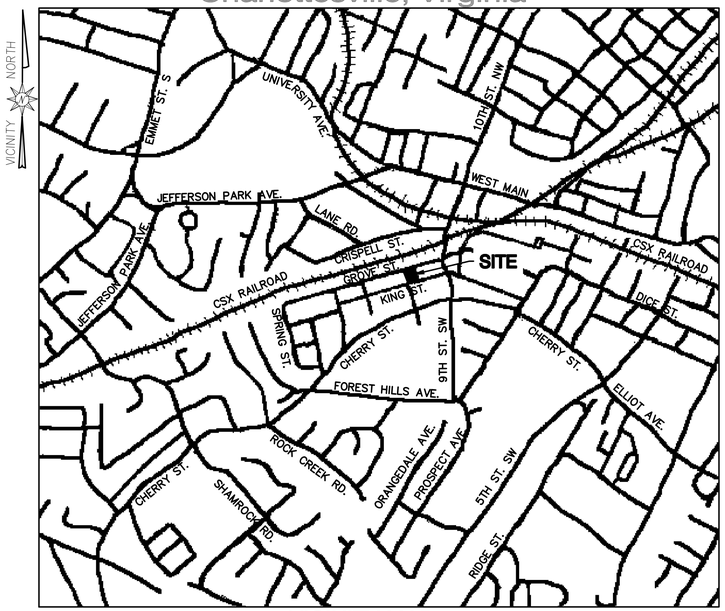
TRAFFIC: — ITE LAND USE CODE: 270 (6 UNITS)
45 TRIPS PER DAY — 3 MORNING PEAK TRIPS — 4 EVENING PEAK TRIPS

CANOPY COVERAGE: — REFER TO THE COMPUTATIONS ON THE LANDSCAPE PLAN, SHEET 6

STORMWATER: — THE OPEN SPACE AREAS, INCLUDING THE BIORETENTION, SHALL BE MAINTAINED BY THE H.O.A.

BENCHMARK: — EXISTING STORM MANHOLE AT THE CORNER OF GROVE STREET AND 10TH STREET SW. TOP OF MANHOLE ELEVATION = 370.90.

Tonsler Magisterial District
Charlottesville, Virginia



VICINITY MAP
1" = 1000'

SHEET INDEX

CITY OF CHARLOTTESVILLE MS4 REPORTING CHART

BMP TYPE	PRACTICE #	LEVEL	LATITUDE	LONGTITUDE	TOTAL DA (AC)	IMP DA	PERV. DA	P REMOVED	12 DIG HUC.	SWM MAINT. AGR. INST. #
BIORETENTION	9	2	38.029632	-78.497161	0.23	0.12	0.11	0.25	20802040402	
GREEN ROOF	1	1	38.029488	-78.497155	0.0025	0.0025	0	0.0025	20802040402	
GREEN ROOF	1	1	38.029721	-78.497071	0.0025	0.0025	0	0.0025	20802040402	
GREEN ROOF	1	1	38.029621	-78.496065	0.0025	0.0025	0	0.0025	20802040402	
GREEN ROOF	1	1	38.029540	-78.497027	0.0025	0.0025	0	0.0025	20802040402	
PERMEABLE PAVERS	7	1	38.029327	-78.497114	0.0067	0.0067	0	0.0083	20802040402	
PERMEABLE PAVERS	7	1	38.029707	-78.497287	0.0067	0.0067	0	0.0083	20802040402	
PERMEABLE PAVERS	7	1	38.029724	-78.496953	0.0067	0.0067	0	0.0083	20802040402	
PERMEABLE PAVERS	7	1	38.029649	-78.496922	0.0067	0.0067	0	0.0083	20802040402	
PERMEABLE PAVERS	7	1	38.029550	-78.496940	0.0067	0.0067	0	0.0083	20802040402	
PERMEABLE PAVERS	7	1	38.029305	-78.497167	0.0067	0.0067	0	0.0083	20802040402	

TOTAL LOD	0.4	AC
TOTAL P REMOVED BY BMPS	0.31	LBS
TOTAL P CREDITS PURCHASED	0	LBS
TOTAL P CREDITED TO PROJECT	0.31	LBS
TOTAL P REQUIRED	0.31	LBS
TOTAL AREA OF LAND COVER CONSIDERED FOREST/OPEN SPACE ON VRRM	0	AC

*LAND DISTURBING #		
*SWM BOND RELEASE DATE		

* SEE CITY OF CHARLOTTESVILLE OUTFALL ACCOUNTING FORM ON SHEET 16

LEGEND

EXISTING INTERMEDIATE CONTOUR	32	FLOW DIRECTION	
EXISTING INDEX CONTOUR	30	EXISTING FENCE LINE	X X
PROPOSED CONTOUR	30	EXISTING UTILITY POLE	
EXISTING EDGE OF PAVEMENT	EX. EP	PROPOSED UTILITY POLE	
PROPOSED EDGE OF PAVEMENT	EP	EXISTING WATERLINE W/ TEE	W
EXISTING CURB AND GUTTER	EX. C&G	PROPOSED WATERLINE W/ TEE	W
PROPOSED CURB AND GUTTER	CG-6	EXISTING FIRE HYDRANT	
TRANSITION FROM CG-6 CG-6R	CG-6 CG-6R	PROPOSED FIRE HYDRANT	
EXISTING TELEPHONE LINE	T	EXISTING WATER VALVE	W
PROPOSED TELEPHONE LINE	UGT UGT	PROPOSED WATER VALVE	W
EXISTING STORM SEWER	EX. 15" RCP	PROPOSED WATER METER	
PROPOSED STORM SEWER	15" RCP	EXISTING REDUCER	
EXISTING SANITARY SEWER		PROPOSED REDUCER	W
PROPOSED SANITARY SEWER		SANITARY LATERAL	
EXISTING ELECTRIC SERVICE	OHT OHT	SANITARY TRAFFIC BOX	
PROPOSED ELECTRIC SERVICE	UGE UGE	HANDICAP RAMP (CG-12) DENOTES LOCATION OF STD. 1207 STANDARD RAMP CONSTRUCTION	
EXISTING GAS LINE	G G	PARKING INDICATOR INDICATES THE NUMBER OF TYPICAL PARKING SPACES	12
PROPOSED GAS LINE	G G	BENCHMARK	
PROPERTY LINE		VEHICLES PER DAY COUNT	1234 VPD
EASEMENT LINE		PROPOSED BUILDING ENTRANCE	
CENTERLINE		EXISTING STREET LIGHT	
LIMITS OF CLEARING & GRADING		PROPOSED STREET LIGHT	
EXISTING SPOT ELEVATION	x12.0	PROPOSED STREET NAME SIGN	
PROPOSED SPOT ELEVATION	x12.0	EXISTING SIGN	
EXISTING TREE DRIP LINE		PROPOSED SIGN	
EXISTING TREE	EX. 15" OAK	SANITARY MANHOLE IDENTIFIER	A
100-YR FLOOD OVERLAND RELIEF		STORM DRAIN STRUCTURE IDENTIFIER	3
DEMOLITION			

STORMWATER MANAGEMENT COMPLIANCE SUMMARY

OVERALL SUMMARY:

THE SITE IS DIVIDED INTO THREE OUTFALL LOCATIONS TO ANALYZE FOR COMPLIANCE WITH CHANNEL AND FLOOD PROTECTION REQUIREMENTS. 0.22 OF A TOTAL 0.295 ON-SITE ACRES FLOW TO A LEVEL II BIORETENTION FACILITY WHICH SERVES THE SITE AS BOTH A QUANTITY AND QUALITY MEASURE. THE REMAINING SITE OUTFLOW LEAVES THE SITE AS SHEET FLOW BEFORE RE-CONCENTRATING IN THE CITY STORMWATER CONVEYANCE SYSTEM OFF-SITE.

QUANTITY CHANNEL PROTECTION
OUTFALL 1: CHANNEL PROTECTION IS MET AT THE SITE OUTFALL BY REDUCING POST DEVELOPED PEAK FLOWS BELOW THE FLOW RATE REQUIRED BY 9VAC25-870-66-B3a (ENERGY BALANCE). THIS IS ACHIEVED THROUGH RETENTION OF A PORTION OF THE 1 YEAR STORM WITHIN THE PROPOSED BIORETENTION FACILITY. THIS IS MODELED USING UNADJUSTED CN VALUE ROUTED THROUGH THE PROPOSED BIORETENTION POND.

OUTFALL 2: CHANNEL PROTECTION IS MET AT THE SITE OUTFALL BY REDUCING POST DEVELOPED PEAK FLOWS BELOW THE FLOW RATE REQUIRED BY 9VAC25-870-66-B3a (ENERGY BALANCE). THIS IS ACHIEVED THROUGH RETENTION OF A PORTION OF THE 1 YEAR STORM WITHIN THE PERVIOUS PAVER SUBSURFACE.

OUTFALL 3: THIS OUTFALL DISCHARGES TO A MANMADE STORMWATER CONVEYANCE SYSTEM. CHANNEL PROTECTION REQUIREMENTS ARE MET SINCE THE RECEIVING CONVEYANCE SYSTEM IS SHOWN TO CONVEY THE POST-DEVELOPED PEAK FLOW RATE FROM THE 2-YEAR 24-HOUR STORM WITHOUT CAUSING EROSION TO THE SYSTEM TO THE LIMITS OF ANALYSIS AS REQUIRED BY 9VAC25-870-66B-4a.

QUANTITY FLOOD PROTECTION

PEAK FLOWS FROM THE 10-YEAR 24-HOUR STORM ARE REDUCED IN THE POSTDEVELOPED CONDITION BELOW THAT OF THE PREDEVELOPED FOR ALL OUTFALLS. FLOOD PROTECTION IS THEREOFORE MET AT EACH OUTFALL ACCORDING TO 9VAC25-870-66-C2B ($Q_{10POST} < Q_{10PRE}$)

QUALITY
THE ON-SITE LEVEL II BIORETENTION FACILITY, LEVEL I GREEN ROOFS, AND LEVEL I PERMEABLE PAVERS ARE SHOWN TO REMOVE 0.31 OF THE REQUIRED 0.31 LBS/YR OF PHOSPHORUS. (SEE SHEET 20)

CONTRACTOR'S RECORD DRAWING CERTIFICATION STATEMENT

CERTIFICATION STATEMENT: (SEE SHEET 15)
THIS HAND-MARKED SET OF DRAWINGS HAS BEEN 'REDLINED' TO PROVIDE ACCURATE DETAILED RECORD OF ANY SUBSTANTIVE CHANGES TO THE APPROVED DESIGN DRAWINGS. ANY ITEM NOT 'REDLINED' ON THIS PLAN SET OR SUBSEQUENT PAGES SHOULD BE CONSIDERED TO BE 'CONSTRUCTED IN ACCORDANCE WITH THE DESIGN AS SHOWN'.

NAME _____ TITLE _____ DATE _____

FOR: _____ (CONTRACTOR)

CITY OF CHARLOTTESVILLE APPROVAL

NAME	DATE	
NDS DIRECTOR		
ENGINEERING		

PROPOSED LOT COVERAGE

LOT #	PROP. UNIT FOOTPRINT (S.F.)	ADDITIONAL LOT IMP. COVER (S.F)	DRIVEWAY APRONS	LOT AREA (S.F.)
LOT 1	584 S.F.	51 S.F.	140 S.F.	1,710 S.F.
LOT 2	748 S.F.	85 S.F.	140 S.F.	1,920 S.F.
LOT 3	748 S.F.	75 S.F.	150 S.F.	1,470 S.F.
LOT 4	748 S.F.	75 S.F.	150 S.F.	1,428 S.F.
LOT 5	748 S.F.	50 S.F.	150 S.F.	1,554 S.F.
LOT 6	624 S.F.	35 S.F.	140 S.F.	1,300 S.F.
OPEN		N/A		3,498 S.F.
% UNIT COVER	32.60%	100% IMPERVIOUS	100% IMPERVIOUS	5,441 S.F.-42% IMP COVER
CATEGORY TOTALS	4,200 S.F.	371 S.F.	870 S.F.	12,880 S.F.

SEE SHEET 11 FOR GENERAL SITE AND CONSTRUCTION NOTES, AND PROFFERS

ROUDABUSH, GALE & ASSOC., INC.
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MAILING: 435 MERCHANT WALK SQ., SUITE 300-159 CHARLOTTESVILLE, VA. 22902
PHONE 434-977-0205 WWW.ROUDABUSH.COM

REVISIONS

NO.	DATE	DESCRIPTION
1	28 SEP 2020	CITY OF CHARLOTTESVILLE COMMENTS
2	08 FEB 2021	CITY OF CHARLOTTESVILLE COMMENTS
3	03 MAY 2021	CITY OF CHARLOTTESVILLE COMMENTS
4	16 JULY 2021	CITY OF CHARLOTTESVILLE COMMENTS
5	17 AUG 2021	CITY OF CHARLOTTESVILLE COMMENTS
6	10 SEPT 2021	CITY OF CHARLOTTESVILLE COMMENTS

DESIGNED BY:	LO, DG
DRAWN BY:	LO
CHECKED BY:	JT

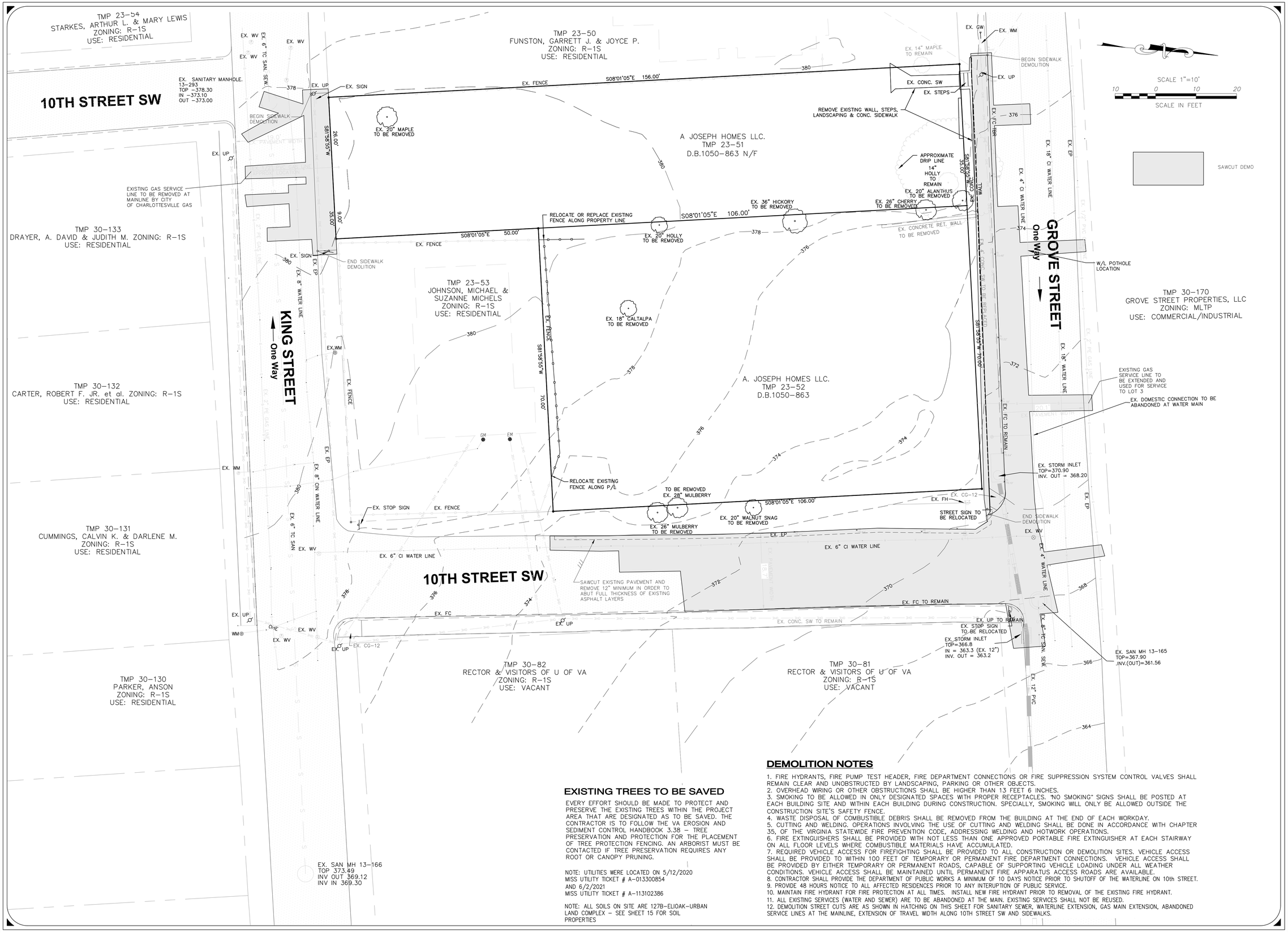
COMMONWEALTH OF VIRGINIA
09/30/2021
JIMMY L. TAGGART
Lic. No. 22841
PROFESSIONAL ENGINEER

1001 & 1002 GROVE STREET PUD
FINAL SITE PLAN AND VSMP
CHARLOTTESVILLE, VIRGINIA
COVER SHEET

DATE:	02-20-2020
JOB:	8555
CONTOUR INTERVAL:	2 FT

SHEET: 1 OF 20

Attachment B



EXISTING TREES TO BE SAVED

EVERY EFFORT SHOULD BE MADE TO PROTECT AND PRESERVE THE EXISTING TREES WITHIN THE PROJECT AREA THAT ARE DESIGNATED AS TO BE SAVED. THE CONTRACTOR IS TO FOLLOW THE VA EROSION AND SEDIMENT CONTROL HANDBOOK 3.38 – TREE PRESERVATION AND PROTECTION FOR THE PLACEMENT OF TREE PROTECTION FENCING. AN ARBORIST MUST BE CONTACTED IF TREE PRESERVATION REQUIRES ANY ROOT OR CANOPY PRUNING.

NOTE: UTILITIES WERE LOCATED ON 5/12/2020
MISS UTILITY TICKET # A-013300854
AND 6/2/2021
MISS UTILITY TICKET # A-113102386

NOTE: ALL SOILS ON SITE ARE 127B–ELIOAK–URBAN LAND COMPLEX – SEE SHEET 15 FOR SOIL PROPERTIES

DEMOLITION NOTES

1. FIRE HYDRANTS, FIRE PUMP TEST HEADER, FIRE DEPARTMENT CONNECTIONS OR FIRE SUPPRESSION SYSTEM CONTROL VALVES SHALL REMAIN CLEAR AND UNOBSTRUCTED BY LANDSCAPING, PARKING OR OTHER OBJECTS.
2. OVERHEAD WIRING OR OTHER OBSTRUCTIONS SHALL BE HIGHER THAN 13 FEET 6 INCHES.
3. SMOKING TO BE ALLOWED IN ONLY DESIGNATED SPACES WITH PROPER RECEPTACLES. "NO SMOKING" SIGNS SHALL BE POSTED AT EACH BUILDING SITE AND WITHIN EACH BUILDING DURING CONSTRUCTION. SPECIALLY, SMOKING WILL ONLY BE ALLOWED OUTSIDE THE CONSTRUCTION SITE'S SAFETY FENCE.
4. WASTE DISPOSAL OF COMBUSTIBLE DEBRIS SHALL BE REMOVED FROM THE BUILDING AT THE END OF EACH WORKDAY.
5. CUTTING AND WELDING. OPERATIONS INVOLVING THE USE OF CUTTING AND WELDING SHALL BE DONE IN ACCORDANCE WITH CHAPTER 35, OF THE VIRGINIA STATEWIDE FIRE PREVENTION CODE, ADDRESSING WELDING AND HOTWORK OPERATIONS.
6. FIRE EXTINGUISHERS SHALL BE PROVIDED WITH NOT LESS THAN ONE APPROVED PORTABLE FIRE EXTINGUISHER AT EACH STAIRWAY ON ALL FLOOR LEVELS WHERE COMBUSTIBLE MATERIALS HAVE ACCUMULATED.
7. REQUIRED VEHICLE ACCESS FOR FIREFIGHTING SHALL BE PROVIDED TO ALL CONSTRUCTION OR DEMOLITION SITES. VEHICLE ACCESS SHALL BE PROVIDED TO WITHIN 100 FEET OF TEMPORARY OR PERMANENT FIRE DEPARTMENT CONNECTIONS. VEHICLE ACCESS SHALL BE PROVIDED BY EITHER TEMPORARY OR PERMANENT ROADS, CAPABLE OF SUPPORTING VEHICLE LOADING UNDER ALL WEATHER CONDITIONS. VEHICLE ACCESS SHALL BE MAINTAINED UNTIL PERMANENT FIRE APPARATUS ACCESS ROADS ARE AVAILABLE.
8. CONTRACTOR SHALL PROVIDE THE DEPARTMENT OF PUBLIC WORKS A MINIMUM OF 10 DAYS NOTICE PRIOR TO SHUTOFF OF THE WATERLINE ON 10th STREET.
9. PROVIDE 48 HOURS NOTICE TO ALL AFFECTED RESIDENCES PRIOR TO ANY INTERRUPTION OF PUBLIC SERVICE.
10. MAINTAIN FIRE HYDRANT FOR FIRE PROTECTION AT ALL TIMES. INSTALL NEW FIRE HYDRANT PRIOR TO REMOVAL OF THE EXISTING FIRE HYDRANT.
11. ALL EXISTING SERVICES (WATER AND SEWER) ARE TO BE ABANDONED AT THE MAIN. EXISTING SERVICES SHALL NOT BE REUSED.
12. DEMOLITION STREET CUTS ARE AS SHOWN IN HATCHING ON THIS SHEET FOR SANITARY SEWER, WATERLINE EXTENSION, GAS MAIN EXTENSION, ABANDONED SERVICE LINES AT THE MAINLINE, EXTENSION OF TRAVEL WIDTH ALONG 10TH STREET SW AND SIDEWALKS.

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REVISIONS

NO.	DATE	DESCRIPTION
1	25 SEP 2020	CITY OF CHARLOTTESVILLE COMMENTS
2	08 FEB 2021	CITY OF CHARLOTTESVILLE COMMENTS
3	08 MAY 2021	CITY OF CHARLOTTESVILLE COMMENTS
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DESIGNED BY:	LO, DG
DRAWN BY:	LO
CHECKED BY:	JT

COMMONWEALTH OF VIRGINIA
09/30/2021
JIMMY L. TAGGART
Lic. No. 22841
PROFESSIONAL ENGINEER

1001 & 1002 GROVE STREET PUD
FINAL SITE PLAN AND VSMP
CHARLOTTESVILLE, VIRGINIA

EXISTING CONDITIONS & DEMO PLAN

DATE:	02-20-2020
JOB:	8555
CONTOUR INTERVAL:	2 FT

SHEET: 2 OF 20

Attachment B

NOTE: ALL RETAINING WALLS ARE BY OTHERS AND CALLED OUT AS LANDSCAPING WALLS

SCALE 1"=10'

SCALE IN FEET

IMPERVIOUS LINER 3' INTO SUBGRADE ALONG BORDER OF PERVIOUS PAVERS AND SIDEWALK (TYP. - SEE PERMEABLE PAVER DETAIL SHEET 19)

N: 3898348.53
E: 11483734.76

VARIABLE WIDTH SWM/BMP PRIVATE MAINTENANCE EASEMENT

1" TEMPORARY CONSTRUCTION EASEMENT (HATCHED)

N: 3898493.25
E: 11483678.00

PROP. NO PARKING SIGN

VARIABLE WIDTH SWM/BMP PRIVATE MAINTENANCE EASEMENT

PROPOSED LANDSCAPING WALL NOT TO EXCEED 3.5' HEIGHT

PROP. NO PARKING SIGN

VARIABLE WIDTH PRIVATE DRAINAGE EASEMENT

PROP. NO PARKING SIGN

TIE INTO EX. CURB BEGIN CG-2

PROPOSED STREET SIGN

PROP. NO PARKING SIGN

NOTE: END CG-2 CURB TIE INTO EX. EP

SAWCUT EXISTING PAVEMENT AND REMOVE 12" MINIMUM IN ORDER TO ABUT FULL THICKNESS OF EXISTING ASPHALT LAYERS

PAVEMENT WIDENING (SEE DETAIL SHEET 11)

VARIABLE WIDTH SWM/BMP ACCESS EASEMENT

PROP. NO PARKING SIGN

PROP. STOP SIGN

TYPICAL BUILDING GRAPHIC (NTS)

DECK (TYP.)
COVERED PORCH (TYP.)
STEPS
CONCRETE LANDING OR WALKWAY (TYP.)
EAVE LINE (TYP.)
INSIDER FOOTER (APPROX) TYP.
BUILDING INFORMATION
DESCRIPTION
FF. ELEVATION
ADDRESS
EXTERIOR WALL (TYP.)
GREEN ROOF (TYP.)

ROUDABUSH, GALE & ASSOC., INC.
A PROFESSIONAL CORPORATION
SERVING VIRGINIA SINCE 1956

PHYSICAL
999 SECOND ST SE
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PHONE 434-977-0205

MAILING
435 MERCHANT WALK SQ., SUITE 300-199
CHARLOTTESVILLE, VA 22902
WWW.ROUDABUSH.COM

REVISIONS

NO.	DATE	DESCRIPTION
1	28 SEP 2020	CITY OF CHARLOTTESVILLE COMMENTS
2	08 FEB 2021	CITY OF CHARLOTTESVILLE COMMENTS
3	03 MAY 2021	CITY OF CHARLOTTESVILLE COMMENTS
4	16 JULY 2021	CITY OF CHARLOTTESVILLE COMMENTS
5	17 AUG 2021	CITY OF CHARLOTTESVILLE COMMENTS
6	10 SEPT 2021	CITY OF CHARLOTTESVILLE COMMENTS

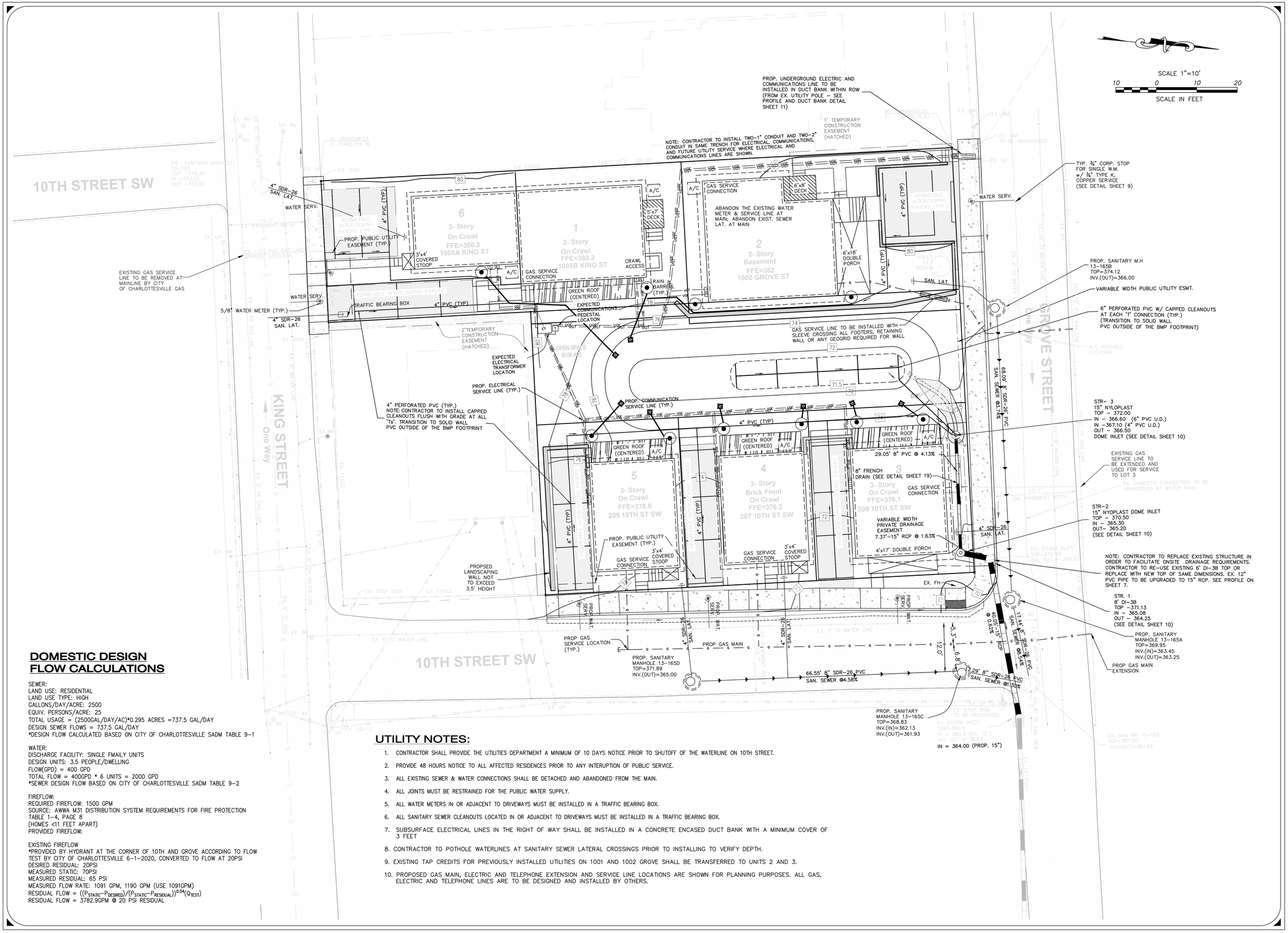
DESIGNED BY:	LO, DG
DRAWN BY:	LO
CHECKED BY:	JT

COMMONWEALTH OF VIRGINIA
09/30/2021
JIMMY L. TAGGART
Lic. No. 22841
PROFESSIONAL ENGINEER

1001 & 1002 GROVE STREET PUD
FINAL SITE PLAN AND VSMP
CHARLOTTESVILLE, VIRGINIA
LAYOUT PLAN

DATE:	02-20-2020
JOB:	8555
CONTOUR INTERVAL: 2 FT	

SHEET: 3 OF 20



DOMESTIC DESIGN FLOW CALCULATIONS

SEWER:
LAND USE: RESIDENTIAL
LAND USE TYPE: HIGH
GALLONS/DAY/ACRE: 2500
EQUIV. PERSONS/ACRE: 25
TOTAL USAGE = (2500GAL/DAY/AC)*0.295 ACRES =737.5 GAL/DAY
DESIGN SEWER FLOWS = 737.5 GAL/DAY
*DESIGN FLOW CALCULATED BASED ON CITY OF CHARLOTTESVILLE SADM TABLE 9–1

WATER:
DISCHARGE FACILITY: SINGLE FMAILY UNITS
DESIGN UNITS: 3.5 PEOPLE/DWELLING
FLOW(GPD) = 400 GPD
TOTAL FLOW = 400GPD * 6 UNITS = 2000 GPD
*SEWER DESIGN FLOW BASED ON CITY OF CHARLOTTESVILLE SADM TABLE 9–2

FIREFLOW:
REQUIRED FIREFLOW: 1500 GPM
SOURCE: AWWA M31 DISTRIBUTION SYSTEM REQUIREMENTS FOR FIRE PROTECTION
TABLE 1–4, PAGE 8
(HOMES <11 FEET APART)
PROVIDED FIREFLOW:

EXISTING FIREFLOW
*PROVIDED BY HYDRANT AT THE CORNER OF 10TH AND GROVE ACCORDING TO FLOW TEST BY CITY OF CHARLOTTESVILLE 6–1–2020, CONVERTED TO FLOW AT 20PSI
DESIRED RESIDUAL: 20PSI
MEASURED STATIC: 70PSI
MEASURED RESIDUAL: 65 PSI
MEASURED FLOW RATE: 1091 GPM, 1190 GPM (USE 1091GPM)
RESIDUAL FLOW = $((P_{STATIC}-P_{DESIRED})/(P_{STATIC}-P_{RESIDUAL}))^{0.54}(Q_{TEST})$
RESIDUAL FLOW = 3782.9GPM @ 20 PSI RESIDUAL

UTILITY NOTES:

1. CONTRACTOR SHALL PROVIDE THE UTILITIES DEPARTMENT A MINIMUM OF 10 DAYS NOTICE PRIOR TO SHUTOFF OF THE WATERLINE ON 10TH STREET.
2. PROVIDE 48 HOURS NOTICE TO ALL AFFECTED RESIDENCES PRIOR TO ANY INTERUPTION OF PUBLIC SERVICE.
3. ALL EXISTING SEWER & WATER CONNECTIONS SHALL BE DETACHED AND ABANDONED FROM THE MAIN.
4. ALL JOINTS MUST BE RESTRAINED FOR THE PUBLIC WATER SUPPLY.
5. ALL WATER METERS IN OR ADJACENT TO DRIVEWAYS MUST BE INSTALLED IN A TRAFFIC BEARING BOX.
6. ALL SANITARY SEWER CLEANOUTS LOCATED IN OR ADJACENT TO DRIVEWAYS MUST BE INSTALLED IN A TRAFFIC BEARING BOX.
7. SUBSURFACE ELECTRICAL LINES IN THE RIGHT OF WAY SHALL BE INSTALLED IN A CONCRETE ENCASED DUCT BANK WITH A MINIMUM COVER OF 3 FEET
8. CONTRACTOR TO POTHOLE WATERLINES AT SANITARY SEWER LATERAL CROSSINGS PRIOR TO INSTALLING TO VERIFY DEPTH.
9. EXISTING TAP CREDITS FOR PREVIOUSLY INSTALLED UTILITIES ON 1001 AND 1002 GROVE SHALL BE TRANSFERRED TO UNITS 2 AND 3.
10. PROPOSED GAS MAIN, ELECTRIC AND TELEPHONE EXTENSION AND SERVICE LINE LOCATIONS ARE SHOWN FOR PLANNING PURPOSES. ALL GAS, ELECTRIC AND TELEPHONE LINES ARE TO BE DESIGNED AND INSTALLED BY OTHERS.

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COMMONWEALTH OF VIRGINIA
09/30/2021
JIMMY L. TAGGART
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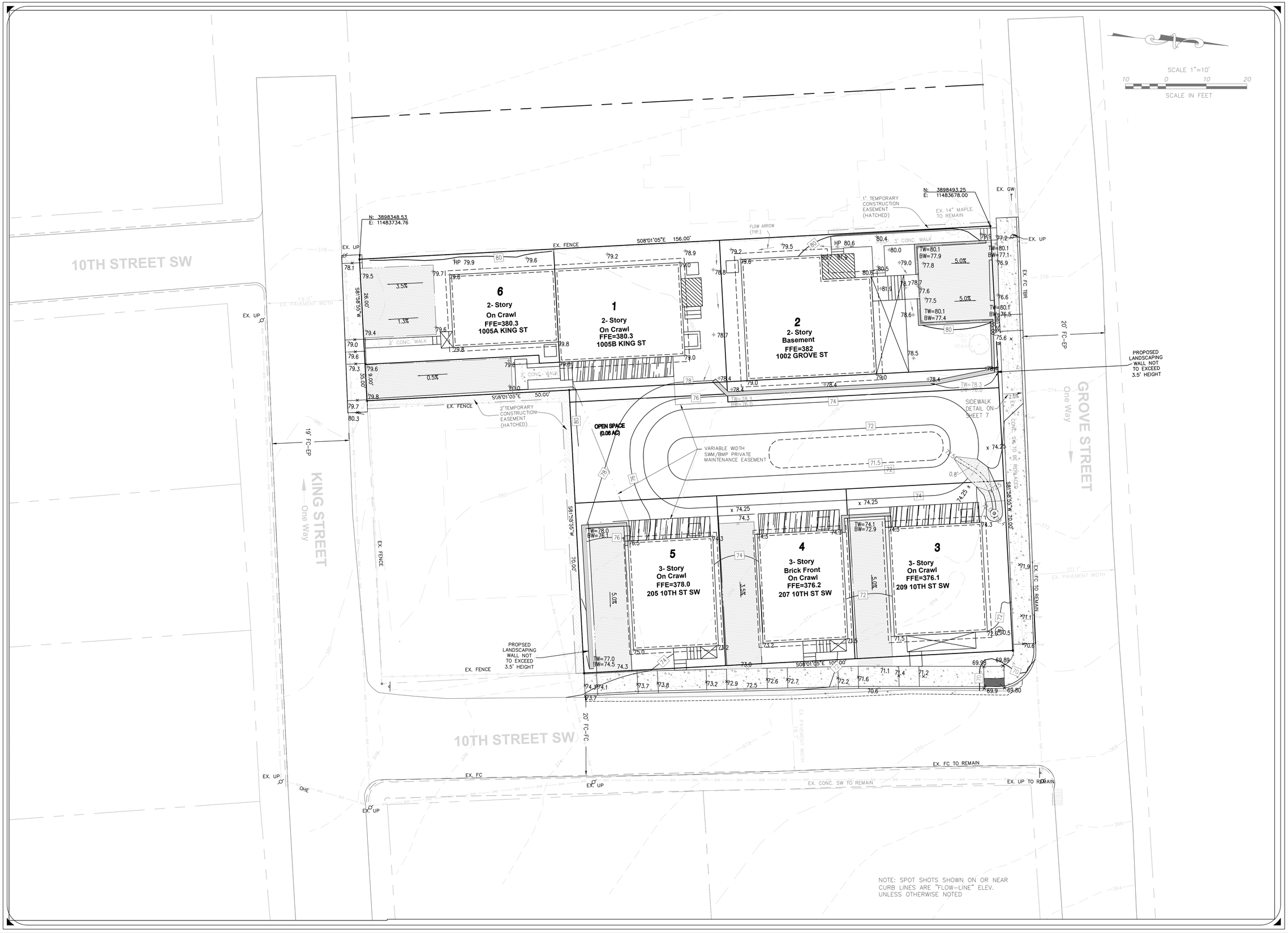
PROFESSIONAL ENGINEER

1001 & 1002 GROVE STREET PUD
FINAL SITE PLAN AND VSMP
CHARLOTTESVILLE, VIRGINIA
UTILITY PLAN

DATE:	02-20-2020
JOB:	8555
CONTOUR INTERVAL: 2 FT	

SHEET: 4 OF 20

Attachment B



NOTE: SPOT SHOTS SHOWN ON OR NEAR CURB LINES ARE "FLOW-LINE" ELEV. UNLESS OTHERWISE NOTED

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REVISIONS

NO.	DATE	DESCRIPTION
1	25 SEPT 2020	CITY OF CHARLOTTESVILLE COMMENTS
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DESIGNED BY: LO, DG
DRAWN BY: LO
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COMMONWEALTH OF VIRGINIA
09/30/2021
JIMMY L. TAGGART
Lic. No. 22841
PROFESSIONAL ENGINEER

1001 & 1002 GROVE STREET PUD
FINAL SITE PLAN AND VSMP
CHARLOTTESVILLE, VIRGINIA
GRADING PLAN

DATE: 02-20-2020
JOB: 8555
CONTOUR INTERVAL: 2 FT

SHEET: 5 OF 20

Attachment B

PLANT LIST

SYMBOL	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	10-YEAR TREE COVERAGE (SF)		COMMENT
					ALLOWANCE	TOTAL	
UA	2	Ulmus americana "Princeton"	Princeton American Elm	2" CAL..	397	794	
AG	3	Amelanchier x grandiflora "Autumn Brilliance"	Autumn Brilliance Serviceberry	6'-7' HT.	130	390	
CO	8	Cephalanthus occidentalis "Sugar Shack"	Sugar Shack Buttonbush	18-24" Ht.	9	72	5' O.C. SPACING
IV	10	Ilex verticillata "Red Sprite"	Red Sprite Winterberry	18-24" Ht.	23	230	5' O.C. SPACING
IV	2	Ilex verticillata "Jim Dandy"	Jim Dandy Winterberry	18-24" Ht.	23	46	5' O.C. SPACING
MIX	20	Aster laevis	Smooth Aster	1 Gal. Cont.			24" O.C. SPACING
	21	Chasmanthium latifolium	Wild Oats	1 Gal. Cont.			24" O.C. SPACING
	20	Coreopsis verticillata	Threadleaf Coreopsis	1 Gal. Cont.			24" O.C. SPACING
	20	Iris versicolor	Northern Blue Flag	1 Gal. Cont.			24" O.C. SPACING
	21	Monarda didyma "Coral Reef"	Coral Reef Beebalm	1 Gal. Cont.			24" O.C. SPACING
	21	Panicum virgatum "Shenandoah"	Shenandoah Switchgrass	1 Gal. Cont.			24" O.C. SPACING
	21	Penstemon digitalis	Beardtongue	1 Gal. Cont.			24" O.C. SPACING
	21	Rudbeckia hirta 'Goldsturm'	Goldsturm Black-Eyed Susan	1 Gal. Cont.			24" O.C. SPACING

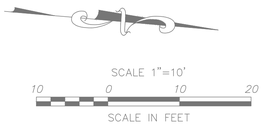
SITE TOTAL: 1,532 SF

TREE COVERAGE CALCULATIONS

GROSS SITE AREA	12,880 SF
TREE COVERAGE REQUIRED	1,288 SF (10%)
TOTAL TREE COVERAGE PROVIDED	1,532 SF (11.9%)

EXISTING TREES TO BE SAVED

EVERY EFFORT SHOULD BE MADE TO PROTECT AND PRESERVE THE EXISTING TREES WITHIN THE PROJECT AREA THAT ARE DESIGNATED AS TO BE SAVED. THE CONTRACTOR IS TO FOLLOW THE VA EROSION AND SEDIMENT CONTROL HANDBOOK 3.38 – TREE PRESERVATION AND PROTECTION FOR THE PLACEMENT OF TREE PROTECTION FENCING. AN ARBORIST MUST BE CONTACTED IF TREE PRESERVATION REQUIRES ANY ROOT OR CANOPY PRUNING.



MIX AREA TO BE SEEDED WITH ERNST RAIN GARDEN SEED MIX (ERNMX-180) OR EQUIVALENT AT A RATE SPECIFIED BY THE MANUFACTURER.

293 SF (0.007 ACRES) REQUIRES 0.14 LBS OF SEED WITH 0.21 LBS OF COVER CROP.

ERNST RAIN GARDEN (ERNMX-180) MIX COMPOSITION
33.4% Schizachyrium scoparium, 'Itasca', MN Ecotype (Little Bluestem, 'Itasca', MN Ecotype)
20.0% Elymus virginicus, PA Ecotype (Virginia Wildrye, PA Ecotype)
7.0% Carex vulpinoidea, PA Ecotype (Fox Sedge, PA Ecotype)
5.6% Chasmanthium latifolium, WV Ecotype (River Oats, WV Ecotype)
5.5% Echinacea purpurea (Purple Coneflower)
3.0% Chamaecrista fasciculata, PA Ecotype (Partridge Pea, PA Ecotype)
3.0% Coreopsis lanceolata (Lanceleaf Coreopsis)
3.0% Panicum clandestinum, Tioga (Deertongue, Tioga)
3.0% Panicum rigidulum, PA Ecotype (Redtop Panicgrass, PA Ecotype)
3.0% Rudbeckia hirta, Coastal Plain NC Ecotype (Blackeyed Susan, Coastal Plain NC Ecotype)
3.0% Verbena hastata, PA Ecotype (Blue Vervain, PA Ecotype)
2.0% Heliopsis helianthoides, PA Ecotype (Oxeye Sunflower, PA Ecotype)
1.8% Asclepias incarnata, PA Ecotype (Swamp Milkweed, PA Ecotype)
1.0% Carex scoparia, PA Ecotype (Blunt Broom Sedge, PA Ecotype)
1.0% Senna hebecarpa, VA & WV Ecotype (Wild Senna, VA & WV Ecotype)
0.5% Aster novae-angliae, PA Ecotype (New England Aster, PA Ecotype)
0.5% Aster prenanthoides, PA Ecotype (Zigzag Aster, PA Ecotype)
0.5% Baptisia australis, Southern WV Ecotype (Blue False Indigo, Southern WV Ecotype)
0.5% Pycnanthemum tenuifolium (Narrowleaf Mountainmint)
0.5% Zizia aurea (Golden Alexanders)
0.4% Monarda fistulosa, Fort Indiantown Gap-PA Ecotype (Wild Bergamot, Fort Indiantown Gap-PA Ecotype)
0.3% Eupatorium coelestinum, VA Ecotype (Mistflower, VA Ecotype)
0.3% Eupatorium perfoliatum, PA Ecotype (Boneset, PA Ecotype)
0.3% Helenium autumnale, PA Ecotype (Common Sneezeweed, PA Ecotype)
0.3% Juncus tenuis, PA Ecotype (Path Rush, PA Ecotype)
0.2% Juncus effusus (Soft Rush)
0.2% Solidago nemoralis, PA Ecotype (Gray Goldenrod, PA Ecotype)
0.2% Solidago rugosa, PA Ecotype (Wrinkleleaf Goldenrod, PA Ecotype)

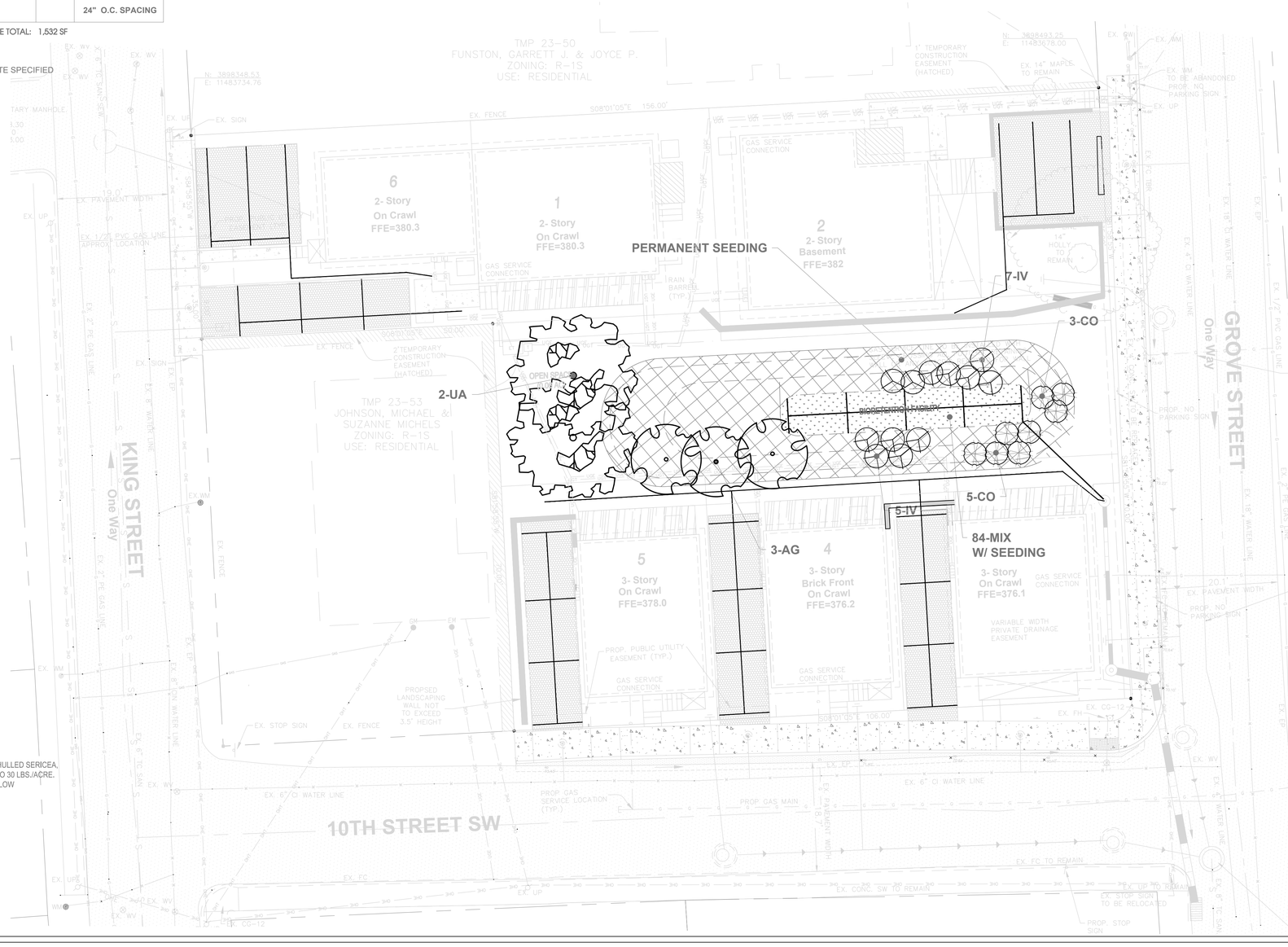
PERMANENT SEEDING IN THE PIEDMONT REGION

VESCH TABLE 25	TOTAL LBS. PER ACRE
MINIMUM CARE LAWN - COMMERCIAL OR RESIDENTIAL	175-200 LBS.
- KENTUCKY 31 OR TURF-TYPE TALL FESCUE	95-100%
- IMPROVED PERENNIAL RYE GRASS	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.
LOW-MAINTENANCE SLOPE (STEEPER THAN 3:1)	
- KENTUCKY 31 FESCUE	108 LBS.
- RED TOP GRASS	2 LBS.
- SEASONAL NURSE CROP*	20 LBS.
- CROWN VETCH**	20 LBS.
	TOTAL 150 LBS.

*USE SEASONAL NURSE CROP IN ACCORDANCE WITH SEEDING DATES AS STATED BELOW:

FEBRUARY 16TH THROUGH APRIL 30TH. . . . . ANNUAL RYE
MAY 1ST THROUGH AUGUST 15TH . . . . FOXTAIL MILLET
AUGUST 16TH THROUGH OCTOBER 31ST. . . . . .ANNUAL RYE
NOVEMBER 1ST THROUGH FEBRUARY 15TH . . . . .ANNUAL RYE

*** SUBSTITUTE SERICEA LESPEDEZA FOR CROWNVETCH EAST OF FARMVILLE, VA (MAY THROUGH SEPTEMBER USE HULLED SERICEA, ALL OTHER PERIODS, USE UNHULLED SERICEA.) IF FLATPEA IS USED IN LIEU OF CROWNVETCH, INCREASE RATE TO 30 LBS./ACRE. ALL LEGUME SEED MUST BE PROPERLY INNOCULATED. WEEPING LOVEGRASS MAY BE ADDED TO ANY SLOPE OR LOW MAINTENANCE MIX DURING WARMER SEEDING PERIODS; ADD 10- 20 LBS./ACRE IN MIXES.



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REVISIONS

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DESIGNED BY:	LO, DG
DRAWN BY:	LO
CHECKED BY:	JT

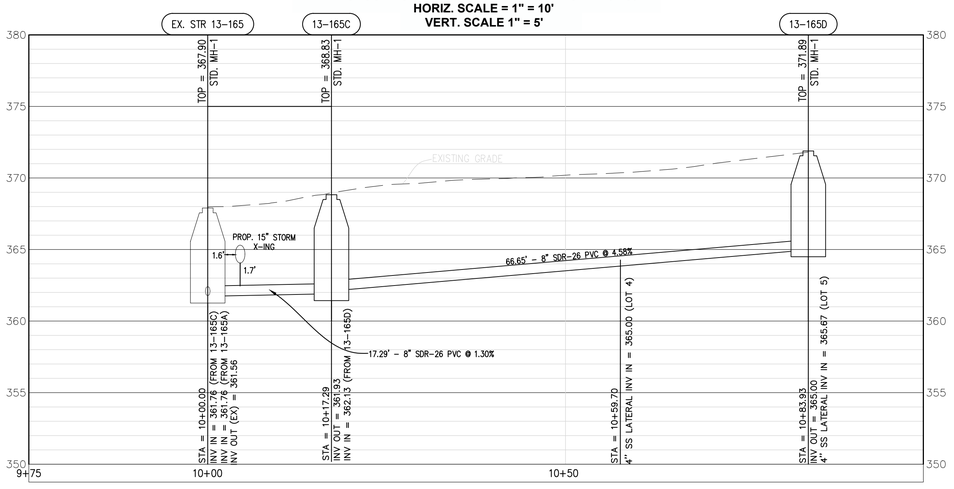
AMMY MARIE GEORGE
No. 0406001817

1001 & 1002 GROVE STREET PUD
FINAL SITE PLAN AND VSMP
CHARLOTTESVILLE, VIRGINIA
LANDSCAPE PLAN

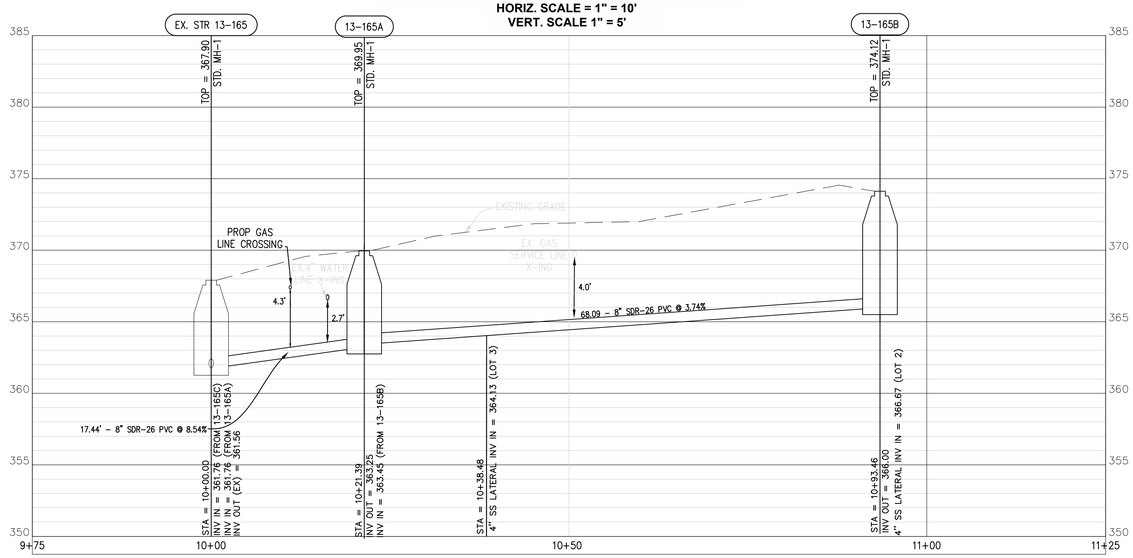
DATE: 02-20-2020
JOB: 8555
CONTOUR INTERVAL: 2 FT
SHEET: 6 OF 20

Attachment B

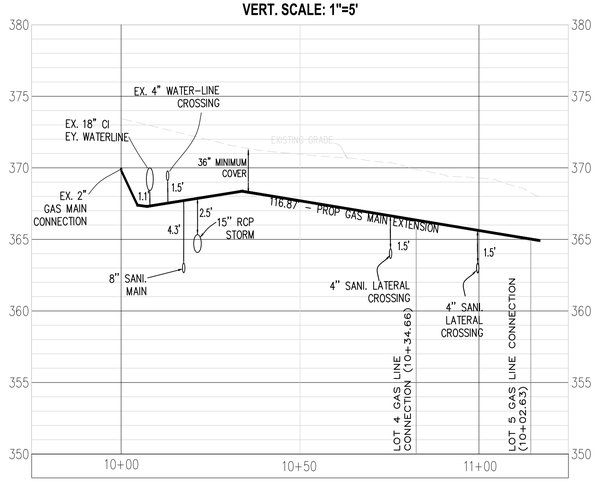
PROPOSED SANITARY SEWER 13-165D TO EX 13-165
HORIZ. SCALE = 1" = 10'
VERT. SCALE 1" = 5'



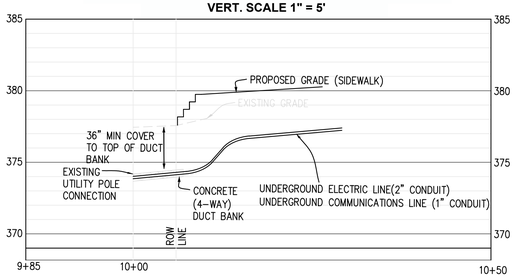
PROPOSED SANITARY SEWER 13-165B TO EX 13-165
HORIZ. SCALE = 1" = 10'
VERT. SCALE 1" = 5'



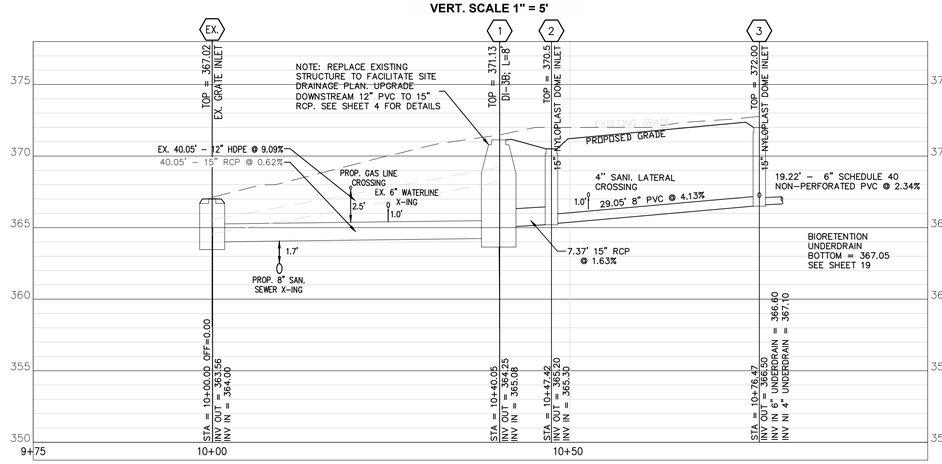
PROPOSED GAS LINE PROFILE IN 10TH STREET SW
HORIZ. SCALE: 1"=20'
VERT. SCALE: 1"=5'



UNDERGROUND UTILITY PROFILE SEE NW CORNER SHEET 4
(ELECTRIC AND COMMUNICATIONS)
HORIZ. SCALE = 1" = 10'
VERT. SCALE 1" = 5'



PROPOSED STORM SEWER 3 TO EX
HORIZ. SCALE = 1" = 10'
VERT. SCALE 1" = 5'



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1001 & 1002 GROVE STREET PUD
FINAL SITE PLAN AND VSMP
CHARLOTTESVILLE, VIRGINIA

UTILITY PROFILES

DATE: 02-20-2020
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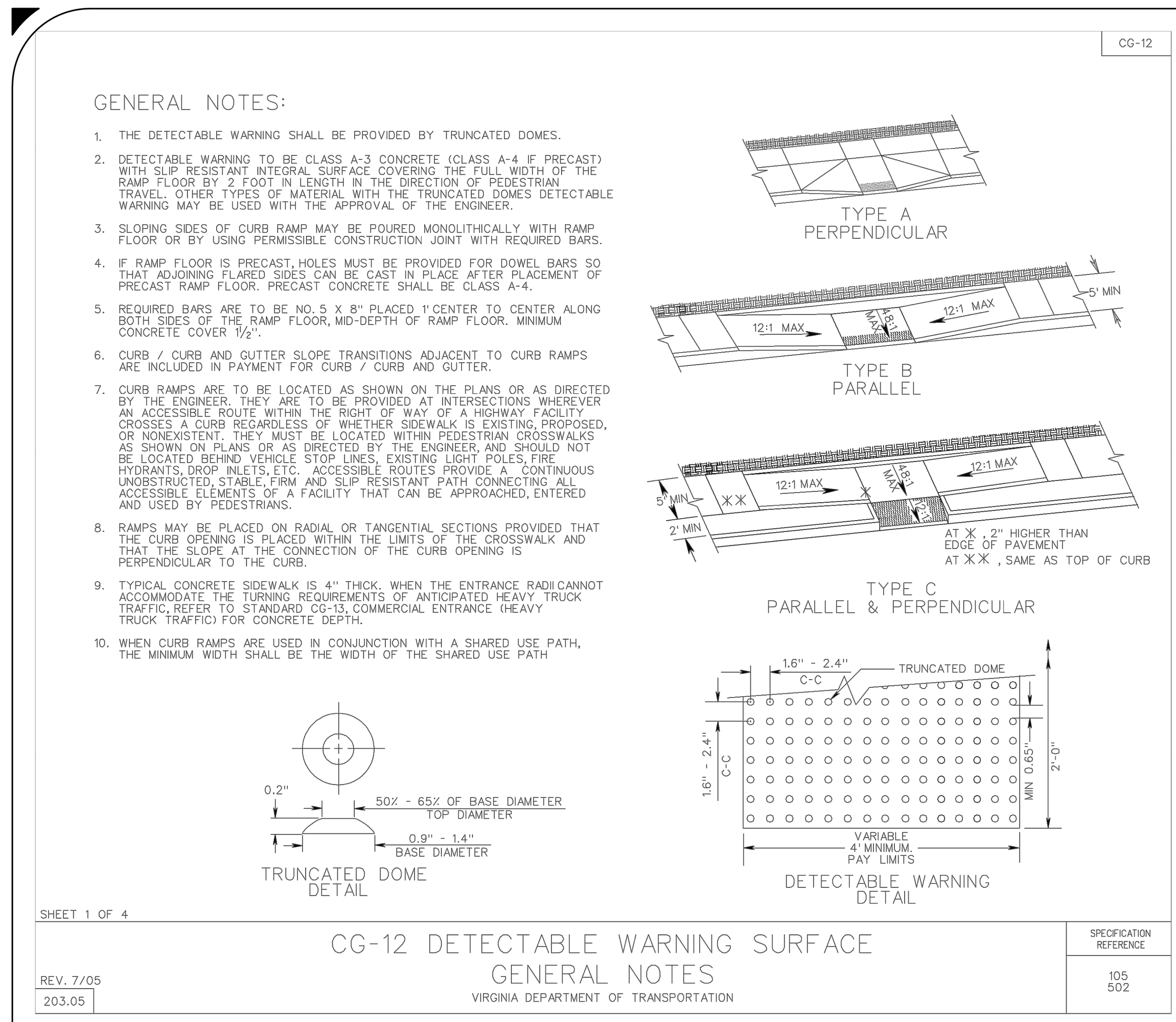
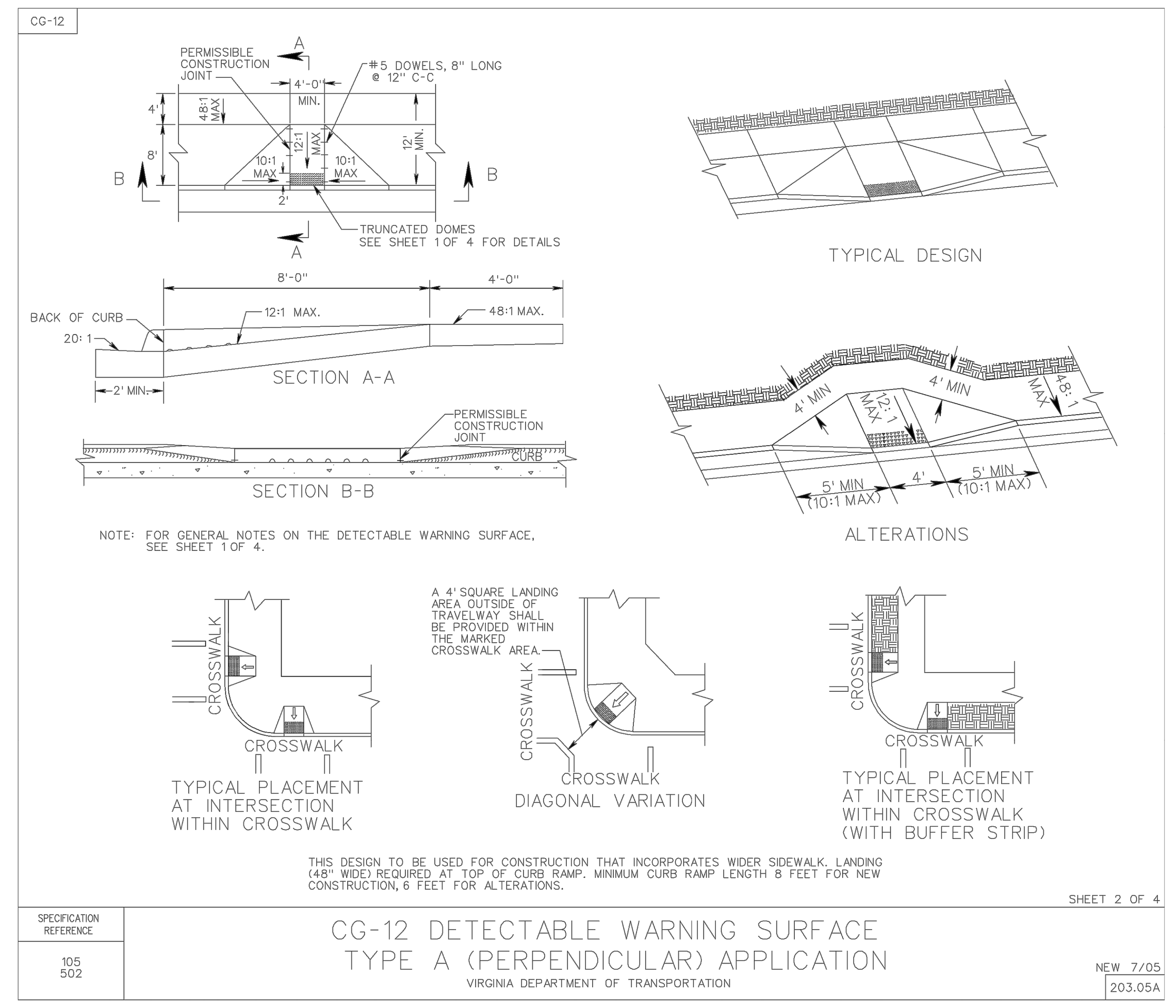
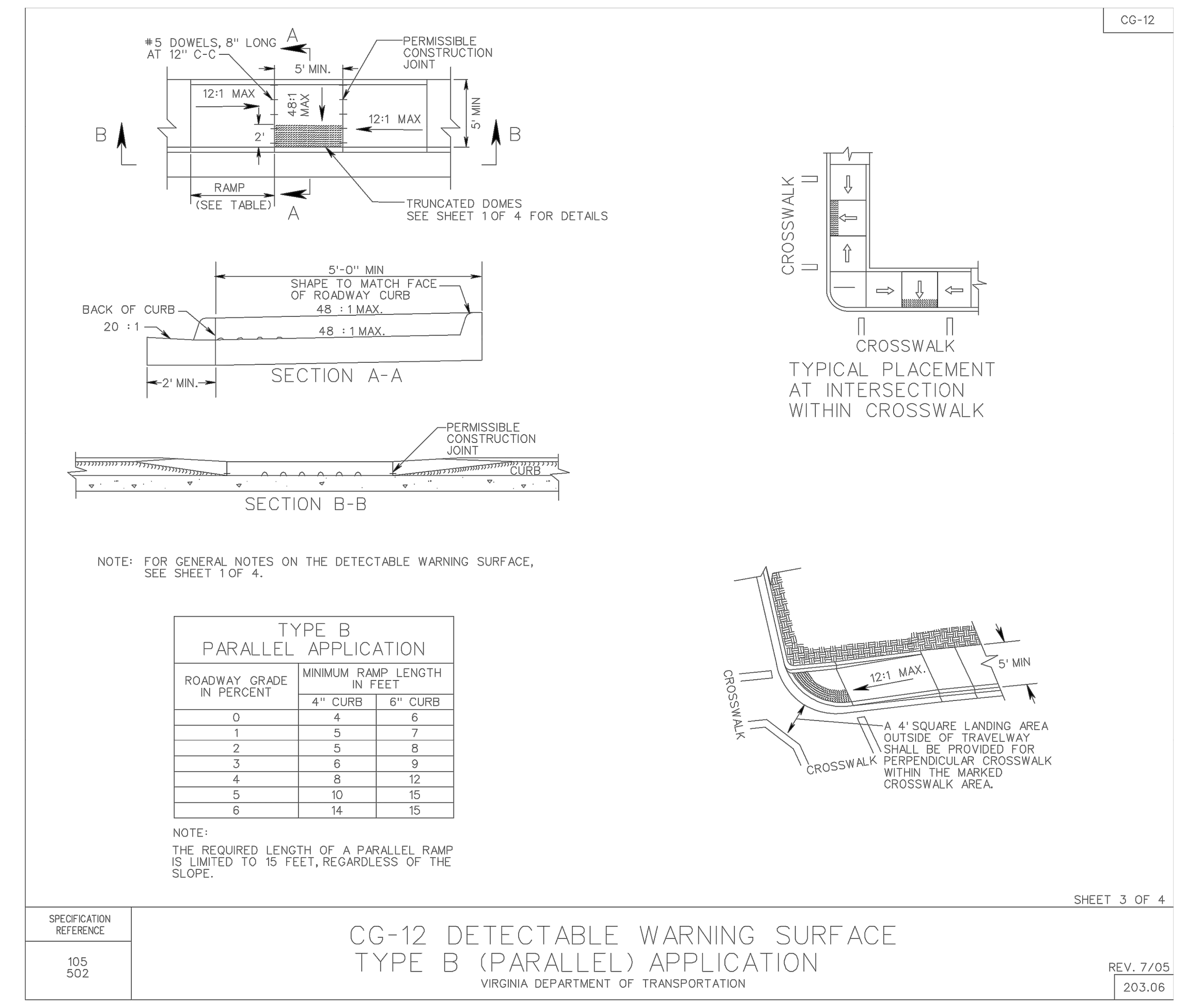
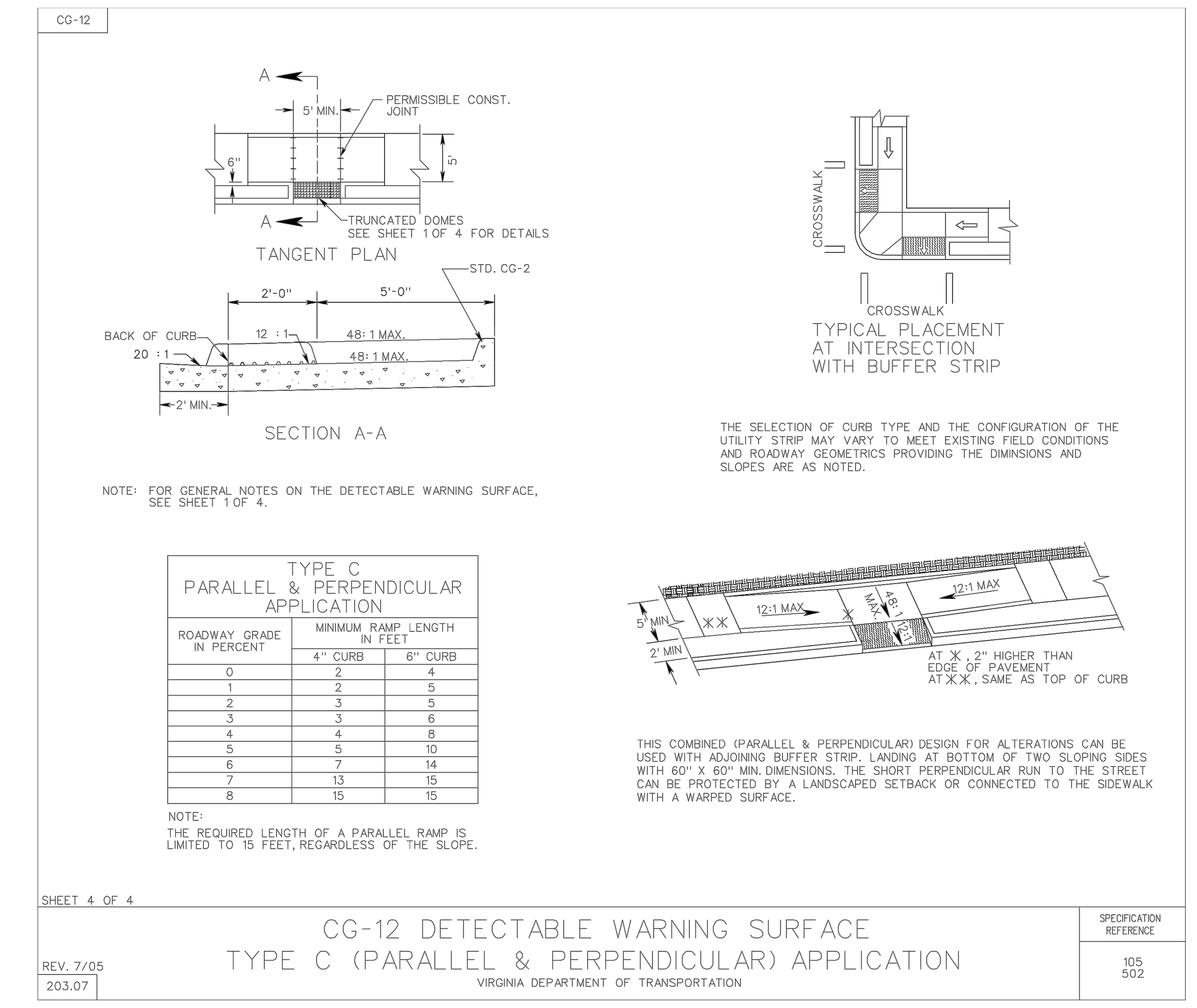
SHEET: 7 OF 20

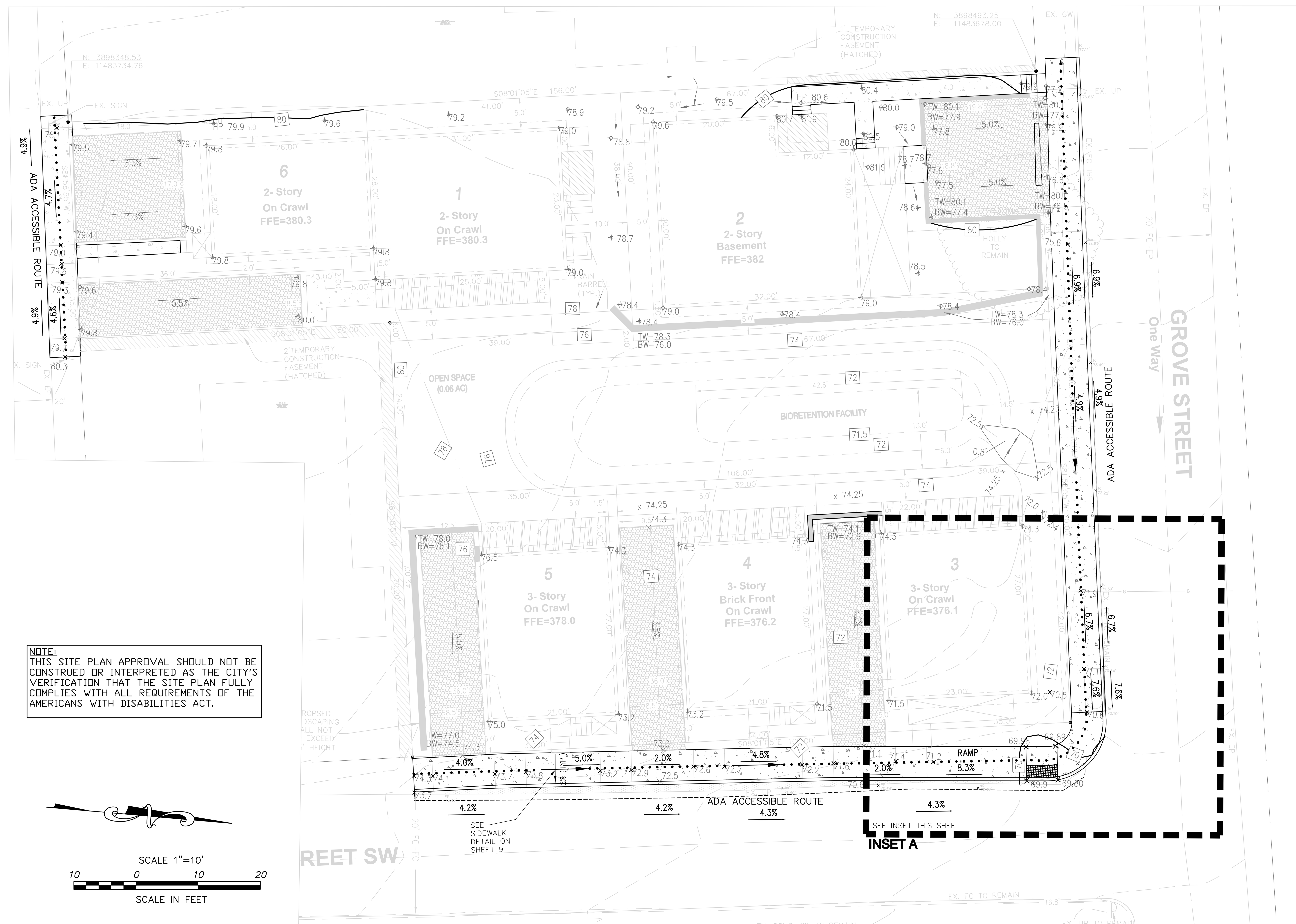
Attachment B







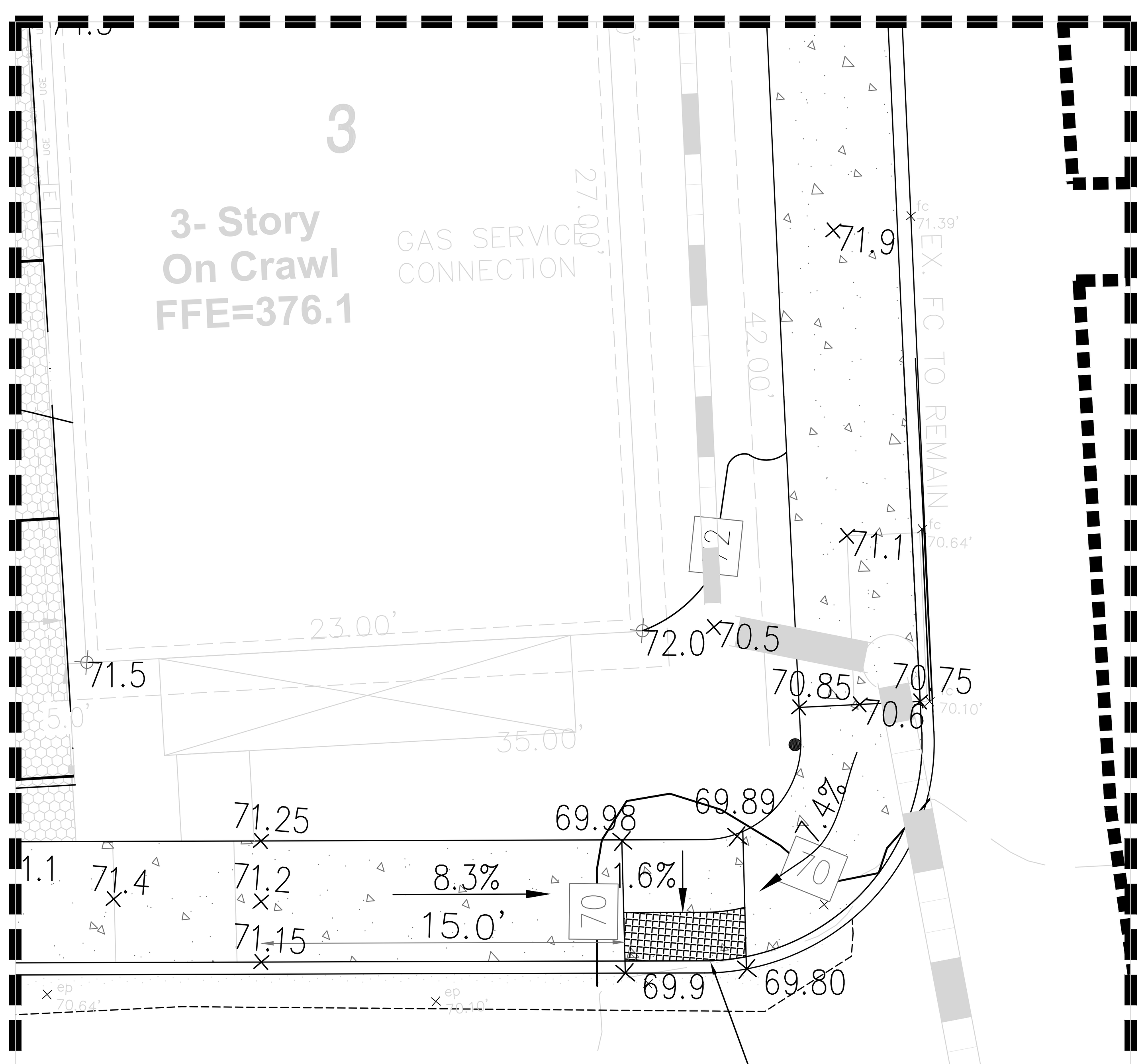




NOTE:
THIS SITE PLAN APPROVAL SHOULD NOT BE CONSTRUED OR INTERPRETED AS THE CITY'S VERIFICATION THAT THE SITE PLAN FULLY COMPLIES WITH ALL REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT.

SCALE 1"=10'

SCALE IN FEET



INSET A
CG-12 GRADING
1"=5'

*PER PROWAG R304.2.2, THE REQUIRED LENGTH OF A PARALLEL RAMP IS LIMITED TO 15 FEET REGARDLESS OF SLOPE. (SEE ABOVE)

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1001 & 1002 GROVE STREET PUD
FINAL SITE PLAN AND VSMP
CHARLOTTESVILLE, VIRGINIA
ADA COMPLIANCE

DATE: 02-20-2020
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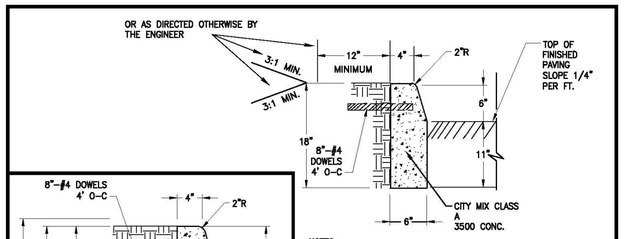
SHEET: 8 OF 20



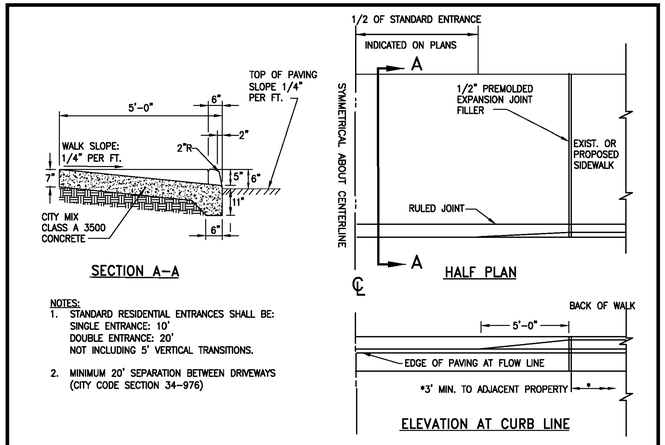
ACCEPTABLE ALTERNATE IF CURB IS EXTRUDED

NOTES:

1. THE DEPTH OF CURB MAY BE REDUCED OR INCREASED AS MUCH AS 6"(15"-21"DEPTH) SO THAT THE BOTTOM OF THE CURB WILL COINCIDE WITH THE TOP OF A COURSE OF THE PAVEMENT SUBSTRUCTURE . OTHERWISE THE DEPTH SHALL BE 18" AS SHOWN.
2. CURBING HAVING A RADIUS OF 300' OR LESS (ALONG FACE OF CURB) SHALL BE CONSIDERED RADIAL CURBING.
3. RULED JOINTS REQUIRED EVERY 10' ON CENTER, 1/2" PREMOLDED EXPANSION JOINT FILLER 30' MAX. ON CENTER.
4. CONCRETE TO BE CITY MIX CLASS A 3500.

CITY OF CHARLOTTESVILLE

REVISION	DATE	CITY STANDARDS
		STANDARD CURBING
		SCALE: N.T.S. / STANDARD NUMBER: CG-2

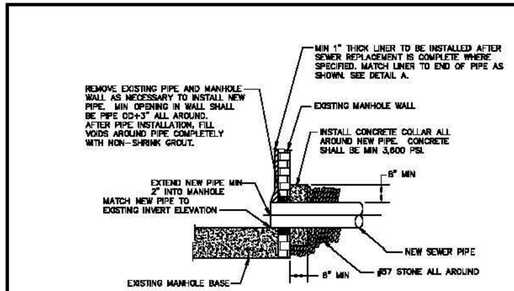


NOTES:

1. STANDARD RESIDENTIAL ENTRANCES SHALL BE:
   SINGLE ENTRANCE: 10'
   DOUBLE ENTRANCE: 20'
   NOT INCLUDING 5' VERTICAL TRANSITIONS.
2. MINIMUM 20' SEPARATION BETWEEN DRIVEWAYS (CITY CODE SECTION 34-976)

CITY OF CHARLOTTESVILLE

REVISION	DATE	CITY STANDARDS
		STANDARD ENTRANCE WITH 5' MONOLITHIC SIDEWALK AND CURB
		SCALE: N.T.S. / STANDARD NUMBER: RE-1

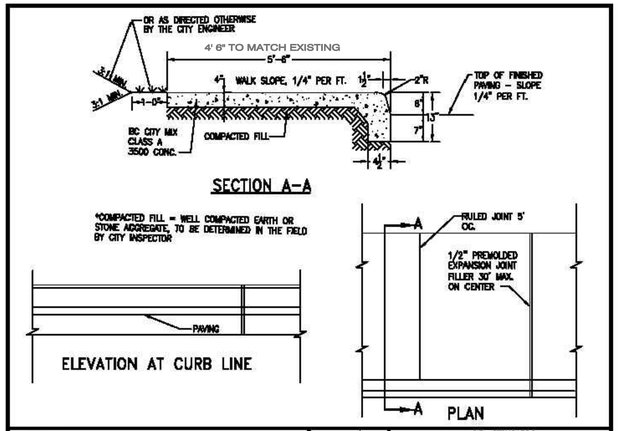


NOTES:

1. CONTRACTOR SHALL REFER TO THIS DETAIL WHEN CONNECTING NEW SEWER PIPES TO EXISTING OR NEW MANHOLES. THE NEW PIPES MAY BE INSTALLED FOR A POINT REPAIR, PIPE REPLACEMENT, PIPE BURSTING, OR SERVICE LATERAL REPLACEMENT.

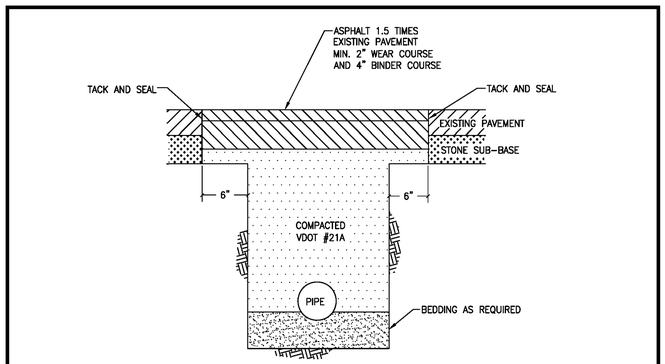
CITY OF CHARLOTTESVILLE

REVISION	DATE	CITY STANDARDS
	JULY 2011	NEW PIPE CONNECTION AT MANHOLE
		SCALE: N.T.S. / STANDARD NUMBER: WW 2.8



CITY OF CHARLOTTESVILLE

REVISION	DATE	CITY STANDARDS
		STANDARD SIDEWALK MONOLITHIC WITH CURB
		SCALE: N.T.S. / STANDARD NUMBER: SW-2

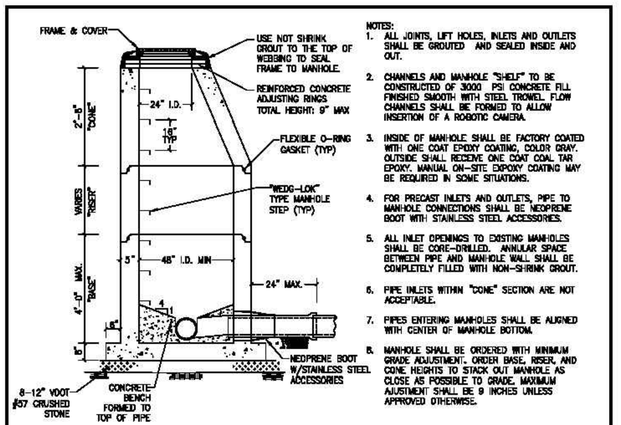


NOTES:

1. PAVEMENT CUTS SHALL BE STRAIGHT AND VERTICAL.
2. REMOVE TEMPORARY PATCH IF PRESENT. EXCAVATE COMPACTED BACKFILL AS REQUIRED TO INSTALL NEW BITUMINOUS ASPHALT. RE-COMPACT SURFACE OF BACKFILL PRIOR TO INSTALLATION OF PATCH.

CITY OF CHARLOTTESVILLE

REVISION	DATE	CITY STANDARDS
		PERMANENT PAVEMENT REPAIR
		SCALE: N.T.S. / STANDARD NUMBER: P 1.0

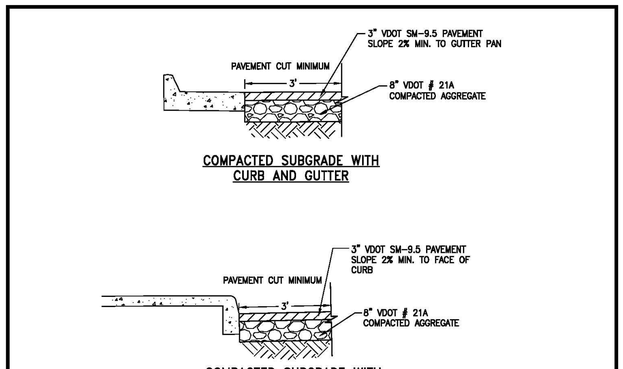


NOTES:

1. ALL JOINTS, LIFT HOLES, INLETS AND OUTLETS SHALL BE GROUTED AND SEALED INSIDE AND OUT.
2. CHANNELS AND MANHOLE "SHELF" TO BE CONSTRUCTED OF 3000 PSI CONCRETE FILL FINISHED SMOOTH WITH STEEL TROWEL. FLOW CHANNELS SHALL BE FORMED TO ALLOW INSERTION OF A ROBOTIC CAMERA.
3. INSIDE OF MANHOLE SHALL BE FACTORY COATED WITH ONE COAT EPOXY COATING, COLOR GRAY. OUTSIDE SHALL RECEIVE ONE COAT COAL TAR EPOXY. MANUAL ON-SITE EPOXY COATING MAY BE REQUIRED IN SOME SITUATIONS.
4. FOR PRECAST INLETS AND OUTLETS, PIPE TO MANHOLE CONNECTIONS SHALL BE NEOPRENE BOOT WITH STAINLESS STEEL ACCESSORIES.
5. ALL INLET OPENINGS TO EXISTING MANHOLES SHALL BE CORE-DRILLED. ANNULAR SPACE BETWEEN PIPE AND MANHOLE WALL SHALL BE COMPLETELY FILLED WITH NON-SHRINK GROUT.
6. PIPE INLETS WITHIN "CONE" SECTION ARE NOT ACCEPTABLE.
7. PIPES ENTERING MANHOLES SHALL BE ALIGNED WITH CENTER OF MANHOLE BOTTOM.
8. MANHOLE SHALL BE ORDERED WITH MINIMUM GRADE ADJUSTMENT. ORDER BASE, RISER, AND CONE HEIGHTS TO STACK OUT MANHOLE AS CLOSE AS POSSIBLE TO GRADE. MAXIMUM ADJUSTMENT SHALL BE 9 INCHES UNLESS APPROVED OTHERWISE.

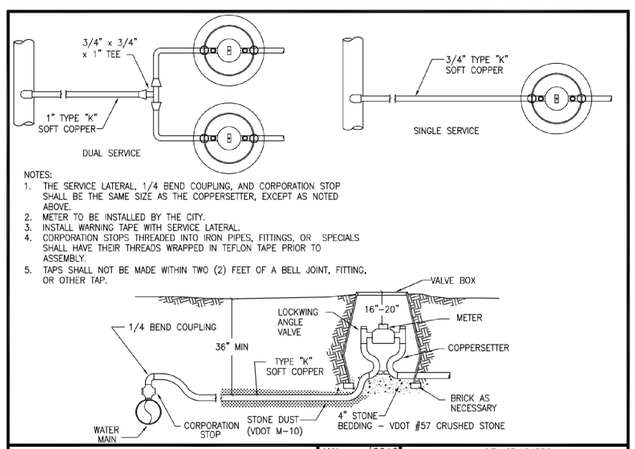
CITY OF CHARLOTTESVILLE

REVISION	DATE	CITY STANDARDS
	JAN 2012	CONCRETE MANHOLE - TYPICAL
		SCALE: N.T.S. / STANDARD NUMBER: WW 2.0



CITY OF CHARLOTTESVILLE

REVISION	DATE	CITY STANDARDS
		MINIMUM PAVEMENT PATCH
		SCALE: N.T.S. / STANDARD NUMBER: PP-1

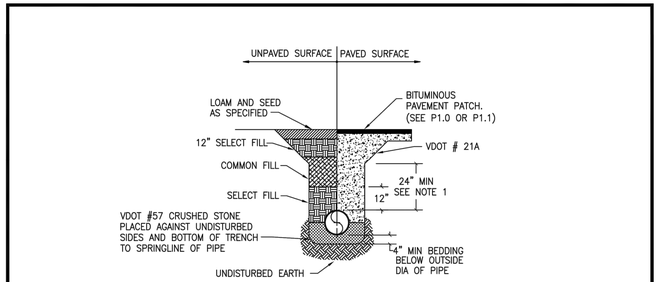


NOTES:

1. THE SERVICE LATERAL, 1/4 BEND COUPLING, AND CORPORATION STOP SHALL BE THE SAME SIZE AS THE COPPERSETTER, EXCEPT AS NOTED ABOVE.
2. METER TO BE INSTALLED BY THE CITY.
3. INSTALL WARNING TAPE WITH SERVICE LATERAL.
4. CORPORATION STOPS THREADED INTO IRON PIPES, FITTINGS, OR SPECIALS SHALL HAVE THEIR THREADS WRAPPED IN TEFLON TAPE PRIOR TO ASSEMBLY.
5. TAPS SHALL NOT BE MADE WITHIN TWO (2) FEET OF A BELL JOINT, FITTING, OR OTHER TAP.

CITY OF CHARLOTTESVILLE

REVISION	DATE	CITY STANDARDS
	JAN 2012	SERVICE LATERAL - TYPICAL
		SCALE: N.T.S. / STANDARD NUMBER: W 5.0



DUCTILE IRON PIPE

NOTES:

1. MAINTAIN VERTICAL TRENCH WALLS FROM BOTTOM OF TRENCH TO 24" ABOVE CROWN OF PIPE. TRENCH WIDTH IN THIS AREA: PIPE O.D. + 24".
2. FOR EXCAVATIONS OVER 5 FT. DEEP, SLOPE TRENCH WALLS AS REQUIRED AND/OR PROVIDE OTHER SAFETY MEASURES IN ACCORDANCE WITH OSHA GUIDELINES.
3. ROCK SHALL BE REMOVED TO A MINIMUM OF 6-INCH CLEARANCE AROUND THE BOTTOM AND 12-INCH MINIMUM CLEARANCE TO THE SIDES OF PIPE.

CITY OF CHARLOTTESVILLE

REVISION	DATE	CITY STANDARDS
	FEB 2012	PIPE TRENCH UNIVERSAL STANDARD SUBGRADE - TYPICAL
		SCALE: N.T.S. / STANDARD NUMBER: W 1.0

ROUDABUSH, GALE & ASSOC., INC.
A PROFESSIONAL CORPORATION
SERVING VIRGINIA SINCE 1956
PHYSICAL: 999 SECOND ST SE, CHARLOTTESVILLE, VA 22902
MAILING: 435 MERCHANT WALK SQ., SUITE 300-199, CHARLOTTESVILLE, VA 22902
PHONE 434-977-0205
WWW.ROUDABUSH.COM

REVISIONS

NO.	DATE	DESCRIPTION
1	28 SEP 2020	CITY OF CHARLOTTESVILLE COMMENTS
2	08 FEB 2021	CITY OF CHARLOTTESVILLE COMMENTS
3	03 MAY 2021	CITY OF CHARLOTTESVILLE COMMENTS
4	16 JULY 2021	CITY OF CHARLOTTESVILLE COMMENTS
5	17 AUG 2021	CITY OF CHARLOTTESVILLE COMMENTS
6	10 SEPT 2021	CITY OF CHARLOTTESVILLE COMMENTS

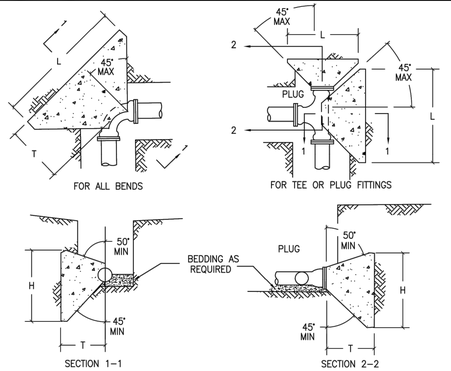
DESIGNED BY: LO, DG
DRAWN BY: LO
CHECKED BY: JT

COMMONWEALTH OF VIRGINIA
09/30/2021
JIMMY L. TAGGART
Lic. No. 22841
PROFESSIONAL ENGINEER

1001 & 1002 GROVE STREET PUD
FINAL SITE PLAN AND VSMP
CHARLOTTESVILLE, VIRGINIA
NOTES AND DETAILS

DATE: 02-20-2020
JOB: 8555
CONTOUR INTERVAL: 2 FT

SHEET: 9 OF 20

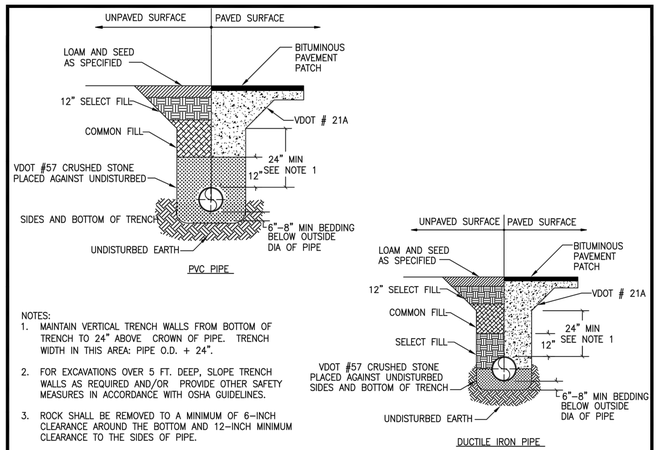


NOTES:
1. MAXIMUM TEST PRESSURE: 225 PSI.
2. MINIMUM ALLOWABLE SOIL BEARING PRESSURE: 2000 PSF.
3. THRUST BLOCKS OR RESTRAINED JOINT FITTINGS ARE REQUIRED WHENEVER PIPELINE CHANGES DIRECTION, SIZE, OR DEAD–ENDS.
4. USE 3000 P.S.I. CONCRETE. NO CONCRETE SHALL BE POURED ON ANY PART OF THE JOINT.
5. SEE DRAWING W 2.1 FOR THRUST BLOCK DIMENSIONS.

CITY OF CHARLOTTESVILLE

REVISION	DATE
	JULY 2011

CITY STANDARDS
CONCRETE THRUST BLOCKS
SCALE: N.T.S. STANDARD NUMBER: W 2.0

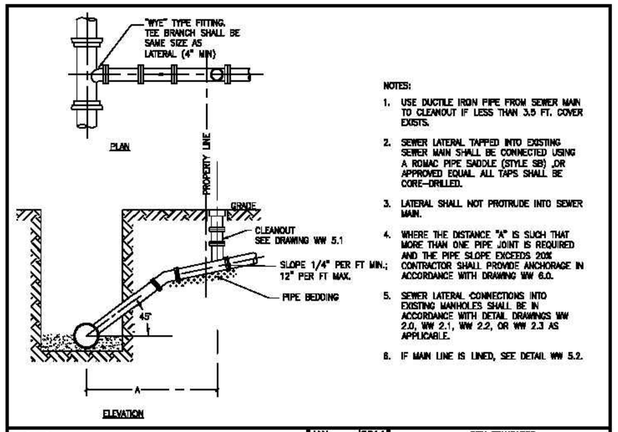


NOTES:
1. MAINTAIN VERTICAL TRENCH WALLS FROM BOTTOM OF TRENCH TO 24" ABOVE CROWN OF PIPE. TRENCH WIDTH IN THIS AREA: PIPE O.D. + 24".
2. FOR EXCAVATIONS OVER 5 FT. DEEP, SLOPE TRENCH WALLS AS REQUIRED AND/OR PROVIDE OTHER SAFETY MEASURES IN ACCORDANCE WITH OSHA GUIDELINES.
3. ROCK SHALL BE REMOVED TO A MINIMUM OF 6–INCH CLEARANCE AROUND THE BOTTOM AND 12–INCH MINIMUM CLEARANCE TO THE SIDES OF PIPE.

CITY OF CHARLOTTESVILLE

REVISION	DATE
	JAN 2012

CITY STANDARDS
PIPE TRENCHING AND BEDDING – TYPICAL
SCALE: N.T.S. STANDARD NUMBER: WW 1.0



NOTES:
1. USE DUCTILE IRON PIPE FROM SEWER MAIN TO CLEANOUT IF LESS THAN 3.5 FT. COVER EXISTS.
2. SEWER LATERAL TAPPED INTO EXISTING SEWER MAIN SHALL BE CONNECTED USING A ROMAC PIPE SADDLE (STYLE SB) ,OR APPROVED EQUAL. ALL TAPS SHALL BE CORE–DRILLED.
3. LATERAL SHALL NOT PROTRUDE INTO SEWER MAIN.
4. WHERE THE DISTANCE "A" IS SUCH THAT MORE THAN ONE PIPE JOINT IS REQUIRED AND THE PIPE SLOPE EXCEEDS 20% CONTRACTOR SHALL PROVIDE ANCHORAGE IN ACCORDANCE WITH DRAWING WW 6.0.
5. SEWER LATERAL CONNECTIONS INTO EXISTING MANHOLES SHALL BE IN ACCORDANCE WITH DETAIL DRAWINGS WW 2.0, WW 2.1, WW 2.2, OR WW 2.3 AS APPLICABLE.
8. IF MAIN LINE IS LINED, SEE DETAIL WW 5.2.

CITY OF CHARLOTTESVILLE

REVISION	DATE
	JAN 2011

CITY STANDARDS
SEWER LATERAL CONNECTION – TYPICAL
SCALE: N.T.S. STANDARD NUMBER: WW 5.0

PIPE SIZE	DEGREE OF BEND	BEND (FT) L	H	T	MIN. PIPE COVER (FT)	TEE AND PLUG (FT) L	H	T	MIN. PIPE COVER (FT)
4" & 6"	90	3.00	2.50	3.01	3	2.00	2.30	2.50	3
	45	2.00	2.30	2.60					
	22 1/2	1.50	2.00	2.50					
	11 1/4	1.50	2.00	2.50					
8" & 10"	90	4.50	3.50	3.20	3	3.20	3.00	3.00	3
	45	3.00	2.70	2.80					
	22 1/2	2.00	2.00	2.70					
	11 1/4	1.70	2.00	2.70					
12" & 14"	90	7.30	4.00	3.60	4	4.30	4.00	2.80	4
	45	4.50	3.60	3.00					
	22 1/2	3.30	2.60	2.90					
	11 1/4	1.80	2.30	2.90					
16" & 18"	90	10.70	4.50	3.40	5	6.30	4.60	3.80	5
	45	6.50	4.00	3.00					
	22 1/2	4.50	3.30	3.00					
	11 1/4	2.80	2.70	3.00					

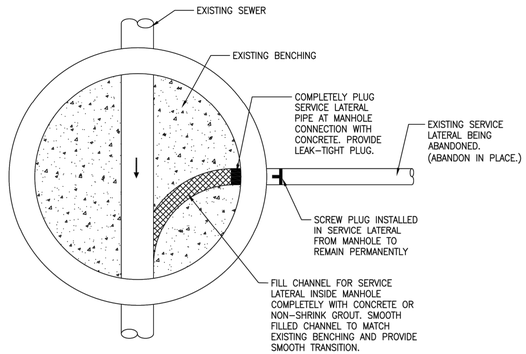
REFERENCE DRAWING 2.0 FOR DIMENSION LOCATIONS

NOTES:
1. MAXIMUM TEST PRESSURE: 225 PSI.
2. MINIMUM ALLOWABLE SOIL BEARING PRESSURE: 2000 PSF.
3. USE MINIMUM 3000 P.S.I. CONCRETE.
4. THE DESIGN ENGINEER SHALL BE RESPONSIBLE FOR VERIFICATION OF ADEQUACY OF ALL THRUST BLOCKS.

CITY OF CHARLOTTESVILLE

REVISION	DATE
	JULY 2011

CITY STANDARDS
CONCRETE THRUST BLOCK DIMENSIONS
SCALE: N.T.S. STANDARD NUMBER: W 2.1

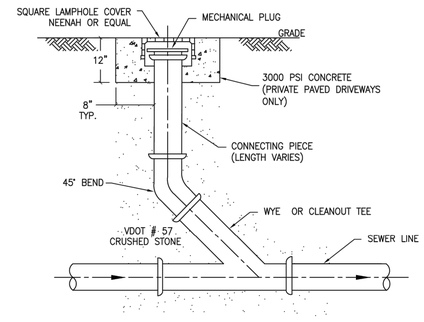


CITY OF CHARLOTTESVILLE

REVISION	DATE
	JAN 2012

CITY STANDARDS
SEWER LATERAL ABANDONMENT AT MANHOLE
SCALE: N.T.S. STANDARD NUMBER: WW 7.1

NOTE: CLEANOUTS IN PAVED OR CONCRETE SHALL BE TRAFFIC RATED.



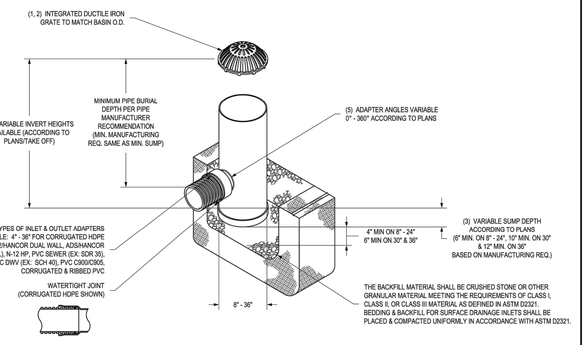
NOTE: CLEANOUT TO BE SAME SIZE AND MATERIAL AS SEWER LINE.

CITY OF CHARLOTTESVILLE

REVISION	DATE
	JAN 2011

CITY STANDARDS
CLEANOUT DETAIL
SCALE: N.T.S. STANDARD NUMBER: WW 5.1

NYLOPLAST DRAIN BASIN WITH DOME GRATE



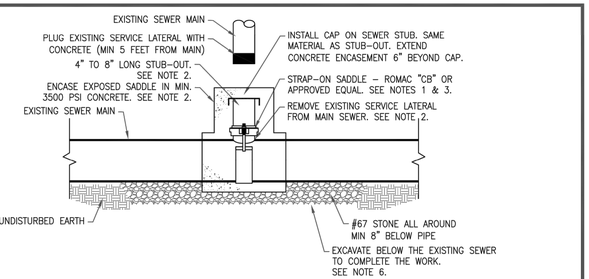
1 - 8" - 30" DOME GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - 8" & 10" DOME GRATES FIT ONTO THE DRAIN BASINS WITH THE USE OF A PVC BODY TOP. SEE DRAWING NO. 7051-110-045.
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7051-110-085.
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/ADVANCOR DUAL WALL), N-12 HP, & PVC SEWER (4" - 36").
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7051-110-012.
6 - 8" - 30" DOME GRATES HAVE NO LOAD RATING.

DRAWN BY	EBC
DATE	03-25-10
REVISED BY	NMH
DATE	06-12-18
DWG SIZE	A
SCALE	1:40
SHEET	1 OF 1
MATERIAL	
PROJECT NO./NAME	

Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-3443
FAX (770) 932-2490
www.nyloplast-us.com

TITLE: DRAIN BASIN WITH DOME GRATE QUICK SPEC INSTALLATION DETAIL

DWG NO. 7051-110-397 REV E



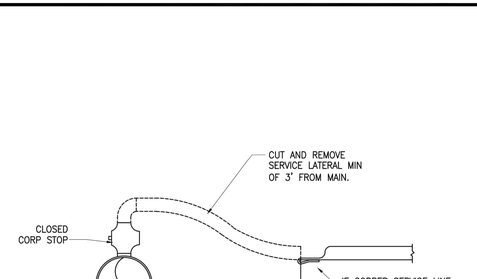
NOTES:
1. REFER TO THIS DETAIL WHEN ABANDONING EXISTING SERVICE LATERALS. SERVICE LATERALS SHALL BE ABANDONED WHEN A NEW LATERAL IS BEING INSTALLED TO SERVE A PROPERTY AND THE NEW LATERAL IS BEING CONNECTED TO THE THE MAIN SEWER AT A DIFFERENT LOCATION, A BUILDING IS BEING DEMOLISHED, OR AS DIRECTED BY UTILITIES ENGINEER. CONTACT PUBLIC UTILITIES (434–970–3800) A MINIUM OF 48 HOURS IN ADVANCE FOR INSPECTION PRIOR TO BACKFILL.
2. TO ABANDON THE EXISTING SERVICE LATERAL AT THE MAIN SEWER, CAREFULLY REMOVE THE LATERAL FROM THE MAIN SEWER, CUT THE EXISTING LATERAL AT LEAST 5 FEET FROM THE MAIN SEWER, PLUG THE REMAINING PIPE END WITH CONCRETE, INSTALL A SADDLE PERNOTE 3 AND 4" TO 8" LONG STUB–OUT. INSTALL A CAP ON THE STUB–OUT AND ENCASE THE SADDLE, STUB–OUT AND CAP IN MIN. 3500 PSI CONCRETE – ENCASEMENT TO EXTEND TO 8" EACH SIDE OF THE LATERAL/SADDLE AND 6" BEYOND THE CAP. BACKFILL AS SPECIFIED.

   IF THE EXISTING MAIN SEWER IS DAMAGED DURING THE REMOVAL OF THE EXISTING LATERAL AND THE SADDLE CONNECTION WILL NOT WORK AS DETERMINED BY CITY PERSONNEL, A POINT REPAIR SHALL BE PERFORMED ON THE MAIN SEWER PER DETAIL WW 8.1.
3. SUPPORT THE EXISTING SEWER DURING THIS WORK.

CITY OF CHARLOTTESVILLE

REVISION	DATE
	JAN 2012

CITY STANDARDS
SEWER LATERAL ABANDONMENT AT MAIN
SCALE: N.T.S. STANDARD NUMBER: WW 7.2



NOTES:
1. METER TO BE REMOVED BY THE CITY.
2. CORPORATION STOPS SHALL BE COMPLETELY CLOSED AND CHECKED FOR LEAKS. LEAKS SHALL BE REPAIRED PRIOR TO BACKFILL.

CITY OF CHARLOTTESVILLE

REVISION	DATE
	JAN 2012

CITY STANDARDS
SERVICE LATERAL ABANDONMENT
SCALE: N.T.S. STANDARD NUMBER: W 7.1

ROUDABUSH, GALE & ASSOC., INC.
A PROFESSIONAL CORPORATION
SERVING VIRGINIA SINCE 1956
PHYSICAL
999 SECOND ST. SE.
CHARLOTTESVILLE, VA 22902
MAILING
435 MERCHANT WALK SQ., SUITE 300-199
CHARLOTTESVILLE, VA 22902
WWW.ROUDABUSH.COM
PHONE 434-977-0205

REVISIONS

NO.	DATE	DESCRIPTION
1	28 SEP 2020	CITY OF CHARLOTTESVILLE COMMENTS
2	08 FEB 2021	CITY OF CHARLOTTESVILLE COMMENTS
3	03 MAY 2021	CITY OF CHARLOTTESVILLE COMMENTS
4	16 JULY 2021	CITY OF CHARLOTTESVILLE COMMENTS
5	17 AUG 2021	CITY OF CHARLOTTESVILLE COMMENTS
6	10 SEPT 2021	CITY OF CHARLOTTESVILLE COMMENTS

DESIGNED BY:	LO, DG
DRAWN BY:	LO
CHECKED BY:	JT

COMMONWEALTH OF VIRGINIA
09/30/2021
JIMMY L. TAGGART
Lic. No. 22841
PROFESSIONAL ENGINEER

1001 & 1002 GROVE STREET PUD
FINAL SITE PLAN AND VSMP
CHARLOTTESVILLE, VIRGINIA
NOTES AND DETAILS

DATE:	02-20-2020
JOB:	8555
CONTOUR INTERVAL:	2 FT

SHEET: 10 OF 20

ORIGINAL PROFFERS:

AN ORDINANCE AMENDING AND REENACTING THE ZONING DISTRICT MAP INCORPORATED IN SECTION 34-1 OF THE ZONING ORDINANCE OF THE CODE OF THE CITY OF CHARLOTTESVILLE, 1990, AS AMENDED, BY THE REZONING OF PROPERTY LOCATED AT 1000 AND 1002 GROVE STREET FROM "R-1(S)" (RESIDENTIAL) TO "PUD", SUBJECT TO PROFFERS

WHEREAS, THE OWNER(S) OF THE PROPERTY LOCATED AT 1000 AND 1002 GROVE STREET, IDENTIFIED ON CITY TAX MAP 23 AS PARCELS 51 AND 52, THROUGH THIER AUTHORIZED REPRESENTATIVE ("APPLICANT"), SUBMITTED AN APPLICATION SEEKING A REZONING OF SUCH PROPERTY FROM THE "R-1(S)" RESIDENTIAL DISTRICT TO THE "PUD" DISTRICT, SUBJECT TO A PUD DEVELOPMENT PLAN DATED JUNE 27, 2006 ("PUD DEVELOPMENT PLAN)) AND TO CERTAIN PROFFERED DEVELOPMENT CONDITIONS SET FORTH WITHIN THE APPLICANT'S STATEMENT OF FINAL PROFFER CONDITIONS, DATED AS JUNE 27, 2006 (TOGETHER, HEREINAFTER THE "PROPOSED REZONING"), AND

WHEREAS, A JOINT PUBLIC HEARING ON THE PROPOSED REZONING WAS HELD BEFORE THE CITY COUNCIL AND PLANNING COMMISSION ON JULY 11 2006, FOLLOWING NOTICE TO THE PUBLIC AND ADJACENT PROPERTY OWNERS AS REQUIRED BY LAW, AND

WHEREAS, ON JULY 11, 2006 THE PLANNING COMMISSION VOTED TO RECOMMEND DENIAL OF THE PROPOSED REZONING TO THE CITY COUNCIL; AND

WHEREAS, THE APPLICANT HAS PREPARED A FINAL PROFFER STATEMENT DATED JUNE 27, 2006 AS REQUIRED BY §34-64(c), AND THE FINAL PROFFER STATEMENT HAS BEEN SUBMITTED AND MADE PART A OF THESE PROCEEDINGS; AND

WHEREAS, THIS COUNCIL FINDS AND DETERMINES THAT THE PUBLIC NECESSITY, CONVENIENCE, GENERAL WELFARE OR GOOD ZONING PRACTICES REQUIRE THE PROPOSED REZONING; THAT BOTH THE EXISTING "R-1(S)" AND THE PROPOSED "PUD" ZONING CLASSIFICATIONS ARE REASONABLE; AND THAT THE PROPOSED REZONING IS CONSISTENT WITH THE COMPREHENSIVE PLAN;

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF CHARLOTTESVILLE, VIRGINIA THAT THE ZONING DISTRICT MAP INCORPORATED IN SECTION 34-1 OF THE ZONING ORDINANCE OF THE CODE OF THE CITY OF CHARLOTTESVILLE, 1990, AS AMENDED BE AND HEREBY IS AMENDED AND REENACTED AS FOLLOWS:

SECTION 34-1: ZONING DISTRICT MAP. REZONING FROM "R-1(S) RESIDENTIAL TO "PUD", SUBJECT TO THE PUD DEVELOPMENT PLAN DATED JUNE 27, 2006 AND TO THE PROFFERED DEVELOPMENT CONDITIONS SET FORTH WITHIN THE FINAL PROFFER STATEMENT DATED JUNE 27, 2006, ALL OF THE PROPERTY LOCATED AT 1000 AND 1002 GROVE STREET, IDENTIFIED ON CITY TAX MAP 23 AS PARCELS 51 AND 52, CONSISTING TOGETHER OF APPROXIMATELY 0.29 ACRE, HAVING APPROXIMATELY 112 OF FRONTAGE ON GROVE STREET, 105 FEET OF FRONTAGE ON 10TH STREET, S.W. AND 37 FEET OF FRONTAGE ON KING STREET.

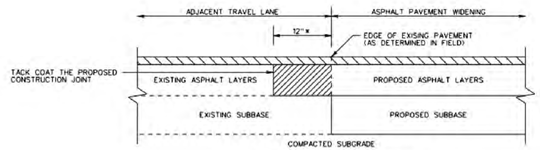
PARCELS	2
UNITS	6
SITE AREA	12,880 SF 0.2957 ACRES
DENSITY	20 UNITS/ACRE
EXISTING BUILDING FOOTPRINT	3,614 SF
PROPOSED BUILDING FOOTPRINTS	4,200 SF
FOOTPRINT INCREASE:	586 SF
PORCH AREA (EXCLUDED FROM F.A.R.)	552 SF
PROPOSED FLOOR AREA	7,848 SF
F.A.R.	0.61
SHARED OPEN SPACE (COMMON GARDEN)	3,485 SF 27.1%

PROFFERED CONDITIONS

A. JOSEPH HOMES, AS PART OF THE SITE PLAN, PROFFERS THE FOLLOWING:

1) TO OFFER, THROUGH A PHA OR SIMILAR PROGRAM, ONE OR MORE OF THE SIX UNITS REPRESENTED IN THE SITE PLAN TO A BUYER WHOSE FAMILY GROSS INCOME REPRESENTS 80% OR LESS OF THE GROSS MEDIAN INCOME IN THE CITY OF CHARLOTTESVILLE FOR THE MOST RECENT CALENDAR YEAR FOR WHICH THE FIGURE IS AVAILABLE;
2) TO INSTALL ENVIRONMENTAL FEATURES SHOWN ON THE SITE PLAN DESIGNED TO RETAIN AS MUCH STORM WATER AS POSSIBLE, INCLUDING BUT NOT LIMITED TO RAIN GARDENS, RAIN BARRELS, AND GREEN ROOFS ON THE ONE-STORY SECTIONS OF THE BUILDINGS;
3) TO ACHIEVE ENERGY STAR OR HIGHER EFFICIENCY RATINGS FOR ALL UNITS INCLUDING INSULATION, APPLIANCES, HOT WATER HEATERS, AND HVAC SYSTEMS;
4) TO MAKE EVERY POSSIBLE EFFORT TO SAVE EXISTING TREES SHOWN ON THE SITE PLAN AND REPLACE ANY SIGNIFICANT TREE LOST WITH NATIVE SPECIES SUCH AS WHITE ASH, APPALACHIAN SERVICEBERRY, AMERICAN DOGS.T.W., OR SIMILAR.

WP-2



CONSTRUCTION JOINT DETAIL

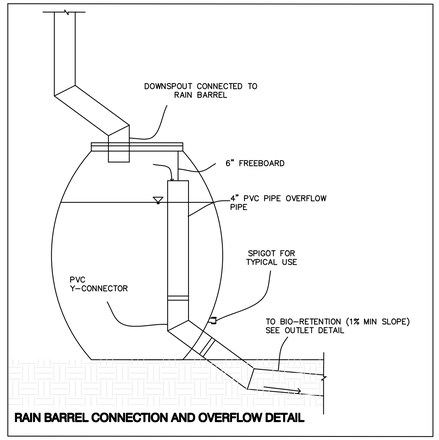
REMOVE EXISTING ASPHALT LAYERS TO EXISTING SUBBASE AND REPLACE WITH PROPOSED ASPHALT WIDENING LAYERS
PROPOSED MINIMUM 1½ INCH THICK ASPHALT SURFACE COURSE (SEE NOTE 5)
X MINIMUM 12 INCHES, OR GREATER AS NECESSARY TO ABUT THE FULL THICKNESS OF EXISTING ASPHALT LAYERS AS DETERMINED BY CORES (SEE NOTE 3)

NOTES:
1. ASPHALT PAVEMENT WIDENING SHALL HAVE A PAVEMENT DESIGN IN ACCORDANCE WITH CURRENT VDOT PROCEDURES AND BE APPROVED BY THE ENGINEER.
2. THE PAVEMENT DESIGN FOR ASPHALT PAVEMENT WIDENING SHALL MEET OR EXCEED THE DEPTHS AND TYPES OF THE LAYERS OF EXISTING PAVEMENT. SUBSURFACE DRAINAGE OF THE EXISTING AND PROPOSED PAVEMENT SHALL BE ADDRESSED IN THE PAVEMENT DESIGN.
3. A MINIMUM OF THREE CORES SHALL BE TAKEN ALONG THE CENTER OF THE ADJACENT TRAVEL LANE TO DETERMINE THE TYPE AND THICKNESS OF EXISTING PAVEMENT LAYERS. THESE CORES SHALL BE SPACED NO MORE THAN 500 FEET APART.
4. THE ADJACENT TRAVEL LANE SHALL BE MILLED A MINIMUM DEPTH OF 1½ INCHES AND REPLACED WITH AN ASPHALT SURFACE COURSE TO MATCH THE PROPOSED PAVEMENT WIDENING SURFACE COURSE, UNLESS WAIVED BY THE ENGINEER.
5. THE ENGINEER MAY REQUIRE THE MILLING DEPTH OF THE EXISTING PAVEMENT TO BE ADJUSTED TO ACHIEVE AN ACCEPTABLE PAVEMENT CROSS-SLOPE AND EFFECTIVE SURFACE DRAINAGE.
6. EXISTING PAVEMENT MARKINGS AND MARKERS WITHIN THE PROJECT LIMITS SHALL BE RESTORED SUBJECT TO THE APPROVAL OF THE ENGINEER.
7. FINAL TRANSVERSE PAVEMENT TIE-IN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 315 OF THE SPECIFICATIONS EXCEPT THAT ALL JOINTS AT TIE-IN LOCATIONS SHALL BE TESTED USING A 10 FOOT STRAIGHTEDGE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 315 OF THE SPECIFICATIONS.

NOTE: THE STANDARD MINIMUM PAVEMENT SECTION IS COMPACTED SUBBASE; 6 INCHES OF COMPACTED 21A STONE, 2.5" BM-25.0 AND 1.5" SM-9.0A

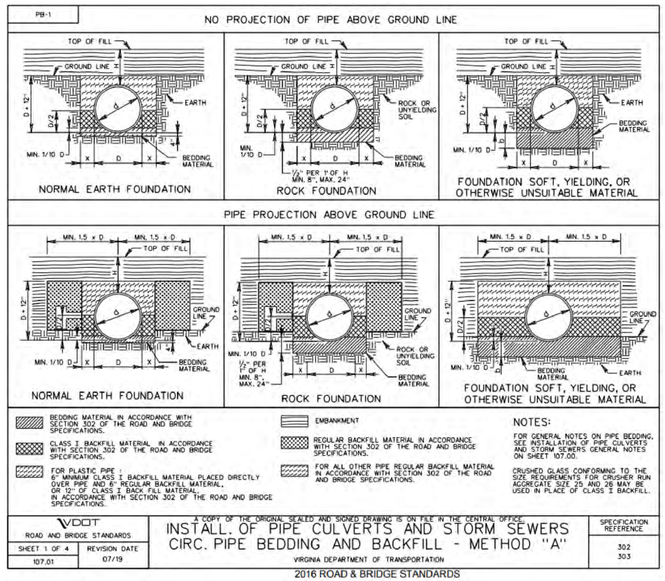
VDOT ROAD AND BRIDGE STANDARDS		ASPHALT PAVEMENT WIDENING FOR WIDENING SUBJECT TO TRAFFIC VIRGINIA DEPARTMENT OF TRANSPORTATION	SPECIFICATION REFERENCE
SHEET 1 OF 1	REVISION DATE		315
303.02			

2016 ROAD & BRIDGE STANDARDS



RAIN BARREL CONNECTION AND OVERFLOW DETAIL

PB-1

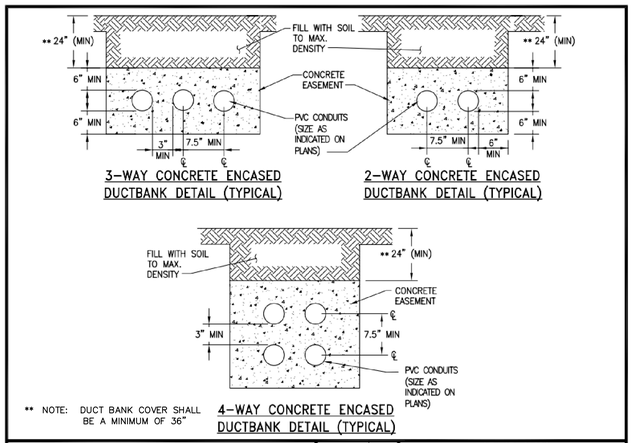


BEDDING MATERIAL IN ACCORDANCE WITH SECTION 302 OF THE ROAD AND BRIDGE SPECIFICATIONS.
CLASS I BACKFILL MATERIAL IN ACCORDANCE WITH SECTION 302 OF THE ROAD AND BRIDGE SPECIFICATIONS.
FOR PLASTIC PIPE : 6" MINIMUM CLASS I BACKFILL MATERIAL PLACED DIRECTLY OVER PIPE AND 6" REGULAR BACKFILL MATERIAL, OR 12" OF CLASS I BACK FILL MATERIAL IN ACCORDANCE WITH SECTION 302 OF THE ROAD AND BRIDGE SPECIFICATIONS.
EMBANKMENT
REGULAR BACKFILL MATERIAL IN ACCORDANCE WITH SECTION 302 OF THE ROAD AND BRIDGE SPECIFICATIONS.
FOR ALL OTHER PIPE REGULAR BACKFILL MATERIAL IN ACCORDANCE WITH SECTION 302 OF THE ROAD AND BRIDGE SPECIFICATIONS.

NOTES:
FOR GENERAL NOTES ON PIPE BEDDING, SEE INSTALLATION OF PIPE CULVERTS AND STORM SEWERS GENERAL NOTES ON SHEET 107.05.
CRUSHED GLASS CONFORMING TO THE SIZE REQUIREMENTS FOR CRUSHER RUN AGGREGATE SIZE 25 AND 26 MAY BE USED IN PLACE OF CLASS I BACKFILL.

VDOT ROAD AND BRIDGE STANDARDS		A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE. INSTALL OF PIPE CULVERTS AND STORM SEWERS CIRC. PIPE BEDDING AND BACKFILL - METHOD "A" VIRGINIA DEPARTMENT OF TRANSPORTATION	SPECIFICATION REFERENCE
SHEET 1 OF 4	REVISION DATE		302
107.01	07/19		303

2016 ROAD & BRIDGE STANDARDS



** NOTE: DUCT BANK COVER SHALL BE A MINIMUM OF 36"

CITY OF CHARLOTTESVILLE		CITY STANDARDS UTILITY DUCTBANK DETAIL	
	REVISION	DATE	SCALE: N.T.S. STANDARD NUMBER: DB-1

PLAN NOTES

1. THE OWNER WILL DESIGNATE A PROJECT MANAGER TO ACT AS OWNER'S REPRESENTATIVE DURING THIS PROJECT. CONTRACTOR SHALL REPORT DIRECTLY TO THIS PROJECT MANAGER UNLESS OTHERWISE DIRECTED.
2. THE DESIGNER HAS CONDUCTED NO STUDIES DESIGNED TO DISCOVER THE PRESENCE OF ANY HAZARDOUS SUBSTANCES ON THIS PROPERTY AND ASSUMES NO RESPONSIBILITY OR LIABILITY RESULTING FROM THE PRESENCE ON ANY SUCH SUBSTANCE.
3. THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED FOR THIS WORK AND PAY ALL ASSOCIATED FEES. THIS INCLUDES ALL NECESSARY PERMITS, INSPECTIONS, BONDS, AND OTHER APPROVAL RELATED ITEMS IN ACCORDANCE WITH THESE PLANS AS WELL AS LOCAL, STATE, AND FEDERAL POLICIES.
4. PAVED OR RIP RAP DITCH MAY BE REQUIRED WHEN, IN THE OPINION OF THE RESIDENT ENGINEER OR HIS DESIGNEE, IT IS DEEMED NECESSARY IN ORDER TO STABILIZE A DRAINAGE CHANNEL.
5. ALL TRAFFIC CONTROL SIGNS SHALL CONFORM WITH THE VIRGINIA MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND SHALL BE PROVIDED BY THE CONTRACTOR.
6. ALL EXCAVATION FOR UNDERGROUND PIPE INSTALLATION MUST COMPLY WITH OSHA STANDARDS FOR THE CONSTRUCTION INDUSTRY (29 CFR PART 1926).
7. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE VDOT ROAD AND BRIDGE STANDARDS (LATEST EDITION) AND THE VDOT ROAD AND BRIDGE SPECIFICATIONS (LATEST EDITION).

EARTHWORK, DRAINAGE, & SITE CONDITIONS

1. EXCEPT AS OTHERWISE SHOWN ON THE PLANS, ALL CUTS AND FILLS SHALL MATCH EXISTING SLOPES OR BE NO GREATER THAN 2:1.
2. UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS, ALL FILL MATERIALS SHALL BE COMPACTED TO 95% OF THEORETICAL MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99 METHOD A, WITHIN PLUS OR MINUS 2% OF OPTIMUM MOISTURE, FOR THE FULL WIDTH AND DEPTH OF THE FILL.
3. ALL GRADING AND IMPROVEMENTS TO BE CONFINED TO THE PROJECT AREA UNLESS OTHERWISE INDICATED.
4. ALL MATERIALS AND INSTALLATION DETAILS SHALL CONFORM TO APPLICABLE LOCAL ORDINANCES AND VDOT ROAD & BRIDGE STANDARDS (LATEST EDITION) UNLESS OTHERWISE STATED WITHIN THE PLANS..
5. ANY UNUSUAL OR UNANTICIPATED SUBSURFACE CONDITIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.
6. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND LOCATIONS PRIOR TO BEGINNING WORK, AND IMMEDIATELY NOTIFY THE PROJECT MANAGER IN THE EVENT THERE ARE ANY DISCREPANCIES BETWEEN SUCH CONDITIONS AND THOSE SHOWN ON THE PLANS AND SPECIFICATIONS.
7. IN THE EVENT THAT GRADING AS SHOWN ON THE PLANS IS NOT FEASIBLE, CONTRACTOR SHALL ADVISE THE PROJECT MANAGER AND ENGINEER BEFORE FINAL GRADING COMPLETION FOR ADVICE AND CONSENT.

UTILITES & DRAINAGE SYSTEMS

UTILITIES

1. ANY DAMAGE TO EXISTING UTILITIES CAUSED BY CONTRACTOR OR ITS SUBCONTRACTORS SHALL BE CONTRACTOR'S SOLE RESPONSIBILITY AND REPAIRED AT CONTRACTOR'S EXPENSE.
2. THESE PLANS DO NOT GUARANTEE THE EXISTENCE, NON-EXISTENCE OR LOCATION OF UTILITIES. CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OR THE NON-EXISTENCE OF UTILITIES. AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION OR CONSTRUCTION, CONTRACTOR SHALL NOTIFY MISS UTILITY (1-800-552-7001) AND/OR THE RESPECTIVE UTILITY COMPANIES FOR GAS, WATER, SEWER, POWER, PHONE AND CABLE. CONTRACTOR SHALL TIMELY ARRANGE TO HAVE THE VARIOUS UTILITIES LOCATED, AND TO HAVE THEM REMOVED OR RELOCATED, OR TO DETERMINE THE METHOD OF PROTECTION ACCEPTABLE TO THE RESPECTIVE OWNER, IF THE METHOD OF PROTECTION IS NOT OTHERWISE SPECIFIED. CONTRACTOR SHALL CONDUCT ITS WORK IN THE VICINITY OF EXISTING UTILITIES IN ACCORDANCE WITH THE RESPECTIVE UTILITY'S RULES AND REGULATIONS. ANY COST INCURRED FOR REMOVING, RELOCATING OR PROTECTING UTILITIES SHALL BE BORNE BY CONTRACTOR UNLESS INDICATED OTHERWISE. CONTRACTOR SHALL EXCAVATE TO LOCATE BURIED UTILITIES FAR ENOUGH IN ADVANCE OF ITS WORK TO ALLOW FOR HORIZONTAL AND /OR VERTICAL ADJUSTMENTS TO ITS WORK AND/OR THE UTILITIES. NO ADJUSTMENT IN COMPENSATION OR SCHEDULE WILL BE ALLOWED FOR DELAYS RESULTING FROM CONTRACTOR'S FAILURE TO CONTACT AND COORDINATE WITH UTILITIES.
3. WHEN THE WORK CROSSES EXISTING UTILITIES, THE EXISTING UTILITIES SHALL BE ADEQUATELY SUPPORTED AND PROTECTED FROM DAMAGE DUE TO THE WORK. ALL METHODS FOR SUPPORTING AND MAINTAINING THE EXISTING UTILITIES SHALL BE APPROVED BY THE RESPECTIVE UTILITY COMPANY AND/OR THE ENGINEER. CONTRACTOR SHALL EXERCISE CARE TO INSURE THAT THE GRADE AND ALIGNMENT OF EXISTING UTILITIES ARE MAINTAINED AND THAT NO JOINTS OR CONNECTIONS ARE DISPLACED. BACKFILL SHALL BE CAREFULLY PLACED AND COMPACTED TO PREVENT FUTURE DAMAGE OR SETTLEMENT TO EXISTING UTILITIES. ANY UTILITIES REMOVED AS PART OF THE WORK, AND NOT INDICATED TO BE REMOVED OR ABANDONED, SHALL BE RESTORED USING MATERIALS AND INSTALLATION EQUAL TO THE UTILITY'S STANDARDS.
4. CONTRACTOR SHALL NOTIFY LANDOWNERS, TENANTS AND THE PROJECT MANAGER PRIOR TO THE INTERRUPTION OF ANY SERVICES. SERVICE INTERRUPTIONS SHALL BE KEPT TO A MINIMUM AND SHALL ONLY OCCUR WITH THE KNOWLEDGE AND PERMISSION OF THE SERVICE'S OWNER OR AUTHORITY.
5. THE ADJUSTMENT OF ALL MANHOLE TOPS, WATER VALVE BOXES, GAS VALVE BOXES AND WATER METER BOXES SHALL BE THE RESPONSIBILITY OF CONTRACTOR.
6. ALL WATER METER, VALVES AND FIRE HYDRANT ADJUSTMENTS/RELOCATIONS SHALL BE PERFORMED BY THE CONTRACTOR. CONTRACTOR SHALL KEEP A "REDLINE" SET OF PLANS DOCUMENTING ALL SUCH AS-BUILT REVISIONS.

CONCRETE WORK

CONCRETE

1. VDOT CLASS A3 CONCRETE SHALL BE USED FOR BURIED APPLICATION ONLY SUCH AS UTILITY THRUST BLOCKING OR ENCASEMENT

2. VDOT A4 4000 LB CONCRETE SHALL BE USED FOR ALL CONCRETE WORK FOR RIGHT OF WAY ELEMENTS INCLUDING SIDEWALKS DRIVEWAYS, CURBS AND GUTTERS.

A. ALL CONCRETE MUST BE ROCKWOOD PIGEMNTS/DAVIS COLORS #5084, OMAHA TAN
B. USE OF FLY ASH IN THIS MIX IS NOT ALLOWED
C. ALL AGGREGATES USED ON A PROJECT MUST BE FROM A SINGLE SOURCE AND SHALL BE CONSISTENT IN COLOR.

DRAINAGE SYSTEMS

1. CONTRACTOR SHALL EXERCISE CARE, ESPECIALLY AT INTERSECTIONS AND GUTTER LINES, TO PROVIDE POSITIVE DRAINAGE. ANY AREAS WHERE WATER IS IMPOUNDED SHALL BE CORRECTED BY CONTRACTOR AT NO ADDITIONAL COST. POSITIVE DRAINAGE OF ALL ROADWAY AREAS TO THE STORM DRAIN INLETS OR OTHER ACCEPTABLE DRAINAGE CHANNELS AS NOTED ON THE PLANS IS REQUIRED.
2. CONTRACTOR SHALL MAINTAIN EXISTING STREAMS, DITCHES, DRAINAGE STRUCTURES, CULVERTS AND FLOWS AT ALL TIMES DURING THE WORK. CONTRACTOR SHALL PAY FOR ALL PERSONAL INJURY AND PROPERTY DAMAGE WHICH MAY OCCUR AS A RESULT OF FAILING TO MAINTAIN ADEQUATE DRAINAGE.
3. ALL PIPES, DI'S AND OTHER STRUCTURES SHALL BE INSPECTED BY THE PROJECT MANAGER BEFORE BEING BACKFILLED OR BURIED. THE PROJECT MANAGER MAY REQUIRE CONTRACTOR, AT NO ADDITIONAL COST, TO UNCOVER AND RE-COVER SUCH STRUCTURES IF THEY HAVE BEEN BACKFILLED OR BURIED WITHOUT SUCH INSPECTION.
4. ALL CATCH BASINS ENCOMPASSED WITHIN NEW CONSTRUCTION SHALL BE CONVERTED TO DROP INLETS.
5. REMOVED PIPE SHALL BE THE PROPERTY OF CONTRACTOR UNLESS NEGOTIATED OTHERWISE BEFORE PROJECT BIDDING; AND IF NOT SALVAGED FOR RE-USE, SHALL BE DISPOSED OF LAWFULLY.
6. ALL STORM SEWER PIPE AND DROP INLETS SHALL BE CLEARED OF DEBRIS AND ERODED MATERIAL PRIOR TO FINAL ACCEPTANCE.
7. ALL STORM SEWER PIPE JOINTS SHALL BE SEATED AND SEALED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
8. ALL EXISTING ROOF DRAINS AND OTHER DRAINAGE CONDUIT BLOCKED OR DISRUPTED FROM THEIR PRE-CONSTRUCTION DRAINAGE PATTERNS SHALL BE SHORTENED, EXTENDED OR OTHERWISE ROUTED USING MATERIALS APPROVED BY THE ENGINEER, AND IN SUCH A WAY THAT THE NEW DRAINAGE PATTERNS ARE ACCEPTABLE TO ENGINEER AND THE PROJECT MANAGER.

GENERAL UTILITIES NOTES

1. PER THE VIRGINIA DEPARTMENT OF HEALTH WATERWORKS REGULATION (PART II, ARTICLE 3, SECTION 12VAC5-590 THROUGH 630), ALL BUILDINGS THAT HAVE THE POSSIBILITY OF CONTAMINATING THE POTABLE WATER DISTRIBUTION SYSTEM(HOSPITALS, INDUSTRIAL SITES, BREWERIES, ETC.) SHALL HAVE BACKFLOW PREVENTION DEVICE INSTALLED WITHIN THE FACILITY. THE DEVICE SHALL BE TESTED IN REGULAR INTERVALS AS REQUIRED, AND TEST RESULTS SHALL BE SUBMITTED TO THE REGULATORY COMPLIANCE ADMINISTRATOR IN THE DEPARTMENT OF UTILITIES.
2. ALL BUILDINGS THAT MAY PRODUCE WASTES CONTAINING MORE THAN ONE HUNDRED PARTS PER MILLION OF FATS, OILS, OR GREASE SHALL INSTALL A GREASE TRAP. THE GREASE TRAP SHALL MEET SPECIFICATIONS OF THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE, MAINTAIN RECORDS OF CLEANING AND MAINTENANCE, AND BE INSPECTED ON REGULAR INTERVALS BY THE REGULATORY COMPLIANCE ADMINISTRATOR IN THE DEPARTMENT OF UTILITIES.
3. PLEASE CONTACT THE REGULATORY COMPLIANCE ADMINISTRATOR AT 970-3032 WITH ANY QUESTIONS REGARDING THE GREASE TRAP OR BACKFLOW PREVENTION DEVICES.

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REVISIONS

NO.	DATE	DESCRIPTION
1	28 SEP 2020	CITY OF CHARLOTTESVILLE COMMENTS
2	08 FEB 2021	CITY OF CHARLOTTESVILLE COMMENTS
3	03 MAY 2021	CITY OF CHARLOTTESVILLE COMMENTS
4	16 JULY 2021	CITY OF CHARLOTTESVILLE COMMENTS
5	17 AUG 2021	CITY OF CHARLOTTESVILLE COMMENTS
6	10 SEPT 2021	CITY OF CHARLOTTESVILLE COMMENTS

DESIGNED BY: LO, DG
DRAWN BY: LO
CHECKED BY: JT

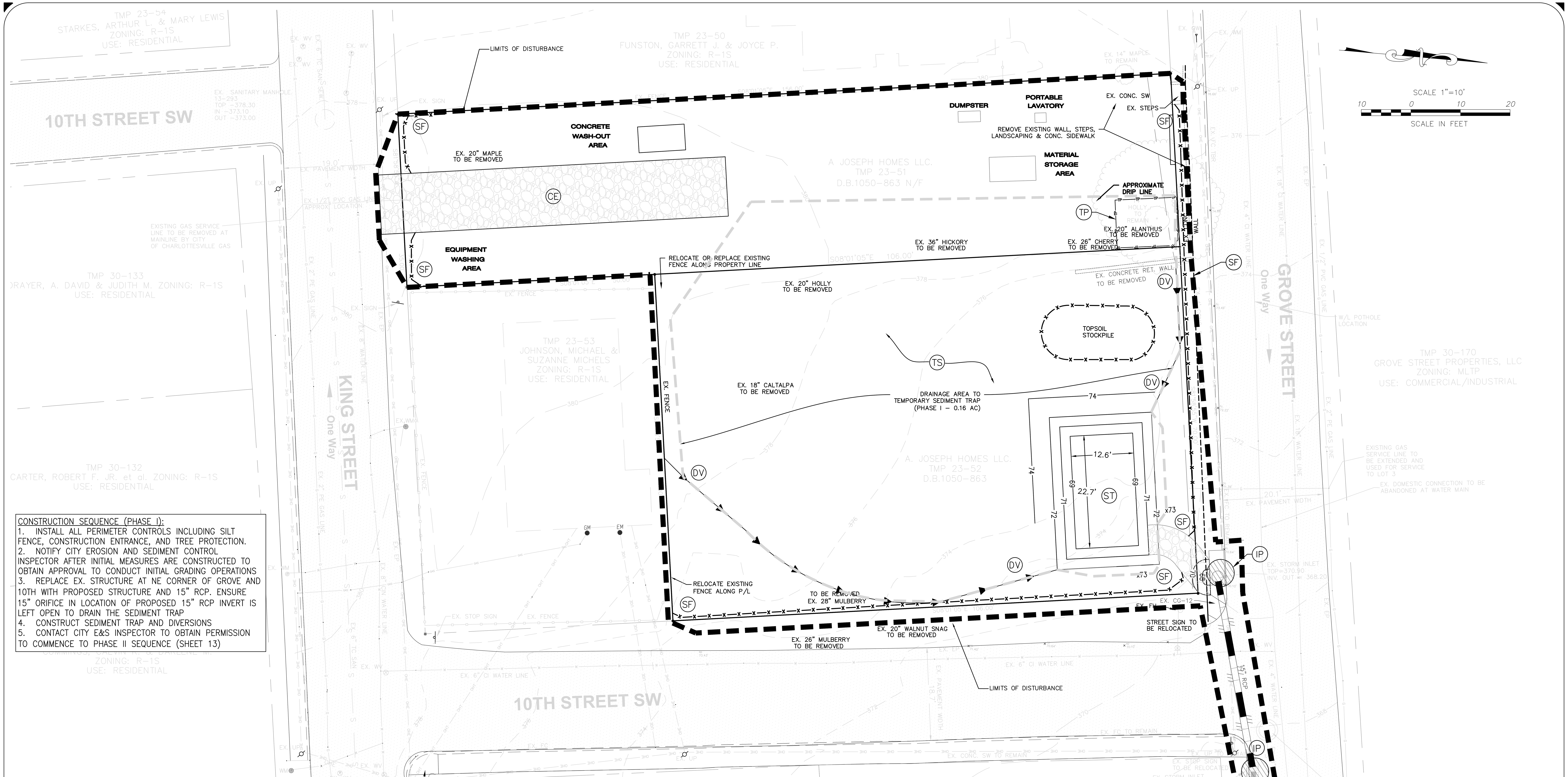
COMMONWEALTH OF VIRGINIA
09/30/2021
JIMMY L. TAGGART
Lic. No. 22841
PROFESSIONAL ENGINEER

1001 & 1002 GROVE STREET PUD
FINAL SITE PLAN AND VSMP
CHARLOTTESVILLE, VIRGINIA
NOTES AND DETAILS

DATE: 02-20-2020
JOB: 8555
CONTOUR INTERVAL: 2 FT

SHEET: 11 OF 20

Attachment B

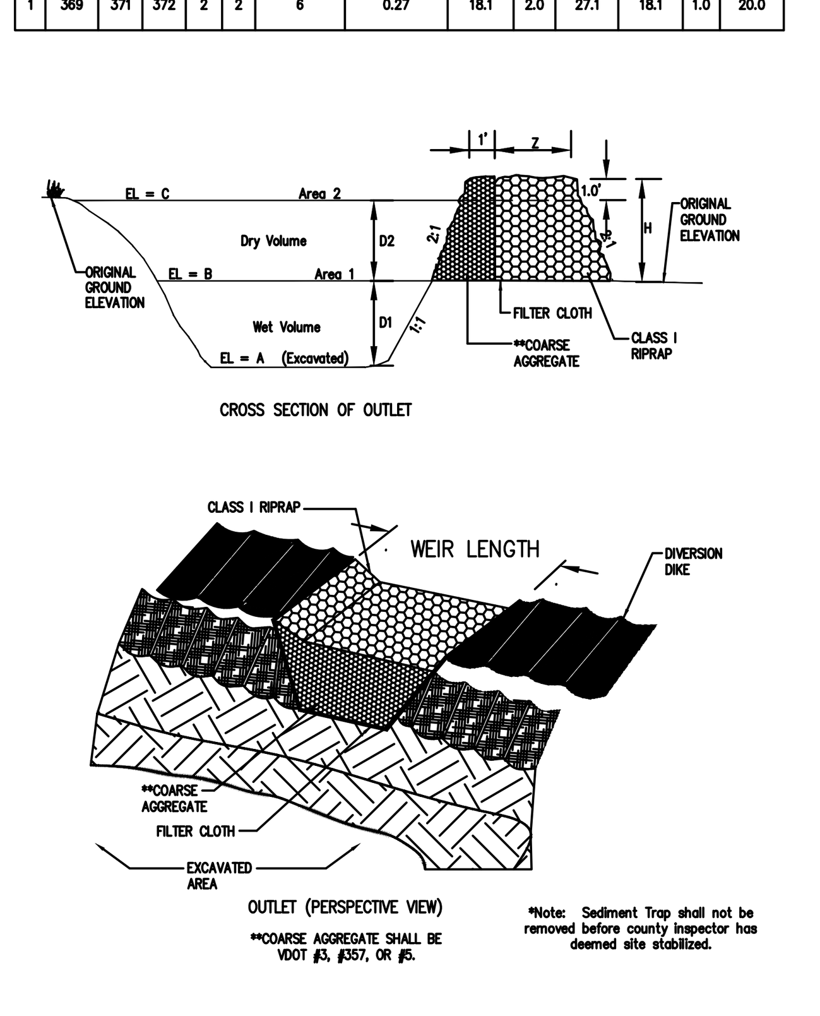


CONSTRUCTION SEQUENCE (PHASE I):

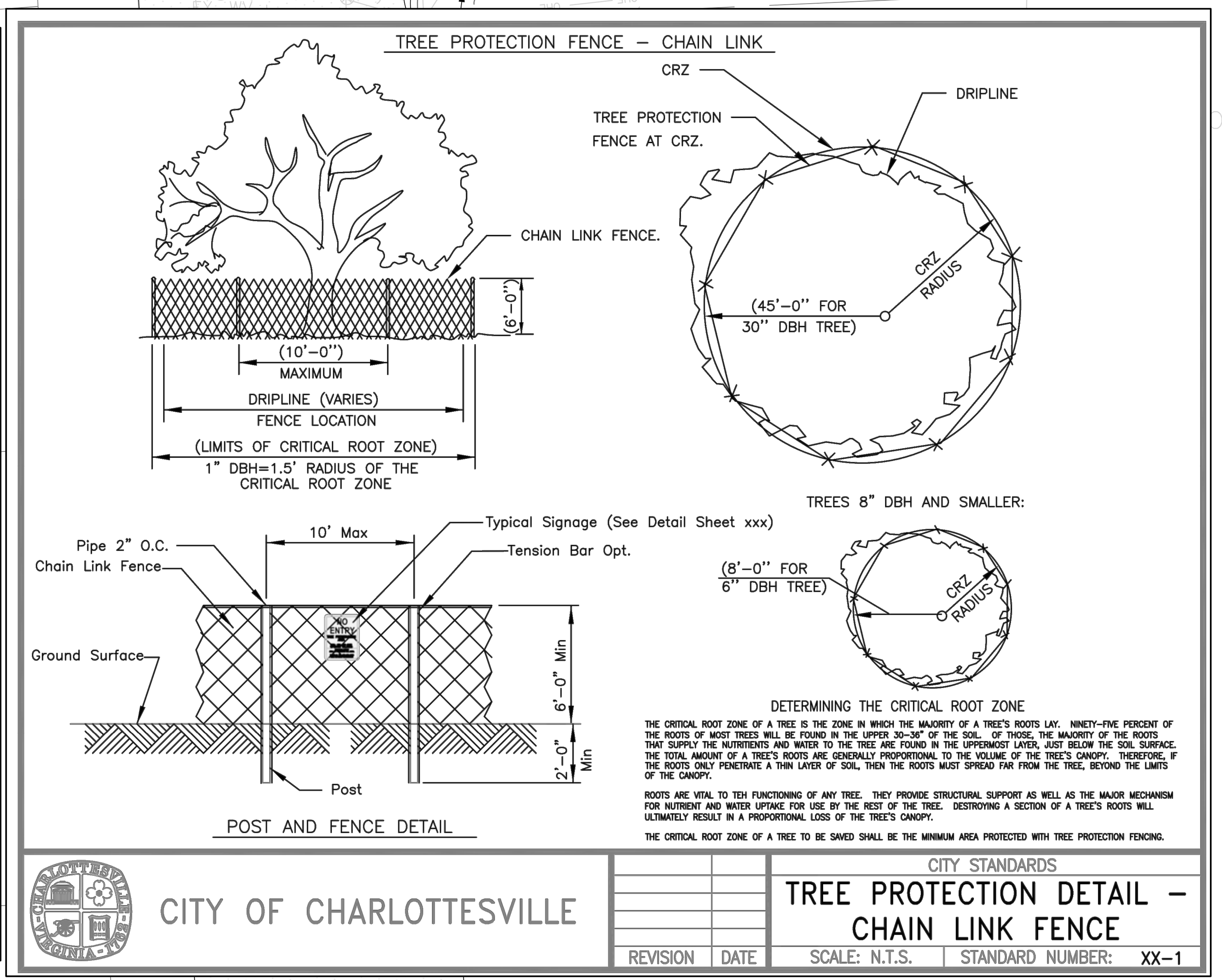
1. INSTALL ALL PERIMETER CONTROLS INCLUDING SILT FENCE, CONSTRUCTION ENTRANCE, AND TREE PROTECTION.
2. NOTIFY CITY EROSION AND SEDIMENT CONTROL INSPECTOR AFTER INITIAL MEASURES ARE CONSTRUCTED TO OBTAIN APPROVAL TO CONDUCT INITIAL GRADING OPERATIONS
3. REPLACE EX. STRUCTURE AT NE CORNER OF GROVE AND 10TH WITH PROPOSED STRUCTURE AND 15" RCP. ENSURE 15" ORIFICE IN LOCATION OF PROPOSED 15" RCP INVERT IS LEFT OPEN TO DRAIN THE SEDIMENT TRAP
4. CONSTRUCT SEDIMENT TRAP AND DIVERSIONS
5. CONTACT CITY E&S INSPECTOR TO OBTAIN PERMISSION TO COMMENCE TO PHASE II SEQUENCE (SHEET 13)

Temporary Sediment Trap Calculations

No.	A	B	C	H (ft.)	Z (ft.)	WEIR LENGTH (ft.)	DRAINAGE AREA (Acres)	WET VOL. (REQ.) (CY)	D1 (ft.)	WET VOL. (PROV.) (CY)	DRY VOL. (REQ.) (CY)	D2 (ft.)	DRY VOL. (PROV.) (CY)
1	369	371	372	2	2	6	0.27	18.1	2.0	27.1	18.1	1.0	20.0



TEMPORARY SEDIMENT TRAP 1 DETAIL (ST)
NOT TO SCALE



NOTES:
UTILITIES WERE LOCATED ON 5/12/2020
MISS UTILITY TICKET # A-013300854

AN EROSION AND SEDIMENT CONTROL INSPECTOR SHALL BE CONTACTED WHEN PERIMETER MEASURES ARE IN PLACE BEFORE ANY GRADING IS DONE.

EXISTING TREES TO BE SAVED

EVERY EFFORT SHOULD BE MADE TO PROTECT AND PRESERVE THE EXISTING TREES WITHIN THE PROJECT AREA THAT ARE DESIGNATED AS TO BE SAVED. THE CONTRACTOR IS TO FOLLOW THE VA EROSION AND SEDIMENT CONTROL HANDBOOK 3.38 – TREE PRESERVATION AND PROTECTION FOR THE PLACEMENT OF TREE PROTECTION FENCING. AN ARBORIST MUST BE CONTACTED IF TREE PRESERVATION REQUIRES ANY ROOT OR CANOPY PRUNING.

LEGEND

- CE = CONSTRUCTION ENTRANCE, 3.02
- SF = SILT FENCE, 3.05
- IP = INLET PROTECTION, 3.07
- DV = DIVERSION, 3.12
- ST = SEDIMENT TRAP, 3.13
- TP = TREE PROTECTION (SEE DETAIL THIS SHEET)

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REVISIONS

NO.	DATE	DESCRIPTION
1	23 SEP 2020	CITY OF CHARLOTTESVILLE COMMENTS
2	08 FEB 2021	CITY OF CHARLOTTESVILLE COMMENTS
3	06 MAY 2021	CITY OF CHARLOTTESVILLE COMMENTS
4	16 JULY 2021	CITY OF CHARLOTTESVILLE COMMENTS
5	17 AUG 2021	CITY OF CHARLOTTESVILLE COMMENTS
6	10 SEPT 2021	CITY OF CHARLOTTESVILLE COMMENTS

DESIGNED BY: LO, DG
DRAWN BY: LO
CHECKED BY: JT

COMMONWEALTH OF VIRGINIA
JIMMY L. TAGGART
Lic. No. 22841
09/30/2021
PROFESSIONAL ENGINEER

1001 & 1002 GROVE STREET PUD
FINAL SITE PLAN AND VSMP
CHARLOTTESVILLE, VIRGINIA
EROSION CONTROL PLAN - PHASE I

DATE: 02-20-2020
JOB: 8555
CONTOUR INTERVAL: 2 FT

SHEET: 12 OF 20

Attachment B

LIMITS OF DISTURBANCE

THE CONTRACTOR SHALL INSTALL A MODIFIED CONSTRUCTION ENTRANCE AT THE LOCATION OF THE DRIVEWAY FOR ALL UNFINISHED HOMES TO BE USED BY CONSTRUCTION VEHICLES. THE DIMENSIONS SHALL BE 8' X 18' OR AS LARGE AS PRACTICABLE. AS HOMES ARE COMPLETED AND THE SITE STABILIZED, THE DRIVEWAYS SHOULD BE CONVERTED TO PERMEABLE PAVERS.

DRAINAGE AREA TO ST = 0.21 AC (PHASE II)
NOTE: CONTRACTOR TO DIRECT ROOF DOWNSPOUTS TO ENSURE RUN-OFF DRAINS TO SEDIMENT TRAP

PORTABLE LAVATORY

TOPSOIL STOCKPILE

MATERIAL STORAGE AREA

CONCRETE WASH-OUT AREA

15" RCP

W/L POTHOLE LOCATION

EX. DOMESTIC CONNECTION TO BE ABANDONED AT WATER MAIN

EX. STORM INLET TOP=370.90 INV. OUT = 368.20

EX. STORM INLET TOP=366.8 IN = 363.3 (EX. 12") INV. OUT = 363.2

EX. SAN MH 13-165 TOP=367.90 INV.(OUT)=361.56

EX. STOP SIGN TO BE RELOCATED

EX. CONC SW TO REMAIN

EX. 14" MAPLE TO REMAIN

SCALE 1"=10'

10 0 10 20

SCALE IN FEET

CONSTRUCTION SEQUENCE (PHASE II):
1. COMPLETE DEMOLITION AND RELOCATION OF FENCING ONSITE. CONDUCT CLEARING AND GRADING OPERATIONS.
2. CONSTRUCT HOMES 2, 4, AND 5.
2B. INSTALL UTILITIES AND CONNECT UTILITIES AS HOMES ARE CONSTRUCTED
3. REMOVE THE CONSTRUCTION ENTRANCE AND CONSTRUCT HOMES 1 AND 6.
4. INSTALL SILT FENCE AROUND DRIVEWAYS AND INSTALL PERMEABLE PAVERS
5. CALL ESC INSPECTOR FOR VERIFICATION THAT SITE IS STABILIZED BEFORE PROCEEDING TO NEXT PHASE

LEGEND

SF = SILT FENCE, 3.05
IP = INLET PROTECTION, 3.07
DV = DIVERSION, 3.12
ST = SEDIMENT TRAP, 3.13
TP = TREE PROTECTION (SEE DETAIL SHEET 12)

NOTE:

1. AS FINAL GRADES ARE REACHED AND THERE WILL BE NO MORE LARGE EARTH MOVING VEHICLES REQUIRING WHEEL WASHING, DRIVEWAYS MAY BE USED FOR SMALLER VEHICLES AND THE CONSTRUCTION ENTRANCE MAY BE REMOVED.
2. ALL AREAS ABOVE SEDIMENT TRAP MUST BE STABILIZED BEFORE WORK MAY BEGIN ON THE BIORETENTION FACILITY.
3. WRITTEN APPROVAL FROM THE CITY IS REQUIRED TO BE OBTAINED BEFORE REMOVING THE TEMPORARY SEDIMENT TRAP.
4. WORK ON LOT 3 MAY BEGIN CONCURRENTLY WITH THE BIORETENTION FILTER.
5. NOTE: PERVIOUS PAVER DRIVEWAYS SHALL NOT BE INSTALLED UNTIL ALL AREA UPSTREAM IS STABILIZED AND NO CONSTRUCTION TRAFFIC IS PLANNED TO USE THE DRIVEWAY.

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REVISIONS

NO.	DATE	DESCRIPTION
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2	08 FEB 2021	CITY OF CHARLOTTESVILLE COMMENTS
3	03 MAY 2021	CITY OF CHARLOTTESVILLE COMMENTS
4	18 JULY 2021	CITY OF CHARLOTTESVILLE COMMENTS
5	17 AUG 2021	CITY OF CHARLOTTESVILLE COMMENTS
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DRAWN BY: LO
CHECKED BY: JT

COMMONWEALTH OF VIRGINIA
09/30/2021
JIMMY L. TAGGART
Lic. No. 22841
PROFESSIONAL ENGINEER

1001 & 1002 GROVE STREET PUD
FINAL SITE PLAN AND VSMP
CHARLOTTESVILLE, VIRGINIA

EROSION CONTROL PLAN - PHASE II

DATE: 02-20-2020
JOB: 8555
CONTOUR INTERVAL: 2 FT

SHEET: 13 OF 20

Attachment B

CONSTRUCTION SEQUENCE (PHASE III):

1. OBTAIN WRITTEN PERMISSION FROM CITY OF CHARLOTTESVILLE TO REMOVE SEDIMENT TRAP
2. REMOVE SEDIMENT TRAP
3. OBTAIN PERMISSION FROM CITY OF CHARLOTTESVILLE TO BEGIN INSTALL BIORETENTION. COORDINATE BIORETENTION INSTALLATION INSPECTIONS AS REQUIRED ON SHEET 19
4. INSTALL OUTLET PIPE, FRENCH DRAIN, AND BIORETENTION FACILITY
5. ENSURE PERIMITER CONTROLS AROUND HOUSE AREA THREE ARE IN PLACE TO PROTECT BIORETENTION FACILITY FROM CONTAMINATED RUNOFF
6. CONSTRUCT HOUSE 3.
7. ENSURE SITE IS PERMANENTLY STABILIZED. CONFIRM WITH CITY ESC INSPECTOR, THEN REMOVE ALL EROSION CONTROL MEASURES.

8" FRENCH DRAIN
N.T.S.

ROUDABUSH, GALE & ASSOC., INC.
A PROFESSIONAL CORPORATION
SERVING VIRGINIA SINCE 1956

PHYSICAL
999 SECOND ST. SE.
CHARLOTTESVILLE, VA 22902
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REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	23 SEP 2020	CITY OF CHARLOTTESVILLE COMMENTS			
2	08 FEB 2021	CITY OF CHARLOTTESVILLE COMMENTS			
3	03 MAY 2021	CITY OF CHARLOTTESVILLE COMMENTS			
4	16 JULY 2021	CITY OF CHARLOTTESVILLE COMMENTS			
5	17 AUG 2021	CITY OF CHARLOTTESVILLE COMMENTS			
6	10 SEPT 2021	CITY OF CHARLOTTESVILLE COMMENTS			

DESIGNED BY:	LO, DG
DRAWN BY:	LO
CHECKED BY:	JT

09/30/2021
JIMMY L. TAGGART
Lic. No.
22841

1001 & 1002 GROVE STREET PUD
FINAL SITE PLAN AND VSMP
CHARLOTTESVILLE, VIRGINIA

EROSION CONTROL PLAN - PHASE III

DATE:	02-20-2020
JOB:	8555
CONTOUR INTERVAL: 2 FT	

SHEET: 14 OF 20

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EROSION AND SEDIMENT CONTROL NARRATIVE

PRIOR TO CONSTRUCTION

1. OWNER SHALL POST SURETY BONDS FOR CONSTRUCTION, EROSION & SEDIMENT CONTROL.
2. CONTRACTOR SHALL OBTAIN PERMITS TO WORK WITHIN STATE RIGHT-OF-WAY (VDOT LAND-USE PERMIT). BONDING FOR WORK WITHIN THE VDOT RIGHT-OF-WAY MAY BE REQUIRED TO OBTAIN THE PERMIT.
3. CONTRACTOR SHALL COORDINATE WITH OWNER TO OBTAIN VSMP PERMITS, AS REQUIRED BY THE STATE DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ).
4. CONTRACTOR SHALL OBTAIN LAND DISTURBANCE PERMIT FROM THE CITY OF CHARLOTTESVILLE PRIOR TO BEGINNING CONSTRUCTION.
5. A PRE-CONSTRUCTION MEETING WITH THE ENGINEER, THE CERTIFIED LAND DISTURBER, AND THE ENVIRONMENTAL INSPECTOR MAY ALSO BE REQUIRED. ALLOW 72 HOURS FOR COORDINATION AND SCHEDULING OF PRE-CONSTRUCTION MEETING.
6. AREA OF FOREST/OPEN SPACE SHALL BE DEMARCATED (FENCED-OFF) PRIOR TO ANY LAND DISTURBING ACTIVITIES.

PROJECT DESCRIPTION
THIS PROJECT PROPOSES TO CONSTRUCT 6 RESIDENTIAL HOUSES AND ASSOCIATED UTILITY AND STORMWATER INFRASTRUCTURE ON A VACANT LOT IN THE CITY OF CHARLOTTESVILLE.

EXISTING SITE CONDITIONS
THE LOT IS CURRENTLY VACANT AND GENERALLY COVERED IN MODERATELY SLOPED GRASSY AREA WITH INTERSPERSED TREES OF VARYING HEALTH, SIZE, AND AGE.

ADJACENT AREAS
THE LOT IS BOUND BY GROVE STREET TO THE NORTH, KING STREET TO THE SOUTH AND 10TH ST TO THE EAST. THERE IS AN EXISTING RESIDENTIAL STRUCTURE TO THE SOUTH AND WEST OF THE PROPERTY.

OFF-SITE AREAS
ANY EXCESS MATERIAL GENERATED AS PART OF THIS PROJECT SHALL BE STORED OR SPREAD WITHIN THE APPROVED LAND DISTURBANCE AREA OR IN AN AREA APPROVED BY THE CITY OF CHARLOTTESVILLE.

SOILS
127B-ELIOSK – URBAN LAND COMPLEX, 2 TO 7 PERCENT SLOPES
HYDROLOGIC SOIL GROUP B. GENTLY SLOPING AND WELL DRAINED, STARTING AT SURFACE LAYER TO SUBSTRATUM, SOIL LAYERS CONSIST OF SILT LOAM, SILTY CLAY, AND BEDROCK, PERMEABILITY IS VERY LOW WHILE AVAILABLE WATER CAPACITY IS LOW, SURFACE RUNOFF IS MEDIUM, HAZARD OF EROSION IS MODERATE.

CRITICAL SLOPES
THERE ARE NO CRITICAL SLOPES ON THE SUBJECT PARCEL OR WITHIN THE LIMITS OF DISTURBANCE

STRUCTURAL PRACTICES
TEMPORARY CONSTRUCTION ENTRANCE (3.02) – A TEMPORARY CONSTRUCTION ENTRANCE SHALL BE INSTALLED AT THE SITE ENTRANCE OFF KING STREET.

ROAD STABILIZATION (3.03) – ACCESS ROADS, PARKING AREAS, AND OTHER ON-SITE VEHICLE TRANSPORTATION ROUTES SHALL BE STABILIZED WITH STONE IMMEDIATELY AFTER GRADING.

SILT FENCE BARRIER (3.05) – SILT FENCE BARRIERS WILL BE INSTALLED TO FILTER RUNOFF FROM SHEET FLOW AS INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN.

STORM DRAIN INLET PROTECTION (3.07) – INLET PROTECTION WILL BE USED TO ENSURE SEDIMENT DOES NOT ENTER THE STORM SYSTEM

TEMPORARY DIVERSION DIKE (3.09) – TEMPORARY DIVERSION DIKES WILL BE INSTALLED TO ENSURE RUN-OFF IS DIRECTED TOWARDS THE ON-SITE SEDIMENT TRAP

TEMPORARY SEDIMENT TRAP (3.13) – THE TEMPORARY SEDIMENT TRAP WILL BE INSTALLED TO ALLOW SEDIMENT TO SETTLE FROM SITE RUN-OFF BEFORE RUN-OFF LEAVES THE SITE

VEGETATIVE PRACTICES
SURFACE ROUGHENING (3.29) – ALL AREAS WITH A GRADE STEEPER THAN 3:1 SHALL BE STAIR-STEP GRADED OR GROOVED (PLATE 3,29-4) TO AID IN GRASS ESTABLISHMENT, INCREASE INFILTRATION, AND TO SLOW RUNOFF VELOCITIES.

TOPSOILING & STOCKPILING (3.30) – TOPSOIL WILL BE STRIPPED FROM AREAS TO BE GRADED AND STOCKPILED FOR LATER USE. STOCKPILES ARE TO BE STABILIZED WITH TEMPORARY VEGETATION OR TO HAVE SILT FENCE INSTALLED ALONG THE LOWER PERIMETER TO PROTECT DOWNSTREAM AREAS.

TEMPORARY SEEDING (3.31) – AREAS NOT BROUGHT TO FINAL GRADE FOR A PERIOD OF MORE THAN 14 DAYS SHALL BE STABILIZED WITH A TEMPORARY SEED MIXTURE ACCEPTABLE FOR THAT TIME OF YEAR. CRIMPING, PUNCH ROLLER-TYPE ROLLERS, OR TRACK WALKING MAY BE USED TO INCORPORATE STRAW MULCH INTO THE SOIL ON SLOPES IF STRAW IS TO BE USED.

PERMANENT SEEDING (3.32) – AREAS BROUGHT TO FINAL GRADE OR THOSE CONSTRUCTION AREAS THAT WILL REMAIN DORMANT FOR YEAR OR MORE SHALL BE STABILIZED WITH A PERMANENT SEED MIXTURE ACCEPTABLE TO THAT TIME OF YEAR. PREPARE SURFACE WITH APPROVED TREATMENT AND ADDITIVES PRIOR TO APPLYING SEED.

MULCH (3.35) – PLANT RESIDUES OR OTHER SUITABLE MATERIALS SHALL BE APPLIED TO DISTURBED SURFACES TO PREVENT EROSION AND REDUCE OVERLAND FLOW VELOCITIES. THIS PRACTICE SHOULD BE APPLIED TO ALL SEEDING OPERATIONS, OTHER PLANTER MATERIALS WHICH DO NOT PROVIDE ADEQUATE SOIL PROTECTION BY THEMSELVES, AND BARE AREAS WHICH CANNOT BE SEEDED DUE TO THE SEASON BUT WHICH STILL NEED PROTECTION TO PREVENT SOIL LOSS. CRIMPING, PUNCH ROLLER-TYPE ROLLERS, OR TRACK WALKING MAY BE USED TO INCORPORATE STRAW MULCH INTO THE SOIL ON SLOPES IF STRAW IS TO BE USED.

TREE PROTECTION (3.38) – TREE PROTECTION WILL BE USED TO ENSURE ANY TREES IDENTIFIED AS BEING PRESERVED IN THE POST DEVELOPED CONDITION ARE NOT DAMAGED BY CONSTRUCTION OR CONSTRUCTION RELATED ACTIVITY.

DUST CONTROL (3.39) – DUST CONTROL METHODS MUST BE USED TO REDUCE THE AMOUNT OF AIRBORNE DUST DURING ALL PHASES OF CONSTRUCTION WHERE SOIL IS EXPOSED OR DISTURBED.

MANAGEMENT STRATEGIES

1. CONSTRUCTION WILL BE SEQUENCED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE.
2. THE CONSTRUCTION ENTRANCE AND PERIMETER EROSION CONTROL MEASURES SUCH AS TREE PROTECTION AND SILT FENCE SHALL BE INSTALLED AS THE FIRST STEP OF DISTURBANCE.
3. TEMPORARY SEEDING OR OTHER STABILIZATION METHODS, SUCH AS BASE AGGREGATE WILL FOLLOW IMMEDIATELY AFTER REACHING FINAL GRADES.
4. ALL SEEDED AREAS WILL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RE-SEEDED AS NEEDED TO ESTABLISH GROWTH.
5. THE JOB SUPERINTENDENT SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL PRACTICES.
6. AFTER BEING NOTIFIED BY THE EROSION AND SEDIMENT CONTROL ADMINISTRATOR, THE TEMPORARY EROSION AND SEDIMENT CONTROLS CAN BE CLEANED UP OR REMOVED, AND THE SEDIMENT TRAP CAN BE FILLED IN AND SEEDED FOR SITE STABILIZATION.

PERMANENT STABILIZATION
ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH STRAW & SEED IMMEDIATELY FOLLOWING FINISHED GRADE. SEEDING SHALL BE DONE WITH KENTUCKY 31 TALL FESCUE IN ACCORDANCE TO STANDARD AND SPECIFICATION 3.32, PERMANENT SEEDING, OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. ANY FERTILIZER AND LIME APPLICATIONS SHALL BE IN ACCORDANCE WITH SOIL TEST RESULTS. ALL SEEDED AREAS WILL BE STRAW MULCHED TO PROTECT AGAINST RILL EROSION AND TO PRESERVE SOIL MOISTURE THAT WILL ENHANCE SEED GERMINATION. CRIMPING, PUNCH ROLLER-TYPE ROLLERS, OR TRACK WALKING MAY BE USED TO INCORPORATE STRAW MULCH INTO THE SOIL ON SLOPES IF STRAW IS TO BE USED.

EROSION CONTROL MAINTENANCE

1. IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED DAILY AND AFTER EACH SIGNIFICANT RAINFALL. THE FOLLOWING ITEMS WILL BE CHECKED IN PARTICULAR:
2. THE CONSTRUCTION ENTRANCE SHALL BE CHECKED DAILY FOR SOIL BUILDUP. IF THE ENTRANCE BECOMES CLOGGED WITH SOIL AND FAILS TO PREVENT THE TRANSPORTATION OF SOIL ONTO THE ROADWAY, ADDITIONAL STONE, REPLACEMENT OF STONE, OR A WASH-RACK MAY BE REQUIRED.
3. SILT FENCE SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. 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.
4. STORMWATER CONVEYANCE CHANNELS (WHERE APPLICABLE):
   - 4.1. GRASS LINED CHANNELS – DURING THE INITIAL ESTABLISHMENT, GRASS LINED CHANNELS SHOULD BE REPAIRED IMMEDIATELY AND RE-ESTABLISHED IF NECESSARY. AFTER GRASS HAS BECOME ESTABLISHED, THE CHANNEL SHOULD BE CHECKED PERIODICALLY TO DETERMINE IF THE GRASS IS WITHSTANDING FLOW VELOCITIES WITHOUT DAMAGE. IF THE CHANNEL IS TO BE MOWED, IT SHOULD BE DONE IN A MANNER THAT IT WILL NOT DAMAGE THE GRASS.
   - 4.2. RIPRAP-LINED CHANNELS – RIPRAP LINED CHANNELS SHOULD BE CHECKED PERIODICALLY TO ENSURE THE SCOUR IS NOT OCCURRING BENEATH FABRIC UNDERLINING OF THE RIPRAP LAYER. THE CHANNEL SHOULD ALSO BE CHECKED TO DETERMINE THE STONES ARE NOT DISLODGED BY LARGE FLOWS.
   - 4.3. IF SEDIMENT IS DEPOSITED IN A GRASS-LINED CHANNEL, IT SHOULD BE REMOVED PROMPTLY TO PREVENT DAMAGE TO THE GRASS. SEDIMENT DEPOSITED IN A RIPRAP CHANNEL SHOULD BE REMOVED WHEN IT REDUCES THE CAPACITY OF THE CHANNEL.
5. CHECK DAMS (WHERE APPLICABLE): SHALL BE CHECKED FOR SEDIMENT ACCUMULATION AFTER EVERY RUNOFF PRODUCING STORM EVENT. SEDIMENT SHOULD BE REMOVED WHEN IT REACHES ONE-HALF OF THE ORIGINAL HEIGHT OF THE MEASURE. REGULAR INSPECTIONS SHALL BE MADE TO INSURE THE CENTER OF EACH DAM IS LOWER THAN THE EDGES. EROSION CAUSED BY HIGH FLOWS AROUND THE EDGES OF THE DAM SHOULD BE CORRECTED IMMEDIATELY.
6. THE EARTHEN EMBANKMENTS SHALL BE CHECKED REGULARLY TO ENSURE THAT IT IS STRUCTURALLY SOUND AND HAS NOT BEEN DAMAGED BY EROSION OR CONSTRUCTION EQUIPMENT.
7. THE STORMWATER MANAGEMENT FACILITIES SHOULD BE CHECKED REGULARLY BY THE HOMEOWNERS ASSOCIATIONS TO ENSURE THAT THEY ARE STRUCTURALLY SOUND AND HAVE NOT BEEN DAMAGED BY EROSION.
8. THE EMERGENCY SPILLWAY SHALL BE CHECKED REGULARLY TO ENSURE THAT ITS LINING IS WELL ESTABLISHED AND EROSION RESISTANT. GRASS SHALL BE KEPT MOWN BELOW A HEIGHT OF 15" AND THE OUTLET SHOULD BE CHECKED FOR CLOGGING.
9. THE DAM SECTION SHALL BE KEPT FREE OF SAPLINGS OR TREES.(REFER TO THE ADDITIONAL MAINTENANCE SPECIFICATIONS)
10. ALL SEEDED AREAS WILL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RE-SEEDED AS NEEDED. IN THE EVENT THAT THE APPLIED SEEDING FAILS TO TAKE HOLD, BLANKET MATTING SHALL BE PLACED IN APPROPRIATE AREAS DEEMED NECESSARY BY THE ENGINEER OR EROSION CONTROL INSPECTOR.

CONSTRUCTION SEQUENCE:

PHASE I:

1. INSTALL ALL PERIMETER CONTROLS INCLUDING SILT FENCE, CONSTRUCTION ENTRANCE, AND TREE PROTECTION.
2. NOTIFY CITY EROSION AND SEDIMENT CONTROL INSPECTOR AFTER INITIAL MEASURES ARE CONSTRUCTED TO OBTAIN APPROVAL TO CONDUCT INITIAL GRADING OPERATIONS
3. REPLACE EX. STRUCTURE AT NE CORNER OF GROVE AND 10TH WITH PROPOSED STRUCTURE AND 15" RCP. ENSURE 15" ORIFICE IN LOCATION OF PROPOSED 15" RCP INVERT IS LEFT OPEN TO DRAIN THE SEDIMENT TRAP
4. CONSTRUCT SEDIMENT TRAP AND DIVERSIONS
5. CONTACT CITY E&S INSPECTOR TO OBTAIN PERMISSION TO COMMENCE TO PHASE II SEQUENCE (SHEET 13)

PHASE II:

1. COMPLETE DEMOLITION AND RELOCATION OF FENCING ONSITE. CONDUCT CLEARING AND GRADING OPERATIONS.
2. CONSTRUCT HOMES 2, 4, AND 5.

2B . INSTALL UTILITIES AND CONNECT UTILITIES AS HOMES ARE CONSTRUCTED

3. REMOVE THE CONSTRUCTION ENTRANCE AND CONSTRUCT HOMES 1 AND 6.
4. INSTALL SILT FENCE AROUND DRIVEWAYS AND INSTALL PERMEABLE PAVERS
5. CALL ESC INSPECTOR FOR VERIFICATION THAT SITE IS STABILIZED BEFORE PROCEEDING TO NEXT PHASE

PHASE III:

1. **OBTAIN WRITTEN PERMISSION FROM CITY OF CHARLOTTESVILLE TO REMOVE SEDIMENT TRAP**
2. REMOVE SEDIMENT TRAP
3. OBTAIN PERMISSION FROM CITY OF CHARLOTTESVILLE TO BEGIN INSTALL BIORETENTION. COORDINATE BIORETENTION INSTALLATION INSPECTIONS AS REQUIRED ON SHEET 19
4. INSTALL OUTLET PIPE, FRENCH DRAIN, AND BIORETENTION FACILITY
5. ENSURE PERIMITER CONTROLS AROUND HOUSE AREA THREE ARE IN PLACE TO PROTECT BIORETENTION FACILITY FROM CONTAMINATED RUNOFF
6. CONSTRUCT HOUSE 3.
7. ENSURE SITE IS PERMANENTLY STABILIZED. CONFIRM WITH CITY ESC INSPECTOR, THEN REMOVE ALL EROSION CONTROL MEASURES.

EROSION AND SEDIMENT CONTROL MINIMUM STANDARDS

1. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.

CONTRACTOR SHALL ESTABLISH A STABILIZED SITE, AND NOT ALLOW ANY SEDIMENT TO EXIT THE PROJECT LIMITS.

2. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES 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.

CONTRACTOR TO PROTECT STOCKPILE AREAS WITH SILT FENCE.

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.

CONTRACTOR SHALL ESTABLISH A VEGETATIVE COVER ON ALL DENUDED AREAS.

4. SEDIMENT 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.

CONTRACTOR SHALL ESTABLISH THE PERIMETER CONTROLS AS THE FIRST STEP OF THE LANDS DISTURBANCE FOR THIS PROJECT.

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

CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES AFTER EACH RAINFALL EVENT.

6. THE SEDIMENT TRAP SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.
7. 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.THERE ARE NO PROPOSED CUT OR FILL SLOPES. HOWEVER, THE CONTRACTOR IS TO RESTORE THE PROJECT AREA TO EXISTING GRADE. IF THE AREAS WITH NATURALLY STEEP SLOPES ARE FOUND TO BE ERODING EXCESSIVELY AFTER ONE YEAR, CONTRACTOR IS TO PROVIDE 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.MAXIMIZE SHEETFLOW AND GROUNDWATER INFILTRATION
9. WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.CONTRACTOR TO NOTIFY ENGINEER AND COUNTY EROSION CONTROL INSPECTOR.
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.THERE ARE NO STORM SEWER INLETS PROPOSED.
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.THERE ARE NO STORMWATER CONVEYANCE CHANNELS OR PIPES PROPOSED.
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. NON-ERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NON-ERODIBLE COVER MATERIALS.CONTRACTOR SHALL FOLLOW THE VESCH CHAPTER 3.25 UTILITY STREAM CROSSING REQUIREMENTS FOR THE TWO INTERMITTENT STREAM CROSSINGS.
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 NON-ERODIBLE MATERIAL SHALL BE PROVIDED.CONTRACTOR SHALL FOLLOW THE VESCH CHAPTER 3.25 UTILITY STREAM CROSSING REQUIREMENTS FOR THE TWO INTERMITTENT STREAM CROSSINGS.
14. ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.CONTRACTOR SHALL FOLLOW FOLLOW ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS FOR THE TWO INTERMITTENT STREAM CROSSINGS.
15. THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.CONTRACTOR SHALL FOLLOW THE VESCH CHAPTER 3.25 UTILITY STREAM CROSSING REQUIREMENTS FOR THE TWO INTERMITTENT STREAM CROSSINGS.
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. RE-STABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THIS CHAPTER.
F. APPLICABLE SAFETY REQUIREMENTS SHALL BE COMPLIED WITH.CONTRACTOR TO ADHERE TO THE APPLICABLE STANDARD FOR PRIVATE AND PUBLIC UTILITY INSTALLATION.

17. WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE 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.CONTRACTOR SHALL MAKE PROVISIONS TO KEEP ADJACENT ROADS CLEAN FROM SOIL BUILD-UP.
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.CONTRACTOR SHALL STABILIZE SITE, AND OBTAIN INSPECTOR APPROVAL PRIOR TO REMOVING EC MEASURES. UPON APPROVAL OF THE ENVIRONMENTAL INSPECTOR, INSTALL INFILTRATION AREAS AND CONNECT ROOF DRAINS.
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:THIS PROJECT DOES NOT INCLUDE ANY ADDITIONAL IMPERVIOUS SURFACES AND THE PROJECT AREA WILL BE RESTORED TO ITS EXISTING CONIDTIONS.THEREFORE WILL NOT PRODUCE ANY ADDITIONAL STORMWATER RUNOFF.

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 USING THE VSMP CHANNEL PROTECTION CRITERIA. STORMWATER DISCHARGES ARE CLASSIFIED INTO ONE OF THREE TYPES OF CHANNEL.

(1) "MANMADE STORMWATER CONVEYANCE SYSTEM" MEANS A PIPE, DITCH, VEGETATED SWALE, OR OTHER STORMWATER CONVEYANCE SYSTEM CONSTRUCTED BY MAN EXCEPT FOR RESTORED STORMWATER CONVEYANCE SYSTEMS OR,

(A) THE MANMADE STORMWATER CONVEYANCE SYSTEM SHALL CONVEY THE POST-DEVELOPMENT PEAK FLOW RATE FROM THE TWO-YEAR EVENT WITHOUT CAUSING EROSION OF THE SYSTEM DETENTION OF THE STORMWATER OR DOWNSTREAM IMPROVEMENTS MAY BE INCORPORATED INTO THE APPROVED LAND-DISTURBING ACTIVITY TO MEET THIS CRITERIA AT THE DISCRETION OF THE STORMWATER PROGRAM ADMINISTRATIVE AUTHORITY.

(B) THE PEAK DISCHARGE REQUIREMENTS FOR CONCENTRATED STORMWATER FLOW TO NATURAL STORMWATER CONVEYANCE SYSTEMS SHALL BE MET.

QDEVELOPED <= I.F. * (QPRE-DEV. * RVPRE-DEV.) / RVDEVELOPED

UNDER NO CONDITION SHALL QDEVELOPED > Q PRE-DEV.

NOR SHALL QDEVELOPED BE REQUIRED TO BE LESS THAN THAT QFOREST * RVPRE-DEV.)/RVDEVELOPED

OR IN ACCORDANCE WITH ANOTHER METHODOLOGY THAT IS DEMONSTRATED BY THE VSMP AUTHORITY TO ACHIEVE EQUIVALENT RESULTS AND IS APPROVED BY THE BOARD.

(2) "NATURAL STORMWATER CONVEYANCE SYSTEM" MEANS THE MAIN CHANNEL OF A NATURAL STREAM AND THE FLOOD-PRONE AREA ADJACENT TO THE MAIN CHANNEL OR,

(3) "RESTORED STORMWATER CONVEYANCE SYSTEM" MEANS A STORMWATER CONVEYANCE SYSTEM THAT HAS BEEN DESIGNED AND CONSTRUCTED USING NATURAL CHANNEL DESIGN CONCEPTS. RESTORED STORMWATER CONVEYANCE SYSTEMS INCLUDE THE MAIN CHANNEL AND THE FLOOD-PRONE AREA ADJACENT TO THE MAIN CHANNEL.

(A) THE DEVELOPMENT SHALL BE CONSISTENT, IN COMBINATION WITH OTHER STORMWATER RUNOFF, WITH THE DESIGN PARAMETERS OF THE RESTORED STORMWATER CONVEYANCE SYSTEM THAT IS FUNCTIONING IN ACCORDANCE WITH THE DESIGN OBJECTIVES.

(B) THE PEAK DISCHARGE REQUIREMENTS FOR CONCENTRATED STORMWATER FLOW TO NATURAL STORMWATER CONVEYANCE SYSTEMS SHALL BE MET. SEE 19(B)(1)(B).

CONTRACTOR'S RECORD DRAWING CERTIFICATION STATEMENT

CONTRACTOR SHALL KEEP ACCURATE RECORDS OF ANY CHANGES SUBSTITUTIONS, ALTERATIONS, VARIATIONS OR UNUSUAL CONDITIONS ENCOUNTERED OR IMPLEMENTED WHILE ENGAGED ON THIS PROJECT. THESE RECORDS SHALL BE IN THE FORM OF "REDLINES". "REDLINES" SHALL REFER TO THE CONTRACTOR'S HAND ANNOTATIONS USING RED COLORED PEN/PENCIL TO DEPICT ACTUAL CHANGE, SUBSTITUTION, OR CONDITION.

PRIOR TO CONTRACTOR REQUESTING PARTIAL OR FULL PAYMENT, CONTRACTOR SHALL PROVIDE THE OWNER WITH AN UP-TO-DATE CONTRACTOR'S RECORD DRAWING. SPECIFICALLY, THIS SET OF PLANS, ISSUED TO THE CONTRACTOR AS FINAL CONSTRUCTION DRAWINGS, SHALL BEAR THE "REDLINE" MARKINGS LISTED BELOW AS WELL AS THE CONTRACTOR (AGENT OR SUPERINTENDENT) SIGNATURE AND CERTIFICATION BELOW:

- REDLINES SHOULD ALWAYS BE ACCURATE NEAT, LEGIBLE, DATED AND REASONABLY SCALED
- ADD LARGE RED LETTERS TO TITLE SHEET WITH 'CONTRACTOR'S RECORD DRAWING' INCLUDING CONTRACTOR'S NAME, DATE, AND OTHER RELEVANT INFORMATION
- CONTRACTOR'S REPRESENTATIVE OR SUPERINTENDENT SHALL INITIAL EACH SHEET. IF A SHEET HAS NOT BEEN CHANGED AT ALL OR NO MARK HAS BEEN ADDED, LABEL THE SHEET ONLY 'NO CHANGES'
- IF A SHEET HAS BEEN CHANGED OR MODIFICATIONS HAVE BEEN ADDED, LABEL IT 'REVISED'
- USE WRITTEN EXPLANATION TO DESCRIBE CHANGES. REFER TO SPECIFIC ACTIONS INSTEAD OF REFERENCING CHANGE ORDER NUMBERS OR RELATED DOCUMENTS
- USE CLEAR LETTERING
- NEVER REMOVE OLD VALUES OR DETAILS, JUST REDLINE OR X THROUGH THEM. IF THERE IS NO ROOM FOR THE NEW VALUE, YOU CAN GO TO THE SIDE AND REDLINE THE REPLACEMENT VALUE.
- PROVIDE THE REDLINE DETAILS OF CHANGES OR ADDITIONAL INFORMATION, INCLUDING BUT NOT LIMITED TO FABRICATION, ERECTION, INSTALLATION, LOCATION, SIZING, MATERIAL, DIMENSION, ADDITIONS, RELOCATIONS, SUBSTITUTIONS, ETC
- BE SPECIFIC WHEN MAKING NOTES TO UNDERGROUND UTILITIES, SHOWING EXACT LOCATION, DEPTH, AND MATERIAL USED (EXAMPLE: SEWER LATERALS)
- PROVIDE ALL NECESSARY INFORMATION OF CONTRACTOR'S DESIGNED SYSTEMS OR SUBSTITUTIONS
- CROSS OUT ANY PLAN REFERENCE TO APPROVED EQUAL AND REPLACE WITH ANY SPECIFIC INFORMATION OF VARIANCE USED DURING THE CONSTRUCTION PROCESS
- ANY CHANGES IN INVERT ELEVATIONS, GRADE MODIFICATIONS, SLOPES, AND RELATED INFORMATION ON PIPING UTILITIES, EARTHWORK, ETC. SHALL BE REDLINED.
- RECORD ALL UNEXPECTED OBSTRUCTIONS, COMPLICATING FACTORS, UNSUITABLE CONDITIONS FOUND IN THE PROJECT AREA INCLUDING ROCK, UNUSUAL TOPSOIL CONDITIONS, BURIED DEBRIS, ETC.
- ATTACH OR INCLUDE ANY SHOW DRAWINGS OR SUPPLEMENTAL INFORMATION TO THE CONTRACTOR'S RECORD DRAWING
- CHANGES MADE AS A RESULT OF ANY REGULATORY OR OWNER INSPECTION PROCESS

(IP) INLET PROTECTION

(CE) CONSTRUCTION ENTRANCE

SOURCE: ADAPTED from 1983 Maryland Standards for Soil erosion and Sediment Control, and Va. DSWC Plate 3.02-1

(SF) SILT FENCE

SOURCE: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control,VA. DSWC PLATE. 3.10-2

SUGGESTED TEMPORARY SEEDING MIXTURE

FERTILIZER: 10-20-10: 1,000 LBS/ACRE
SEPTEMBER-FEBRUARY 15: 50% ANNUAL RYE & 50% WINTER RYE 100 LBS/ACRE FEBRUARY 16-APRIL 30: ANNUAL RYE 100 LBS/ACRE MAY-AUGUST: GERMAN MILLET 50 LBS/ACRE OTHER OPTIONS EXIST, SEE VA EROSION AND SEDIMENT CONTROL HANDBOOK.

SUGGESTED PERMANENT SEEDING MIXTURE

LIME: 2 TONS/ACRE FERTILIZER: 10-20-10 1,000 LBS/ACRE
MARCH-MAY 15: KENTUCKY 31 FESCUE 200 LBS/ACRE, ANNUAL RYE 20 LBS/ACRE MAY 16-AUGUST 15: KENTUCKY 31 FESCUE 200 LBS/ACRE, FOXTAIL MILLET 20 LBS/ACRE AUGUST 16-OCTOBER: KENTUCKY 31 FESCUE 200 LBS/ACRE, ANNUAL RYE 20 LBS/ACRE NOVEMBER-FEBRUARY: KENTUCKY 31 FESCUE 200 LBS/ACRE, WINTER RYE 20 LBS/ACRE

(PS) PERMANENT SEEDING MIXTURES FOR THE PIEDMONT AREA

TABLE 25		TOTAL LBS. PER ACRE
MINIMUM CARE LAWN - COMMERCIAL OR RESIDENTIAL		175-200 LBS.
- KENTUCKY 31 OR TURF-TYPE TALL FESCUE		95-100%
- IMPROVED PERENNIAL RYE GRASS	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.
LOW-MAINTENANCE SLOPE (STEEPER THAN 3:1)		
- KENTUCKY 31 FESCUE		108 LBS.
- RED TOP GRASS		2 LBS.
- SEASONAL NURSE CROP*		20 LBS.
- CROWN VETCH**		20 LBS.
		TOTAL 150 LBS.

*USE SEASONAL NURSE CROP IN ACCORDANCE WITH SEEDING DATES AS STATED BELOW:

FEBRUARY 16TH THROUGH APRIL 30TH............ANNUAL RYE
MAY 1ST THROUGH AUGUST 15TH................FOXTAIL MILLET
AUGUST 16TH THROUGH OCTOBER 31ST...........ANNUAL RYE
NOVEMBER 1ST THROUGH FEBRUARY 15TH........ANNUAL RYE

*** SUBSTITUTE SERICEA LESPEDEZA FOR CROWNVETCH EAST OF FARMVILLE, VA (MAY THROUGH SEPTEMBER USE HULLED SERICEA, ALL OTHER PERIODS, USE UNHULLED SERICEA.) IF FLATPEA IS USED IN LIEU OF CROWNVETCH, INCREASE RATE TO 30 LBS./ACRE. ALL LEGUME SEED MUST BE PROPERLY INNOCULATED. WEEPING LOVEGRASS MAY BE ADDED TO ANY SLOPE OR LOW MAINTENANCE MIX DURING WARMER SEEDING PERIODS; ADD 10- 20 LBS./ACRE IN MIXES.

(PS) PERMANENT SEEDING FERTILIZATION AND MAINTENANCE

TABLE 24

Maintenance Fertilization for Permanent Seedings

Use Soil Test Recommendation or Rates Shown Below

Seeding Mixture	Formulation	Lbs. per Acre	Lbs. per 1000 sf	Time	Mowing
Tall fescue makes up 70% or more of cover.	10-10-10 or 30-10-10	500 400	11.5 9.2	Yearly, or as needed fall	*Not closer than 3" if occasional mowing is desired.
Crownvetch Service lespedeza Birdsfoot trefoil	0-20-0	400	9.2	Spring the year following establishment and every 4-5 years thereafter.	Do not mow crownvetch
Fairly uniform stand of Tall Tescue & Service lespedeza, or Birdsfoot Trefoil.	5-10-10	500	11.5	Fall the year following establish- ment and every 4-5 years thereafter.	Not required. not closer than 4" if occasional mowing is desired, and then in fall after seed has matured.
Weeping Lovegrass & Service lespedeza fairly uniform plant distribution	5-10-10	500	11.5	Spring the year following establishment and every 3-4 years thereafter.	Not required. not closer than 4" if occasional mowing is desired, and fall after sericea has matured.
Red & chewings fescue, Kentucky bluegrass, hard fescue mixture:	20-10-10	250 100	5.8 2.3	September, 30 days later December, May 20-June-30, if needed.	Mow no closer than 2" for red fescue and Ky bluegrass; and closer than 3" for fescue.

TEMPORARY SEEDING MIXTURES FOR THE PIEDMONT AREA

TABLE 26

TEMPORARY SEEDINGS BY RATES, DEPTHS, AND DATES

Planting depth (1)	Seeding zones (2) and Seeding Date (3)								
	7a and 7b			6b			6a and 5b		
(Inches)	2/1-4/30	5/1-8/14	8/15-11/30	3/1-4/30	5/1-8/14	8/15-11/15	3/15-5/31	6/1-7/31	8/1-10/31
	X X X	- - -	BY 10/15 - X	X X X	- - -	BY 10/15 - X	X X X	- - -	BY 10/1 - X
	X X	X X	10/15 X	X X	X X	10/15 X	X X	X X	10/1 X
1/4-1/2	-	X	-	-	X	-	-	X	-
1/4-1/2	X	-	11/1	X	-	11/1	X	-	8/15
	-	X	-	-	X	-	-	X	-

(1) Applicable on slopes of 3:1 or flatter
(2) Refer to figure A - Adopted from USDA, ARS Miscellaneous Publication #1475, January 1990
(3) Between fall and spring seeding dates, use mulch only if ground is frozen and reseed when thawed
(4) May be used as a nurse crop for late fall/early winter permanent seedings, add 56 lbs/ac. to the permanent seeding mixture
(4) Maryland State Highway Administration Temporary Seed Mix
(5) May be used as a nurse crop for mid-summer permanent seedings. Add 2 lbs/ac to permanent seed mix.
(6) May be used as a nurse crop for mid-summer permanent seedings. Add 10 lbs/ac. to the permanent seeding mix.

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REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	23 SEP 2020	CITY OF CHARLOTTESVILLE COMMENTS			
2	08 FEB 2021	CITY OF CHARLOTTESVILLE COMMENTS			
3	03 MAY 2021	CITY OF CHARLOTTESVILLE COMMENTS			
4	16 JULY 2021	CITY OF CHARLOTTESVILLE COMMENTS			
5	17 AUG 2021	CITY OF CHARLOTTESVILLE COMMENTS			
6	10 SEPT 2021	CITY OF CHARLOTTESVILLE COMMENTS			

DESIGNED BY: LO, DG
DRAWN BY: LO
CHECKED BY: JT

09/30/2021
JIMMY L. TAGGART
Lic. No. 22841

1001 & 1002 GROVE STREET PUD
FINAL SITE PLAN AND VSMP
CHARLOTTESVILLE, VIRGINIA
EROSION CONTROL NARRATIVE

DATE: 02-20-2020
JOB: 8555
CONTOUR INTERVAL: 2 FT

SHEET: 15 OF 20

PREDEVELOPED DRAINAGE SUMMARY

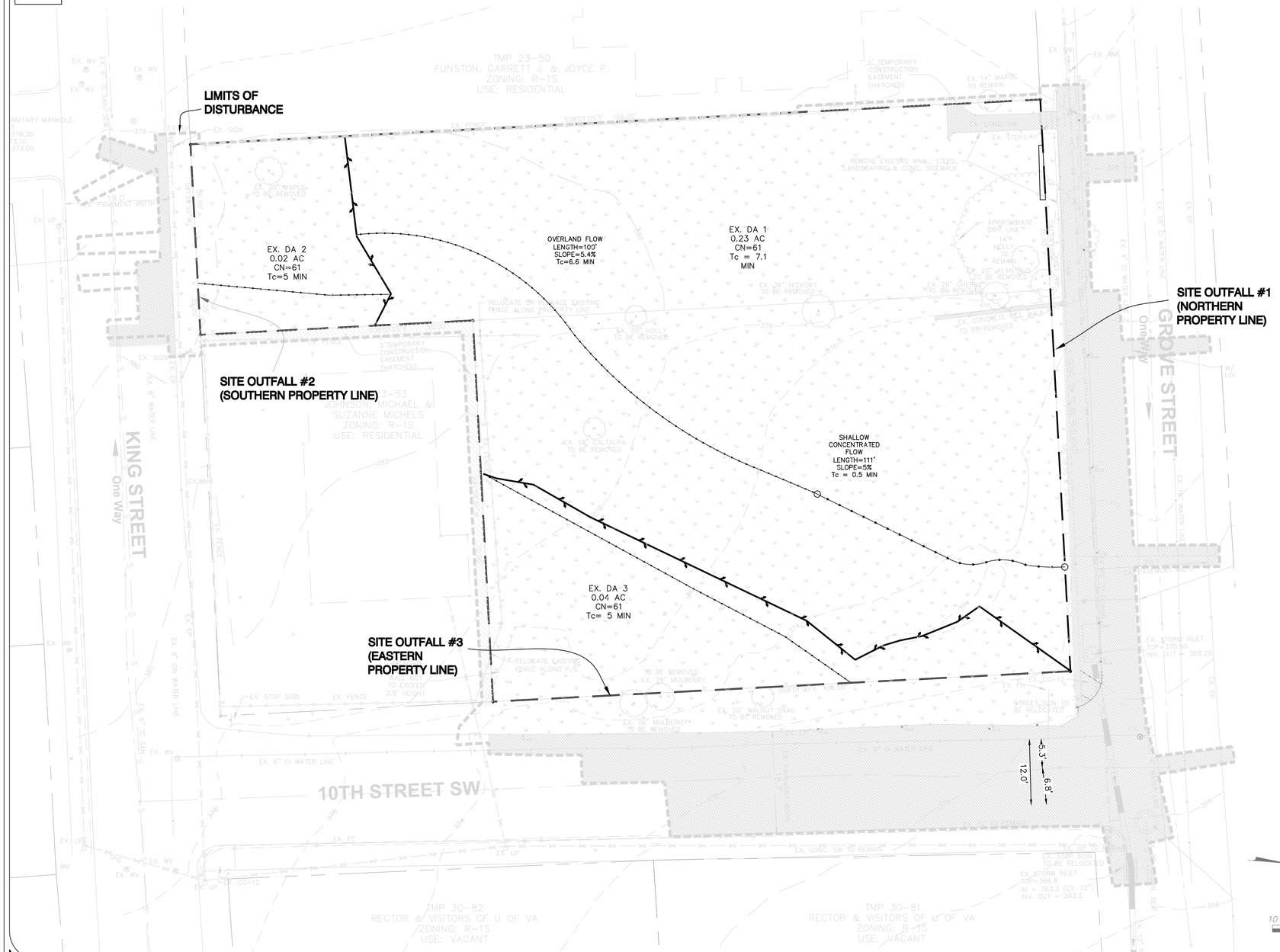
STORM EVENTS	PRE-DEV OUTFALL #1	PRE-DEV OUTFALL #2	PRE-DEV OUTFALL #3	PRE-DEV SITE
PRE-DEV. ACREAGE	0.23 Ac.	0.04 Ac.	0.03 Ac.	0.3 Ac.
1 YEAR	0.10 cfs	0.01 cfs	0.02 cfs	0.13 cfs
2 YEAR	0.21 cfs	0.02 cfs	0.04 cfs	0.26 cfs
10 YEAR	0.61 cfs	0.07 cfs	0.12cfs	0.79 cfs
100 YEAR	1.58 cfs	0.18 cfs	0.29 cfs	2.05 cfs

CITY OF CHARLOTTESVILLE - OUTFALL ACCOUNTING FORM

				PRE-DEVELOPED									POST-DEVELOPED								
OUTFALL DESIGNATION	LOA DESIGNATION	RECEIVING CHANNEL TYPE	COMPLIANCE METHOD	DA (AC)	OFFSITE CONTRIBUTING	CN	Tc (MIN)	Q1	Q2	Q10	Q100	RUNOFF VOLUME	UNITS	DA (AC)	OFFSITE CONTRIBUTING	CN	Tc (MIN)	Q1	Q2	Q10	Q100	RUNOFF VOLUME	UNITS
1	OUTFALL 1	MANMADE	B.1.b (EB)	0.23	N/A	61	7.1	0.1	0.21	0.61	1.58	0.0874	WATERSHED-INCH *DA	0.24	N/A	80	6.2	0.035	0.049	0.593	2.124	0.18	WATERSHED-INCH *DA
2	OUTFALL 2	MANMADE	B.1.b (EB)	0.04	N/A	61	5	0.012	0.024	0.07	0.175	31	FT^3 (1 YR DESIGN STORM	0.02	N/A	86	5	0.005	0.009	0.022	0.301	12	FT^3 (1 YR DESIGN STORM
3	SEE SHEET 18 (INLET ON GROVE)	MANMADE	B.1.a	0.03	N/A	61	5	0.012	0.024	0.07	0.175	52	FT^3 (1 YR DESIGN STORM	0.04	*SEE SHEET 18	81	5	0.022	0.035	0.073	0.558	45	FT^3 (1 YR DESIGN STORM
			TOTAL	0.30									TOTAL	0.3									

IMPERVIOUS

MANAGED TURF



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REVISIONS

NO.	DATE	DESCRIPTION
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5	17 AUG 2021	CITY OF CHARLOTTESVILLE COMMENTS
6	10 SEPT 2021	CITY OF CHARLOTTESVILLE COMMENTS

DESIGNED BY:	LO, DG
DRAWN BY:	LO
CHECKED BY:	JT

COMMONWEALTH OF VIRGINIA
09/30/2021
JIMMY L. TAGGART
Lic. No. 22841
PROFESSIONAL ENGINEER

1001 & 1002 GROVE STREET PUD
FINAL SITE PLAN AND VSMP
CHARLOTTESVILLE, VIRGINIA

VSMP - PRE-DEVELOPED ANALYSIS

DATE:	02-20-2020
JOB:	8555
CONTOUR INTERVAL: 2 FT	

SHEET: 16 OF 20

IMPERVIOUS
SITE - 0.13 AC

MANAGED TURF
SITE - 0.17 AC

PERVIOUS PAVERS

LAND COVER SUMMARY

SITE: (PARCEL BOUNDARY) AREA: 0.295 AC
MANAGED TURF: 0.13 AC (CN=61)
IMPERVIOUS: 0.17 AC (CN=98)
*PERMEABLE PAVERS CONSIDERED PERVIOUS FOR PURPOSE OF LAND COVER SUMMARY
COMPOSITE CN = 78

LIMITS OF DISTURBANCE: FOR PURPOSES OF WATER QUALITY ANALYSIS (VRRM SPREADSHEET)
AREA: 0.40 AC
MANAGED TURF: 0.16 AC (CN=61)
IMPERVIOUS: 0.24 (CN=98)
COMPOSITE CN = 82

OUTFALL 1 – NOTHERN PROPERTY LINE – SUMMARY
CONTRIBUTING POST-DEVELOPED DRAINAGE AREAS:
DA-1A (TO BIORETENTION)
DA-1B (UNDETAINED TO GUTTER ON GROVE STREET)
DA-1C (FRENCH DRAIN TO EXISTING STRUCTURE ON GROVE STREET)

CHANNEL COMPLIANCE:
OUTFALL 1 DRAINAGE AREAS DISCHARGE TO A MANMADE SYSTEM (CURB AND DROP INLET ON GROVE). OUTFALL ONE IS THEREFORE ANALYZED FOR COMPLIANCE IN ACCORDANCE WITH 9VAC25-870-66B-1b (REFERENCE TO ENERGY BALANCE METHODOLOGY). POST-DEVELOPED PEAK FLOWS ARE LESS THAN THAT REQUIRED BY THE ENERGY BALANCE EQUATION (SEE BELOW) DUE TO RETENTION WITHIN THE BIORETENTION FACILITY. SINCE ENERGY BALANCE IS USED TO SHOW COMPLIANCE, NO FURTHER ANALYSIS IS REQUIRED (9VAC25-870-66-B4).

$Q_{POST} < Q_{PRE} * (I.F) . * (R_{VPRE} / R_{VPOST})$
0.035cfs<0.097*(0.9).*((0.38 WATERSHED-INCH * 0.23AC) / 0.82 WATERSHED-INCH * 0.22 AC))
0.035<0.042
***ENERGY BALANCE ACHIEVED**

FLOOD PROTECTION COMPLIANCE:
FLOOD PROTECTION IS ANALYZED UTILIZING 9VAC25-870-66C-2B. SINCE $Q_{10POST} < Q_{10PRE}$ FLOOD PROTECTION REQUIREMENTS ARE MET AND NO FURTHER ANALYSIS IS REQUIRED.

$Q_{10POST} < Q_{10PRE}$
0.60CFS < 0.62CFS
*SEE H&H CALCULATIONS FOR BIORETENTION MODELING, DRAINAGE AREA HYDROGRAPH INFORMATION AND ROUTING DETAILS.

OUTFALL 2 – SOUTHERN PROPERTY LINE – SUMMARY
CONTRIBUTING POST-DEVELOPED DRAINAGE AREA:
DA-2A (PERMEABLE PAVER AREA)
DA-2B (UNDETAINED TO KING STREET)

CHANNEL COMPLIANCE:
OUTFALL 2 DRAINAGE AREAS DISCHARGE TO A MANMADE SYSTEM (ROADSIDE GUTTER TO DRAINAGE INLET ON KING STREET). OUTFALL TWO IS THEREFORE ANALYZED FOR COMPLIANCE IN ACCORDANCE WITH 9VAC25-870-66B-1-B (REFERENCE TO ENERGY BALANCE METHODOLOGY). POST-DEVELOPED PEAK FLOWS ARE LESS THAN THAT REQUIRED BY THE ENERGY BALANCE EQUATION (SEE BELOW) DUE TO STORAGE VOLUME WITHIN THE PERVIOUS PAVER SUBSURFACE AREA. FOR DA-2A THE ENTIRE VOLUME OF THE 1 YEAR-24HOUR STORM IS RETAINED WITHIN THE PERVIOUS PAVER SYSTEM. SINCE ENERGY BALANCE IS USED TO SHOW COMPLIANCE, NO FURTHER ANALYSIS IS REQUIRED (9VAC25-870-66-B4).

$Q_{POST} < Q_{PRE} * (I.F) . * (R_{VPRE} / R_{VPOST})$
0.005cfs<0.012*(0.9).*(31.1ft²/11.8ft²)
0.005cfs<0.028cfs
***ENERGY BALANCE ACHIEVED**

FLOOD PROTECTION COMPLIANCE:
FLOOD PROTECTION IS ANALYZED UTILIZING 9VAC25-870-66C-2B. SINCE $Q_{10POST} < Q_{10PRE}$ FLOOD PROTECTION REQUIREMENTS ARE MET AND NO FURTHER ANALYSIS IS REQUIRED.

$Q_{10POST} < Q_{10PRE}$
0.02cfs < 0.07cfs
*SEE H&H CALCULATIONS FOR PERMEABLE PAVER MODELING, DRAINAGE AREA HYDROGRAPH INFORMATION AND ROUTING DETAILS.

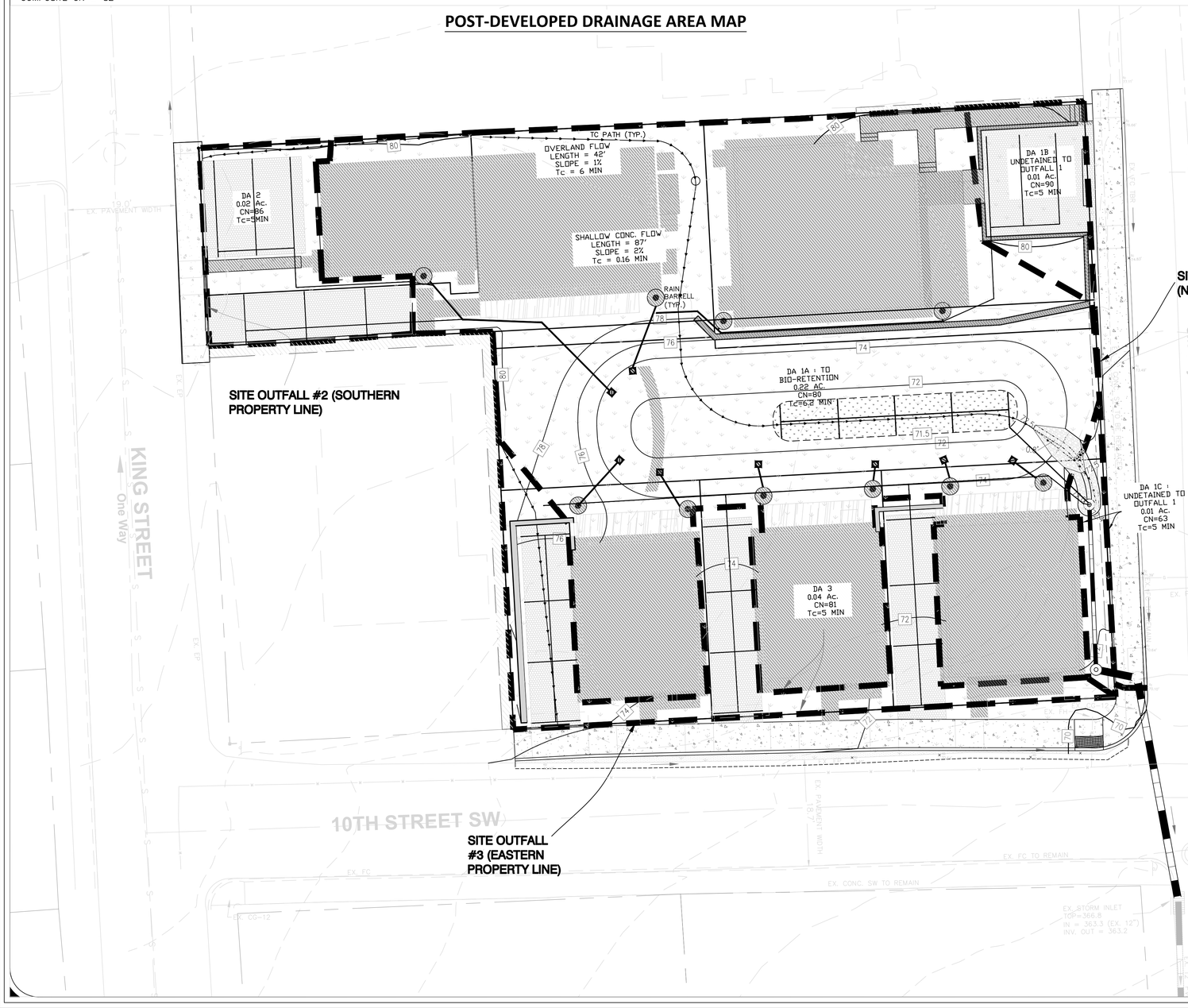
OUTFALL 3 – EASTERN PROPERTY LINE – SUMMARY
OUTFALL 3 DISCHARGES TO A MANMADE SYSTEM AND IS ANALYZED FOR COMPLIANCE WITH CHANNEL COMPLIANCE REQUIREMENTS (9VAC25-870-B-1a TO THE LIMITS OF ANALYSIS AS DEFINED IN 9VAC25-870-B-4A.) SEE SHEET 18 FOR THE CHANNEL COMPLIANCE ANALYSIS OF OUTFALL 3.

FLOOD PROTECTION COMPLIANCE:
FLOOD PROTECTION IS ANALYZED UTILIZING 9VAC25-870-66C-2B. SINCE $Q_{10POST} < Q_{10PRE}$ FLOOD PROTECTION REQUIREMENTS ARE MET AND NO FURTHER ANALYSIS IS REQUIRED.

$Q_{10POST} < Q_{10PRE}$
0.079CFS < 0.116CFS
*SEE H&H CALCULATIONS FOR PERMEABLE PAVER MODELING, DRAINAGE AREA HYDROGRAPH INFORMATION AND ROUTING DETAILS.

NOTE: RUNOFF REDUCTION FOR BIO-RETENTION AREA AND GREEN ROOFS APPLIED BY USING ADJUSTED CN VALUES AND POSTDEVELOPED RUN-OFF VOLUMES FROM VRRM SPREADSHEET. RUN-OFF REDUCTION FOR PERVIOUS PAVER AREAS APPLIED BY MODELING PAVERS STORAGE AREA AS DETENTION FACILITY WITH A WEIR AROUND THE ENTIRE PERIMITER AT THE TOP OF THE NO.57 STORAGE LAYER.

POST-DEVELOPED DRAINAGE AREA MAP



POST-DEVELOPED DRAINAGE AREA SUMMARY TABLE

DRAINAGE AREA	TOTAL AREA (AC)	TOTAL AREA (SF)	MANAGED TURF (CN - 61)	IMPERVIOUS (CN - 98)	PERVIOUS PAVERS (CN-98)	COMPOSITE CN	RR CN (1YR, 10YR - FROM VRRM)	OUTFALL
DA-1A	0.22	9772	4792	4980	0	80	72,75	OUTFALL 1
DA-1B	0.01	579	120	90	369	90	86,87	OUTFALL 1
DA-1C	0.01	450	420	30	0	63	N/A	OUTFALL 1
DA-2A	0.01	279	231	48	0	67	N/A	OUTFALL 2
DA-2B	0.01	594	0	0	594	98	NOT USED	OUTFALL 2
DA-3A	0.02	918	0	0	918	98	N/A	OUTFALL 3
DA-3B	0.02	705	485	220	0	73	NOT USED	OUTFALL 3

*Note: drainage areas 2b and 3b are paver areas seperated for the purpose of modeling storage within the paver stone storage area. These areas are not representative of drainage divides.

SCALE 1"=10'
10 0 10 20
SCALE IN FEET

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DESIGNED BY:	LO, DG
DRAWN BY:	LO
CHECKED BY:	JT

COMMONWEALTH OF VIRGINIA
09/30/2021
JIMMY L. TAGGART
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1001 & 1002 GROVE STREET PUD
FINAL SITE PLAN AND VSMP
CHARLOTTESVILLE, VIRGINIA
VSMP - POST DEVELOPED ANALYSIS

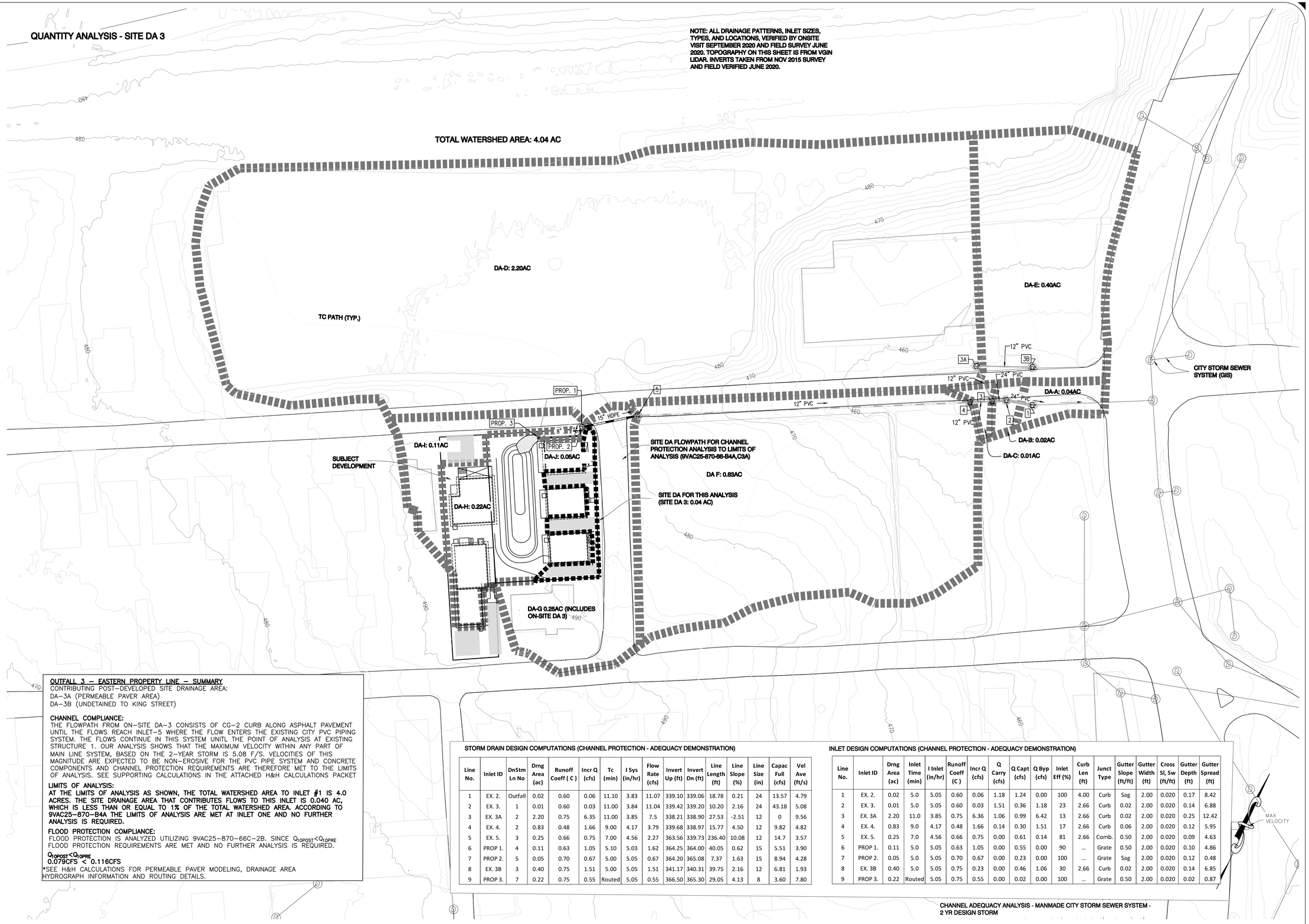
DATE:	02-20-2020
JOB:	8555
CONTOUR INTERVAL:	2 FT

SHEET: 17 OF 20

Attachment B

QUANTITY ANALYSIS - SITE DA 3

NOTE: ALL DRAINAGE PATTERNS, INLET SIZES, TYPES, AND LOCATIONS, VERIFIED BY ONSITE VISIT SEPTEMBER 2020 AND FIELD SURVEY JUNE 2020. TOPOGRAPHY ON THIS SHEET IS FROM VGIN LIDAR. INVERTS TAKEN FROM NOV 2015 SURVEY AND FIELD VERIFIED JUNE 2020.



OUTFALL 3 – EASTERN PROPERTY LINE – SUMMARY
CONTRIBUTING POST-DEVELOPED SITE DRAINAGE AREA:
DA-3A (PERMEABLE PAVER AREA)
DA-3B (UNDETAINED TO KING STREET)

CHANNEL COMPLIANCE:
THE FLOWPATH FROM ON-SITE DA-3 CONSISTS OF CG-2 CURB ALONG ASPHALT PAVEMENT UNTIL THE FLOWS REACH INLET-5 WHERE THE FLOW ENTERS THE EXISTING CITY PVC PIPING SYSTEM. THE FLOWS CONTINUE IN THIS SYSTEM UNITL THE POINT OF ANALYSIS AT EXISTING STRUCTURE 1. OUR ANALYSIS SHOWS THAT THE MAXIMUM VELOCITY WITHIN ANY PART OF MAIN LINE SYSTEM, BASED ON THE 2-YEAR STORM IS 5.08 F/S. VELOCITIES OF THIS MAGNITUDE ARE EXPECTED TO BE NON-EROSIVE FOR THE PVC PIPE SYSTEM AND CONCRETE COMPONENTS AND CHANNEL PROTECTION REQUIREMENTS ARE THEREFORE MET TO THE LIMITS OF ANALYSIS. SEE SUPPORTING CALCULATIONS IN THE ATTACHED H&H CALCULATIONS PACKET

LIMITS OF ANALYSIS:
AT THE LIMITS OF ANALYSIS AS SHOWN, THE TOTAL WATERSHED AREA TO INLET #1 IS 4.0 ACRES. THE SITE DRAINAGE AREA THAT CONTRIBUTES FLOWS TO THIS INLET IS 0.040 AC, WHICH IS LESS THAN OR EQUAL TO 1% OF THE TOTAL WATERSHED AREA. ACCORDING TO 9VAC25-870-B4A THE LIMITS OF ANALYSIS ARE MET AT INLET ONE AND NO FURTHER ANALYSIS IS REQUIRED.

FLOOD PROTECTION COMPLIANCE:
FLOOD PROTECTION IS ANALYZED UTILIZING 9VAC25-870-66C-2B. SINCE $Q_{10POST} < Q_{10PRE}$
FLOOD PROTECTION REQUIREMENTS ARE MET AND NO FURTHER ANALYSIS IS REQUIRED.

$Q_{10POST} < Q_{10PRE}$
0.079CFS < 0.116CFS
*SEE H&H CALCULATIONS FOR PERMEABLE PAVER MODELING, DRAINAGE AREA HYDROGRAPH INFORMATION AND ROUTING DETAILS.

STORM DRAIN DESIGN COMPUTATIONS (CHANNEL PROTECTION - ADEQUACY DEMONSTRATION)

Line No.	Inlet ID	DnStm Ln No	Drng Area (ac)	Runoff Coeff (C)	Incr Q (cfs)	Tc (min)	I Sys (in/hr)	Flow Rate (cfs)	Invert Up (ft)	Invert Dn (ft)	Line Length (ft)	Line Slope (%)	Line Size (in)	Capac Full (cfs)	Vel Ave (ft/s)
1	EX. 2.	Outfall	0.02	0.60	0.06	11.10	3.83	11.07	339.10	339.06	18.78	0.21	24	13.57	4.79
2	EX. 3.	1	0.01	0.60	0.03	11.00	3.84	11.04	339.42	339.20	10.20	2.16	24	43.18	5.08
3	EX. 3A	2	2.20	0.75	6.35	11.00	3.85	7.5	338.21	338.90	27.53	-2.51	12	0	9.56
4	EX. 4.	2	0.83	0.48	1.66	9.00	4.17	3.79	339.68	338.97	15.77	4.50	12	9.82	4.82
5	EX. 5.	3	0.25	0.66	0.75	7.00	4.56	2.27	363.56	339.73	236.40	10.08	12	14.7	3.57
6	PROP 1.	4	0.11	0.63	1.05	5.10	5.03	1.62	364.25	364.00	40.05	0.62	15	5.51	3.90
7	PROP 2.	5	0.05	0.70	0.67	5.00	5.05	0.67	364.20	365.08	7.37	1.63	15	8.94	4.28
8	EX. 3B	3	0.40	0.75	1.51	5.00	5.05	1.51	341.17	340.31	39.75	2.16	12	6.81	1.93
9	PROP 3.	7	0.22	0.75	0.55	Routed	5.05	0.55	366.50	365.30	29.05	4.13	8	3.60	7.80

INLET DESIGN COMPUTATIONS (CHANNEL PROTECTION - ADEQUACY DEMONSTRATION)

Line No.	Inlet ID	Drng Area (ac)	Inlet Time (min)	I Inlet (in/hr)	Runoff Coeff (C)	Incr Q (cfs)	Q Carry (cfs)	Q Capt (cfs)	Q Byp (cfs)	Inlet Eff (%)	Curb Len (ft)	Junct Type	Gutter Slope (ft/ft)	Gutter Width (ft)	Cross Sl, Sw (ft/ft)	Gutter Depth (ft)	Gutter Spread (ft)
1	EX. 2.	0.02	5.0	5.05	0.60	0.06	1.18	1.24	0.00	100	4.00	Curb	Sag	2.00	0.020	0.17	8.42
2	EX. 3.	0.01	5.0	5.05	0.60	0.03	1.51	0.36	1.18	23	2.66	Curb	0.02	2.00	0.020	0.14	6.88
3	EX. 3A	2.20	11.0	3.85	0.75	6.36	1.06	0.99	6.42	13	2.66	Curb	0.02	2.00	0.020	0.25	12.42
4	EX. 4.	0.83	9.0	4.17	0.48	1.66	0.14	0.30	1.51	17	2.66	Curb	0.06	2.00	0.020	0.12	5.95
5	EX. 5.	0.25	7.0	4.56	0.66	0.75	0.00	0.61	0.14	81	2.66	Comb.	0.50	2.00	0.020	0.09	4.63
6	PROP 1.	0.11	5.0	5.05	0.63	1.05	0.00	0.55	0.00	90	...	Grate	0.50	2.00	0.020	0.10	4.86
7	PROP 2.	0.05	5.0	5.05	0.70	0.67	0.00	0.23	0.00	100	...	Grate	Sag	2.00	0.020	0.12	0.48
8	EX. 3B	0.40	5.0	5.05	0.75	0.23	0.00	0.46	1.06	30	2.66	Curb	0.02	2.00	0.020	0.14	6.85
9	PROP 3.	0.22	Routed	5.05	0.75	0.55	0.00	0.02	0.00	100	...	Grate	0.50	2.00	0.020	0.02	0.87

CHANNEL ADEQUACY ANALYSIS - MANMADE CITY STORM SEWER SYSTEM - 2 YR DESIGN STORM

30 0 30 60 90
SCALE: 1" = 30'

ROUDABUSH, GALE & ASSOC., INC.
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REVISIONS

NO.	DATE	DESCRIPTION
1	23 SEP 2020	CITY OF CHARLOTTESVILLE COMMENTS
2	09 FEB 2021	CITY OF CHARLOTTESVILLE COMMENTS
3	21 MAY 2021	CITY OF CHARLOTTESVILLE COMMENTS
4	15 JULY 2021	CITY OF CHARLOTTESVILLE COMMENTS
5	17 AUG 2021	CITY OF CHARLOTTESVILLE COMMENTS
6	10 SEPT 2021	CITY OF CHARLOTTESVILLE COMMENTS

DESIGNED BY: LO, DG
DRAWN BY: LO
CHECKED BY: JT

COMMONWEALTH OF VIRGINIA
09/30/2021
JIMMY L. TAGGART
Lic. No. 22841
PROFESSIONAL ENGINEER

1001 & 1002 GROVE STREET PUD
FINAL SITE PLAN AND VSMP

CHARLOTTESVILLE, VIRGINIA

VSMP LIMITS OF ANALYSIS

DATE: 02-20-2020
JOB: 8555
CONTOUR INTERVAL: 2 FT

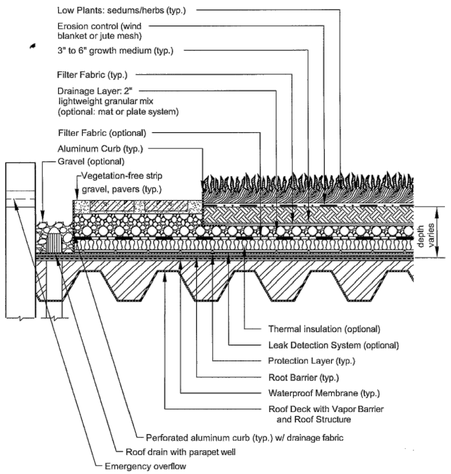


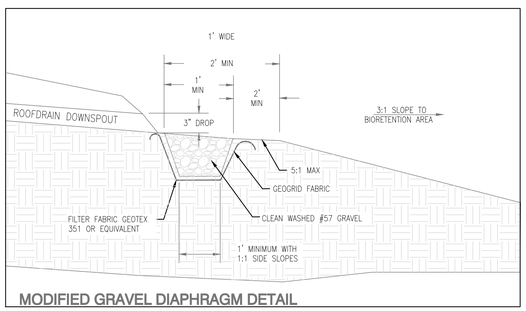
Figure 5.2. Typical Section – Extensive Vegetated Roof (Source: Northern VA Regional Commission)

Table 5.3. Vegetated Roof Design Guidance

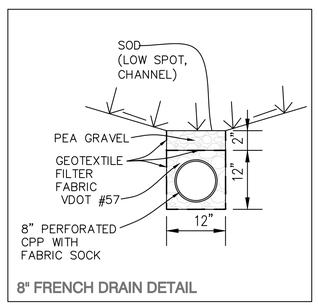
Level 1 Design (RR:45; TP:0; TN:0)	Level 2 Design (RR: 60; TP:0; TN:0)
Tv = 1.0 (Rv)[1] (A)/12	Tv = 1.1 (Rv) [1] (A)/12
Depth of media up to 4 inches	Media depth 4 to 8 inches
Drainage System	2-inch stone drainage layer
No more than 20% organic matter in media	No more than 10% organic matter in media
All Designs: Must be in conformance to ASTM (2005) International Green (Vegetated) Roof Stds.	
[1]Rv represents the runoff coefficient for a conventional roof, which will usually be 0.95. The runoff reduction rate applied to the vegetated roof is for "capturing" the Treatment Volume (Tv) compared to what a conventional roof would produce as runoff.	

TREATMENT VOLUME CALCULATION
TOTAL GREEN ROOF AREA = 435SF
$Tv_{REQUIRED}$ = 34 FT^3
$Tv_{PROVIDED}$ = 1.0(Rv)(A)/(12)
= 1.0(0.95)(435)/12 = 34.44FT^3
34.44 FT^3 > 34.00 FT^3
$Tv_{PROVIDED}$ > $Tv_{REQUIRED}$

GREEN ROOF DETAIL AND CALCULATIONS

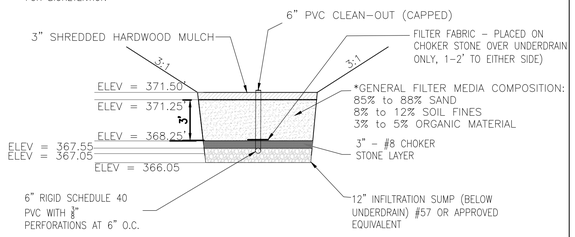


MODIFIED GRAVEL DIAPHRAGM DETAIL



8" FRENCH DRAIN DETAIL

*TAKEN FROM VA DEQ BMP CLEARING HOUSE DESIGN SPECIFICATION No.9 FOR BIORETENTION



SIZING FOR BIORETENTION FACILITY (LEVEL 2 DESIGN):

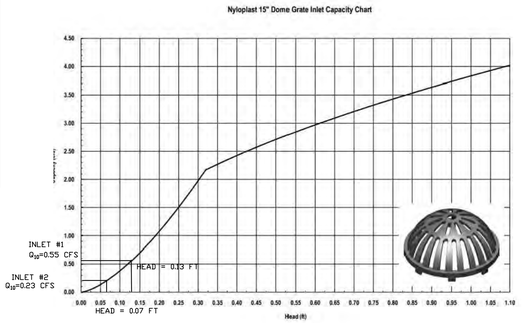
SURFACE AREA REQUIRED = [T(V)BMP / STORAGE DEPTH]
[444FT^3 / [(1' PONDING) + (3.0' FILTER MEDIA X 0.25 VOID) + (0.25' STONE X 0.40 VOID)] = 206 SF
SURFACE AREA PROVIDED: 293 SF

PRETREATMENT CELL CALCULATION
REQUIRED VOLUME = 15%Tv
= (.15)(498 FT^3)
= 74.7 FT^3
PROVIDED VOLUME = 75.2 FT^3

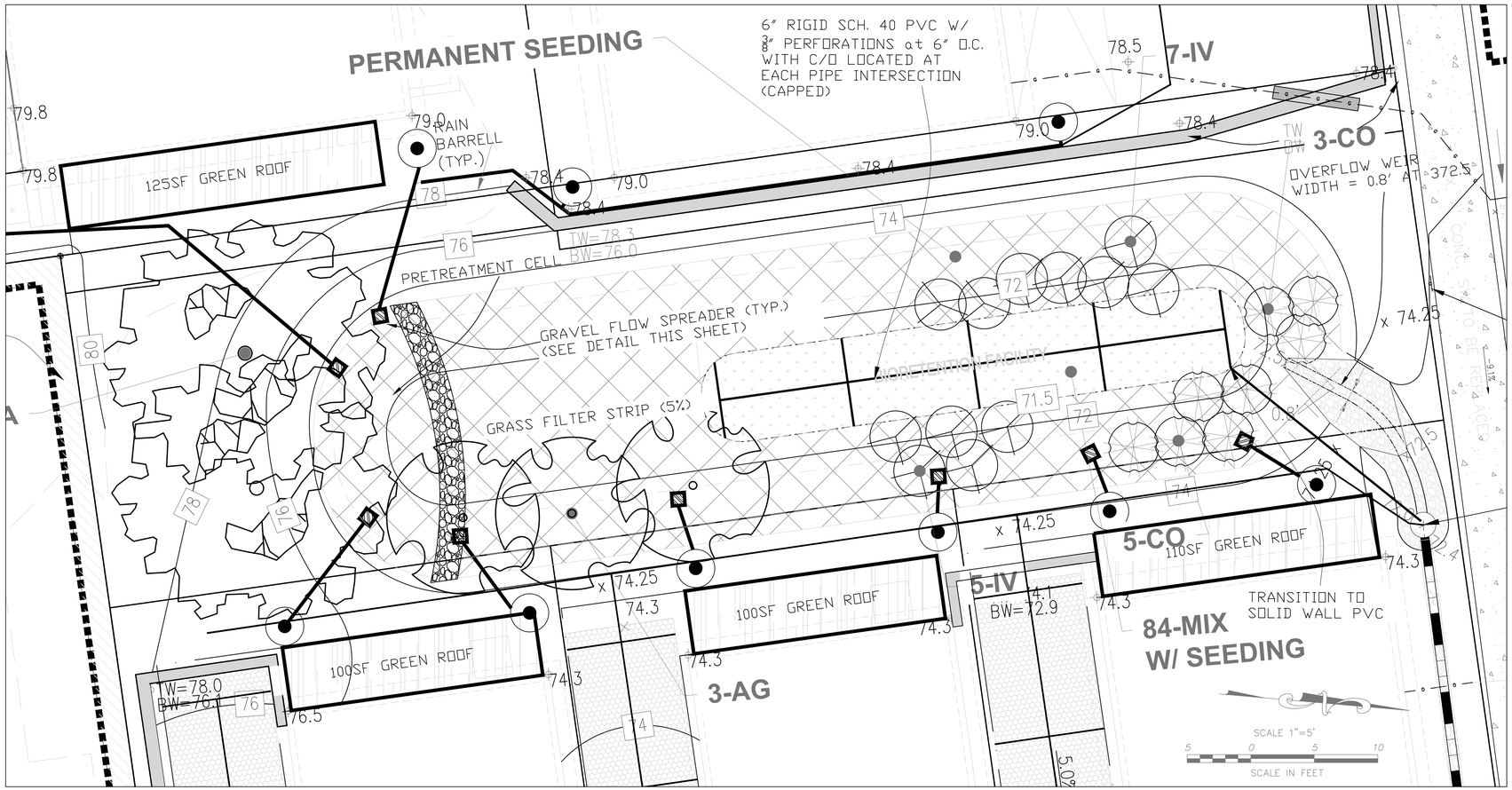
BIORETENTION FACILITY
A:A CROSS SECTION
LAT 38.029632, LONG -78.497161

BMP Summary Table	Bioretention Facility	Green Roofs (4)	Pervious Pavers (6)
New Construction/Redev.	Redevelopment	Redevelopment	Redevelopment
Land Disturbance	0.40 Ac	0.40 Ac	0.40 Ac
Total Drainage Area to BMP	0.23 Ac	0.01 Ac	0.04 Ac
Impervious DA to BMP	0.12 Ac	0.01 Ac	0.04 Ac
Pervious DA to BMP	0.11 Ac	0 Ac	0 Ac
Required Ph RR	0.31 lbs/yr	0.31 lbs/yr	0.31 lbs/yr
Provided Ph RR	0.28 lbs/yr	0.02 lbs/yr	0.05 lbs/yr
Provided N RR	2.04 lbs/yr	0.07 lbs/yr	0.36 lbs/yr
Hydrologic Unit Code	2080204	2080204	2080204
Impaired Surface Water	Unnamed Tributary to Rock Creek	Unnamed Tributary to Rock Creek	Unnamed Tributary to Rock Creek
VA SWM Handbook BMP	Bioretention Facility	Green roof	Pervious Pavers
Maintenance activities	See sheet 16	See sheet 16	See sheet 16
Inspections	See sheet 16	See sheet 16	See sheet 16
Latitude/Longitude BMP	38.029632, -78.497161	Unit 1: 38.029488, 78.497155 Unit 3: 38.029721, 78.497071 Unit 4: 38.029621, 78.496056 Unit 5: 38.029540, 78.497027	Unit 1: 38.029327, 78.497114 Unit 2: 38.029707, 78.497287 Unit 3: 38.029724, 78.496953 Unit 4: 38.029649, 78.496940 Unit 5: 38.029550, 78.496922 Unit 6: 38.029305, 78.497167
Latitude/Longitude Outfall	38.029738, -78.497124	N/A	N/A

BMP SUMMARY TABLE

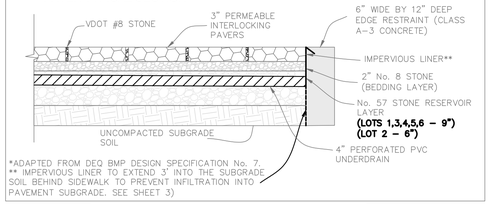


NYOPLAST DOME INLET CAPACITY CHART



BIORETENTION FACILITY PLANTING PLAN

PERMEABLE INTERLOCKING PAVER TYPICAL SECTION*



*ADAPTED FROM DEQ BMP DESIGN SPECIFICATION No. 7.
** IMPERVIOUS LINER TO EXTEND 3' INTO THE SUBGRADE SOIL BEHIND SIDEWALK TO PREVENT INFILTRATION INTO PAVEMENT SUBGRADE. SEE SHEET 3)

TREATMENT VOLUME CALCULATION
TOTAL PERMEABLE PAVEMENT AREA = 1881SF
$Tv_{REQUIRED}$ = 138 FT^3 (from VRRM)
$Tv_{PROVIDED}$ = 1.0(Rv)(A)/(12)
= 1.0(0.95)(1881)/12 = 1786.95FT^3
1787 FT^3 > 138 FT^3
$Tv_{PROVIDED}$ > $Tv_{REQUIRED}$

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REVISIONS

NO.	DATE	DESCRIPTION
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2	08 FEB 2021	CITY OF CHARLOTTESVILLE COMMENTS
3	03 MAY 2021	CITY OF CHARLOTTESVILLE COMMENTS
4	16 JULY 2021	CITY OF CHARLOTTESVILLE COMMENTS
5	17 AUG 2021	CITY OF CHARLOTTESVILLE COMMENTS
6	10 SEPT 2021	CITY OF CHARLOTTESVILLE COMMENTS

DESIGNED BY: LO, DG
DRAWN BY: LO
CHECKED BY: JT

COMMONWEALTH OF VIRGINIA
09/30/2021
JIMMY L. TAGGART
Lic. No. 22841
PROFESSIONAL ENGINEER

1001 & 1002 GROVE STREET PUD
FINAL SITE PLAN AND VSMP
CHARLOTTESVILLE, VIRGINIA
VSMP - DETAILS

DATE: 02-20-2020
JOB: 8555
CONTOUR INTERVAL: 2 FT

SHEET: 19 OF 20

SEE FULL VRRM SPREADSHEET IN CALCULATION PACKET

Project Name:	Grove Street VSMP	CLEAR ALL (Ctrl+Shift+R)	data input cells
Date:	9/18/2020		constant values
Linear Development Project?	No		calculation cells
			final results

Site Information

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area *(acres)* → 0.40

Maximum reduction required:	10%
The site's net increase in impervious cover (acres) is:	0.16
Post-Development TP Load Reduction for Site (lb/yr):	0.31

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

Pre-ReDevelopment Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed forest/open space					0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be		0.32			0.32
Impervious Cover (acres)		0.08			0.08
					0.40

Post-Development Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested					0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be		0.16			0.16
Impervious Cover (acres)		0.24			0.24
Area Check	OK.	OK.	OK.	OK.	0.40

Constants

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

Runoff Coefficients (Rv)

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

LAND COVER SUMMARY -- PRE-REDEVELOPMENT

Land Cover Summary-Pre		
Pre-ReDevelopment	**Listed**	**Adjusted**[1]
Forest/Open Space Cover (acres)	0.00	0.00
Weighted Rv(forest)	0.00	0.00
% Forest	0%	0%
Managed Turf Cover (acres)	0.32	0.16
Weighted Rv(turf)	0.20	0.20
% Managed Turf	80%	67%
Impervious Cover (acres)	0.08	0.08
Rv(impervious)	0.95	0.95
% Impervious	20%	33%
Total Site Area (acres)	**0.40**	**0.24**
Site Rv	**0.35**	**0.45**
Treatment Volume and Nutrient Load		
Pre-ReDevelopment Treatment Volume (acre-ft)	0.0117	0.0090
Pre-ReDevelopment Treatment Volume (cubic feet)	508	392
Pre-ReDevelopment TP Load (lb/yr)	**0.32**	**0.25**
Pre-ReDevelopment TP Load per acre (lb/acre/yr)	0.80	1.03
Baseline TP Load (lb/yr) (0.41 lbs/acre/yr applied to pre-redevelopment area excluding pervious land proposed for new impervious cover)		*0.10*

LAND COVER SUMMARY – POST DEVELOPMENT

Land Cover Summary-Post (Final)	
Post ReDev. & New Impervious	
Forest/Open Space Cover (acres)	0.00
Weighted Rv(forest)	0.00
% Forest	0%
Managed Turf Cover (acres)	0.16
Weighted Rv (turf)	0.20
% Managed Turf	40%
Impervious Cover (acres)	0.24
Rv(impervious)	0.95
% Impervious	60%
Final Site Area (acres)	**0.40**
Final Post Dev Site Rv	**0.65**
Final Post-Development Treatment Volume (acre-ft)	0.0217
Final Post-Development Treatment Volume (cubic feet)	944
Final Post-Development TP Load (lb/yr)	**0.59**
Final Post-Development TP Load per acre (lb/acre/yr)	1.48

Land Cover Summary-Post	
Post-ReDevelopment	
Forest/Open Space Cover (acres)	0.00
Weighted Rv(forest)	0.00
% Forest	0%
Managed Turf Cover (acres)	0.16
Weighted Rv (turf)	0.20
% Managed Turf	67%
ReDev. Impervious Cover (acres)	0.08
Rv(impervious)	0.95
% Impervious	33%
Total ReDev. Site Area (acres)	**0.24**
ReDev Site Rv	**0.45**
Post-ReDevelopment Treatment Volume (acre-ft)	0.0090
Post-ReDevelopment Treatment Volume (cubic feet)	392
Post-ReDevelopment Load (TP) (lb/yr)*	0.25
Post-ReDevelopment TP Load per acre (lb/acre/yr)	1.03
Max. Reduction Required (Below Pre-ReDevelopment Load)	10%
TP Load Reduction Required for Redeveloped Area (lb/yr)	**0.02**

Land Cover Summary-Post	
Post-Development New Impervious	
New Impervious Cover (acres)	0.16
Rv(impervious)	0.95
Post-Development Treatment Volume (acre-ft)	0.0127
Post-Development Treatment Volume (cubic feet)	552
Post-Development TP Load (lb/yr)	0.35
TP Load Reduction Required for New Impervious Area (lb/yr)	**0.28**

[1] Adjusted Land Cover Summary:
Pre ReDevelopment land cover minus pervious land cover (forest/open space or managed turf) acreage proposed for new impervious cover.

Adjusted total acreage is consistent with Post-ReDevelopment acreage (minus acreage of new impervious cover).

Column I shows load reduction requirement for new impervious cover (based on new development load limit, 0.41 lbs/acre/year).

Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr)	**0.31**

Nitrogen Loads (Informational Purposes Only)

Pre-ReDevelopment TN Load (lb/yr)	2.28	Final Post-Development TN Load (Post-ReDevelopment & New Impervious) (lb/yr)	4.24

Site Results (Water Quality Compliance)

Area Checks	D.A. A	D.A. B	D.A. C	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)	0.11	0.04	0.04	0.00	0.00	OK.
IMPERVIOUS COVER TREATED (ac)	0.11	0.04	0.00	0.00	0.00	OK.
MANAGED TURF AREA (ac)	0.11	0.00	0.00	0.00	0.00	OK.
MANAGED TURF AREA TREATED (ac)	0.11	0.00	0.00	0.00	0.00	OK.
AREA CHECK	OK.	OK.	OK.	OK.	OK.	

Site Treatment Volume (ft^3) 944

Runoff Reduction Volume and TP By Drainage Area

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	TOTAL
RUNOFF REDUCTION VOLUME ACHIEVED (ft^3)	370	62	0	0	0	433
TP LOAD AVAILABLE FOR REMOVAL (lb/yr)	0.29	0.09	0.09	0.00	0.00	0.46
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.26	0.05	0.00	0.00	0.00	0.31
TP LOAD REMAINING (lb/yr)	0.03	0.04	0.09	0.00	0.00	0.15
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	1.90	0.36	0.00	0.00	0.00	2.27

Total Phosphorus

FINAL POST-DEVELOPMENT TP LOAD (lb/yr)	0.59
TP LOAD REDUCTION REQUIRED (lb/yr)	0.31
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.31
TP LOAD REMAINING (lb/yr):	0.28
REMAINING TP LOAD REDUCTION REQUIRED (lb/yr):	0.00 **

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

Total Nitrogen (For Information Purposes)

POST-DEVELOPMENT LOAD (lb/yr)	4.24
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	2.27
REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr)	1.98

1. Vegetated Roof (RR)

1.a. Vegetated Roof #1 (Spec #5)	45		0.01		16	19	34	0		0.02	0.01	0.01	6.b. Bioretention #2
1.b. Vegetated Roof #2 (Spec #5)	60				0	0	0	0		0.00	0.00	0.00	

6. Bioretention (RR)

6.a. Bioretention #1 or Micro-Bioretention #1 or Urban Bioretention (Spec #9)	40			0	0	0	0	25	0.00	0.00	0.00	0.00
6.b. Bioretention #2 or Micro-Bioretention #2 (Spec #9)	80	0.11	0.10	19	355	89	444	50	0.01	0.27	0.25	0.03

3. Permeable Pavement (RR)

3.a. Permeable Pavement #1 (Spec #7)	45		0.04	0	62	76	138	25	0.00	0.09	0.05	0.04
3.b. Permeable Pavement #2 (Spec #7)	75				0	0	0	25		0.00	0.00	0.00

VA DEQ STORMWATER DESIGN SPECIFICATION NO. 7 **PERMEABLE PAVEMENT**

Table 7.7. Different Permeable Pavement Specifications

Material	Specification	Notes
Permeable Interlocking Concrete Pavers	Surface open area: 5% to 15%. Thickness: 3.125 inches for vehicles. Compressive strength: 55 Mpa. Open void fill media: aggregate	Must conform to ASTM C936 specifications. Reservoir layer required to support the structural load.

SECTION 8: CONSTRUCTION

Experience has shown that proper installation is absolutely critical to the effective operation of a permeable pavement system.

8.1 Necessary Erosion & Sediment Controls

- All permeable pavement areas should be fully protected from sediment intrusion by silt fence or construction fencing, particularly if they are intended to infiltrate runoff.
- Permeable pavement areas should remain outside the limit of disturbance during construction to prevent soil compaction by heavy equipment. Permeable pavement areas should be clearly marked on all construction documents and grading plans. To prevent soil compaction, heavy vehicular and foot traffic should be kept out of permeable pavement areas during and immediately after construction.
- During construction, care should be taken to avoid tracking sediments onto any permeable pavement surface to avoid clogging.
- Any area of the site intended ultimately to be a permeable pavement area should generally not be used as the site of a temporary sediment basin. Where locating a sediment basin on an area intended for permeable pavement is unavoidable, the invert of the sediment basin must be a minimum of 2 feet above the final design elevation of the bottom of the aggregate reservoir course. All sediment deposits in the excavated area should be carefully removed prior to installing the sub-base, base and surface materials.

8.2. Permeable Pavement Construction Sequence

The following is a typical construction sequence to properly install permeable pavement, which may need to be modified to depending on whether Porous Asphalt (PA), Pervious Concrete (PC) or Interlocking Paver (IP) designs are employed.

Step 1. Construction of the permeable pavement shall only begin after the entire contributing drainage area has been stabilized. The proposed site should be checked for existing utilities prior to any excavation. Do not install the system in rain or snow, and do not install frozen aggregate

Step 2. As noted above, temporary erosion and sediment (E&S) controls are needed during installation to divert stormwater away from the permeable pavement area until it is completed. Special protection measures such as erosion control fabrics may be needed to protect vulnerable side slopes from erosion during the excavation process. The proposed permeable pavement area must be kept free from sediment during the entire construction process. Construction materials that are contaminated by sediments must be removed and replaced with clean materials.

Step 3. Where possible, excavators or backhoes should work from the sides to excavate the reservoir layer to its appropriate design depth and dimensions. For micro-scale and small-scale pavement applications, excavating equipment should have arms with adequate extension so they do not have to work inside the footprint of the permeable pavement area (to avoid compaction). Contractors can use a cell construction approach, whereby the proposed permeable pavement area is split into 500 to 1000 sq. ft. temporary cells with a 10 to 15 foot earth bridge in between, so that cells can be excavated from the side. Excavated material should be placed away from the open excavation so as to not jeopardize the stability of the side walls.

Step 4. The native soils along the bottom and sides of the permeable pavement system should be scarified or tilled to a depth of 3 to 4 inches prior to the placement of the filter layer or filter fabric. In large scale paving applications with weak soils, the soil subgrade may need to be compacted to 95% of the Standard Proctor Density to achieve the desired load-bearing capacity. (NOTE: This effectively eliminates the infiltration function of the installation, and it must be addressed during hydrologic design.)

Step 5. The filter layer should be installed on the bottom of the reservoir layer and, where appropriate, filter fabric can be placed on the sides.

Step 6. Provide a minimum of 2 inches of aggregate above and below the underdrains. The underdrains should slope down towards the outlet at a grade of 0.5% or steeper. The up-gradient end of underdrains in the reservoir layer should be capped. Where an underdrain pipe is connected to a structure, there should be no perforations within 1 foot of the structure. Ensure that there are no perforations in clean-outs and observation wells within 1 foot of the surface.

Step 7. Spread 6-inch lifts of the appropriate clean, washed stone aggregate. Place at least 4 inches of additional aggregate above the underdrain, and then compact it using a vibratory roller in static mode until there is no visible movement of the aggregate. Do not crush the aggregate with the roller.

Step 8. Install over-drain if required and connect into outlet conveyance system.

Step 9. Install the desired depth of the bedding layer, depending on the type of pavement, as follows:

- **Pervious Concrete:** No bedding layer is used.
- **Porous Asphalt:** The bedding layer for porous asphalt pavement consists of 1 to 2 inches of clean, washed ASTM D 448 No.57 stone. The filter course must be leveled and pressed (choked) into the reservoir base with at least four (4) passes of a 10-ton steel drum static roller.
- **Interlocking Pavers:** The bedding layer for open-jointed pavement blocks should consist of 2 inches of washed ASTM D 448 No.8 stone.

Step 10. Install paving materials in accordance with manufacturer or industry specifications for the particular type of pavement.

8.3. Construction Inspection

Inspections before, during and after construction are needed to ensure that permeable pavement is built in accordance with these specifications. Use a detailed inspection checklist that requires sign-offs by qualified individuals at critical stages of construction and to ensure that the contractor's interpretation of the plan is consistent with the designer's intent. The basic elements of a permeable pavement construction checklist are provided at the end of this design specification.

Once the final construction inspection has been completed, log the GPS coordinates for each facility and submit them for entry into the local BMP maintenance tracking database.

PERMEABLE INTERLOCKING CONCRETE PAVERS INSPECTION REQUIREMENTS –

PAVERS MUST BE INSPECTED AT THE FOLLOWING POINTS:
a. WHEN THE FACILITY IS EXCAVATED AND GRADED, PRIOR TO INSTALLATION OF STONE LAYER, GEOTEXTILES, OR UNDERDRAINS
b. WHEN STONE SUMP LAYER AND UNDERDRAIN ARE PLACED, PRIOR TO PLACING STONE ABOVE UNDERDRAIN
c. BEFORE PLACEMENT OF SURFACE PAVEMENT MATERIAL
d. CONNECTION OF THE UNDERDRAIN TO THE STORM SYSTEM
e. FINAL COMPLETION AND VERIFICATION OF PAVEMENT PERMEABILITY

NOTE: IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE CITY INSPECTOR AND DEVELOPER'S APPOINTED PROJECT MANAGER TO INSPECT AT EACH STAGE LISTED ABOVE.

It may be advisable to divert the runoff from the first few runoff-producing storms away from larger permeable pavement applications, particularly when up-gradient conventional asphalt areas drain to the permeable pavement. This can help reduce the input of fine particles that are often produced shortly after conventional asphalt is laid down.

SECTION 9: MAINTENANCE

9.1. Maintenance Agreements

The Virginia Stormwater Management regulations (9 VAC 25-870) specify the circumstances under which a maintenance agreement must be executed between the owner and the VSMP authority, and sets forth inspection requirements, compliance procedures if maintenance is neglected, notification to the local program upon transfer of ownership, and right-of-entry for local program personnel.

- The regulations require that all post-construction BMPs, including Permeable Pavement installations, must be covered by a long term maintenance agreement and drainage easement to allow inspection and maintenance.
- The maintenance agreements should note which conventional parking lot maintenance tasks must be *avoided* (see **Section 9.2** below). Signs should be posted on larger parking lots to indicate their stormwater function and special maintenance requirements. When micro-scale or small-scale permeable pavement are installed on private residential lots, homeowners should be provided a simple document that explains the purpose of the Permeable Pavement and outlines (1) the routine maintenance needs, (2) the long-term maintenance plan, and (3) the basic parameters of the deed restriction, drainage easement or other mechanism enforceable by the VSMP Authority to help ensure that the permeable pavement system is maintained and functioning.
- The mechanism should, if possible, grant authority for the VSMP authority to access the property for inspection or corrective action.

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

A preventative maintenance task for large-scale applications involves regenerative air vacuum sweeping on a frequency consistent with the use and loadings encountered in the parking lot. Many consider an annual, dry-weather sweeping in the spring months to be important. The contract for sweeping should specify that a vacuum sweeper be used that does not use water spray, since spraying may lead to subsurface clogging. Vacuum settings for large-scale interlocking paver applications should be calibrated so they *do not* pick up the small stones between pavement blocks.

Table 7.8. Recommended Maintenance Tasks for Permeable 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 inspection • Spot 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 sweeper • Replace any necessary joint material	If clogged

[1] Required frequency of maintenance will depend on pavement use, traffic loads, and surrounding land use.

9.3. Maintenance Inspections

It is highly recommended that a spring maintenance inspection and cleanup be conducted at each permeable pavement site, particularly at large-scale applications.

Maintenance of permeable pavement is driven by annual inspections that evaluate the condition and performance of the practice. Any permeable pavement installation that captures external drainage area (run-on) should be inspected more frequently during the first year (four seasons) to ensure that there are no unexpected loads of sediment or pavement particulates from the contributing area. If so, the property owner should assess ways to limit the contributions, or the maintenance schedule should be adjusted to ensure the pavement does not become clogged.

The following are suggested routine annual maintenance inspection points for permeable pavements:

- The drawdown rate should be measured at the observation well for three (3) days following a storm event in excess of 1/2-inch in depth. If standing water is still observed in the well after three days, this is a clear sign that clogging is a problem.
- Inspect the surface of the permeable pavement for evidence of sediment deposition, organic debris, staining or ponding that may indicate surface clogging. If any signs of clogging are noted, schedule a vacuum sweeper (no brooms or water spray) to remove deposited material. Then, test sections by pouring water from a five gallon bucket to ensure they work.
- Inspect the structural integrity of the pavement surface, looking for signs of surface deterioration, such as slumping, cracking, spalling or broken pavers. Replace or repair affected areas, as necessary.
- Check inlets, pretreatment cells and any flow diversion structures for sediment buildup and structural damage. Note if any sediment needs to be removed.
- Inspect the condition of the observation well and make sure it is still capped.
- Generally inspect any contributing drainage area for any controllable sources of sediment or erosion.

An example maintenance inspection checklist for permeable pavement can be accessed in **Appendix 9-C** of **Chapter 9** of the *Virginia Stormwater Management Handbook* (2nd edition, 2013). Based on inspection results, specific maintenance tasks will be triggered and scheduled to keep the facility in operating condition.

Table 5.5. Extensive Vegetated Roof Material Specifications

Material	Specification
Roof	Structural Capacity should conform to ASTM E-2397-05, *Practice for Determination of Live Loads and Dead Loads Associated with Green (Vegetated) Roof Systems*. In addition, use standard test methods ASTM E2398-05 for *Water Capture and Media Retention of Geocomposite Drain Layers for Green (Vegetated) Roof Systems*, and ASTME 2399-05 for *Maximum Media Density for Dead Load Analysis*.
Waterproof Membrane	See Chapter 6 of Weiler and Scholz-Barth (2009) for waterproofing options that are designed to convey water horizontally across the roof surface to drains or gutter. This layer may sometimes act as a root barrier.
Root Barrier	Impermeable liner that impedes root penetration of the membrane.
Drainage Layer	1 to 2 inch layer of clean, washed granular material, such as ASTM D 448 size No. 8 stone. Roof drains and emergency overflow should be designed in accordance with VUSBC.
Filter Fabric	Needled, non-woven, polypropylene geotextile. Density (ASTM D3776) > 16 oz./sq. yd., or approved equivalent. Puncture resistance (ASTM D4833) > 220 lbs., or approved equivalent.
Growth Media	80% lightweight inorganic materials and 20% organic matter (e.g. well-aged compost). Media should have a maximum water retention capacity of around 30%. Media should provide sufficient nutrients and water holding capacity to support the proposed plant materials. Determine acceptable saturated water permeability using ASTM E2396-05.
Plant Materials	Sedum, herbaceous plants, and perennial grasses that are shallow-rooted, self-sustaining, and tolerant of direct sunlight, drought, wind, and frost. See ASTM E2400-06, *Guide for Selection, Installation and Maintenance of Plants for Green (Vegetated) Roof Systems*.

SECTION 8: CONSTRUCTION

8.1. Construction Sequence

Given the diversity of extensive vegetated roof designs, there is no typical step-by-step construction sequence for proper installation. The following general construction considerations are noted:

- Construct the roof deck with the appropriate slope and material.
- Install the waterproofing method, according to manufacturer's specifications.
- Conduct a flood or electronic test to ensure the system is water tight by placing at least 2 inches of water over the membrane for 48 hours to confirm the integrity of the waterproofing system.
- Add additional system components (e.g., insulation, root barrier, drainage layer and interior drainage system, and filter fabric) or modules, taking care not to damage the waterproofing. Drain collars and protective flashing should be installed to ensure free flow of excess stormwater.
- The growing media should be mixed prior to delivery to the site. Media should be spread evenly over the filter fabric surface. Allow for some settlement by adding additional medium depth. The growing media should be covered until planting to prevent weeds from growing. Sheets of exterior grade plywood can also be laid over the growing media to accommodate foot or wheelbarrow traffic. Foot traffic and equipment traffic should be limited over the growing media to reduce compaction.
- The growing media should be moistened prior to planting, and then planted with the ground cover and other plant materials, per the planting plan, or in accordance with ASTM E2400. Plants should be watered and the media saturated such that water is running from all the vegetated sections of the roof immediately after installation and routinely during establishment.
- It generally takes 12 to 18 months to fully establish the vegetated roof. An initial fertilization using slow release fertilizer (e.g., 14-14-14) with adequate minerals is often needed to support growth. (Pre-grown systems will often include the required fertilization required for establishment.) Temporary watering may also be needed during the first summer, if drought conditions persist. Hand weeding is also critical in the first two years (see Table 10.1 of Weiler and Scholz-Barth, 2009, for a photo guide of common rooftop weeds).
- Most construction contracts should contain a Care and Replacement Warranty that specifies a 75% minimum survival after the first growing season of species planted and a minimum effective vegetative ground cover of 75% for flat roofs and 90% for pitched roofs.

8.2. Construction Inspection

Inspections during construction are needed to ensure that the vegetated roof is built in accordance with these specifications. Detailed inspection checklists should be used that include sign-offs by qualified individuals at critical stages of construction and confirm that the contractor's interpretation of the plan is consistent with the intent of the designer and/or manufacturer.

An experienced installer should be retained to construct the vegetated roof system. The vegetated roof should be constructed in sections for easier inspection and maintenance access to the membrane and roof drains. Careful construction supervision is needed during several steps of vegetated roof installation, as follows:

- During placement of the waterproofing layer, to ensure that it is properly installed and watertight;
- During placement of the drainage layer and drainage system;
- During placement of the growing media, to confirm that it meets the specifications and is applied to the correct depth;
- Upon installation of plants, to ensure they conform to the planting plan;
- Before issuing use and occupancy approvals; and

An additional inspection should be conducted at the end of the first or second growing season to ensure desired surface cover specified in the Care and Replacement Warranty has been achieved.

Upon final inspection and acceptance, log the filtering practice's GPS coordinates and submit them for entry into the local BMP maintenance tracking database.

SECTION 9: MAINTENANCE

9.1. Maintenance Inspections and Ongoing Operations

Maintenance of a vegetated roof must be ensured through written documentation and an enforceable mechanism as per the VSMP regulations (4VAC50-60-112) between the VSMP authority and the property owner or manager. Documentation should include provisions for adequate notification or authorization for access to conduct inspections.

A vegetated roof should be inspected twice a year during the growing season to assess vegetative cover, and to look for leaks, drainage problems and any rooftop structural concerns (see **Table 5.6** below). In addition, the vegetated roof should be hand-weeded to remove invasive or volunteer plants, and plants/media should be added to repair bare areas (refer to ASTM E2400). Many practitioners also recommend an annual application of slow release fertilizer in the first five years after the vegetated roof is installed.

If a roof leak is suspected, it is advisable to perform an electric leak survey (i.e., Electrical Field Vector Mapping) to pinpoint the exact location, make localized repairs, and then reestablish system components and ground cover.

The use of herbicides, insecticides, and fungicides should be avoided, since their presence could hasten degradation of the waterproof membrane. Also, power-washing and other exterior maintenance operations should be avoided so that cleaning agents and other chemicals do not harm the vegetated roof plant communities.

An example maintenance inspection checklist for Vegetated Roofs can be accessed in Appendix C of Chapter 9 of the *Virginia Stormwater Management Handbook* (2nd Edition, 2013).

Table 5.6. Typical Maintenance Activities Associated with Vegetated Roofs

Activity	Schedule
• Water to promote plant growth and survival. • Inspect the vegetated roof and replace any dead or dying vegetation.	As Needed (Following Construction)
• Inspect the waterproof membrane for leaking or cracks. • Annual pH test to determine if fertilization is needed. • Weeding to remove invasive plants. • Inspect roof drains, scuppers and gutters immediately adjacent to the growing media to ensure they are not overgrown or have organic matter deposits. Remove any accumulated organic matter or debris. • Inspect the vegetated roof for dead, dying, or invasive vegetation. Plant replacement vegetation as needed. • Mow or trim plantings in early April of each year as needed.	Semi-Annually

BIORETENTION INSPECTION REQUIREMENTS:

BIORETENTION FACILITIES MUST BE INSPECTED AT THE FOLLOWING POINTS:
a. WHEN THE FACILITY IS EXCAVATED AND GRADED, PRIOR TO INSTALLATION OF STONE LAYER, UNDERDRAINS, GEOTEXTILE, OR FILTER MEDIA
b. WHEN STONE SUMP LAYER AND UNDERDRAIN ARE PLACED, PRIOR TO THE PEA GRAVEL LAYER
c. PLACEMENT OF FILTER MEDIA AND MATERIAL VERIFICATION
d. INSTALLATION OF PLANTS AND MULCH
e. SETTING OF OVERFLOW INVERT
f. CONNECTION OF THE UNDERDRAIN TO THE STORM SYSTEM
g. FINAL COMPLETION

NOTE: IT IS THE RESPONSIBLITY OF THE CONTRACTOR TO CONTACT THE CITY INSPECTOR AND DEVELOPER'S APPOINTED PROJECT MANAGER TO INSPECT AT EACH STAGE LISTED ABOVE.

VA DCR STORMWATER DESIGN SPECIFICATION NO. 9 **BIORETENTION**

Table 9.7. Bioretention Material Specifications

Material	Specification	Notes
Filter Media Composition	Filter Media to contain: • 80% - 90% sand • 10%-20% soil fines • 3%-5% organic matter	The volume of filter media based on 110% of the plan volume, to account for settling or compaction.
Filter Media Testing	Available P between L+ and M per DCR 2005 Nutrient Management Criteria.	The media should be certified by the supplier.
Mulch Layer	Use aged, shredded hardwood bark mulch or stable coarse compost.	Lay a 2 to 3 inch layer on the surface of the filter bed.
Alternative Surface Cover	Use river stone or pea gravel, coir and jute matting, or turf cover.	Lay a 2 to 3 inch layer of to suppress weed growth.
Top Soil For Turf Cover	Loamy sand or sandy loam texture, with less than 5% clay content, pH corrected to between 6 and 7, and an organic matter content of at least 2%.	3 inch surface depth.
Geotextile/Liner	Use a non-woven geotextile fabric with a flow rate of > 110 gal./min./sq. ft. (e.g., Geotex 351 or equivalent)	Apply only to the sides and directly above the underdrain. For hotspots and certain karst sites only, use an appropriate liner on bottom.
Choking Layer	Lay a 2 to 4 inch layer of sand over a 2 inch layer of choker stone (typically #8 or #89 washed gravel), which is laid over the underdrain stone.	
Stone Jacket for Underdrain and/or Storage Layer	1 inch stone should be double-washed and clean and free of all fines (e.g., VDOT #57 stone).	12 inches for the underdrain; 12 to 18 inches for the stone storage layer, if needed
Underdrains, Cleanouts, and Observation Wells	Use 6 inch rigid schedule 40 PVC pipe (or equivalent corrugated HDPE for micro-bioretention), with 3/8-inch perforations at 6 inches on center; position each underdrain on a 1% or 2% slope located nor more than 20 feet from the next pipe.	Lay the perforated pipe under the length of the bioretention cell, and install non-perforated pipe as needed to connect with the storm drain system. Install T's and Y's as needed, depending on the underdrain configuration. Extend cleanout pipes to the surface with vented caps at the Ts and Ys.
Plant Materials	Plant one tree per 250 square feet (15 feet on-center, minimum 1 inch caliper). Shrubs a minimum of 30 inches high planted a minimum of 10 feet on-center. Plant ground cover plugs at 12 to 18 inches on-center; Plant container-grown plants at 18 to 24 inches on-center, depending on the initial plant size and how large it will grow.	Establish plant materials as specified in the landscaping plan and the recommended plant list. In general, plant spacing must be sufficient to ensure the plant material achieves 80% cover in the proposed planting areas within a 3-year period. If seed mixes are used, they should be from a qualified supplier, should be appropriate for stormwater basin applications, and should consist of native species (unless the seeding is to establish maintained turf).

SECTION 8: CONSTRUCTION

8.1. Construction Sequence

Construction Stage E&S Controls. Micro-bioretention and small-scale bioretention areas should be fully protected by silt fence or construction fencing, particularly if they will rely on infiltration (i.e., have no underdrains). Ideally, bioretention should remain outside the limit of disturbance during construction to prevent soil compaction by heavy equipment. Bioretention basin locations may be used as small sediment traps or basins during construction. However, these must be accompanied by notes and graphic details on the ESC plan specifying that (1) the maximum excavation depth at the construction stage must be at least 1 foot above the post-construction maximum excavation, (2) the facility must contain an underdrain, and (3) the plan must also show the proper procedures for converting the temporary sediment control practice to a permanent bioretention facility, including dewatering, cleanout and stabilization.

8.2 Bioretention Installation

The following is a typical construction sequence to properly install a bioretention basin. The installation of a bioretention basin will include intermediate inspections at critical stages of construction with inspector sign-off that the particular elements of the bioretention are constructed according the approved plans and specifications. As an alternative, if allowed by the VSMP Authority, the contractor may rely on the engineer of record or other qualified individual

VA DCR STORMWATER DESIGN SPECIFICATION NO. 9 **BIORETENTION**

to conduct the intermediate inspections and certifications of compliance. The construction sequence for micro-bioretention is more simplified. These steps may be modified to reflect different bioretention applications or expected site conditions:

Step 1. Construction of the bioretention area may only begin after the entire contributing drainage area has been stabilized with vegetation. It may be necessary to block certain curb or other inlets while the bioretention area is being constructed. The proposed site should be checked for existing utilities prior to any excavation.

Step 2. The designer and the installer should have a preconstruction meeting, checking the boundaries of the contributing drainage area and the actual inlet elevations to ensure they conform to original design. Since other contractors may be responsible for constructing portions of the site, it is quite common to find subtle differences in site grading, drainage and paving elevations that can produce hydraulically important differences for the proposed bioretention area. The designer should clearly communicate, in writing, any project changes determined during the preconstruction meeting to the installer and the plan review/inspection authority.

Step 3. Temporary E&S controls are needed during construction of the bioretention area to divert stormwater away from the bioretention area until it is completed. Special protection measures such as erosion control fabrics may be needed to protect vulnerable side slopes from erosion during the construction process.

Step 4. Any pre-treatment cells should be excavated first and then sealed to trap sediments.

Step 5. Excavators or backhoes should work from the sides to excavate the bioretention area to its appropriate design depth and dimensions. Excavating equipment should have scoops with adequate reach so they do not have to sit inside the footprint of the bioretention area. Contractors should use a cell construction approach in larger bioretention basins, whereby the basin is split into 500 to 1,000 sq. ft. temporary cells with a 10-15 foot earth bridge in between, so that cells can be excavated from the side.

Step 6. It may be necessary to rip the bottom soils to a depth of 6 to 12 inches to promote greater infiltration.

Step 7. Place geotextile fabric on the sides of the bioretention area with a 6-inch overlap on the sides. If a stone storage layer will be used, place the appropriate depth of #57 stone on the bottom, install the perforated underdrain pipe, pack #57 stone to 3 inches above the underdrain pipe, and add approximately 3 inches of choker stone/pea gravel as a filter between the underdrain and the soil media layer. If no stone storage layer is used, start with 6 inches of #57 stone on the bottom, and proceed with the layering as described above.

Step 8. Obtain soil the media from a qualified vendor, and store it on an adjacent impervious area or plastic sheeting. After verifying that the media meets the specifications, apply the media in 12-inch lifts until the desired top elevation of the bioretention area is achieved. Wait a few days to check for settlement, and add additional media, as needed, to achieve the design elevation.

VA DCR STORMWATER DESIGN SPECIFICATION NO. 9 **BIORETENTION**

Step 9. Prepare planting holes for any trees and shrubs, install the vegetation, and water accordingly. Install any temporary irrigation.

Step 10. Place the surface cover in both cells (mulch, river stone or turf), depending on the design. If coir or jute matting will be used in lieu of mulch, the matting will need to be installed prior to planting (**Step 9**), and holes or slits will have to be cut in the matting to install the plants.

Step 11. Install the plant materials as shown in the landscaping plan, and water them during weeks of no rain for the first two months.

8.3 Construction Inspection

Inspections during and immediately after construction are needed to ensure that all the elements of bioretention basins are built in accordance with these specifications. Use a detailed inspection checklist that requires sign-offs by qualified individuals at critical stages of construction and to ensure that the contractor's interpretation of the plan is consistent with the designer's intent. The following identifies the critical stages of construction where an intermediate inspection and sign-off by a qualified individual is recommended since the items can't be verified after construction is completed. A construction inspection checklist that includes certifications of inspection at critical stages is provided at the end of this specification.

The following represents items that are frequently overlooked during construction inspection but represent important elements for ensuring the success of the bioretention facility during the initial break-in period.

- Verify the proper coverage and depth of mulch, vegetation, or soil matting has been achieved following construction, both on the filter bed and the side-slopes.
- Inspect the pre-treatment forbays and filter strips to verify that they are properly installed, stabilized, and working effectively before opening the facility to runoff.
- Check that outfall protection/energy dissipation measures at concentrated inflow and outflow points are stable.

Upon final acceptance of the facility, log the practice's GPS coordinates and submit them for entry into the VSMP Authority's BMP maintenance tracking database.

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REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	23 SEP 2020	CITY OF CHARLOTTESVILLE COMMENTS			
2	08 FEB 2021	CITY OF CHARLOTTESVILLE COMMENTS			
3	03 MAY 2021	CITY OF CHARLOTTESVILLE COMMENTS			
4	16 JULY 2021	CITY OF CHARLOTTESVILLE COMMENTS			
5	17 AUG 2021	CITY OF CHARLOTTESVILLE COMMENTS			
6	10 SEPT 2021	CITY OF CHARLOTTESVILLE COMMENTS			

DESIGNED BY:	LO, DG
DRAWN BY:	LO
CHECKED BY:	JT

09/30/2021
JIMMY L. TAGGART
Lic. No. 22841

1001 & 1002 GROVE STREET PUD
FINAL SITE PLAN AND VSMP
CHARLOTTESVILLE, VIRGINIA
VSMP - QUALITY

DATE:	02-20-2020
JOB:	8555
CONTOUR INTERVAL: 2 FT	

SHEET: 20 OF 20

Attachment C

Fifeville Heights Condominiums
A PUD Application regarding the property at 1000 & 1002 Grove Street & 10th St. SW.

Respectfully submitted by:
V. G. Sullivan and Mark H. Saunders on behalf of London Calling, LLC
June 27, 2006

Narrative Statement

Background

London Calling, LLC was formed in the summer of 2005 by three partners, including two Charlottesville city residents, to pursue development opportunities that balance the following objectives:

- Responding to the city's Planned Unit Development initiative, create a small-scale, in-fill development model that improves the urban fabric of Charlottesville city neighborhoods and decreases sprawl by upgrading or replacing existing housing stock while delivering a reasonable return to investors;
- Build architecturally distinctive, high-quality middle-income houses;
- Offer units priced in an under-represented range of the Charlottesville real estate market (roughly $200,000 - $350,000)
- Use environmentally sensitive building technologies wherever possible, not just as marketing but to lessen environmental impact, including increased storm-water retention and energy efficiency;
- Achieve maximum efficiency in building systems for environmental sustainability and long-term affordability;
- Allow artisan quality construction by acting as General Contractor;
- Preserve viable historic structures and urban forest wherever possible;
- Provide all of the above while acting as responsible community members, not outside "developers" insensitive to the needs of the community

We purchased the two parcels at 1000 and 1002 Grove Street in fall 2005. The parcels attracted us as a possible PUD because of their proximity to U.Va., particularly the hospital complex, and growing retail development along the West Main Street corridor and existing shopping along Cherry Avenue. The houses on the site had been neglected and ill-used and were no longer economically viable due to a variety of issues. The site also seemed ideal for increased density because of its situation at the edge of a residential neighborhood, across the street from a large parking lot and one block from a Piedmont Housing Alliance (PHA) site slated for mixed-use development. We felt that the site, if sensitively developed, could offer a transition between the parking lot and its future use, the 9th-10th connector, and the older neighborhood behind it. We also approached the owner of 1000 King Street. While he supported our development plans, he did not want to join our project.

Designers

In the same month, we approached the Charlottesville Community Design Center with our objective to create a small community on the sites. The CCDC referred us to Christopher Genter and Susanne Schindler of Genter-Schindler/Utile Architects, the winners of the Urban Habitats design competition. The architects embraced the idea of creating a PUD that planners and developers could point to as a successful model from a variety of perspectives. As experts in in-fill development, contextual design, and green building technology, the architects bring strong credentials to the project.

Process

With the first design in hand—a 7-unit site plan with 3 detached and 4 attached units clustered around a common garden—we came before the planning commission on April 11, 2006. The reaction to the proposal seemed to us largely positive, with more than one commissioner commending the care represented in the preparation of the design. We carried away the following generally constructive feedback:

- There was no consensus regarding detached versus attached houses, with some commissioners advocating single-family detached while others advocated row houses;
- Provide at least one affordable unit: the definition of "affordable" was debated (anywhere between $120,000 - $292,000 per unit) but a sales price figure pegged to "80% of gross median income" was reported as a standard measure adopted by the city;
- Maintain and enhance the environmental features represented in the design, including replacing areas of turf that could be compacted with rain gardens or other plantings;
- Provide a more pleasant elevation on the King Street side for existing homeowners;
- Provide greater visual access to the common space so that the development does not appear to exclude the neighborhood.

After receiving this feedback, we approached the Fifeville Neighborhood Association with the plan. At a meeting on May 11, 2006, the Fifeville neighbors expressed great concern about what has happened to their neighborhood in the last 5 years—the 9th-10th connector, Walker Square apartments/condominiums, the threat of new development at the corner of Cherry Avenue and Ridge Street—and there were some neighbors who wanted no new development at all. Responding to the 7-unit site plan, which we passed out at the meeting and made available to the association's e-mail list, some of the neighbors echoed the planning commission's positive reaction to the quality of the design but we perceived the following specific negative reactions:

- The scale of the single attached 4-unit building was too large, creating a "wall" between the development and the existing neighbors
- Preserve as many existing trees as possible, especially a large American holly and a green ash, the largest tree on the site

- The neighbors were not interested in "affordability" as a token gesture in service of greater density
- The design provoked security concerns, including a perceived cut-through along a proposed walkway on the western boundary and easy access to the common area
- The design "turned its back on Grove," not providing a pleasing streetscape or enough "eyes on the street" to provide security
- King Street house design "clashed" with the cottage on the King-10th St. corner
- The level of density would create a "wedge" leading to further density in the neighborhood

With these reactions from planners and neighbors in hand, including minutes from a follow-up meeting with neighbors on May 20, 2006, the architects revised the plan in an attempt to balance their client's objectives with the other parties' concerns. The first revised plan incorporated the following:

- Decrease the density from 7 units to 6 detached units;
- Preserve all the important existing trees, including the holly and the ash;
- Add windows to the Grove Street elevations for more "eyes on the street;"
- Break up the walkway perceived as a security issue;
- Move two parking spaces to limit direct access to the common area—perceived as a security issue—while providing greater visual access to provide a visual respite for passing neighbors;
- Improve King Street elevation, including gabled roof to match neighboring houses

We also met with Peter Loach and Mark Watson of the PHA to learn more about and discuss their initiatives with regard to providing an "affordable unit."

We provided the revised 6-unit plan to the neighborhood association by email, and presented it to the planning commission on June 13, 2006. We did not receive any substantive reaction to the revised plan from the neighbors, although we understand that there is still opposition. From the planners, we received the following constructive feedback:

- Increase the variety of housing types, with one commissioner pushing larger homes up to 2000+ square feet
- Do more with the design of the middle unit E
- Push the environmental features
- Include an affordable unit

At this point, we asked the architects to balance as much as possible the sometimes conflicting reactions/requirements of the three primary interested parties: London Calling; the planning commission; and the Fifeville neighbors. The resulting 6-unit plan reflects what we believe to have been a positive process conducted in good faith by all parties:

- Provides a variety of housing types and sizes, including a 1057-square foot two-bedroom cottage at unit E and two large (1658- and 1721-square foot) three-bedroom homes with space for a family;
- Modulates units D, E, F with green-roofed one-storey extensions punctuating two- and three-story sections to mitigate the scale of the development
- Adds accessible green roofs to all one-story sections
- Preserves important trees
- Improves King and Grove Street elevations, from aesthetic and security perspectives
- Allows visual but not physical access to common garden

In sum, we believe that the proposed plan reflects our respect for the neighborhood and the goals of the planning commission, and will enhance the City in the long run.

Response to Specific Requirements

In response to the PUD "Objectives" as enumerated in Sec. 34-490, our plan meets the specific requirements as follows:

1) To encourage developments of equal or higher quality than otherwise required by the strict application of zoning district regulations that would otherwise govern:

> The two structures currently on the site have been neglected to the point that they are derelict, not economically viable for renovation by an investor or a homeowner. Replacing the existing structures with two similar structures would likewise create homes far outside the size, scale, and price range of the surrounding neighborhood.

(2) To encourage innovative arrangements of buildings and open spaces to provide efficient, attractive, flexible and environmentally sensitive design.

> The architects have created an attractive, ingenious arrangement of buildings with green roves and permeable parking spaces clustered around a central community space that provides further storm water retention.

(3) To promote a variety of housing types, or, within a development containing only a single housing type, to promote the inclusion of houses of various sizes;

> The design offers four different housing sizes and floor plans to accommodate different lifestyles and income levels.

(4) To encourage the clustering of single-family dwellings for more efficient use of land and preservation of open space;

The design mixes single-family detached houses with a row of "attached cottages" linked by single-story extensions with green roofs to increase living space while minimizing the visual impact of the building's scale.

(5) To provide for developments designed to function as cohesive, unified projects;

Because London Calling has applied the same design values to the entire project, it will function as a community from an aesthetic, environmental, and livability perspective.

(6) To ensure that a development will be harmonious with the existing uses and character of adjacent property, and/or consistent with patterns of development noted with respect to such adjacent property;

As noted above, the development was designed as a transition between the more densely developed areas to the north and east, and the small-lot, residential character of the neighborhood to the south and west.

(7) To ensure preservation of cultural features, scenic assets and natural features such as trees, streams and topography;

The site plan incorporates the existing topography, using it as an asset to improve home design, views from upper-storey decks, and storm water management, and explicitly preserves at least five large existing trees and adds additional native species to the site

(8) To provide for coordination of architectural styles internally within the development as well as in relation to adjacent properties along the perimeter of the development; and

The design presents a cohesive, attractive, updated interpretation of the architectural styles—ranging from cottage to federal to Victorian, cladded mainly with stucco or lap siding—represented in the surrounding neighborhood. The buildings will be sided in Hardiplank or similar material with a variety of rooflines, including gabled, flat, and shed.

(9) To provide for coordinated linkages among internal buildings and uses, and external connections, at a scale appropriate to the development and adjacent neighborhoods;

The design takes advantage of the topography to keep the scale of the development similar to the adjacent properties, while allowing for ample open space and parking. The height of the buildings on Grove and King are equal to the existing structures and lower than the majority of neighboring structures, and the proposed building footprint is only 477 square feet (13%) greater than the existing footprint.

(10) To facilitate access to the development by public transit services or other single vehicle-alternative services, including, without limitation, public pedestrian systems.

1000-1002 Grove Street is ideally situated to facilitate access to public transit systems, bike lanes on the 9th-10th street connector and West Main Street, and safe sidewalks that lead to the University, the Corner district, West Main Street, and the Downtown Mall. The site plan calls for a sidewalk wrapping the corner of 10th and Grove Streets, thus adding a section where none exists on 10th.

Sec. 34-493. Required open space.

The site plan provides for 16% shared open space as defined in the relevant article, designated as a "common garden" that due to its size will primarily provide a visual and aesthetic amenity to the residents and neighbors of the development, and an opportunity to install environmental features that increase storm-water retention on the site, including rain gardens and native plant species. The common area will allow for quiet activities such as reading, picnicking, etc.

While not included in the shared "open space" as strictly defined, the site plan also provides private yards, decks, and porches opening onto the shared space and the surrounding streets, as well as accessible (one-storey) green roofs to improve the community and private lives of the residents and the surrounding neighborhood.

Proffers:

London Calling LLC, as part of the site plan, proffers the following:

1) To offer, through a PHA or similar program, one or more of the six units represented in the site plan to a buyer whose family gross income represents 80% or less of the gross median income in the city of Charlottesville for the most recent calendar year for which the figure is available;
2) To install environmental features shown on the site plan designed to retain as much storm water as possible, including but not limited to rain gardens, rain barrels, and green roofs on the one-storey sections of the buildings;
3) To achieve Energy Star or higher efficiency ratings for all units including insulation, appliances, hot water heaters, and HVAC systems;
4) To make every possible effort to save existing trees shown on the site plan, and replace any significant trees lost with native species such as white ash, Appalachian serviceberry, American dogwood, or similar.

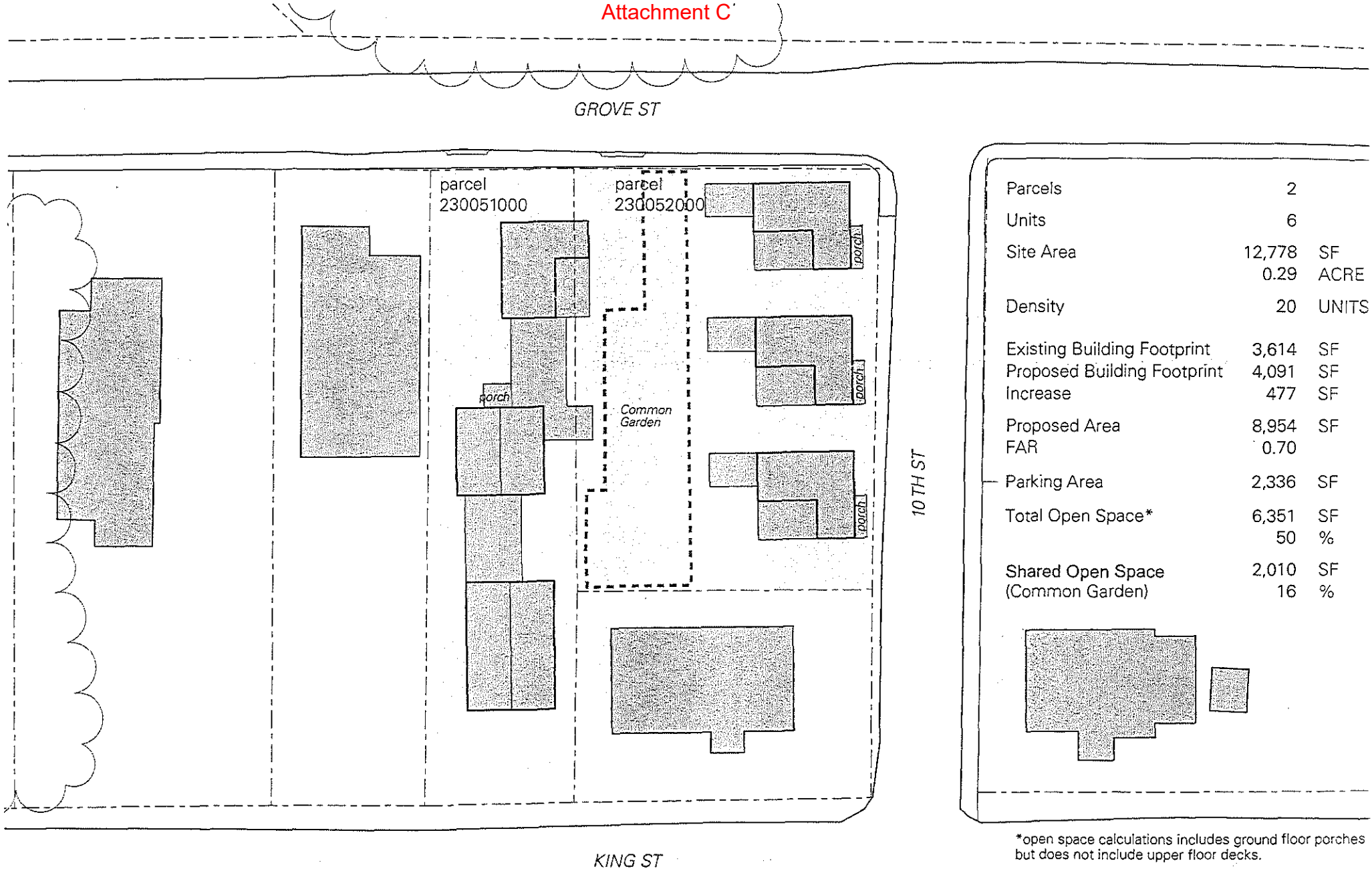
Attachment C

Prepared and submitted on behalf of London Calling LLC by

V. G. Sullivan

Mark H. Saunders

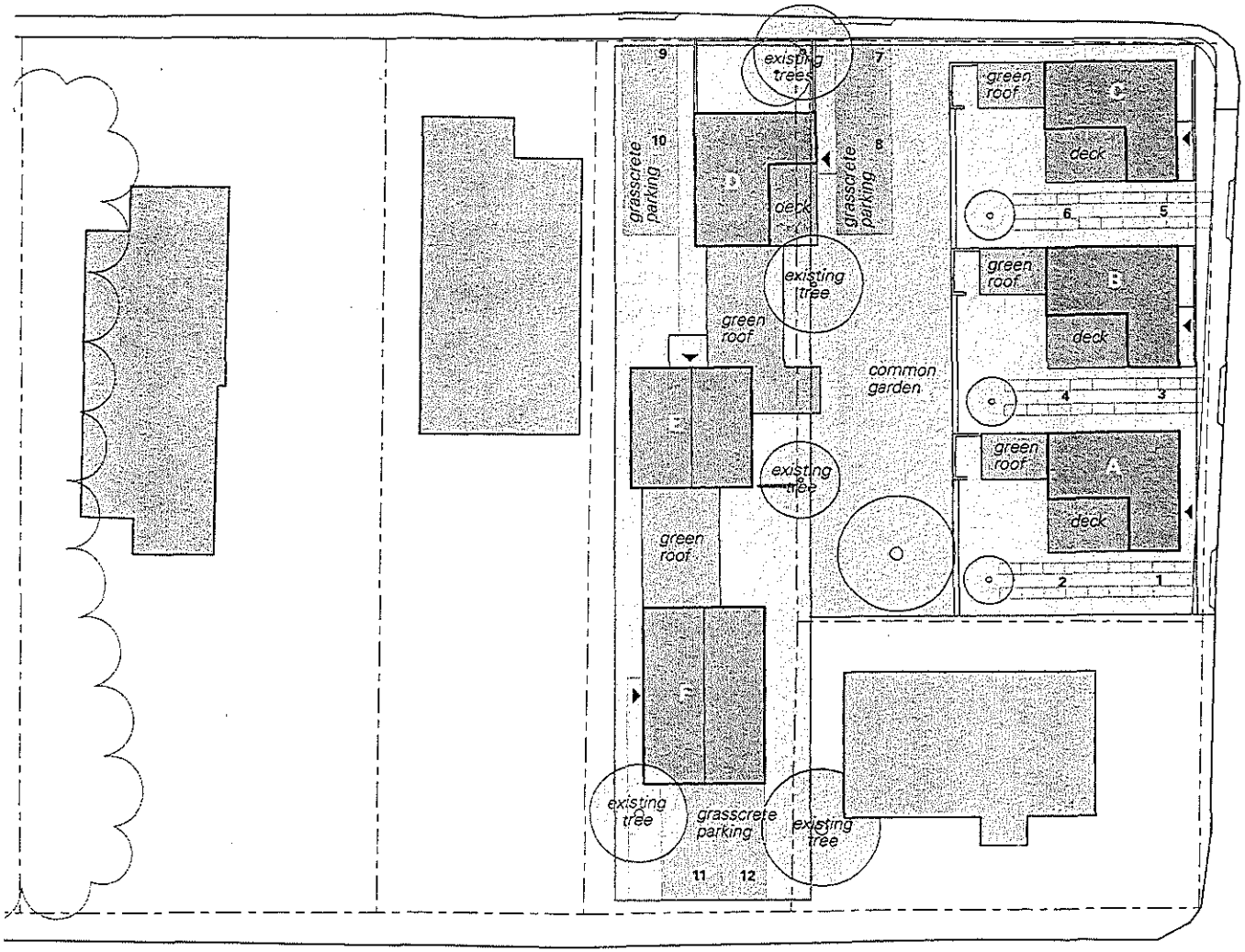
Attachment C



Parcels	2	
Units	6	
Site Area	12,778	SF
	0.29	ACRE
Density	20	UNITS
Existing Building Footprint	3,614	SF
Proposed Building Footprint	4,091	SF
Increase	477	SF
Proposed Area	8,954	SF
FAR	0.70	
Parking Area	2,336	SF
Total Open Space*	6,351	SF
	50	%
Shared Open Space	2,010	SF
(Common Garden)	16	%

*open space calculations includes ground floor porches but does not include upper floor decks.

Attachment C



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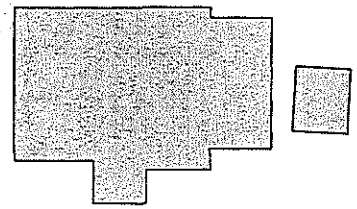

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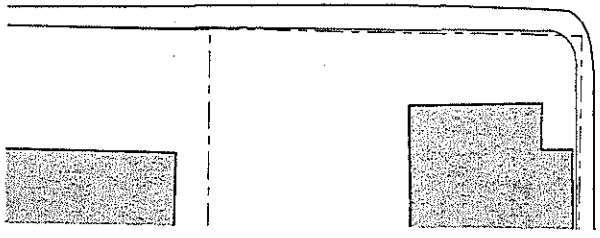
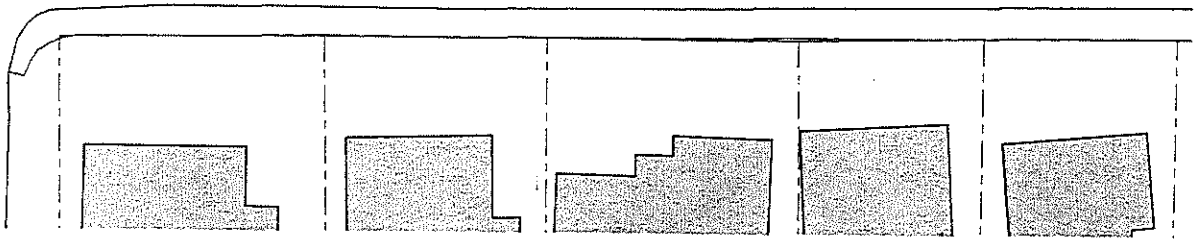
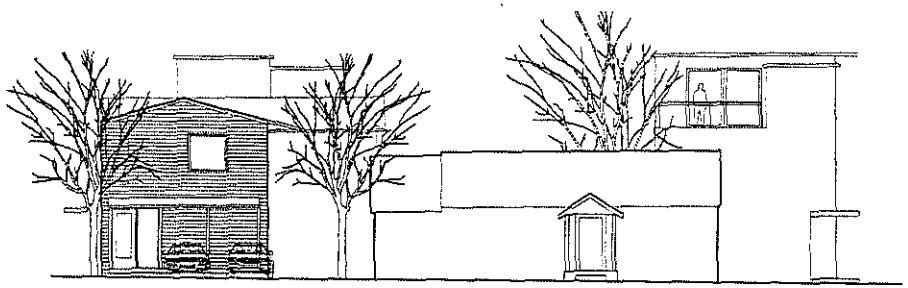


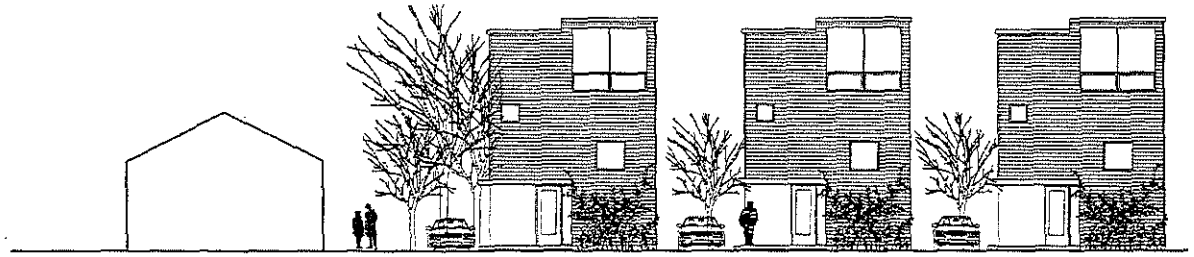


Attachment C

Grove Street



King Street



10 th Street

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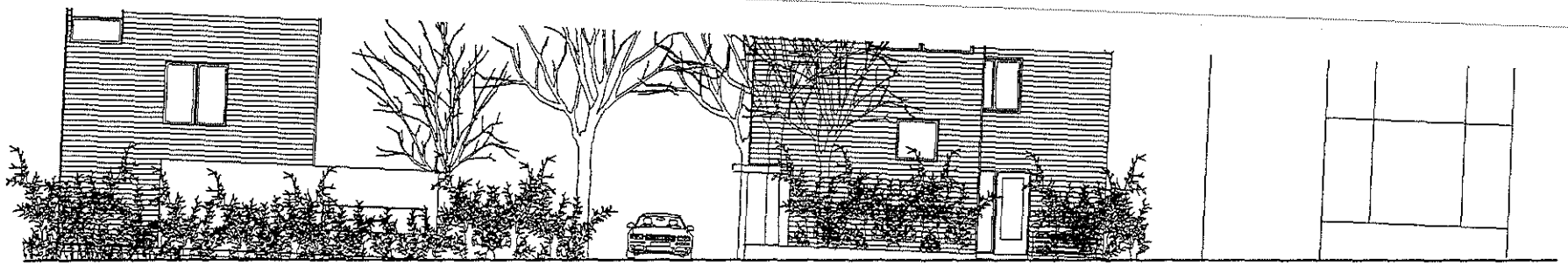
Grove 10th and King Street
Charlottesville, VA

prepared for London Calling, LLC by

utile

31 May 2006



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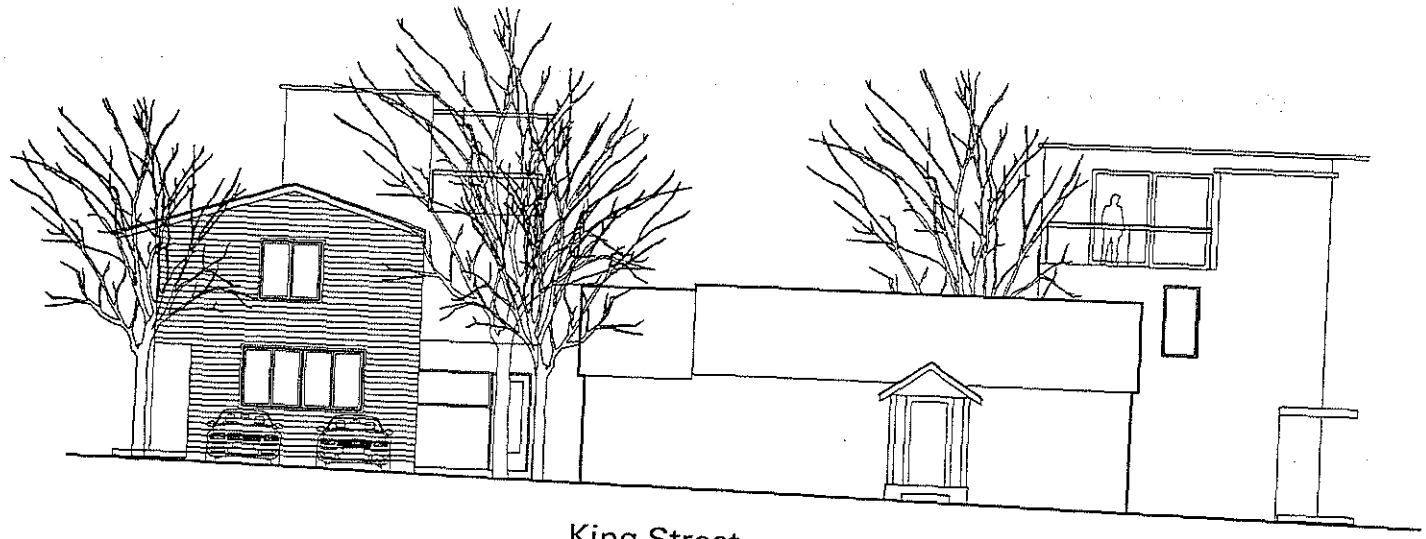

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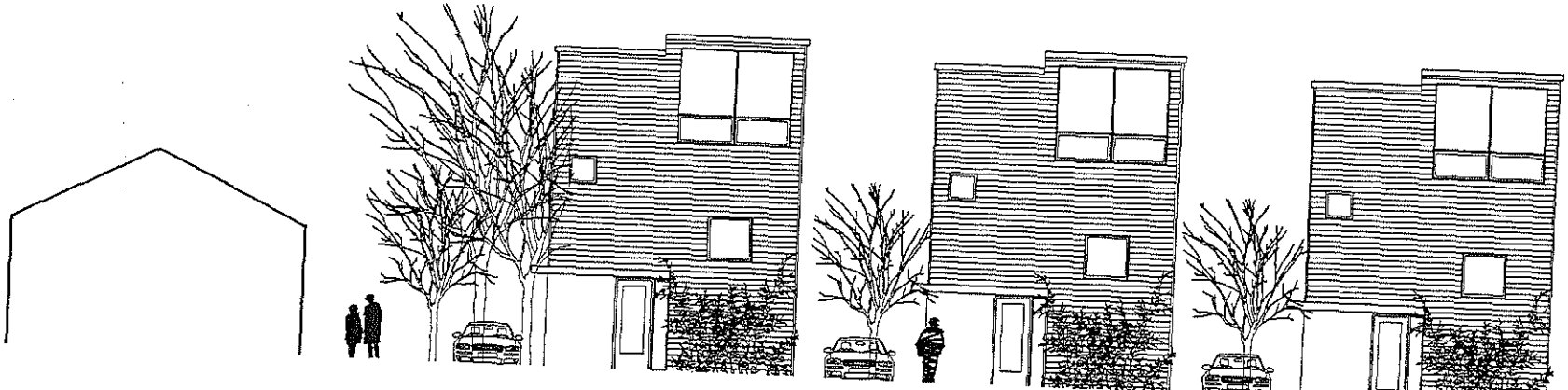
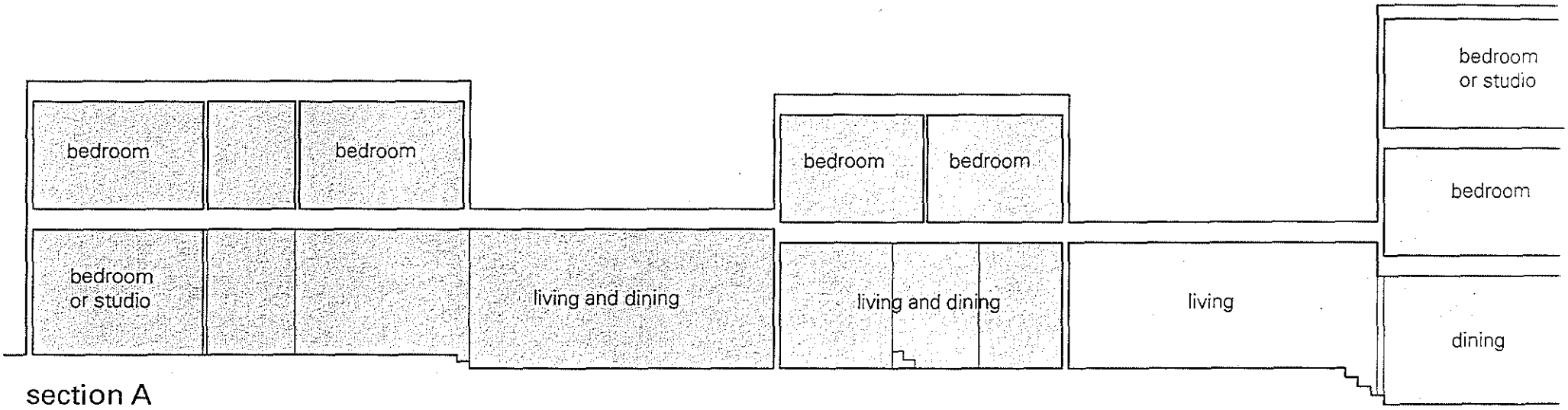


Attachment C

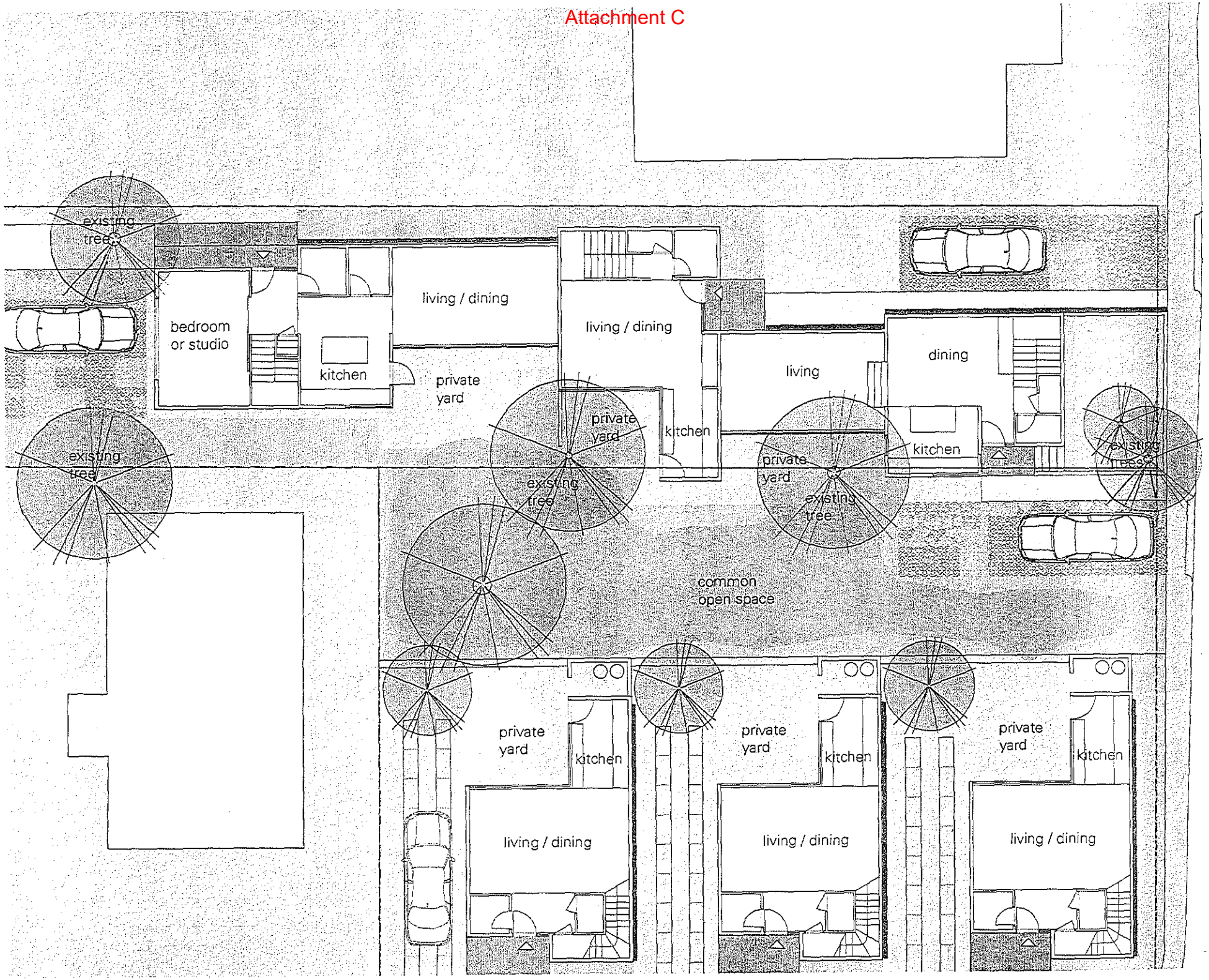
Attachment C

Unit	1	2	3	Total	Parking	Deck
A	591	528	387	1,506	2	69 sf porch, 140 sf deck
B	591	528	387	1,506	2	69 sf porch, 140 sf deck
C	591	528	387	1,506	2	69 sf porch, 140 sf deck
D	791	528	402	1,721	2	28 sf porch, 125 sf deck
E	573	484		1,057	2	55 sf porch
F	954	704		1,658	2	115 sf porch
6	4,091			8,954	12	



section A

Attachment C



Attachment C

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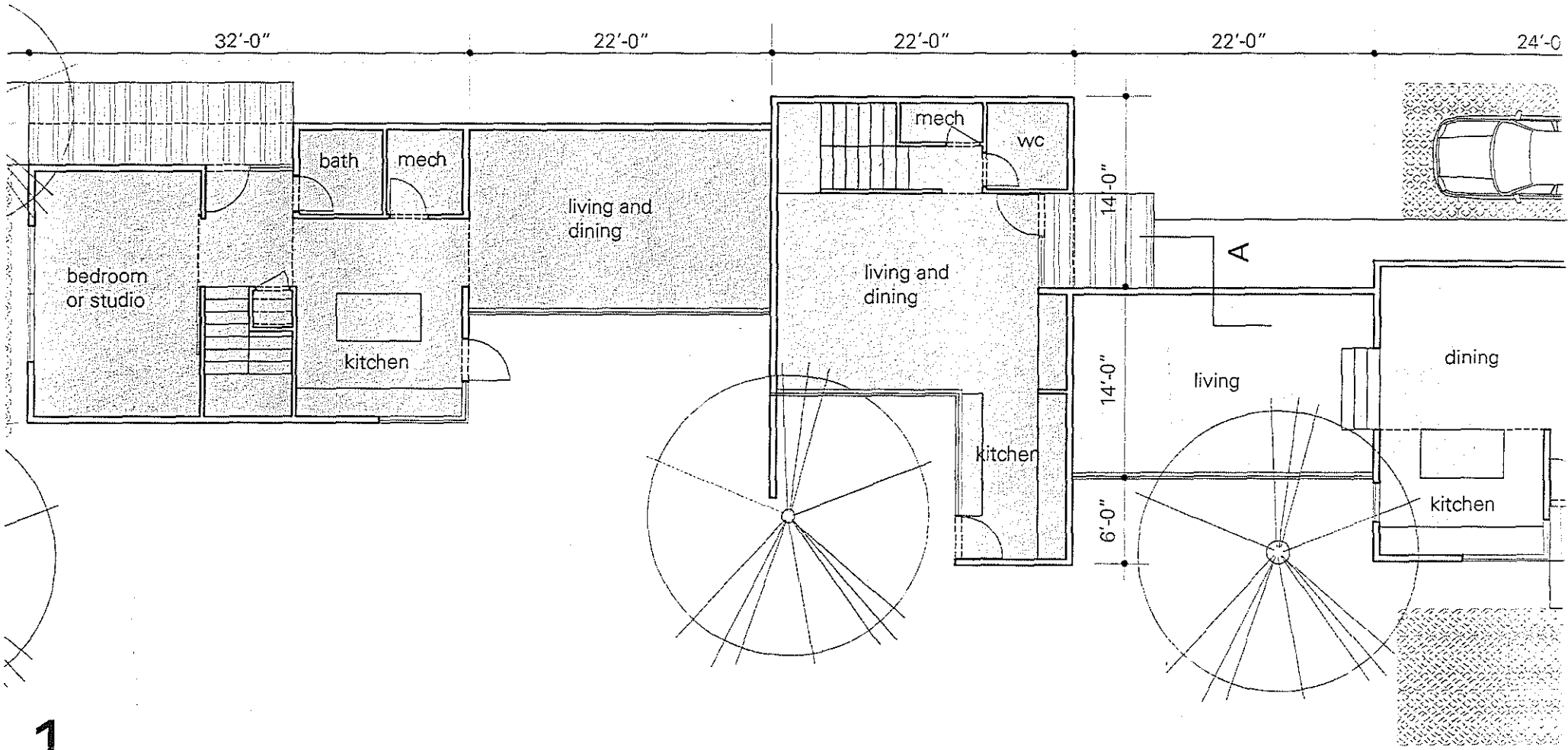

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Attachment C

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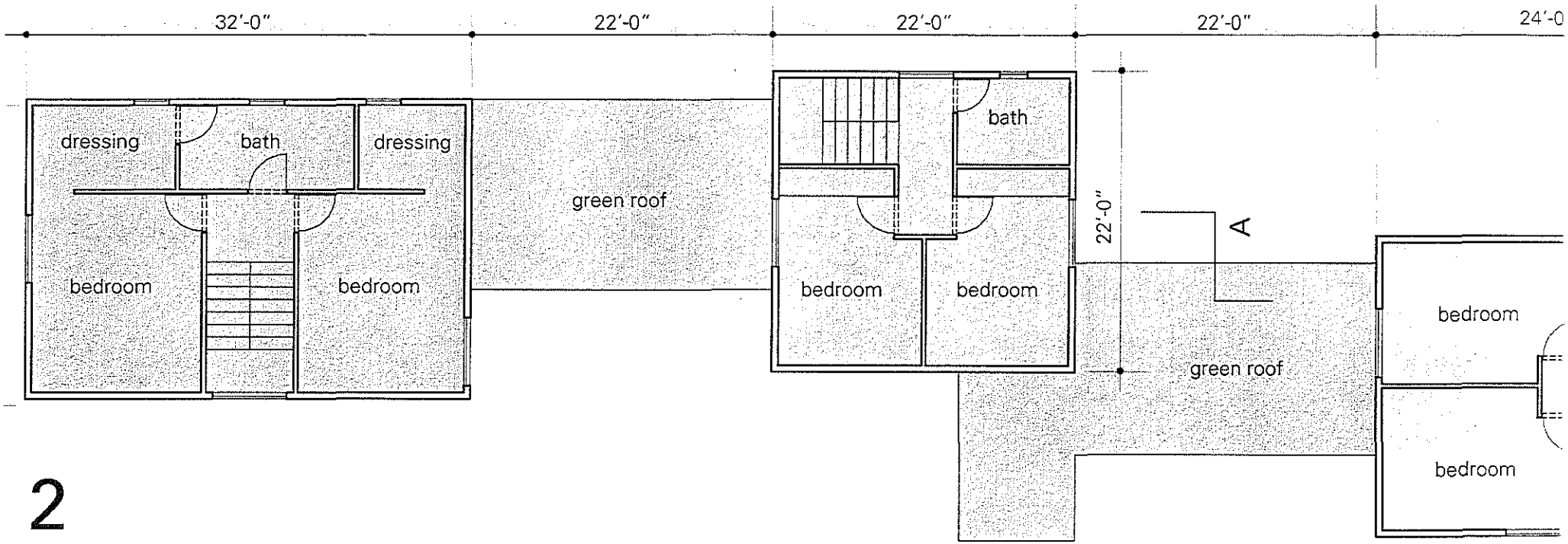

2

Attachment C

Unit	1	2	3	Total	Parking	Deck
A	591	528	387	1,506	2	69 sf porch, 140 sf deck
B	591	528	387	1,506	2	69 sf porch, 140 sf deck
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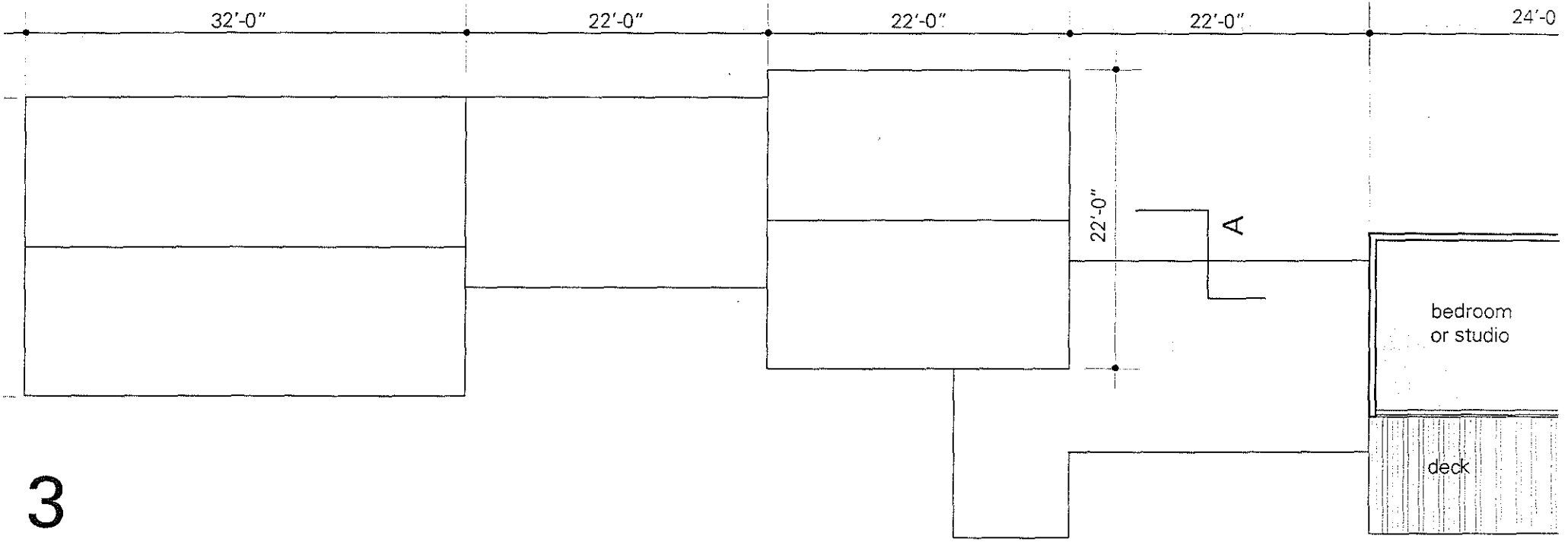
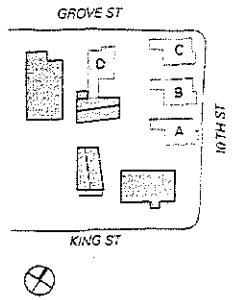


3

Attachment C

3 Storey House



Unit	Floor 1	2	3	Total	Parking	Deck
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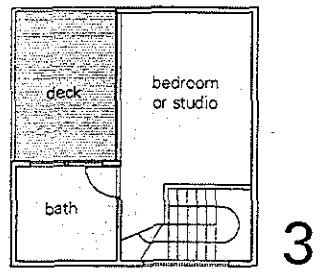
B	591	528	387	1,506	2	69 sf porch, 140 sf deck
C	591	528	387	1,506	2	69 sf porch, 140 sf deck
D	625	528	387	1,540	2	69 sf porch, 140 sf deck
E	711	711		1,422	2	60 sf porch
F	711	711		1,422	2	100 sf porch
6	3,820			8,902	12	



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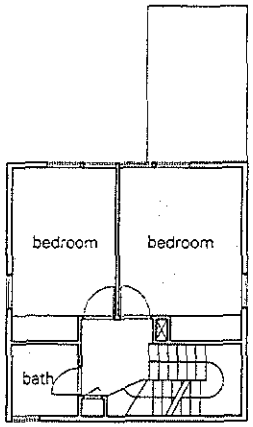

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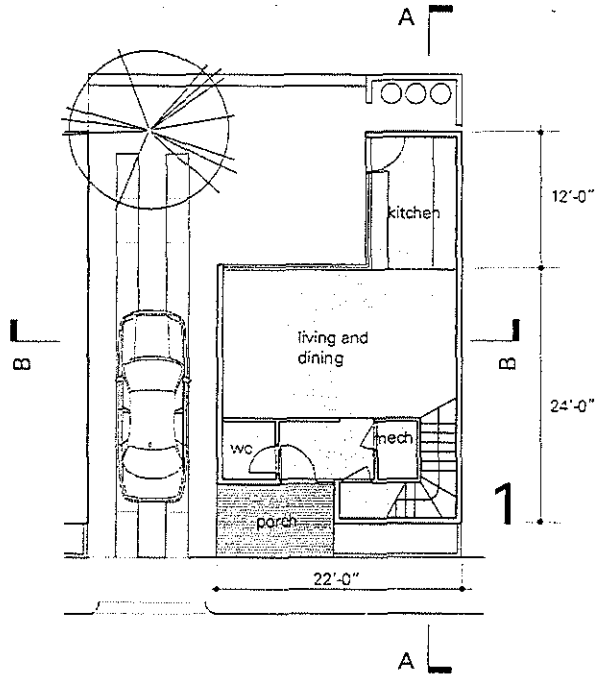

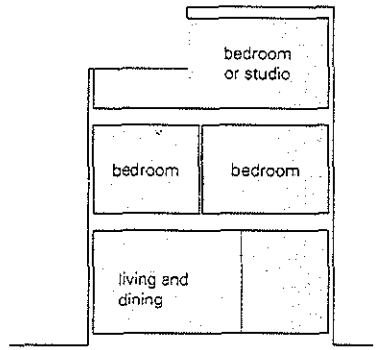

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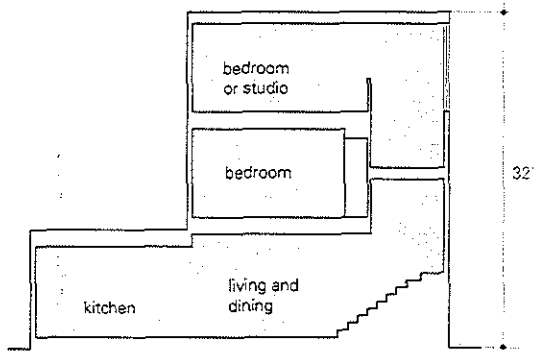

section A

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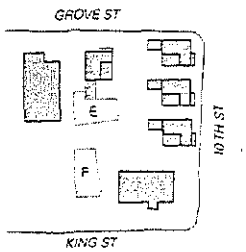
Grove 10th and King Street
Charlottesville, VA

prepared for London Calling, LLC by
utile

31 May 2006

Attachment C

2 Storey House



Unit	1	2	Floor 3	Total	Parking	Deck
A	591	528	387	1,506	2	69 sf porch, 140 sf deck
B	591	528	387	1,506	2	69 sf porch, 140 sf deck
C	591	528	387	1,506	2	69 sf porch, 140 sf deck
D	625	528	387	1,540	2	69 sf porch, 140 sf deck
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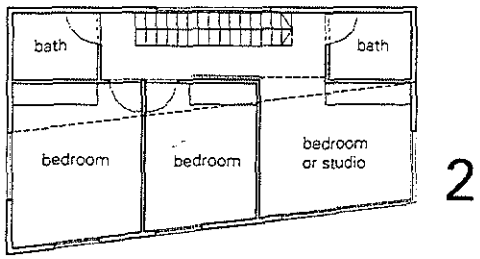

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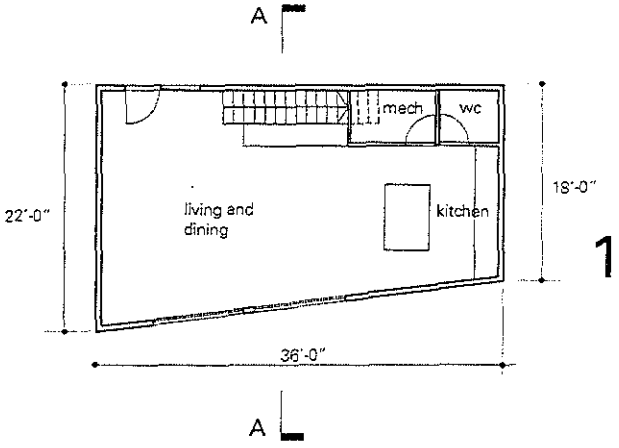

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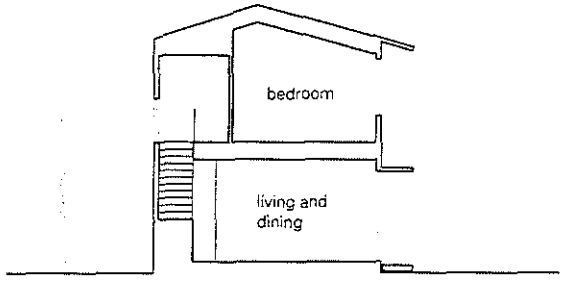

section A

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Grove 10th and King Street
Charlottesville, VA

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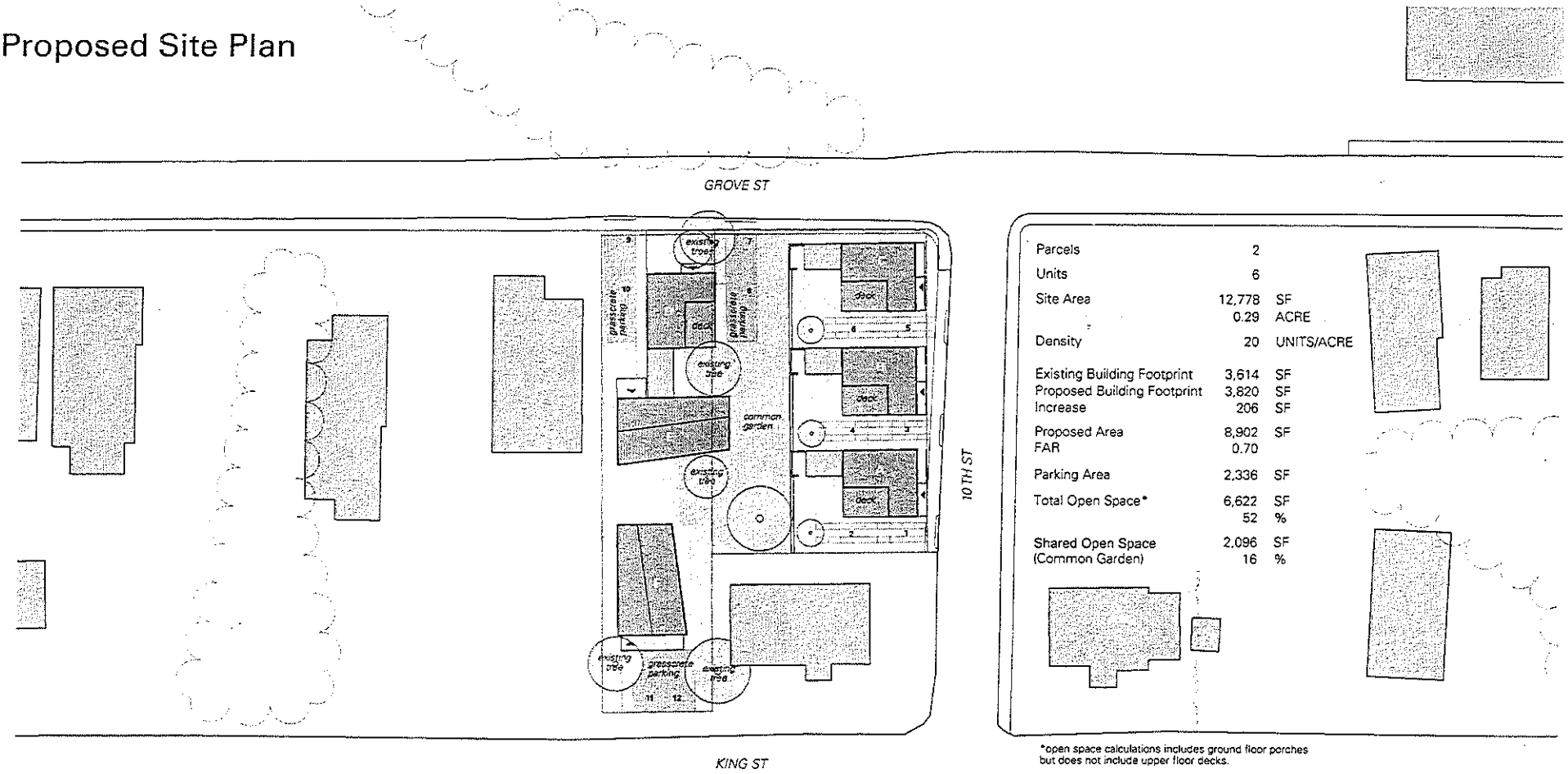
utile

31 May 2006

Attachment C

Proposed Site Plan



Parcels	2	
Units	6	
Site Area	12,778	SF
	0.29	ACRE
Density	20	UNITS/ACRE
Existing Building Footprint	3,614	SF
Proposed Building Footprint	3,820	SF
Increase	206	SF
Proposed Area	8,902	SF
FAR	0.70	
Parking Area	2,336	SF
Total Open Space*	6,622	SF
	52	%
Shared Open Space (Common Garden)	2,096	SF
	16	%

*open space calculations includes ground floor porches but does not include upper floor decks.

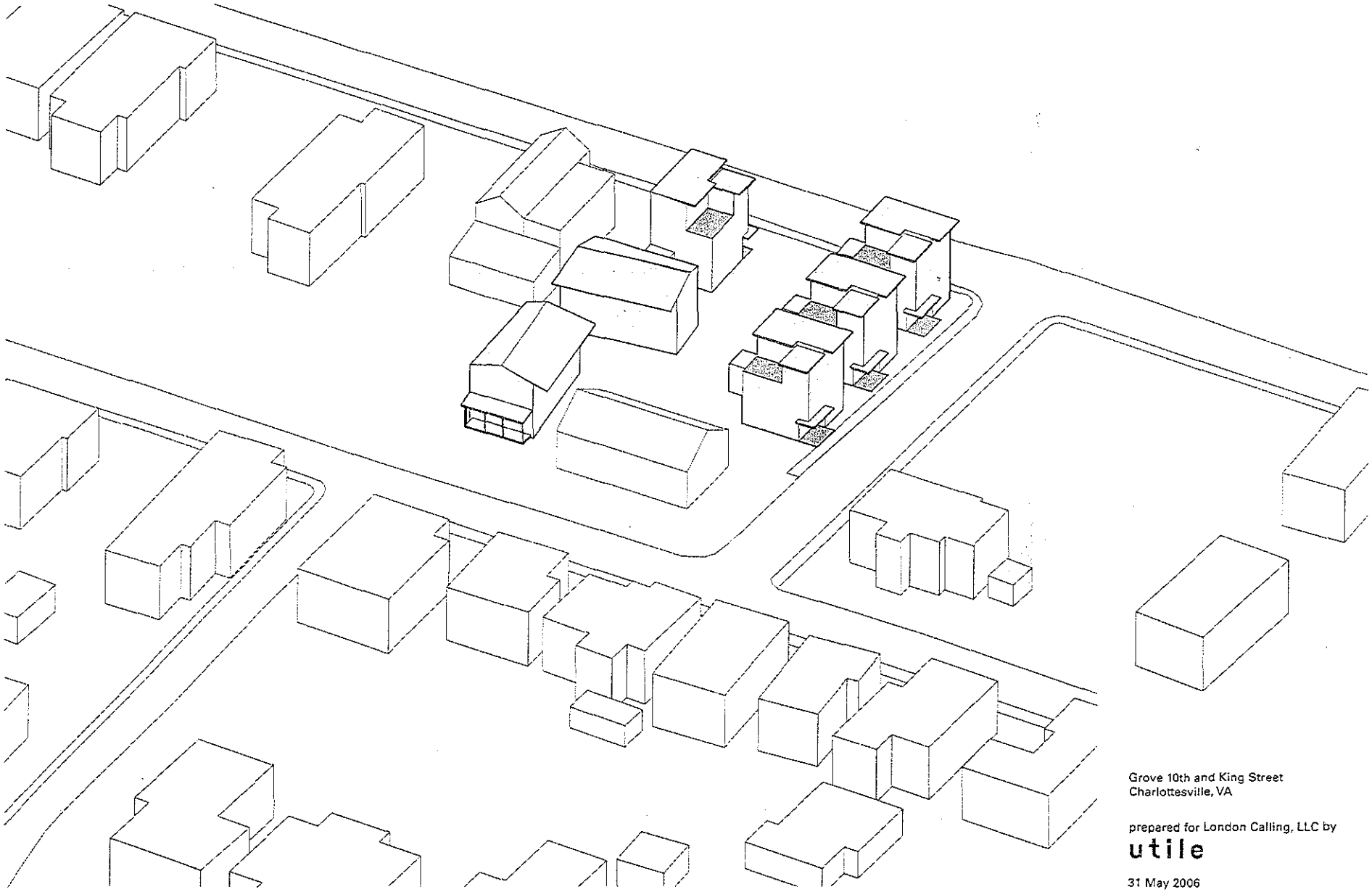
Grove 10th and King Street
Charlottesville, VA

prepared for London Calling, LLC by

utile

31 May 2006

Attachment C



Grove 10th and King Street
Charlottesville, VA

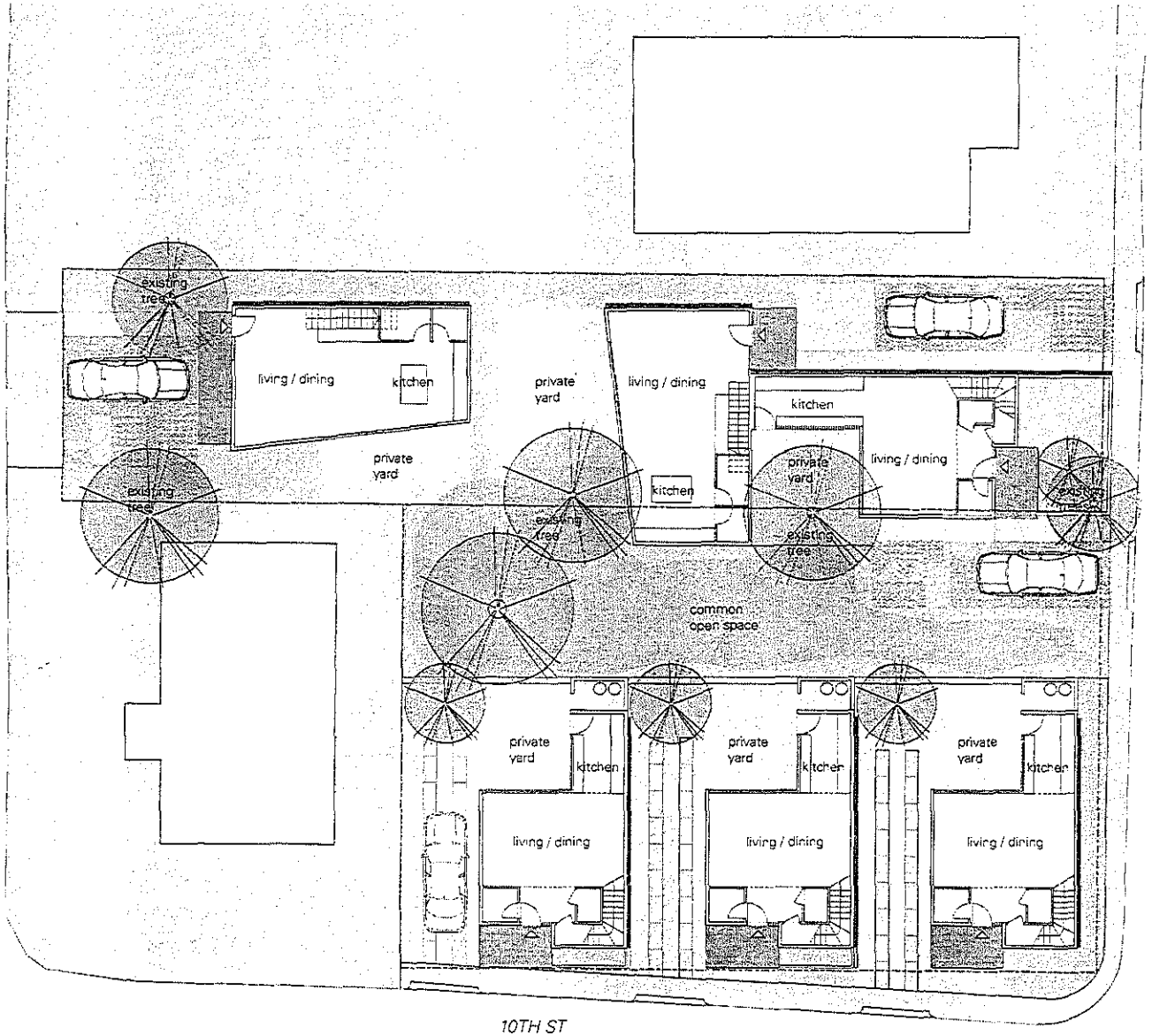
prepared for London Calling, LLC by

utile

31 May 2006

Attachment C

Landscape Plan



Legend

- rain garden
- grass or low groundcover
- medium-height planting
- vine pocket
- grasscrete or other permeable surface
- paving

0 1 5 10 15

Grove 10th and King Street
Charlottesville, VA

prepared for London Calling, LLC by
utile

31 May 2006

Front Elevation - Facing King Street

Rear Elevation

Exterior Color Scheme:

Lap Siding - James Hardie Cedarmill Cobble Stone
Trim - James Hardie Artic White
Porch Ceiling to be Stained Beadboard
Exposed Deck Joists to be Covered with White PVC Trim- Paint Arctic White
Foundation - Poured Concrete with Brick Stamping or Parged - Painted to Match Exterior

NO.	DESCRIPTION	BY	DATE

Development:
THE GROVE
Charlottesville Viginia

PROJECT DESCRIPTION:
1005A and 1005B King Street
Building 1 & 6

DRAWINGS PROVIDED BY:
A. Joseph Homes LLC
401 E. Market St ES27
Charlottesville, VA 22902
ajosephhomes.com

DATE:
11/19/2020

SCALE:

SHEET:
A-1

Right Elevation - Unit 1 Facing Open Space

Exterior Color Scheme:

Lap Siding - James Hardie Cedarmill Cobble Stone
Trim - James Hardie Artic White
Porch Ceiling to be Stained Beadboard
Exposed Deck Joists to be Covered with White PVC Trim- Paint Arctic White
Foundation - Poured Concrete with Brick Stamping or Parged - Painted to Match Exterior

NO.	DESCRIPTION	BY	DATE

Development:
THE GROVE
Charlottesville Viginia

PROJECT DESCRIPTION:
1005A and 1005B King Street
Building 1 & 6

DRAWINGS PROVIDED BY:
A. Joseph Homes LLC
401 E. Market St ES27
Charlottesville, VA 22902
ajosephhomes.com

DATE:
11/19/2020

SCALE:

SHEET:
A-2

Left Elevation

Exterior Color Scheme:

Lap Siding - James Hardie Cedarmill Cobble Stone
Trim - James Hardie Artic White
Porch Ceiling to be Stained Beadboard
Exposed Deck Joists to be Covered with White PVC Trim- Paint Arctic White
Foundation - Poured Concrete with Brick Stamping or Parged - Painted to Match Exterior

NO.	DESCRIPTION	BY	DATE

Development:
THE GROVE
Charlottesville Viginia

PROJECT DESCRIPTION:
1005A and 1005B King Street
Building 1 & 6

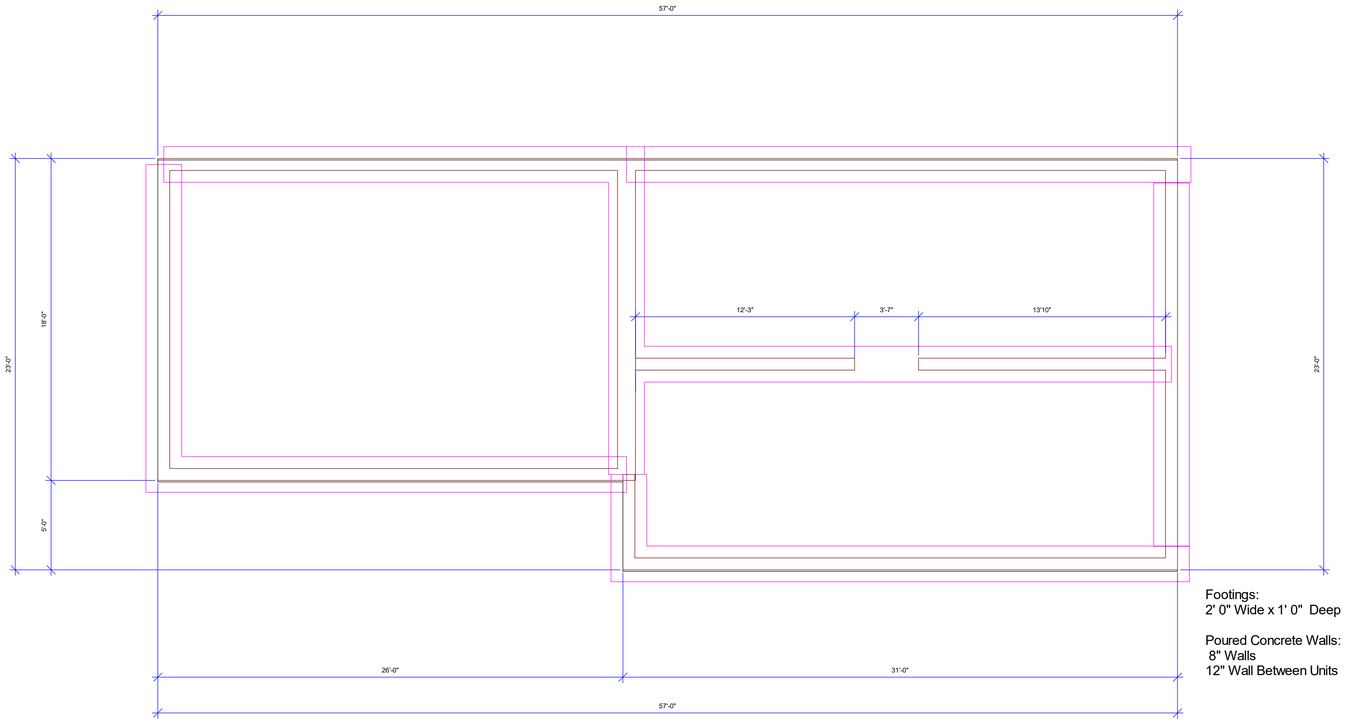
DRAWINGS PROVIDED BY:
A. Joseph Homes LLC
401 E. Market St ES27
Charlottesville, VA 22902
ajosephhomes.com

DATE:
11/19/2020

SCALE:

SHEET:
A-3

Attachment D



Footings:
2' 0" Wide x 1' 0" Deep

Poured Concrete Walls:
8" Walls
12" Wall Between Units

Foundation Plan

NO.	DESCRIPTION	BY	DATE

Development:
THE GROVE
Charlottesville Viginia

PROJECT DESCRIPTION:
1005A and 1005B King Street
Building 1 & 6

DRAWINGS PROVIDED BY:
A. Joseph Homes LLC
401 E. Market St ES27
Charlottesville, VA 22902
ajosephhomes.com

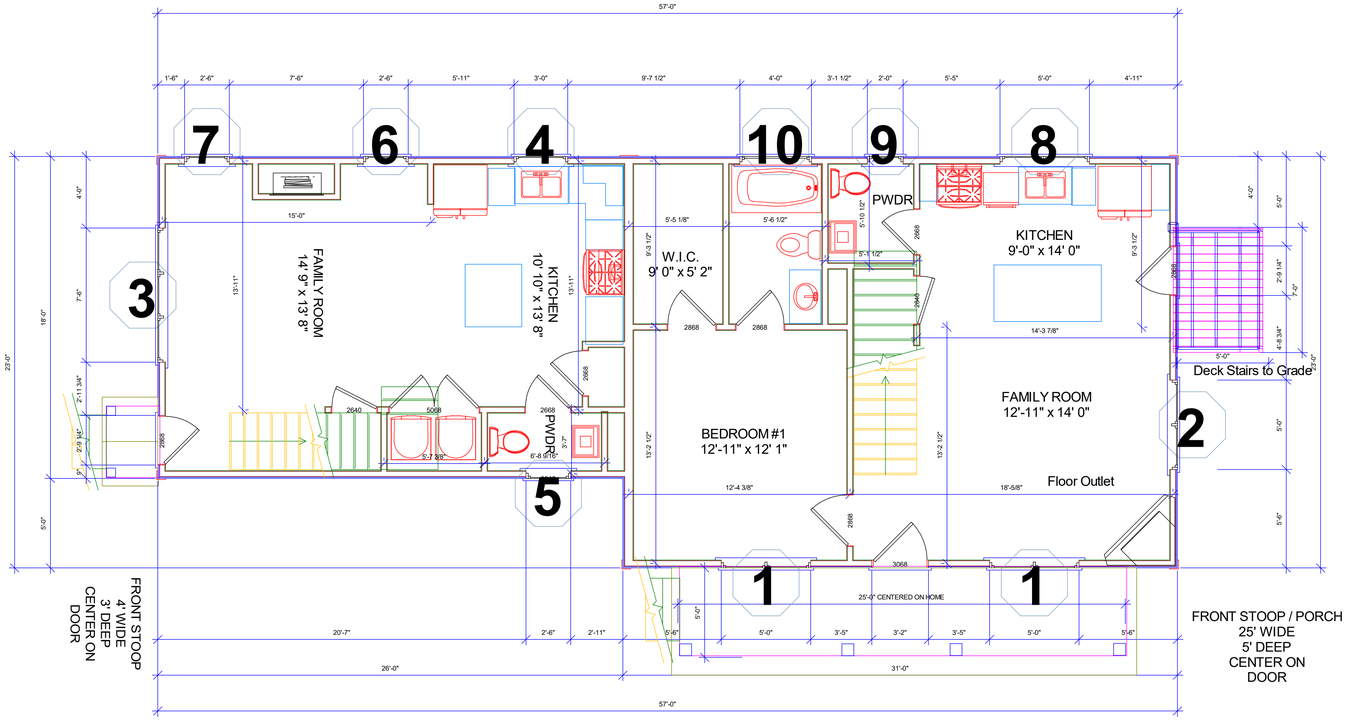
DATE:
11/19/2020

SCALE:

SHEET:
A-4

Window Schedule

Mark	Size	Description	Count	Notes
1	5'-0" X 5'-6"	Double - Double Hung Window	2	Header Height 7' 9"
2	5'-0" X 5'-6"	Double - Double Hung Window	1	Header Height 7' 9"
3	7'-6" X 5'-0"	Triple - Double Hung Window	1	Header Height 7' 9"
4	3'-0" X 4'-0"	Single - Double Hung Window - Tempered	1	Header Height 7' 9"
5	2'-6" X 4'-6"	Single - Double Hung Window - Tempered	1	Header Height 7' 9"
6	2'-6" X 4'-0"	Single - Double Hung Window	1	Header Height 7' 9"
7	2'-6" X 4'-0"	Single - Double Hung Window	1	Header Height 7' 9"
8	5'-0" X 4'-0"	Double - Double Hung Window - Tempered	1	Header Height 7' 9"
9	2'-0" X 4'-0"	Single - Double Hung Window - Tempered	1	Header Height 7' 9"
10	4'-0" X 1'-0"	Single - Fixed Window - Tempered	1	Header Height 7' 9"



Party Wall to be Constructed from Foundation to Roof Between Units
Fire Rated Roof Sheathing within 4' of Party Wall

Wall Between Units - Fire Protection Wall extends past Party Wall
NO VENTS - 1 HR Interior - 1HR Exterior

1st Floor Plan

NO.	DESCRIPTION	BY	DATE

Development:
THE GROVE
Charlottesville Viginia

PROJECT DESCRIPTION:
1005A and 1005B King Street
Building 1 & 6

DRAWINGS PROVIDED BY:
A. Joseph Homes LLC
401 E. Market St #527
Charlottesville, VA 22902
ajosephhomes.com

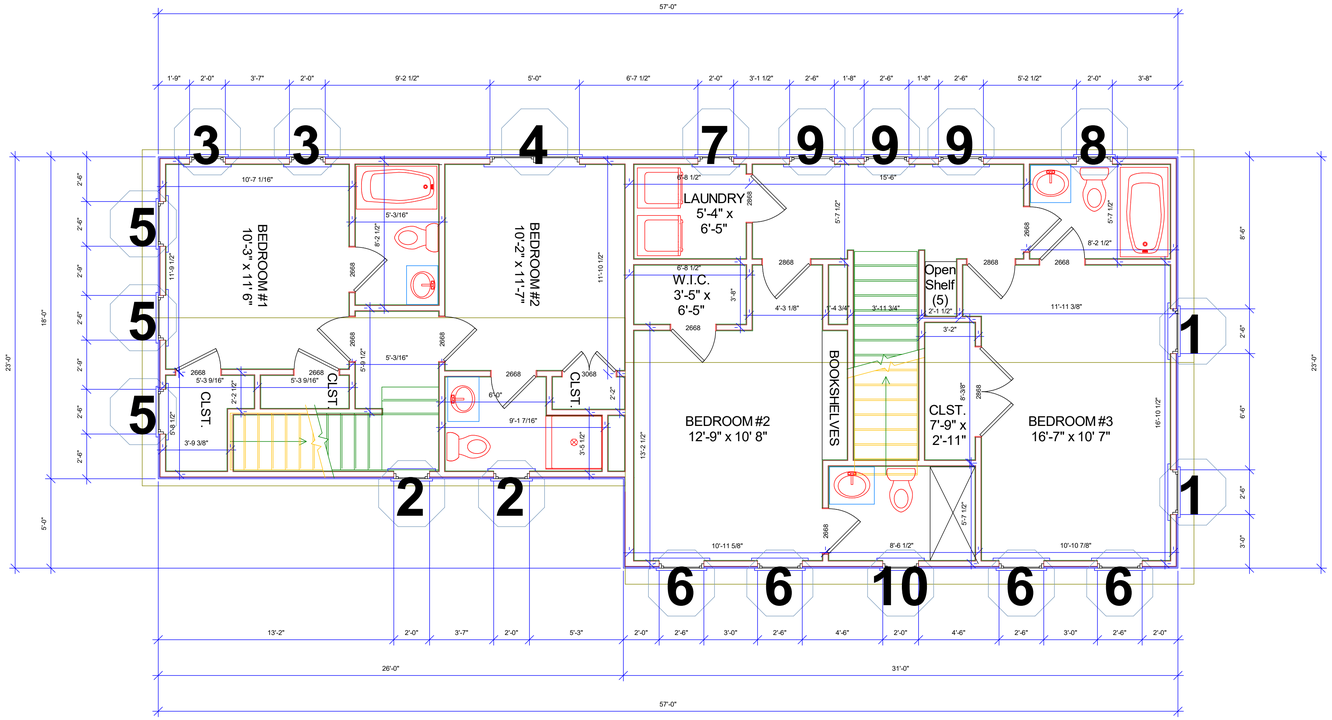
DATE:
11/19/2020

SCALE:

SHEET:
A-5

Window Schedule

Mark	Size	Description	Count	Notes
1	2'-6" X 2'-6"	Single - Double Hung Window	2	Header Height 7' 3"
2	2'-0" X 4'-0"	Single - Double Hung Window - Tempered	2	Header Height 7' 3"
3	2'-0" X 2'-0"	Single Fixed Window	2	Header Height 7' 3"
4	5'-0" X 5'-0"	Double - Double Hung Window	1	Header Height 7' 3"
5	2'-6" X 5'-0"	Single - Double Hung Window (1 Lower Sash Temp)	3	Header Height 7' 3"
6	2'-6" X 5'-0"	Single - Double Hung Window	4	Header Height 7' 3"
7	2'-0" X 3'-6"	Single - Double Hung Window - Tempered	1	Header Height 7' 3"
8	2'-0" X 3'-6"	Single - Double Hung Window - Tempered	1	Header Height 7' 3"
9	2'-6" X 2'-6"	Single Fixed Window	3	Header Height 7' 3"
10	2'-0" X 3'-6"	Single - Double Hung Window - Tempered	1	Header Height 7' 3"



Party Wall to be Constructed from Foundation to Roof Between Units
Fire Rated Roof Sheathing within 4' of Party Wall

Wall Between Units - Fire Protection Wall extends past Party Wall
NO VENTS - 1 HR Interior - 1HR Exterior

2nd Floor Plan

NO.	DESCRIPTION	BY	DATE

Development:
THE GROVE
Charlottesville Viginia

PROJECT DESCRIPTION:
1005A and 1005B King Street
Building 1 & 6

DRAWINGS PROVIDED BY:
A. Joseph Homes LLC
401 E. Market St ES27
Charlottesville, VA 22902
ajosephhomes.com

DATE:
11/19/2020

SCALE:

SHEET:
A-6

First Floor - 9'
Second Floor - 9'

Overall Height - Not to Exceed 35'
Refer to City Guidlines and Site Plan for 'Height' Definition

Building Height From (FFE) First Floor Elevation to Middle of Main Gable - Approximately 26' 3"

Roof System
Main House - 10/12
Front Porch - 10/12
Right Side Green Porch
- 3/12Min - 5/12Max

Wall Between Units -
See Floorplan Pages For Building Notes

Overhangs
Front and Right of Unit 1 - 1'
Rear of Unit 1 - 6"
Left of Unit 1 (Between Units) - 0"
Front of Unit 6 - 1'
Left and Right of Unit 6 - 6"
Add 5" for Gutters
Add 1" for Fascia Board

Home Details Front Unit (#6):
2 Bedrooms
2 1/2 Baths
890* Finished Square Ft.
12* Sq. Ft. Front Stoop

Home Details Rear Unit (#1):
3 Bedrooms
3 1/2 Baths
1372* Finished Square Ft.
125* Sq. Ft. Porch
35* Side Deck Square Ft.

* Square Ft. Numbers are Approximate

NO.	DESCRIPTION	BY	DATE

Development:
THE GROVE
Charlottesville Viginia

PROJECT DESCRIPTION:
1005A and 1005B King Street
Building 1 & 6

DRAWINGS PROVIDED BY:
A. Joseph Homes LLC
401 E. Market St ES27
Charlottesville, VA 22902
ajosephhomes.com

DATE:
11/19/2020

SCALE:

SHEET:
A-7

Front Elevation

Left Elevation

Exterior Color Scheme:
Lap Siding - James Hardie Cedarmill Gray Slate (1st Choice)
Lap Siding - James Hardie Cedarmill Night Gray (2nd Choice)
Straight Hardie Shake To Match Lap Siding Color Above Break
Trim - James Hardie Arctic White
Porch Ceiling to be Stained Beadboard
Exposed Deck Joists to be Covered with White PVC Trim- Paint Arctic White
Foundation - Poured Concrete with Brick Stamping or Parged - Painted to Match Exterior

NO.	DESCRIPTION	BY	DATE

Development:
THE GROVE
Charlottesville Viginia

PROJECT DESCRIPTION:
1002 Grove Street
Building 2

DRAWINGS PROVIDED BY:
A. Joseph Homes LLC
401 E. Market St ES27
Charlottesville, VA 22902
ajosephhomes.com

DATE:
8/31/2020

SCALE:

SHEET:
A-1

Rear Elevation

Right Elevation

Exterior Color Scheme:
Lap Siding - James Hardie Cedarmill Gray Slate (1st Choice)
Lap Siding - James Hardie Cedarmill Night Gray (2nd Choice)
Straight Hardie Shake To Match Lap Siding Color Above Break
Trim - James Hardie Arctic White
Porch Ceiling to be Stained Beadboard
Exposed Deck Joists to be Covered with White PVC Trim- Paint Arctic White
Foundation - Poured Concrete with Brick Stamping or Parged - Painted to Match Exterior

NO.	DESCRIPTION	BY	DATE

Development:
THE GROVE
Charlottesville Viginia

PROJECT DESCRIPTION:
1002 Grove Street
Building 2

DRAWINGS PROVIDED BY:
A. Joseph Homes LLC
401 E. Market St ES27
Charlottesville, VA 22902
ajosephhomes.com

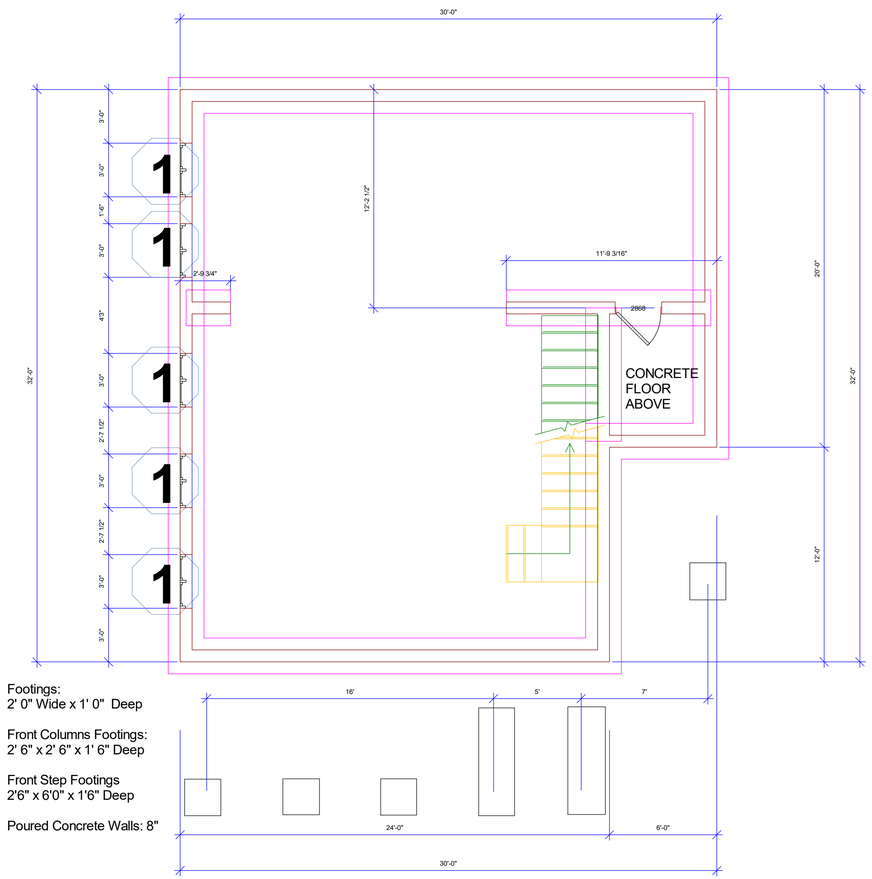
DATE:
8/31/2020

SCALE:

SHEET:
A-2

Window Schedule

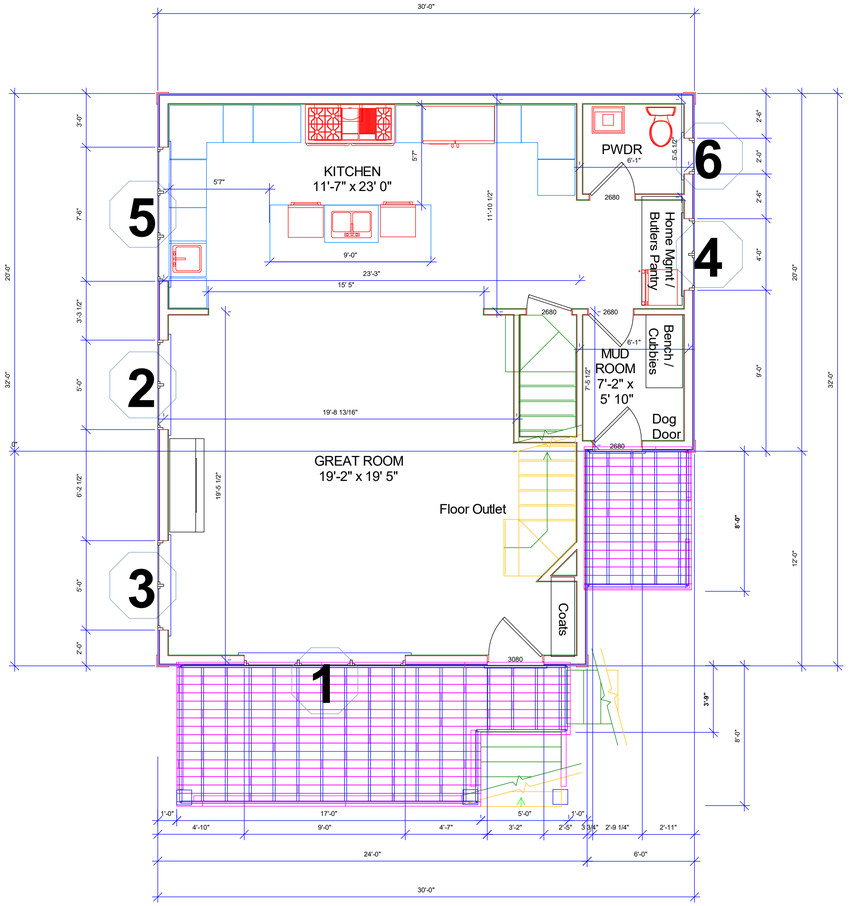
Mark	Size	Description	Count	Notes
1	3'-0" X 1'-6"	3'-0" X 1'-6" Casement Window	5	



Foundation Plan

Window Schedule

Mark	Size	Description	Count	Notes
1	9'-0" X 6'-6"	Triple - Double Hung Window	1	Header Height 8' 0"
2	5'-0" X 6'-6"	Double - Double Hung Window	1	Header Height 8' 0"
3	5'-0" X 6'-6"	Double - Double Hung Window	1	Header Height 8' 0"
4	4'-0" X 3'-6"	Double - Double Hung Window	1	Header Height 8' 0"
5	7'-6" X 3'-6"	Triple - Double Hung Window - Tempered	1	Header Height 8' 0"
6	2'-0" X 3'-6"	Single - Double Hung Window - Tempered	1	Header Height 8' 0"



1st Floor Plan

NO. | DESCRIPTION | BY | DATE

Development: THE GROVE Charlottesville Viginia

PROJECT DESCRIPTION: 1002 Grove Street Building 2

DRAWINGS PROVIDED BY:
A. Joseph Homes LLC
401 E. Market St #527
Charlottesville, VA 22902
ajosephhomes.com

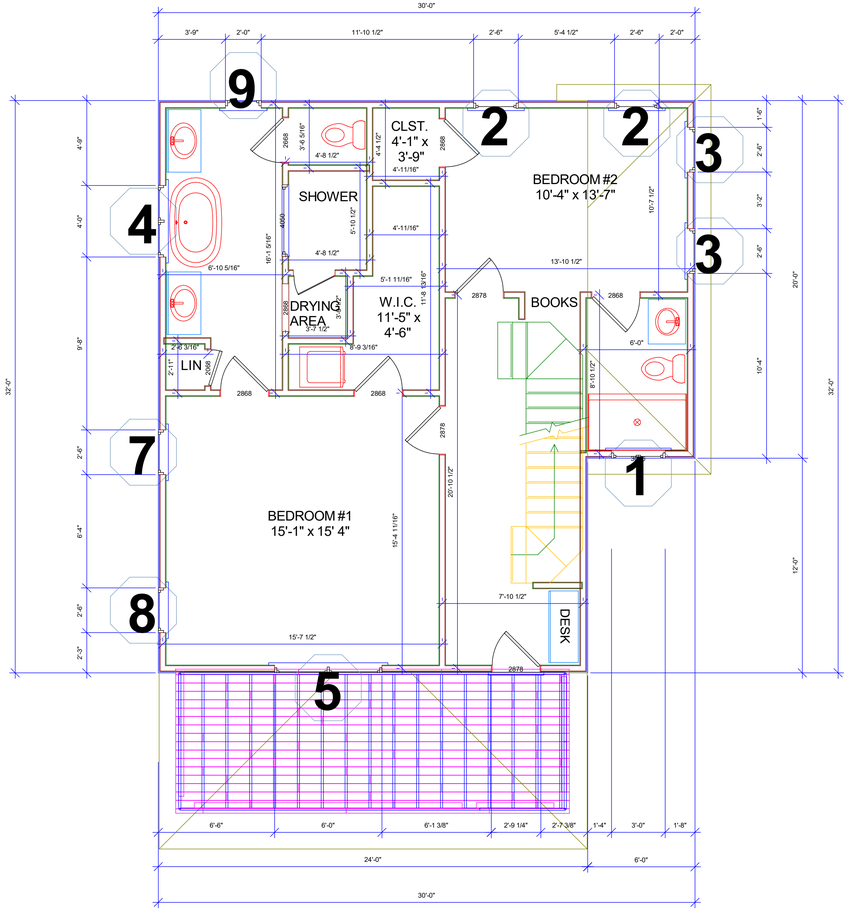
DATE: 8/31/2020

SCALE:

SHEET: A-3

Window Schedule

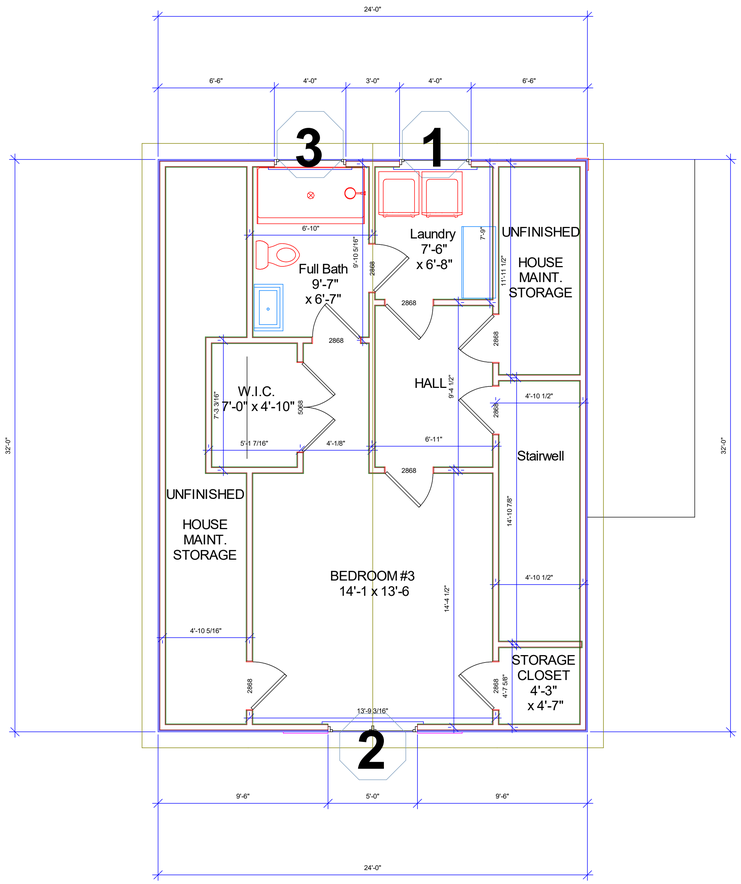
Mark	Size	Description	Count	Notes
1	3'-0" X 1'-0"	Single - Fixed Window	1	Header Height 7' 6"
2	2'-6" X 2'-6"	Single - Fixed Window	2	Header Height 7' 6"
3	2'-6" X 5'-0"	Single - Double Hung Window	2	Header Height 7' 6"
4	4'-0" X 5'-0"	Double - Double Hung Windows Tempered	1	Header Height 7' 6"
5	6'-0" X 5'-0"	Double - Double Hung Window	1	Header Height 7' 6"
			1	
7	2'-6" X 5'-0"	Single - Double Hung Window	1	Header Height 7' 6"
8	2'-6" X 5'-0"	Single - Double Hung Window	1	Header Height 7' 6"
9	2'-0" X 5'-0"	Single - Double Hung Window - Tempered	1	Header Height 7' 6"



2nd Floor Plan

Window Schedule

Mark	Size	Description	Count	Notes
1	4'-0" X 1'-0"	Single - Fixed Window - Tempered	1	Header Height 7'3"
2	5'-0" X 4'-6"	Double - Double Hung Window	1	Header Height 7'3"
3	4'-0" X 1'-0"	Single - Fixed Window - Tempered	1	Header Height 7'3"



3rd Floor Plan

NO. | DESCRIPTION | BY | DATE

Development:
THE GROVE
Charlottesville Viginia

PROJECT DESCRIPTION:
1002 Grove Street
Building 2

DRAWINGS PROVIDED BY:
A. Joseph Homes LLC
401 E. Market St ES27
Charlottesville, VA 22902
ajosephhomes.com

DATE:
8/31/2020

SCALE:

SHEET:
A-4

First Floor - 10'
Second Floor - 9'
Third Floor (Interior Walls) - 9'
Third Floor (Exterior Non-Gable) - 5'6"

Overall Height - Not to Exceed 35'
Refer to City Guidlines and Site Plan for 'Height' Definition

Building Height From (FFE) First Floor Elevation to Middle of Main Gable - Approximately 31' 0"

Roof System
Main House - 8/12
Front Porch - 4/12
Side Roof - 8/12

Overhangs
Front and Rear - 1'
Left and Right - 1'
Add 5" for Gutters
Add 1" for Fascia Board

Home Details:
3 Bedrooms
3 1/2 Baths
2090* Finished Square Ft.
331* Front Double Porch Square Ft.
48* Side Deck Square Ft.
* Square Ft. Numbers are Approximate

NO.	DESCRIPTION	BY	DATE

Development:
THE GROVE
Charlottesville Viginia

PROJECT DESCRIPTION:
1002 Grove Street
Building 2

DRAWINGS PROVIDED BY:
A. Joseph Homes LLC
401 E. Market St ES27
Charlottesville, VA 22902
ajosephhomes.com

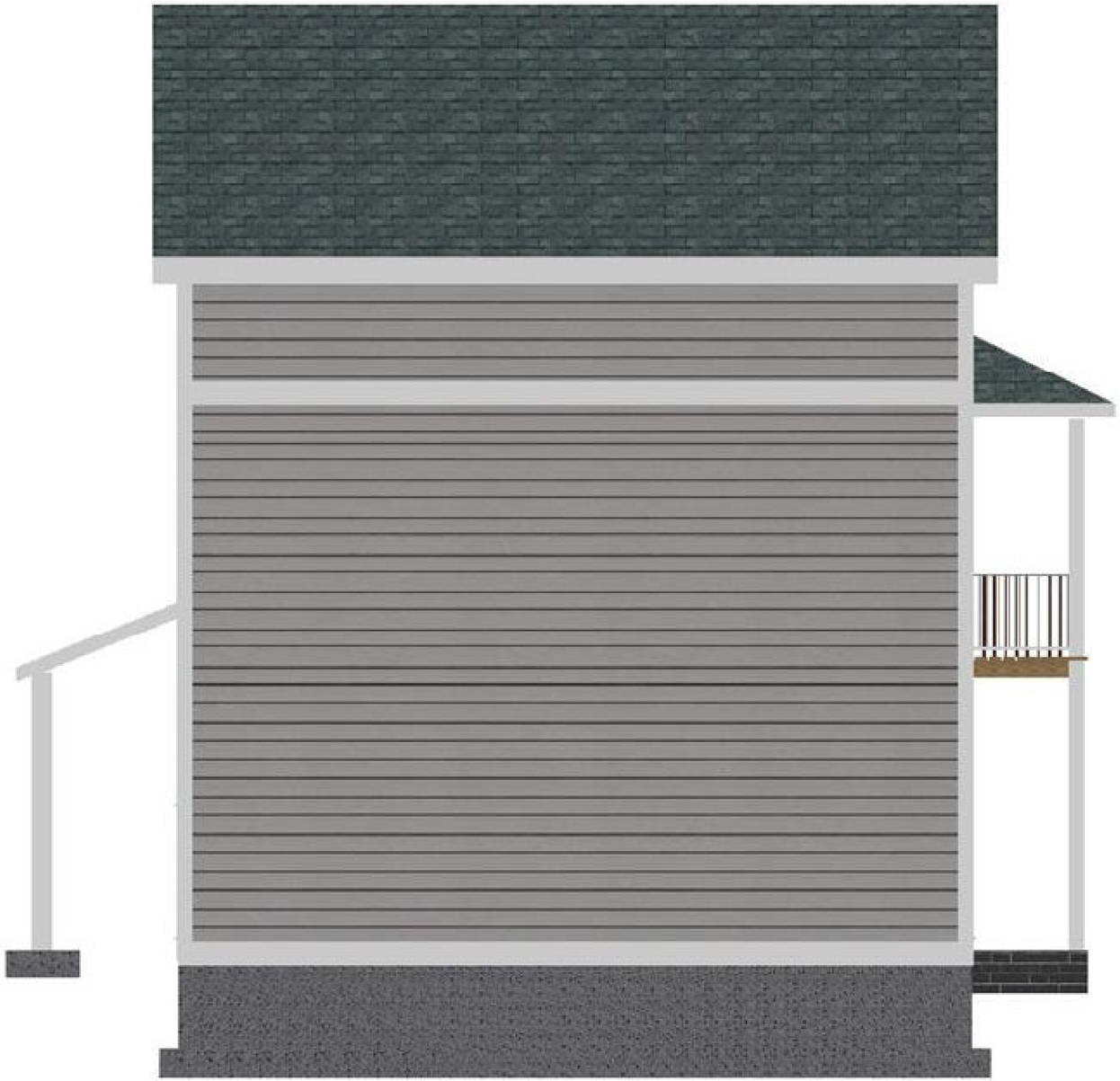
DATE:
8/31/2020

SCALE:

SHEET:
A-5

Front Elevation

Left Elevation



Exterior Color Scheme:
Lap Siding - James Hardie Cedarmill Arctic White (1st Choice)
Lap Siding - James Hardie Cedarmill Light Mist (2nd Choice)
Trim - James Hardie Artic White
Porch Ceiling to be Stained Beadboard
Exposed Deck Joists to be Covered with White PVC Trim- Paint Arctic White
Foundation - Poured Concrete with Brick Stamping or Parged - Painted to Match Exterior

NO.	DESCRIPTION	BY	DATE

Development:
THE GROVE
Charlottesville Viginia

PROJECT DESCRIPTION:
209 10th Street SW
Building 3

DRAWINGS PROVIDED BY:
A. Joseph Homes LLC
401 E. Market St ES27
Charlottesville, VA 22902
ajosephhomes.com

DATE:
8/31/2020

SCALE:

SHEET:
A-1

Rear Elevation

Right Elevation

Exterior Color Scheme:
Lap Siding - James Hardie Cedarmill Arctic White (1st Choice)
Lap Siding - James Hardie Cedarmill Light Mist (2nd Choice)
Trim - James Hardie Artic White
Porch Ceiling to be Stained Beadboard
Exposed Deck Joists to be Covered with White PVC Trim- Paint Arctic White
Foundation - Poured Concrete with Brick Stamping or Parged - Painted to Match Exterior

NO.	DESCRIPTION	BY	DATE

Development:
THE GROVE
Charlottesville Viginia

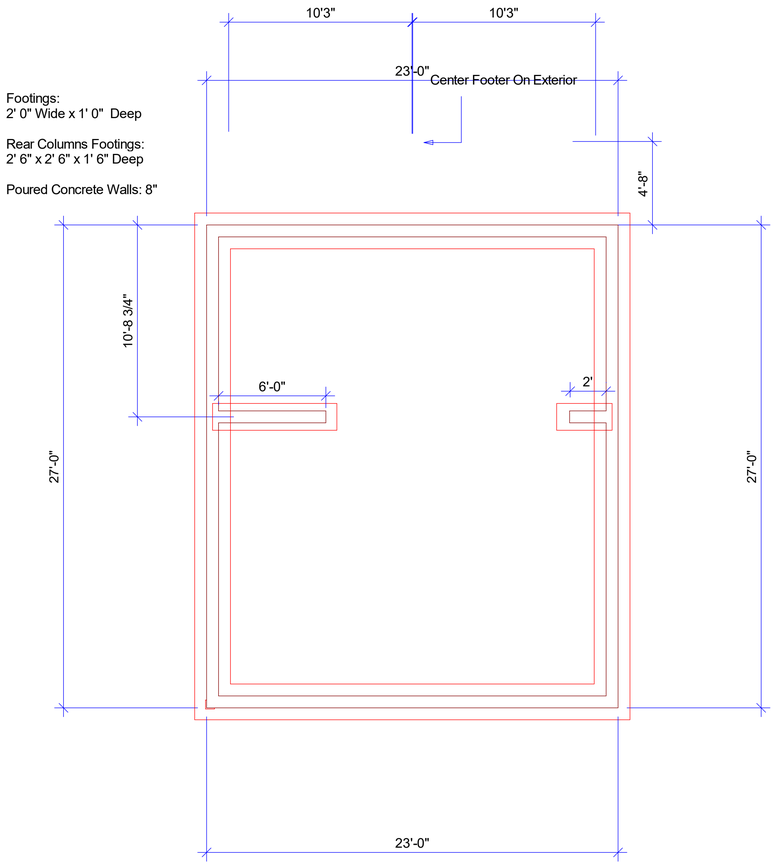
PROJECT DESCRIPTION:
209 10th Street SW
Building 3

DRAWINGS PROVIDED BY:
A. Joseph Homes LLC
401 E. Market St E527
Charlottesville, VA 22902
ajosephhomes.com

DATE:
8/31/2020

SCALE:

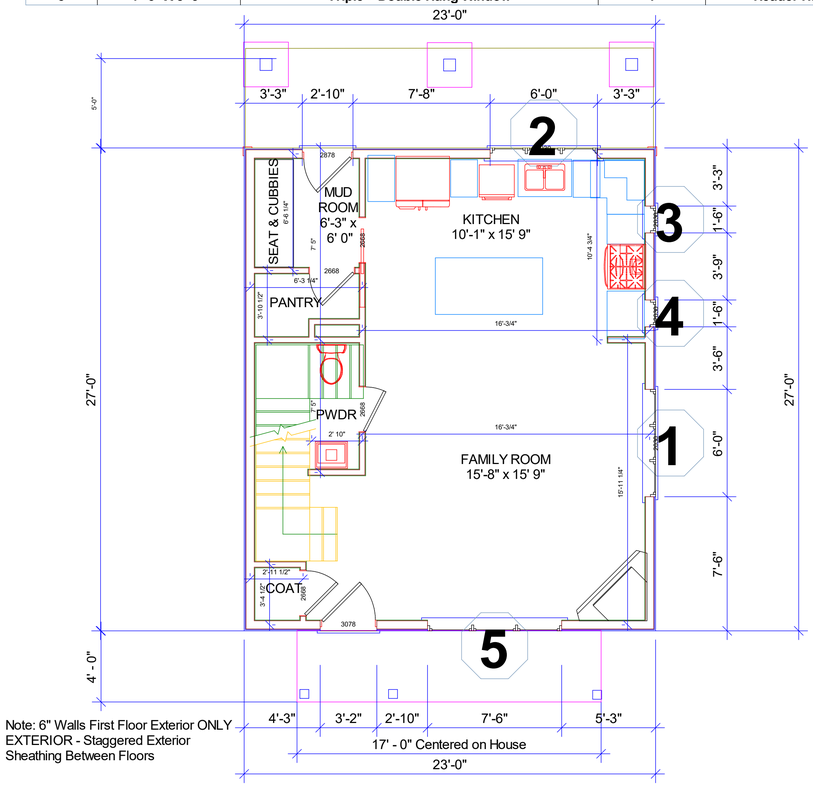
SHEET:
A-2



Foundation Plan

Window Schedule

Mark	Size	Description	Count	Notes
1	6'-0" X 5'-0"	Triple - Double Hung Window	1	Header Height 7' 9"
2	6'-0" X 3'-0"	Triple - Double Hung Window	1	Header Height 7' 9"
3	1'-6" X 3'-0"	Single - Double Hung Window	1	Header Height 7' 9"
4	1'-6" X 3'-0"	Single - Double Hung Window	1	Header Height 7' 9"
5	7'-6" X 5'-6"	Triple - Double Hung Window	1	Header Height 7' 9"



Note: 6" Walls First Floor Exterior ONLY
EXTERIOR - Staggered Exterior
Sheathing Between Floors

1st Floor Plan

NO.	DESCRIPTION	BY	DATE

Development:
THE GROVE
Charlottesville Viginia

PROJECT DESCRIPTION:
209 10th Street SW
Building 3

DRAWINGS PROVIDED BY:
A. Joseph Homes LLC
401 E. Market St ES27
Charlottesville, VA 22902
ajosephhomes.com

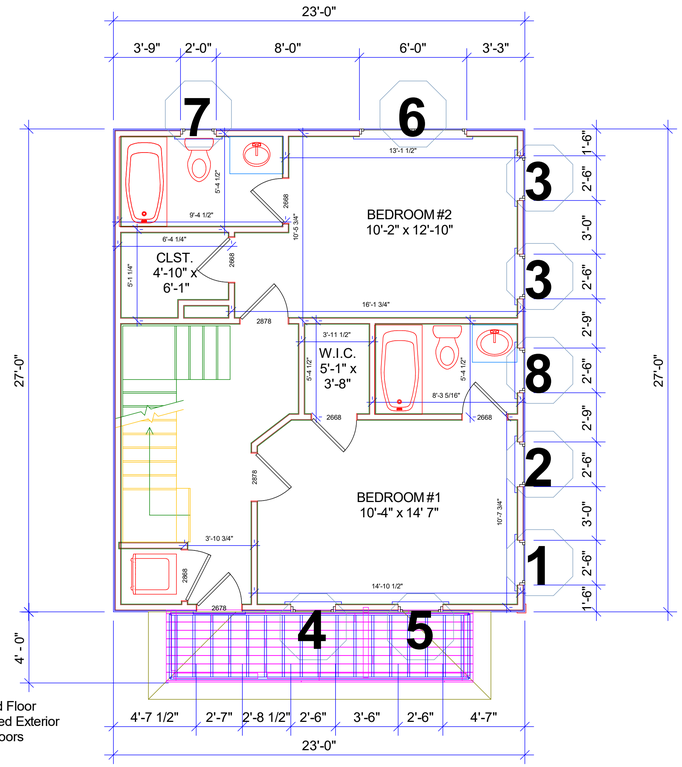
DATE:
8/31/2020

SCALE:

SHEET:
A-3

Window Schedule

Mark	Size	Description	Count	Notes
1	2'-6" X 2'-6"	Single - Fixed Window	1	Header Height 7' 6"
2	2'-6" X 2'-6"	Single - Fixed Window	1	Header Height 7' 6"
3	2'-6" X 2'-6"	Single - Fixed Window	2	Header Height 7' 6"
4	2'-6" X 5'-0"	Single - Double Hung Window	1	Header Height 7' 6"
5	2'-6" X 5'-0"	Single - Double Hung Window	1	Header Height 7' 6"
6	6'-0" X 4'-0"	Double - Double Hung Window	1	Header Height 7' 6"
7	2'-0" X 3'-0"	Single - Double Hung Window - Tempered	1	Header Height 7' 6"
8	2'-6" X 2'-6"	Single - Fixed Window - Tempered	1	Header Height 7' 6"

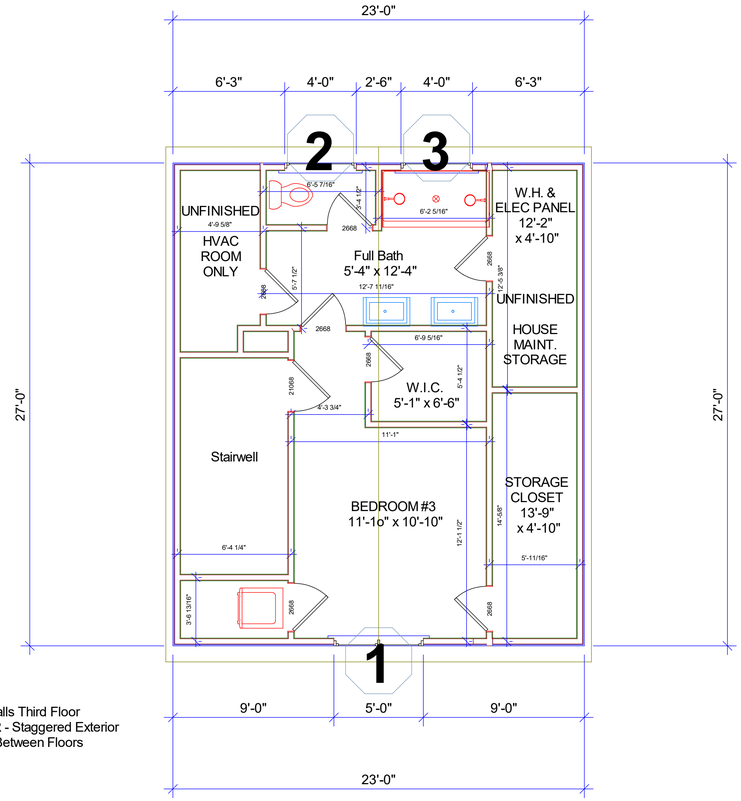


Note: 4" Walls Second Floor
EXTERIOR - Staggered Exterior
Sheathing Between Floors

2nd Floor Plan

Window Schedule

Mark	Size	Description	Count	Notes
1	5'-0" X 4'-6"	Double - Double Hung Window	1	Header Height 7' 6"
2	4'-0" X 1'-0"	Single - Fixed Window Tempered	1	Header Height 6' 8"
3	4'-0" X 1'-0"	Single - Fixed Window Tempered	1	Header Height 6' 8"



Note: 4" Walls Third Floor
EXTERIOR - Staggered Exterior
Sheathing Between Floors

3rd Floor Plan

Development :
THE GROVE
Charlottesville Viginia

NO.	DESCRIPTION	BY	DATE

PROJECT DESCRIPTION:
209 10th Street SW
Building 3

DRAWINGS PROVIDED BY:
A. Joseph Homes LLC
401 E. Market St ES27
Charlottesville, VA 22902
ajosephhomes.com

DATE:
8/31/2020

SCALE:

SHEET:
A–4

First Floor - 9'
Second Floor - 8'
Third Floor (Interior Walls) - 9'
Third Floor (Exterior Non-Gable) - 5'6"

Overall Height - Not to Exceed 35'
Refer to City Guidlines and Site Plan for 'Height' Definition

Building Height From (FFE) First Floor Elevation to Middle of Main Gable - Approximately 29' 6"

Roof System
Main House - 9/12
Front Porch - 6/12
Rear Porch - 5/12

Overhangs
Front and Rear - 1'
Left and Right - 6"
Add 5" for Gutters
Add 1" for Fascia Board

Home Details:
3 Bedrooms
3 1/2 Baths
1665* Finished Square Ft.
135* Front Porch Square Ft.
115* Covered Patio Square Ft.
* Square Ft. Numbers are Approximate

NO.	DESCRIPTION	BY	DATE

Development:
THE GROVE
Charlottesville Viginia

PROJECT DESCRIPTION:
209 10th Street SW
Building 3

DRAWINGS PROVIDED BY:
A. Joseph Homes LLC
401 E. Market St E527
Charlottesville, VA 22902
ajosephhomes.com

DATE:
8/31/2020

SCALE:

SHEET:
A-5

Front Elevation

Left Elevation

Exterior Color Scheme:
Painted Brick Front - To Match Siding
Lap Siding - James Hardie Cedarmill Pearl Gray (1st Choice)
Lap Siding - James Hardie Cedarmill Aged Pewter (2nd Choice)
Trim - James Hardie Artic White
Foundation - Poured Concrete with Brick Stamping or Parged - Painted to Match Exterior

NO.	DESCRIPTION	BY	DATE

Development:
THE GROVE
Charlottesville Viginia

PROJECT DESCRIPTION:
207 10TH ST SW
Building 4

DRAWINGS PROVIDED BY:
A. Joseph Homes LLC
401 E. Market St ES27
Charlottesville, VA 22902
ajosephhomes.com

DATE:
8/31/2020

SCALE:

SHEET:
A-1

Rear Elevation

Right Elevation

Exterior Color Scheme:
Painted Brick Front - To Match Siding
Lap Siding - James Hardie Cedarmill Pearl Gray (1st Choice)
Lap Siding - James Hardie Cedarmill Aged Pewter (2nd Choice)
Trim - James Hardie Artic White
Foundation - Poured Concrete with Brick Stamping or Parged - Painted to Match Exterior

NO.	DESCRIPTION	BY	DATE

Development:
THE GROVE
Charlottesville Viginia

PROJECT DESCRIPTION:
207 10TH ST SW
Building 4

DRAWINGS PROVIDED BY:
A. Joseph Homes LLC
401 E. Market St ES27
Charlottesville, VA 22902
ajosephhomes.com

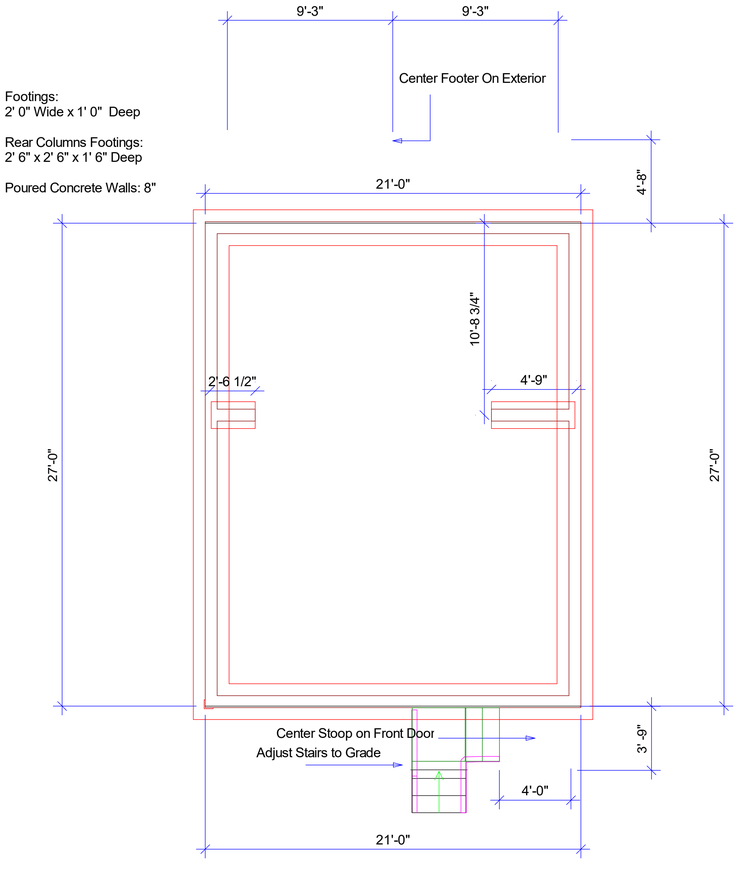
DATE:
8/31/2020

SCALE:

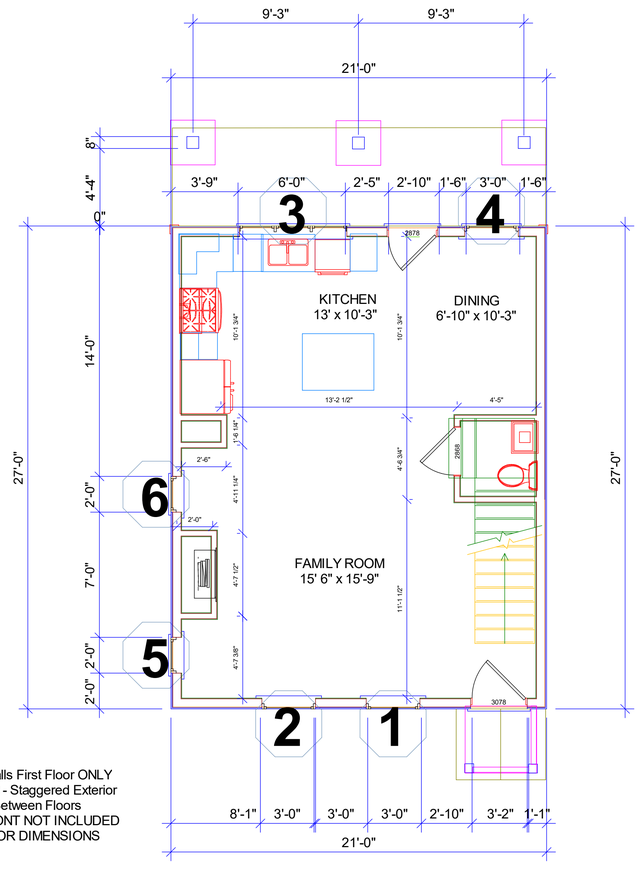
SHEET:
A-2

Window Schedule

Mark	Size	Description	Count	Notes
1	3'-0" X 5'-6"	Single - Double Hung Window	1	7' 9" Header Height
2	3'-0" X 5'-6"	Single - Double Hung Window	1	7' 9" Header Height
3	6'-0" X 3'-6"	Triple - Double Hung Window	1	7' 9" Header Height
4	3'-0" X 3'-6"	Single - Double Hung Window	1	7' 9" Header Height
5	2'-0" X 3'-0"	Single - Double Hung Window	1	7' 9" Header Height
6	2'-0" X 3'-0"	Single - Double Hung Window	1	7' 9" Header Height



Foundation Plan



Note: 6" Walls First Floor ONLY
EXTERIOR - Staggered Exterior
Sheathing Between Floors
BRICK FRONT NOT INCLUDED
IN EXTERIOR DIMENSIONS

1st Floor Plan

Development:
THE GROVE
Charlottesville Viginia

PROJECT DESCRIPTION:
207 10TH ST SW
Building 4

DRAWINGS PROVIDED BY:
A. Joseph Homes LLC
401 E. Market St ES27
Charlottesville, VA 22902
ajosephhomes.com

DATE:
8/31/2020

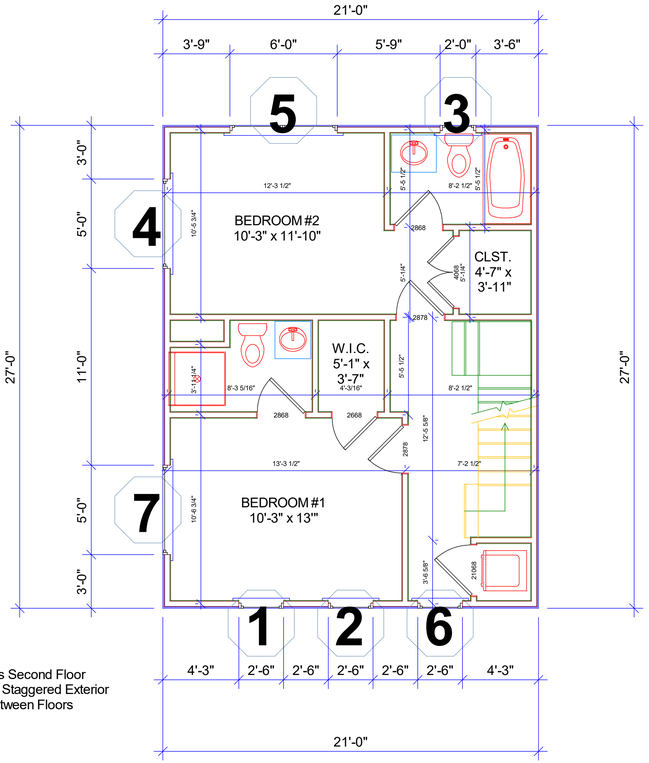
SCALE:

SHEET:
A-3

NO.	DESCRIPTION	BY	DATE

Window Schedule

Mark	Size	Description	Count	Notes
1	2'-6" X 5'-0"	Single - Double Hung Window	1	
2	2'-6" X 5'-0"	Single - Double Hung Window	1	7' 6" Header Height
3	2'-0" X 3'-0"	Single - Double Hung Window - Tempered	1	7' 6" Header Height
4	5'-0" X 2'-0"	Single Fixed Window	1	7' 6" Header Height
5	5'-0" X 2'-0"	Single Fixed Window	1	7' 6" Header Height
6	6'-0" X 4'-0"	Double - Double Hung Window	1	7' 6" Header Height
7	2'-6" X 5'-0"	Single - Double Hung Window - Tempered Lower Sash	1	7' 6" Header Height

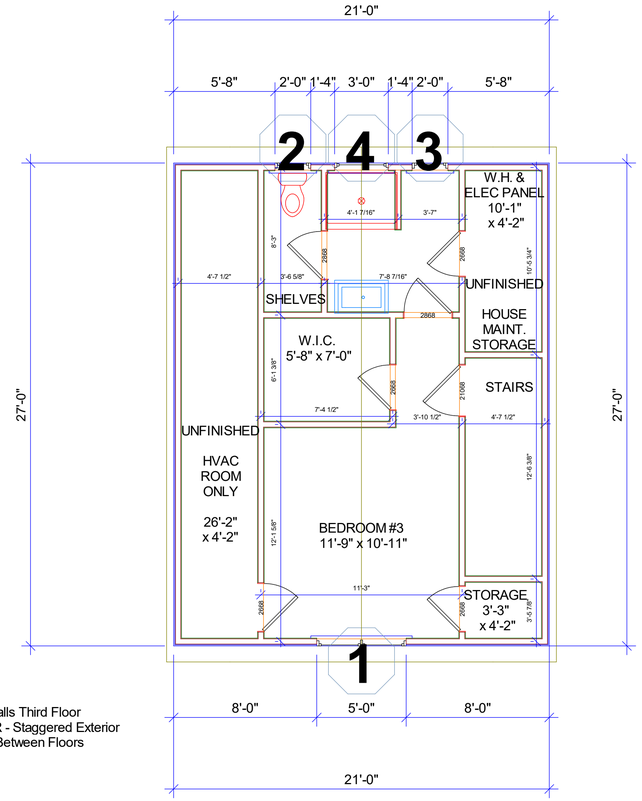


Note: 4" Walls Second Floor
EXTERIOR - Staggered Exterior
Sheathing Between Floors

2nd Floor Plan

Window Schedule

Mark	Size	Description	Count	Notes
1	5'-0" X 5'-0"	Double - Double Hung Window	1	7' 6" Header Height
2	2'-0" X 3'-0"	Single - Double Hung Window - Tempered	1	7' 6" Header Height
3	2'-0" X 3'-0"	Single - Double Hung Window - Tempered	1	7' 6" Header Height
4	3'-0" X 1'-0"	Single Fixed Window	1	7' 6" Header Height



Note: 4" Walls Third Floor
EXTERIOR - Staggered Exterior
Sheathing Between Floors

3rd Floor Plan

NO. | DESCRIPTION | BY | DATE

Development:
THE GROVE
Charlottesville Viginia

PROJECT DESCRIPTION:
207 10TH ST SW
Building 4

DRAWINGS PROVIDED BY:
A. Joseph Homes LLC
401 E. Market St ES27
Charlottesville, VA 22902
ajosephhomes.com

DATE:
8/31/2020

SCALE:

SHEET:
A-4

First Floor - 9'
Second Floor - 8'
Third Floor (Interior Walls) - 9'
Third Floor (Exterior Non-Gable) - 5'6"

Wall Restrictions (FIRE) -
Right Side - NO VENTS
Right Side - 1 HR Fire Interior and Exterior

Overall Height - Not to Exceed 35'
Refer to City Guidlines and Site Plan for 'Height' Definition

Building Height From (FFE) First Floor Elevation to Middle of Main Gable - Approximately 28' 6"

Roof System
Main House - 9/12
Front Porch - 12/12
Rear Porch - 5/12

Framed Overhangs -
Front and Rear - 1'
Left and Right - 6"
Add 5" for Gutters
Add 1" for Fascia Board

Home Details:
3 Bedrooms
3 1/2 Baths
1525* Finished Square Ft.
100* Covered Patio Square Ft.
* Square Ft. Numbers are Approximate

NO.	DESCRIPTION	BY	DATE

Development:
THE GROVE
Charlottesville Viginia

PROJECT DESCRIPTION:
207 10TH ST SW
Building 4

DRAWINGS PROVIDED BY:
A. Joseph Homes LLC
401 E. Market St ES27
Charlottesville, VA 22902
ajosephhomes.com

DATE:
8/31/2020

SCALE:

SHEET:
A-5

Front Elevation

Left Elevation

Exterior Color Scheme:

Lap Siding - James Hardie Cedarmill Monterey Taupe (1st Choice)
Lap Siding - James Hardie Cedarmill Timber Bark (2nd Choice)
Trim - James Hardie Artic White
Foundation - Poured Concrete with Brick Stamping or Parged - Painted to Match Exterior

NO.	DESCRIPTION	BY	DATE

Development:
THE GROVE
Charlottesville Viginia

PROJECT DESCRIPTION:
205 10TH ST SW
Building 5

DRAWINGS PROVIDED BY:
A. Joseph Homes LLC
401 E. Market St E527
Charlottesville, VA 22902
ajosephhomes.com

DATE:
8/31/2020

SCALE:

SHEET:
A-1

Rear Elevation

Right Elevation

Exterior Color Scheme:

Lap Siding - James Hardie Cedarmill Monterey Taupe (1st Choice)
Lap Siding - James Hardie Cedarmill Timber Bark (2nd Choice)
Trim - James Hardie Artic White
Foundation - Poured Concrete with Brick Stamping or Parged - Painted to Match Exterior

NO.	DESCRIPTION	BY	DATE

Development:
THE GROVE
Charlottesville Viginia

PROJECT DESCRIPTION:
205 10TH ST SW
Building 5

DRAWINGS PROVIDED BY:
A. Joseph Homes LLC
401 E. Market St ES27
Charlottesville, VA 22902
ajosephhomes.com

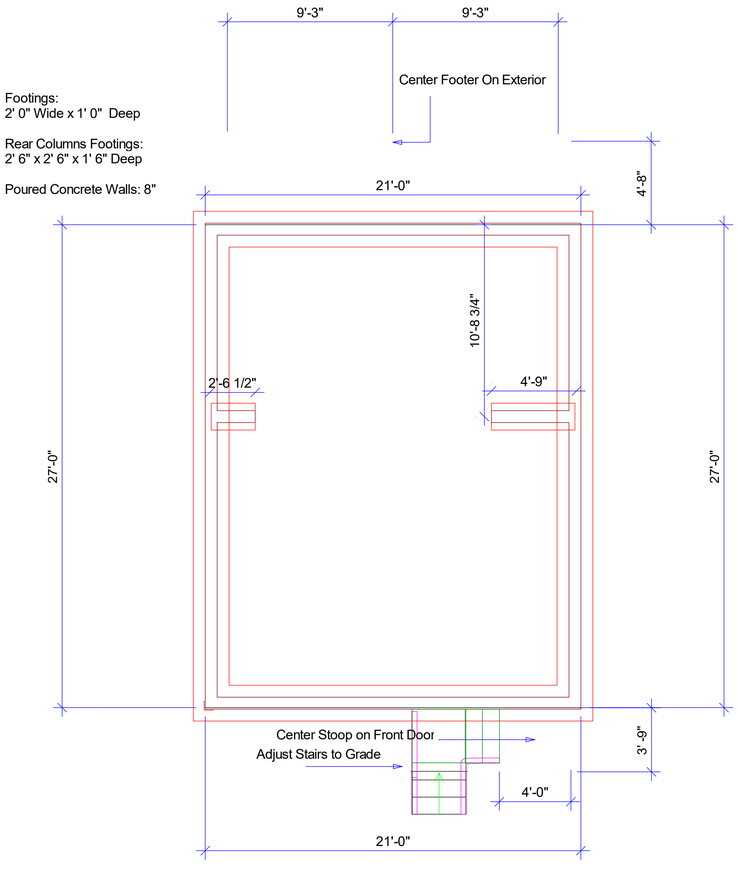
DATE:
8/31/2020

SCALE:

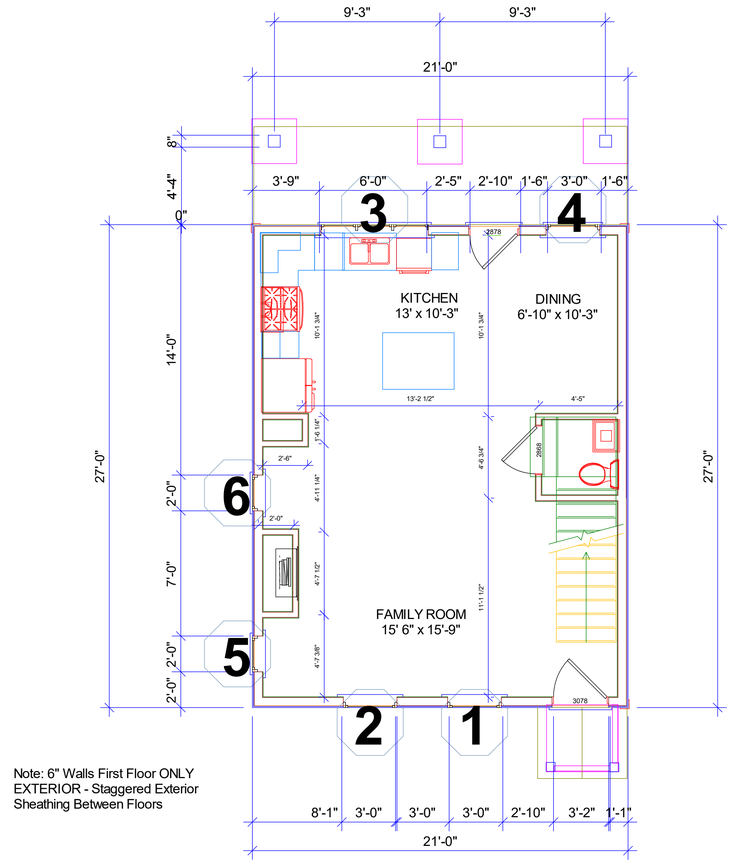
SHEET:
A-2

Window Schedule

Mark	Size	Description	Count	Notes
1	3'-0" X 5'-6"	Single - Double Hung Window	1	7' 9" Header Height
2	3'-0" X 5'-6"	Single - Double Hung Window	1	7' 9" Header Height
3	6'-0" X 3'-6"	Triple - Double Hung Window - Tempered	1	7' 9" Header Height
4	3'-0" X 3'-6"	Single - Double Hung Window	1	7' 9" Header Height
5	2'-0" X 3'-0"	Single - Double Hung Window	1	7' 9" Header Height
6	2'-0" X 3'-0"	Single - Double Hung Window	1	7' 9" Header Height



Foundation Plan



Note: 6" Walls First Floor ONLY
EXTERIOR - Staggered Exterior Sheathing Between Floors

1st Floor Plan

Development:
THE GROVE
Charlottesville Viginia

PROJECT DESCRIPTION:
205 10TH ST SW
Building 5

NO.	DESCRIPTION	BY	DATE

DRAWINGS PROVIDED BY:
A. Joseph Homes LLC
401 E. Market St #527
Charlottesville, VA 22902
ajosephhomes.com

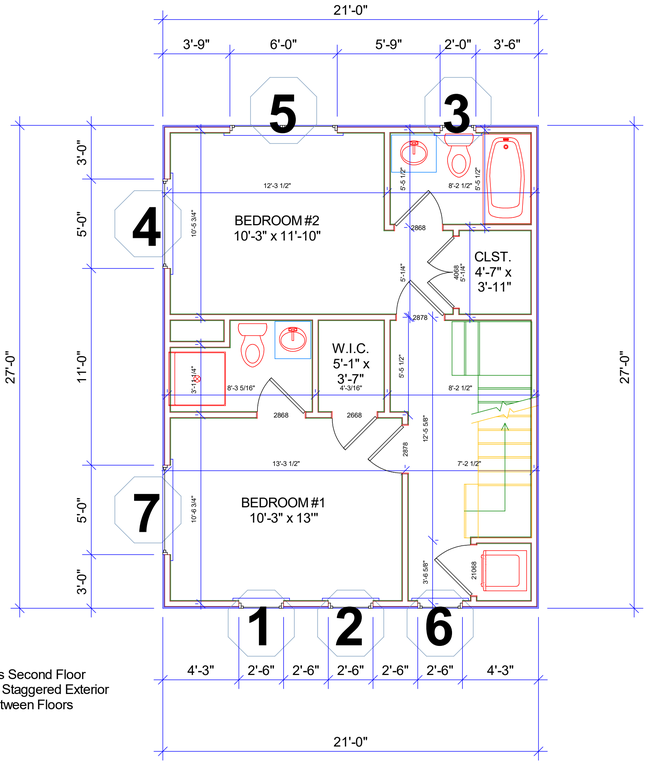
DATE:
8/31/2020

SCALE:

SHEET:
A-3

Window Schedule

Mark	Size	Description	Count	Notes
1	2'-6" X 5'-0"	Single - Double Hung Window	1	
2	2'-6" X 5'-0"	Single - Double Hung Window	1	7' 6" Header Height
3	2'-0" X 3'-0"	Single - Double Hung Window - Tempered	1	7' 6" Header Height
4	5'-0" X 2'-0"	Single Fixed Window	1	7' 6" Header Height
5	5'-0" X 2'-0"	Single Fixed Window	1	7' 6" Header Height
6	6'-0" X 4'-0"	Double - Double Hung Window	1	7' 6" Header Height
7	2'-6" X 5'-0"	Single - Double Hung Window - Tempered Lower Sash	1	7' 6" Header Height

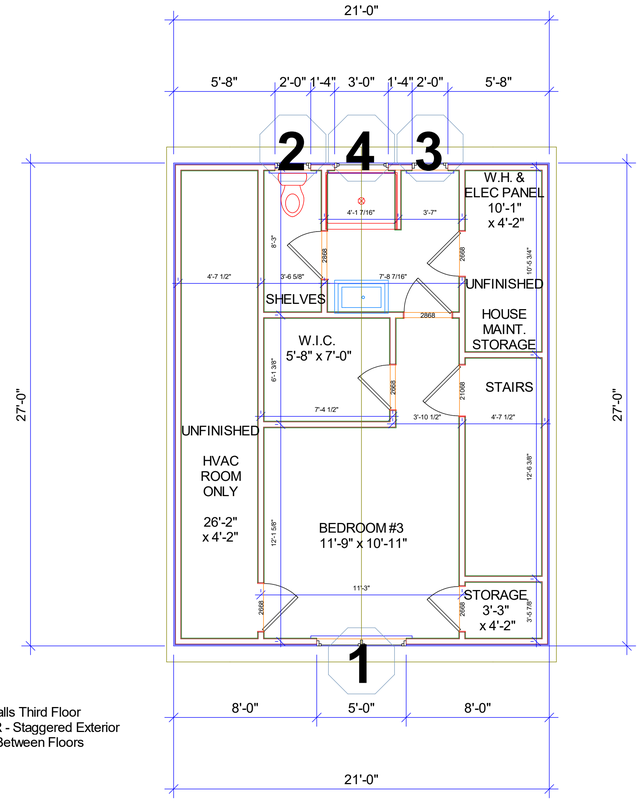


Note: 4" Walls Second Floor
EXTERIOR - Staggered Exterior
Sheathing Between Floors

2nd Floor Plan

Window Schedule

Mark	Size	Description	Count	Notes
1	5'-0" X 5'-0"	Double - Double Hung Window	1	7' 6" Header Height
2	2'-0" X 3'-0"	Single - Double Hung Window - Tempered	1	7' 6" Header Height
3	2'-0" X 3'-0"	Single - Double Hung Window - Tempered	1	7' 6" Header Height
4	3'-0" X 1'-0"	Single Fixed Window	1	7' 6" Header Height



Note: 4" Walls Third Floor
EXTERIOR - Staggered Exterior
Sheathing Between Floors

3rd Floor Plan

NO. | DESCRIPTION | BY | DATE

Development:
THE GROVE
Charlottesville Viginia

PROJECT DESCRIPTION:
205 10TH ST SW
Building 5

DRAWINGS PROVIDED BY:
A. Joseph Homes LLC
401 E. Market St ES27
Charlottesville, VA 22902
ajosephhomes.com

DATE:
8/31/2020

SCALE:

SHEET:
A-4

First Floor - 9'
Second Floor - 8'
Third Floor (Interior Walls) - 9'
Third Floor (Exterior Non-Gable) - 5'6"

Wall Restrictions (FIRE) -
Right Side - NO VENTS
Right Side - 1 HR Fire Interior and Exterior

Overall Height - Not to Exceed 35'
Refer to City Guidlines and Site Plan for 'Height' Definition

Building Height From (FFE) First Floor Elevation to Middle of Main Gable - Approximately 28' 6"

Roof System
Main House - 9/12
Front Porch - 12/12
Rear Porch - 5/12

Framed Overhangs -
Front and Rear - 1'
Left and Right - 6"
Add 5" for Gutters
Add 1" for Fascia Board

Home Details:
3 Bedrooms
3 1/2 Baths
1525* Finished Square Ft.
100* Covered Patio Square Ft.
* Square Ft. Numbers are Approximate

NO.	DESCRIPTION	BY	DATE

Development:
THE GROVE
Charlottesville Viginia

PROJECT DESCRIPTION:
205 10TH ST SW
Building 5

DRAWINGS PROVIDED BY:
A. Joseph Homes LLC
401 E. Market St ES27
Charlottesville, VA 22902
ajosephhomes.com

DATE:
8/31/2020

SCALE:

SHEET:
A-5

CITY OF CHARLOTTESVILLE

DEPARTMENT OF NEIGHBORHOOD DEVELOPMENT SERVICES

STAFF MEMO

JOINT CITY COUNCIL AND PLANNING COMMISSION PUBLIC HEARING

UPDATE MEMO ON REZONING APPLICATION ZM20-00003 AND SPECIAL USE PERMIT APPLICATION SP21-00002

DATE OF HEARING: October 21, 2021

Project Planner: Matt Alfele, AICP
Date of Staff Memo: October 8, 2021

Applicant: Lorven Investments LLC
Applicant's Representative(s): Justin Shimp, Shimp Engineering, P.C.
Current Property Owner: Lorven Investments LLC

Application Information

Property Street Address: 1613 Grove St. Ext., 1611 Grove St. Ext, and 0 Grove St.
Tax Map & Parcel: 230133000, 230134000, and 230135000
Total Square Footage/ Acreage Site: 0.652acres (28,401square feet)
Comprehensive Plan (General Land Use Plan): Low Density Residential
Current Zoning Classification: R-2 (applicant is pursuing a rezoning to R-3 under application ZM20-00003, a SUP under application SP21-00002 and a Critical Slope Waiver under application P21-0023)
Overlay District: None

Applicant's Request and update Summary

On May 11, 2021 Planning Commission held a Public Hearing for the requested rezoning and SUP applications. The application was seeking to rezone the Subject Properties from R-2 (Residential Two-family) to R-3 (Residential Multifamily) and increase the density to forty-three (43) DUA (Dwelling Units per Acre). The applicant was also seeking a recommendation on a Critical Slope Waiver at that meeting. All three applications were needed for the proposed development. That development included four (4) apartment buildings with seven (7) two (2) bedroom units per building for a total number of residential units of twenty-eight (28).

During the Public Hearing the Planning Commission heard from five (5) members of the public. Two (2) members of the public voiced support for the proposed development and three (3) voiced opposition. The public in favor of the development stated the City needed

more housing and affordable units. Members of the public opposed to the development believe parking will be an issue and Valley Road Extended cannot handle more traffic. They also stated the development would not fit the characteristics of the surrounding single and two-family homes.

During Planning Commission's discussion traffic, density, stream restoration and impacts to the surrounding neighborhood were discussed. Planning Commission did not know if this location (at the end of a dead-end street) was the best location for twenty-eight (28) units. Some commissioners would like to see more than the by-right, but less than the twenty-eight (28). Traffic was a big concern as Valley Road Extended is a narrow road and would be hard to improve due to Rock Creek bordering one side. The Commission also stated they would like to see more affordable units within the development. This proposal only requires one (1) affordable unit per Sec. 34-12. At the end of the discussion the applicant requested, and was granted, a deferral to address these concerns.

Notwithstanding the changes noted below, the applications before you tonight are the same as what was presented to Planning Commission on May 11, 2021.

Critical Slope Waiver Application P21-0023
No Changes

Rezoning Application ZM20-00003
Additional Proffer (Affordable Housing) (Attachment E)
The applicant updated their proffer statement to add an affordable housing requirement. The applicant is proposing that eight (8) of the twenty-eight (28) units will be Affordable Units (AUs). Of the eight (8) AUs, four (4) will be for-rent affordable where the monthly cost of rent, including any tenant paid utilities, does not exceed 125% of the Fair Market Rent by unit bedrooms for the Charlottesville MSA; and four (4) units will be for-rent units where the monthly cost of rent, including any tenant paid utilities, does not exceed the Fair Market Rent by unit bedrooms for the Charlottesville MSA. The AUs shall be reserved as such throughout a period of a least ten (10) years from the date on which the unit received a certificate of occupancy. The AU obligations set forth in the proffer statement shall be set forth within one or more written declarations of covenants recorded within the land records of the Charlottesville Circuit Court in a form approved by the Office of the City Attorney.

Summary of Proffers: The proffered development conditions regarding affordable housing include:

…In furtherance of the Project, the Owner hereby proffers for City Council's consideration voluntary development conditions, which the Owner agrees are reasonable. The Owner agrees that, if the Property is rezoned as requested, the use and development of the Property will be subject to and in accordance with the following conditions:…

…2. Affordable Housing:

The Owner shall provide affordable housing within the Property, as follows:

a. For the purposes of this Proffer, the term "For-Rent Workforce Affordable Dwelling Unit" means a dwelling unit where the monthly cost of rent, including any tenant paid utilities, does not exceed 125% of the Fair Market Rent by unit bedrooms for the Charlottesville MSA, the aforementioned Fair Market Rent is established annually by the federal Department of Housing and Urban Development (HUD).
b. For the purposes of this Proffer, the term "For-Rent Affordable Dwelling Unit" means a dwelling unit where the monthly cost of rent, including any tenant paid utilities, does not exceed the Fair Market Rent by unit bedrooms for the Charlottesville MSA, the aforementioned Fair Market Rent is established annually by the federal Department of Housing and Urban Development (HUD).
c. Fourteen percent (14%) of all dwelling units constructed within the area of the Property shall be For-Rent Workforce Affordable Dwelling Units and an additional fourteen percent (14%) of all dwelling units constructed within the area of the Property shall be For-Rent Affordable Dwelling Units (collectively, the "Required Affordable Dwelling Units") for a total of 28% of dwelling units constructed within the area of the Property provided as Required Affordable Dwelling Units. The Required Affordable Dwelling Units shall be identified on a layout plan, by unit, prior to the issuance of any certificate of occupancy for a residential unit within the Property ("Initial Designation"). The Owner reserves the right, from time to time after the Initial Designation, and subject to approval by the City, to change the unit(s) reserved as Workforce-Affordable Dwelling Units and Affordable Dwelling Units, and the City's approval shall not unreasonably be withheld so long as a proposed change does not reduce the number of Required Affordable Dwelling Units and does not result in an Affordability Period shorter than required by these proffers with respect to any of the Required Affordable Dwelling Units.
    i. The Required Affordable Dwelling Units shall be reserved as such throughout a period of at least ten (10) years from the date on which the unit receives a certificate of occupancy from the City's building official ("Rental Affordability Period"). All Rental Affordable Dwelling Units shall be administered in accordance with one or more written declarations of

covenants within the land records of the Charlottesville Circuit Court, in a form approved by the Office of the City Attorney.

ii. On or before July 1 of each calendar year the then current owner of each Required Affordable Dwelling Unit shall submit an Annual Report to the City, identifying each Required Affordable Dwelling Unit by address and location, and verifying the Household Income of the occupant of each Required Affordable Dwelling Unit.

d. The land use obligations referenced in 2.c.i and 2.c.ii shall be set forth within one or more written declarations of covenants recorded within the land records of the Charlottesville Circuit Court, in a form approved by the Office of the City Attorney, so that the Owner's successors in right, title and interest to the Property shall have notice of and be bound by the obligations. In the event of re-sale of any of the required Affordable dwelling Units that reduces the number of required Affordable Dwelling Units below the thresholds set forth in this proffer, the declaration of covenants shall provide a mechanism to ensure that an equivalent Affordable Dwelling Unit is created within the City of Charlottesville, either on or off of the Subject Project, that satisfies the requirements contained herein for the remainder of the Affordability Period.

Staff Analysis:

In this particular application, the proposed development does not exceed 1.0 floor-area ratio (FAR), therefore the applicant is not required to provide on-site affordable dwelling units as part of the project (pursuant to City code Section 34-12). However, the applicant is proffering:

- Fourteen percent (14%) of all dwelling units constructed within the area of the Property shall be For-Rent Workforce Affordable Dwelling Units
- and an additional fourteen percent (14%) of all dwelling units constructed within the area of the Property shall be For-Rent Affordable Dwelling Units

The applicant has defined the above as:

<u>For-Rent Workforce Affordable Dwelling Unit</u> means a dwelling unit where the monthly cost of rent, including any tenant paid utilities, does not exceed 125% of the Fair Market Rent by unit bedrooms

<u>For-Rent Affordable Dwelling Unit</u> means a dwelling unit where the monthly cost of rent, including any tenant paid utilities, does not exceed the Fair Market Rent by unit bedrooms

At this time, the applicant is proposing to develop a total of 28 dwelling units, of which eight (8) of those will be committed affordable units. Information has not been provided as to the proposed bedroom size or square footage of the affordable units.

The table below shows the 2021 HUD guidelines for Fair Market Rent. We have included information in this table based on the applicant's proffer. However, if this application is approved, the FMR will be based on the HUD guidelines for that year that the Certificate of Occupancy for the unit is issued.

	Eff	1 BR	2 BR	3 BR	4 BR	5 BR
2021 HUD FMR	949	1077	1266	1575	1965	2260
Proffer:						
4 units @ FMR	949	1077	1266	1575	1965	2260
4 units @ 125% FMR	1186	1346	1583	1969	2456	2925
Monthly cost includes tenant-paid utilities						

Staff offers the following comments as to this application and the proffered development conditions related to providing affordable dwelling units:

- Under 2(b), staff is concerned that not enough detail is provided describing the process in the event the Owner changes the unit(s) reserved as Workforce Affordable Dwelling Units and Affordable Dwelling Units. This proffer does not specify the size of the units (square footage) and/or number of bedrooms. Further, it does not state that the size (square footage or number of bedrooms) will not be reduced/changed, should this section of the proffer be enacted.
- Under 2(d), staff is concerned that not enough detail is provided describing the process in the event of re-sale of any of the required Affordable dwelling Units that reduces the number of required Affordable Dwelling Units below the thresholds set forth in this proffer. How can the City be assured that an equivalent Affordable Dwelling Unit is created within the City in a timely manner and/or that the Owner/applicant will come out of compliance with the proffer conditions at any time for an unspecified timeframe, should this section of the proffer be enacted?
- Under 2(d), not enough detail is provided describing the process of how the monitoring and enforcement of the yearly reporting will continue in the event of re-sale of any of the committed affordable dwelling units. This section is not clear if any of the proposed rental affordable dwelling units will be re-sold as privately owned (homeownership) units.
- The proffer does not state that the units must not be segregated.
- The proffer does not state that on-site amenities will be available for use by the occupants of the affordable and workforce units.

Special Use Permit SP21-00002

Updated Preliminary Site Plan (Attachment A)

Building Height:

The original building height was a maximum allowable of forty-five (45) feet and a proposed height of forty (40) feet.

The updated plan calls for a maximum allowable of forty-five (45) feet and a proposed height of thirty-five (35) feet. The applicant is proposing to lower the rear buildings so each unit has one (1) unit below grade.

Bedrooms:

The original development called for twenty-eight (28) two (2) bedroom units.

The updated plan calls for eight (8) one (1) bedroom units and twenty (20) two (2) bedroom units.

Parking:

The original development called for on street parking on Valley Road Extended.

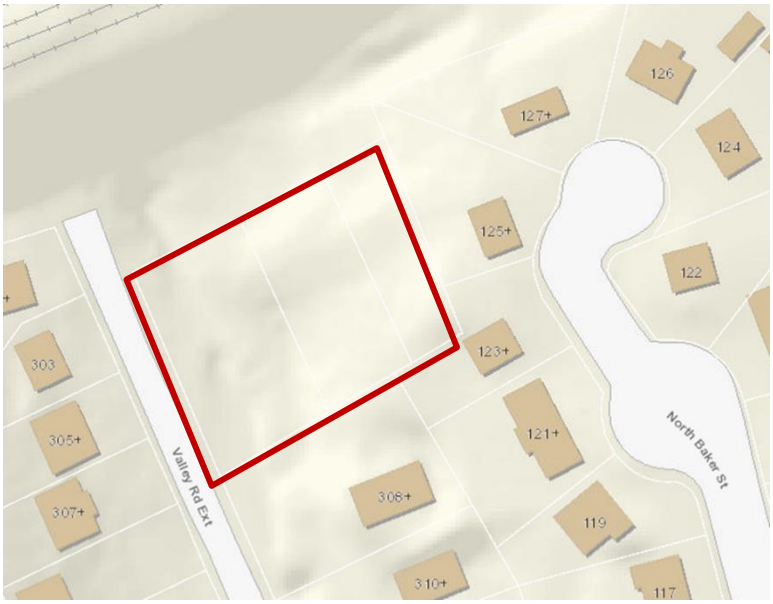
The updated plan removes the on street parking.

Section 34-12 (Affordable Dwelling Units):

The original development required one (1) affordable unit per Section 34-12.

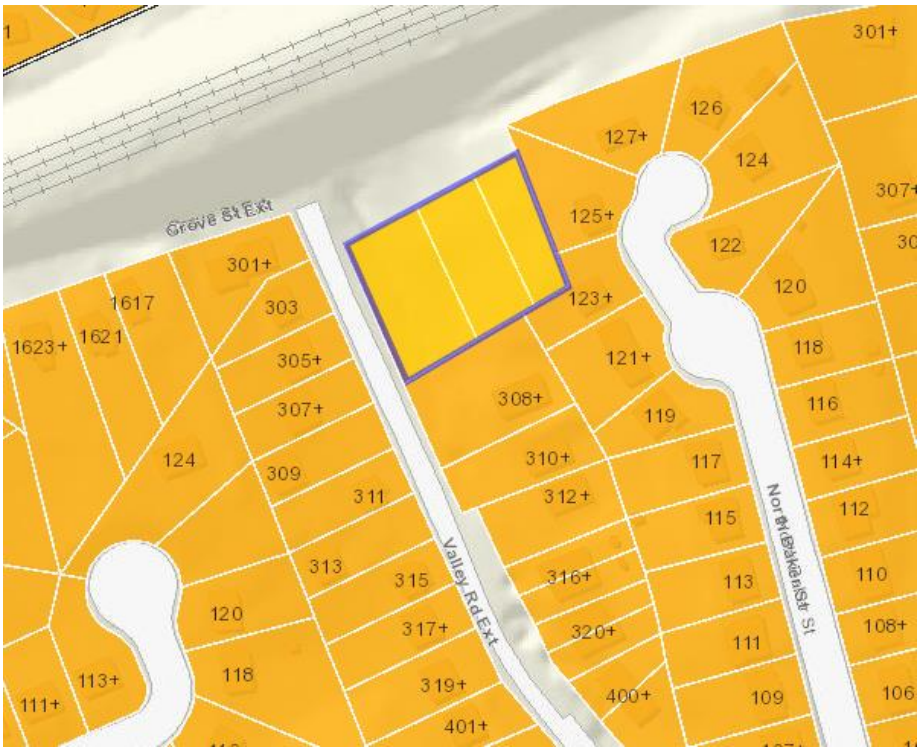
The updated plan has been reconfigure so that it now falls below the one (1) floor-area ratio (FAR) and no longer requires an affordable unit. The applicant is now proffering eight (8) affordable units (see the rezoning section above).

Vicinity Map



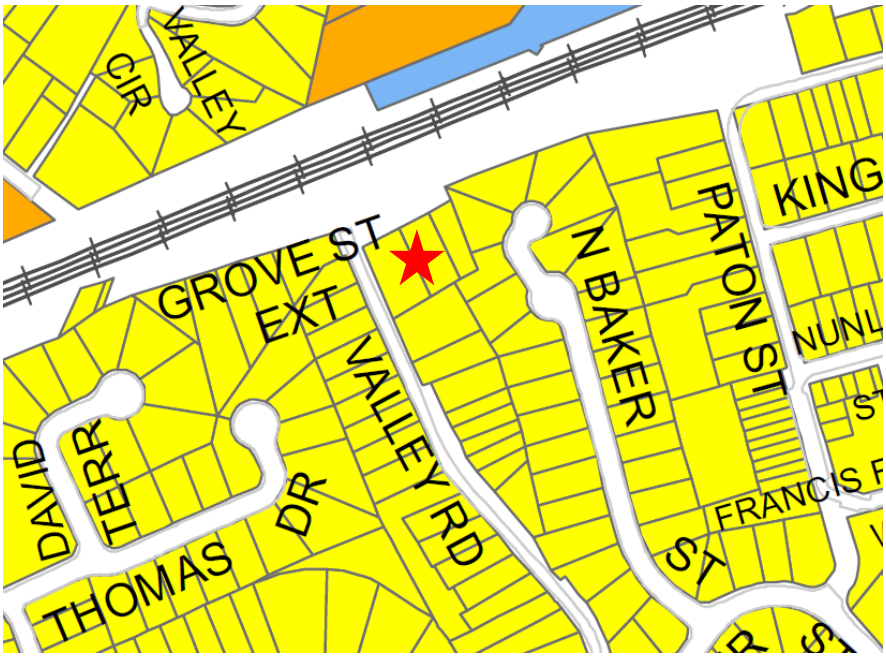
Context Map 1

Context Map 2- Zoning Classification



KEY - Orange: R-2

Context Map 3- General Land Use Plan, 2013 Comprehensive Plan



KEY: Yellow: Low Density Residential, Blue: Public or Semi-Public, & Orange: High Density Residential

Staff Recommendation

Staff Recommendation for ZM20-00003

Staff finds the proposed zoning change could contribute to some goals of the City's Comprehensive Plan such as increasing the City housing stock, restoring a portion of Rock Creek, and adding an affordable dwelling unit. But staff also finds that the proposed rezoning would not be consistent with the City future Land Use Map or the surrounding fabric of the neighborhood. Staff recommends denial of the rezoning request.

Staff Recommendation for SP16-000001

Staff recommends denial of the Special Use Permit as the increased density at this location would not be in line with the City Future Land Use Map and could have an adverse impact on the surrounding low density neighborhood and infrastructure.

Recommended Conditions

Should the Special Use permit be approved, Staff recommends the following conditions:

1. Up to 43 dwelling units per acre (DUA) are permitted on the Subject Properties with a maximum of two bedrooms per unit.
2. The restoration of Rock Creek as presented in the applicant's narrative dated July 14, 2020 and revised September 29, 2021.
3. Modifications of yard requirements to:
    a. Front yard: Twenty-five (25) feet.
    b. North Side yard: Five (5) feet.

c. South Side yard: Fourteen (14) feet.
d. Rear yard: Twenty-five (25) feet.

Staff Recommendation for P21-0023

If a recommendation for approval is provided, the following conditions should be considered:

1) Site Plans (VESCP Plans) should include, at a minimum, 4 stages/phases of ESC controls. The first phase shall include "Initial/Preliminary Controls" and also include special consideration and provisions for how the 'creek'/'channel' will be crossed throughout the project and how concentrated flows will outfall to the channel/culvert. Ideally outfall and site access (culvert work/tie in) would be established with rigorous independent ESC controls prior to the establishment of a sediment trap and associated conveyances. Any channels/diversions that convey 'clear' water to the channel shall be stabilized with sod on the 'clear water' side immediately after installation. The sequence shall dictate that no 'benching', or any disturbance of the slopes can occur until after the establishment of the trap and conveyances (Stage/Phase III).
2) "Super Silt Fence" (chain linked backing) shall be installed where perimeter silt fence is specified.
3) Any disturbance occurring outside of conveyances to the trap, in either sequence or space, planned or unforeseen, shall be immediately stabilized with sod (for pervious areas, utilities should have other "same day stabilization").

Suggested Motions

Rezoning

1. I move to recommend approval of this application to rezone the Subject Property from R-2, to R-3, on the basis that the proposal would service the interests of the general public and good zoning practice.

OR,

2. I move to recommend denial of this application to rezone the Subject Property from R-2 to R-3, on the basis that the proposal would not service the interests of the general public and good zoning practice.

Special Use Permit

1. I move to recommend approval of this application for a Special Use Permit for Tax Map & Parcels 230133000, 230134000, and 230135000 (1613 Grove Street Extended) to permit residential density up to forty-three (43) DUA and adjusted yard requirements as depicted on the site plan dated September 29, 2021 with the following listed conditions.
    a. Conditions recommended by staff
    b. [alternative conditions, or additional condition(s)….list here]

OR,

2. I move to recommend denial of this application for a Special Use Permit for Tax Map & Parcels 230133000, 230134000, and 230135000 (1613 Grove Street Extended)

Critical Slope

1. I move to recommend approval of the critical slope waiver for Tax Map and Parcel 230135000, 230134000, and 230133000 as requested, with no reservations or conditions, based on a finding that [*reference at least one*]:
    - The public benefits of allowing the disturbance outweigh the benefits afforded by the existing undisturbed critical slope, per Section 34-1120(b)(6)(d)(i)
    - Due to unusual physical conditions, or the existing development of the property, compliance with the City's critical slopes regulations would prohibit or unreasonably restrict the use or development of the property, per Section 34-1120(b)(6)(d)(ii)
2. I move to recommend approval of the critical slope waiver for Tax Map and Parcel 230135000, 230134000, and 230133000 as requested, with the conditions outlined in the staff report, based on a finding that [*reference at least one*]:
    - The public benefits of allowing the disturbance outweigh the benefits afforded by the existing undisturbed critical slope, per Section 34-1120(b)(6)(d)(i)
    - Due to unusual physical conditions, or the existing development of the property, compliance with the City's critical slopes regulations would prohibit or unreasonably restrict the use or development of the property, per Section 34-1120(b)(6)(d)(ii)
3. I move to recommend denial of the critical slope waiver for Tax Map and Parcel 230135000, 230134000, and 230133000

Attachments

A. Updated Preliminary Site Plan
B. Updated Exhibit
C. Updated Narrative
D. Updated ADU Worksheet
E. Updated Preliminary Proffer Statement

Link to the staff reports and attachments from the May 11, 2021 Public Hearing. Reports start on page 4.
https://charlottesvilleva.civicclerk.com/Web/Player.aspx?id=1099&key=-1&mod=-1&mk=-1&nov=0
Or,
https://civicclerk.blob.core.windows.net/stream/CHARLOTTESVILLEVA/7d5d2871-ff48-4b5e-b988-efefd68930e5.pdf?sv=2015-12-11&sr=b&sig=eGMe3%2F%2BklOcQeV3OaxApywoUK34OjN4eGqFYBX7N%2Bmo%3D&st

=2021-10-11T14%3A48%3A13Z&se=2022-10-11T14%3A53%3A13Z&sp=r&rscc=no-cache&rsct=application%2Fpdf

Attachment A (10/21/21)

PRELIMINARY SITE PLAN

1613 GROVE STREET

TAX MAP 23, PARCEL 133, 134, 135

CHARLOTTESVILLE, VIRGINIA

LEGEND

EXISTING	NEW	DESCRIPTION
		BOUNDARIES
		BENCHMARK
		SITE PROPERTY LINE
		ADJACENT PROPERTY LINE
		BUILDING SETBACK
		PARKING SETBACK
		SITE TEXT
10	10	PARKING COUNT
		TOPOGRAPHY
		INDEX CONTOUR
		INTERVAL CONTOUR
311.5 x	x	SPOT ELEVATION
311.5 TC x	x	TOP OF CURB ELEVATION
311.5 TW x	x	TOP OF WALL ELEVATION
311.5 BW x	x	BOTTOM OF WALL ELEVATION
		STREAM
		STREAM BUFFER
		100 YEAR FLOODPLAIN
		BUILDING
		BUILDING
		RETAINING WALL
		STAIRS
		EDGE OF PAVEMENT
		ROAD CENTERLINE
		FRONT OF CURB
		BACK OF CURB
		CG-12 TRUNCATED DOME
		SIDEWALK
		BIKE PARKING
		HANDICAP ACCESSIBLE AISLE
		HANDICAP PARKING
		MATERIAL
		CONCRETE
		RIPRAP
		ASPHALT
		EC-2 MATTING
		EC-3 MATTING
		WETLAND
		TREELINE
X	X	FENCE
		UTILITY
		UTILITY POLE
		GUY WIRE
OHU	OHU	OVERHEAD UTILITY
UGU	UGU	UNDERGROUND UTILITY
		STORM
		STORM MANHOLE
		DROP INLET
		STORM SEWER
RD	RD	ROOF DRAIN
		SANITARY
		SANITARY MANHOLE
		SANITARY SEWER MAIN
S	S	SANITARY SEWER LATERAL
		WATER
W	W	WATER LINE
		WATER METER
		WATER METER VAULT
		FIRE HYDRANT
		FIRE DEPARTMENT CONNECTION
		GAS
GAS	GAS	GAS LINE
		EASEMENTS
		CONSTRUCTION
		GRADING
		ACCESS
		SIGHT DISTANCE
		UTILITY
		STORMWATER FACILITY MAINTENANCE
		STORMWATER ACCESS
		DRAINAGE
		SANITARY
		WATERLINE
		GASLINE

OWNER/DEVELOPER

Lorven Investments, LLC
4776 Walbern Court
Chantilly, VA 20151

ZONING

Existing: R-2 Residential
Proposed: R-3 Residential with Special Use Permit (SUP) for residential density up to 43 DUA

SETBACKS

Per R-3 setback regulations:
FRONT MINIMUM: 25'
SIDE MINIMUM: 14'*
REAR MINIMUM: 25'
*Northern side setback to be reduced to 5', setback modification request submitted concurrently with SUP

SOURCE OF TITLE

DB 2020 PG 578

SOURCE OF BOUNDARY AND TOPOGRAPHY

Boundary information obtained from plat of record
Topographic information obtained from City of Charlottesville GIS information

FLOODZONE

According to the FEMA Flood Insurance Rate Map, effective February 4, 2005
(Community Panel 51003C0269D), this property does not lie in a floodplain.

WATER & SANITARY SERVICES

Site is served by City of Charlottesville public water and sewer.
All waterline shutdowns must be coordinated with and performed by the City, and the developer must hand out notices to affected customers at least 48 hours in advance.

CITY PERMITS

1. The contractor shall be responsible for obtaining a street cut permit from the City.
2. A Temporary Street Closure Permit is required for closure of sidewalks, parking spaces, and roadways; and is subject to approval by the City Traffic Engineer. The contractor contact information will be provided with the final plans.
3. The contractor shall provide adequate pedestrian barriers and circulation during construction.

FIRE MARSHAL'S NOTES

SITE PLAN:
1. VSFPC 505.1-The building street number to be plainly visible from the street for emergency responders.
2. VSFPC 506.1 - An approved key box shall be mounted to the side of the front or main entrance.
3. VSFPC 506.1.2 - An elevator key box will be required if the building has an elevator.
4. VSFPC 507.5.4 - Fire hydrants, fire pump test header, fire department connections or fire suppression system control valves shall remain clear and unobstructed by landscaping, parking or other objects.
2. VSFPC 503.2.1 - Overhead wiring or other obstructions shall be higher than 13 feet 6 inches.
3. VSFPC 3312.1 - An approved water supply for fire protection shall be made available as soon as combustible material arrives on the site. Fire hydrants shall be installed and useable prior to the start of any building construction.
4. All pavement shall be capable of supporting fire apparatus weighing 85,000 lbs.
5. Required vehicle access for fire fighting shall be provided to all construction or demolition sites. Vehicle access shall be provided to within 100 feet of temporary pr permanent fire department connections. Vehicle access shall be provided by either temporary or permanent roads, capable of supporting vehicle loading under all weather conditions. Vehicle access shall be maintained until permanent fire apparatus access roads are available.
6. Buildings four or more stories in height shall be provided with not less than one standpipe for use during construction. Such standpipes shall be installed when the progress of construction is not more than 40 feet in height above the lowest level of fire department access. Such standpipe shall be provided with fire department hose connections at accessible locations adjacent to usable stairs. Such standpipes shall be extended as construction progresses to within one floor of the highest point of construction having secured decking or flooring.
7. VSFPC 912.2.1 the fire department connection shall be located on the street side of the structure unless otherwise approved by the fire code official.
8. SFPC 507.5.1.1-Hydrant for standpipe system- Buildings equipped with a standpipe system installed in accordance with Section 905 shall have a fire hydrant within 100 feet of fire department connections. The distance shall be permitted to exceed 100 feet where approved by the fire code official.
9. VSFPC 503.2.1 Overhead wiring or other obstructions shall be higher than 13 feet 6 inches.
10. VSFPC 3312.1 An approved water supply for fire protection shall be made available as soon as combustible material arrives on site.
11. VSFPC 905.3.1 If the floor level of the highest story is more than 30 feet above the lowest level of fire department vehicle access, then a Class I standpipe mu7st be installed in addition to the sprinkler system.
12. VSFPC 3311.1 Where a building has been constructed to a height greater than 50 feet or four (4) stories, at least one temporary lighted stairway shall be provided unless one or more of the permanent stairways are erected as the construction progresses.
13. VSFPC 503.3 Marking Fire Lanes, The location and method of marking fire lanes shall be clearly indicated on the submitted plan. Fire lanes shall be a minimum of 20 feet in width. Signs and markings to delineate fire lanes as designated by the fire official shall be provided and installed by the owner or his/her agent of the property involved. Fire apparatus roads 20 to 26 feet in width shall be posted or marked on both sides "No Parking--Fire Lane.
14. VSFPC 3313.1 Where required-Buildings four or more stories in height shall be provided with not less than one standpipe for use during construction. Such standpipes shall be installed when the progress of construction is not more than 40 feet in height above the lowest level of fire department access. Such standpipe shall be provided with fire department hose connections at accessible locations adjacent to useable stairs. Such standpipes shall be extended as construction progresses to within one floor of the highest point of construction having secured decking or flooring.
15. VSFPC 507.5.1.1 Hydrant for standpipe system-Buildings equipped with a standpipe system installed in accordance with Section 905 shall have a fire hydrant within 100 feet of the fire department connections. The distance shall be permitted to exceed 100 feet where approved by the fire code official.

CONSTRUCTION & DEMOLITION:
1. VSFPC 310.3: 310.5 - Smoking to be allowed in only designated spaces with proper receptacles.
2. VSFPC 3304.2 - Waste disposal of combustible debris shall be removed from the building at the end of each workday.
3. IFC 1410.1-Access to the building during demolition and construction shall be maintained.
4. VSFPC 3304.6 - Operations involving the use of cutting and welding shall be done in accordance with Chapter 35, of the Virginia Statewide Fire Prevention Code, addressing welding and hotwork operations.
5. VSFPC 3315.1 -Fire extinguishers shall be provided with not less than one approved portable fire extinguisher at each stairway on all floor levels where combustible materials have accumulated.
6. VSFPC 3310.1 - Required vehicle access for fire fighting shall be provided to all construction or demolition sites. Vehicle access shall be provided to within 100 feet of temporary or permanent fire department connections, if any. Vehicle access shall be provided by either temporary or permanent roads, capable of supporting vehicle loading under all weather conditions. Vehicle access shall be maintained until permanent fire apparatus access roads are available.

RECREATIONAL AREA

(8) 1-bedroom units + (20) 2-bedroom units proposed

Required Recreational Facilities: 5,600 sq. ft. of adult and 400 sq. ft. of child recreational space; 25% or 1,500 sq. ft. of indoor or weather-protected facilities are required

Proposed Recreational Facilities: 4,565 sq. ft. of adult recreational area provided on-site; 4,460 sq. ft. of natural amenity area provided with restoration of Rock Creek; 440 sq. ft. of child recreational area provided; 1,570 sq. ft. of covered recreational area provided

BUILDING HEIGHTS

Maximum allowable: 45', proposed heights at less than 35'

EXISTING USE

Vacant

PROPOSED USE

4 apartment buildings - total 28 units
Residential density - 43 DUA

LAND USE SCHEDULE

EXISTING	Area	%
Building	0 SF	00.0%
Pavement	0 SF	00.0%
Sidewalk	0 SF	0.0%
Open space	28,401.12 SF	100.0%
Total=	28,401.12 SF	(0.652 ac.)

PROPOSED	Area	%
Building	8,881.6 SF	31.3%
Pavement	6,103.8 SF	21.5%
Sidewalk	2,583.3 SF	9.1%
Open space	10,832.4 SF	38.1%
Total=	28,401.12 SF	(0.652 ac.)

PARKING SCHEDULE

Multifamily dwellings: 1 bedroom & 2 bedroom units, 1 space per unit
(8) 1 bedroom units + (20) 2 bedroom units, 28 spaces required
28 spaces required, 29 spaces provided

ITE Trip Generation

Use	ITE Code	IV	AM			PM			Daily Total
			In	Out	Total	In	Out	Total	
Multifamily Housing (Low-Rise)	220	28 Dwelling Units	3	11	14	12	7	19	171

ITE Trip Generation, 10th Generation Edition reflects AM and PM peak hour traffic.

SIGNS

All signs and pavement shall conform with the latest edition of the MUTCD Guidelines.
A sign permit must be issued in accordance with the City of Charlottesville Sign Regulations prior to placement of any signs on-site.

GENERAL NOTES

1. All excavation for underground pipe installation must comply with OSHA Standards for the Construction Industry (29 CFR Part 1926).
2. The location of existing utilities across or along the line of the proposed work are not necessarily shown on the plans and where shown based on "MISS UTILITY" markings and are only approximately correct. The contractor shall locate all underground lines and structures as necessary.
3. The contractor shall verify the locations of all boundaries, buildings, existing elevations, vegetation and other pertinent site elements. Contractor shall immediately report any discrepancies to the engineer of record.
4. The contractor shall be responsible for notifying "MISS UTILITY" - 1-800-552-7001.
5. Any damage to existing utilities caused by the contractor or its subcontractors shall be the contractor's sole responsibility to repair. This expense is the contractor's responsibility.
6. All paving, drainage related materials and construction methods shall conform to current specifications and standards of the City of Charlottesville unless otherwise noted.
7. An erosion and sediment control plan is required with this site plan.
8. All slopes and disturbed areas are to be fertilized, seeded and mulched. The maximum allowable slope is 2:1. Where it is reasonably obtainable, lesser slopes of 3:1 or better are to be achieved.
9. Paved, rip-rap or stabilization mat lined ditch may be required when in the opinion of the Engineer it is deemed necessary in order to stabilize a drainage channel.
10. All traffic control signs shall conform to the 2011 Virginia Supplement to the 2009 Manual on Uniform Control Devices..
11. Unless otherwise noted all concrete pipe shall be reinforced concrete pipe - Class III.
12. All material inside concrete forms shall be clean and free of all rocks and other loose debris. Sub-base material shall be compacted by mechanical means. Remove all standing water from area inside forms.
13. Concrete and asphalt shall not be placed unless the air temperature is at least 40 degrees in the shade and rising. Material shall not be placed on frozen subgrade.
14. All existing curbs, curb and gutters and sidewalks to be removed shall be taken out to the nearest joint.
15. Existing asphalt pavement shall be saw cut and removed as per VDOT Road and Bridge Specifications 2016. Removal shall be done in such a manner as to not tear, bulge or displace adjacent pavement. Edges shall be clean and vertical. All cuts shall be parallel or perpendicular to the direction of traffic.
16. The contractor shall exercise care to provide positive drainage to the storm inlets or other acceptable drainage paths in all locations.
17. Contact information for any necessary inspections with City:
    E&S inspector, NDS- 970-3182 (for the E&S inspections)
    Project Inspectors, NDS-970-3182 (for other construction items like sidewalk, pavement patches, road, storm sewer etc)
    Water and Sanitary Sewer-Public Works 970-3800
    Street cut, Public Works 970-3800
    Other public ROW issues-City Engineer 970-3182.
18. Any sidewalk and/or curb damage identified in the site vicinity due to project construction activities as determined by City inspector shall be repaired at the contractor's expense.
19. A temporary street closure permit is required for closure of sidewalks, parking spaces and roadways and is subject to approval by the City Traffic Engineer.
20. Per the Virginia Department of Health Waterworks Regulation (Part II. Article 3, Section 12 VAC 5-590 through 630), all buildings that have the possibility of contaminating the potable water distribution system (hospitals, industrial sites, breweries, etc) shall have a backflow prevention device installed within the facility. This device shall meet specifications of the Virginia uniform Statewide Building Code, shall be tested in regular intervals as required, and test results shall be submitted to the Regulatory Compliance Administrator in the Department of Utilities.
21. All buildings that may produce wastes containing more than one hundred (100) perts per million of fats, or grease shall install a grease trap. The grease trap shall meet specifications of the Virginia Uniform Statewide Building Code, maintain records of cleaning and maintenance, and be inspected on regular intervals by the Regulatory Compliance Administrator in the Department of Utilities.
22. Please contact the Regulatory Compliance Administrator at 970-3032 with any questions regarding the grease trap or backflow prevention devices.

AFFORDABLE HOUSING

(8) 1-bedroom units proposed as affordable in accordance with proffered conditions.

VICINITY MAP

SCALE : 1"=1000'

Map provided by Google.com

SHEET INDEX

APPROVALS

Director of Neighborhood Development Services Date

SHIMP ENGINEERING PLLC
LAND PLANNING - PROJECT MANAGEMENT
912 E. HIGH ST. 434.227.5140
CHARLOTTESVILLE VA, 22902 JUSTIN@SHIMP-ENGINEERING.COM

COMMONWEALTH OF VIRGINIA
JUSTIN M. SHIMP
Lic. No. 45183
PROFESSIONAL ENGINEER
FOR REVIEW

PRELIMINARY SITE PLAN
CITY OF CHARLOTTESVILLE, VA

1613 GROVE STREET

SUBMISSION:
2020.07.14
REVISION:
2021.01.29
2021.04.15
2021.06.22
2021.09.29

FILE NO.
20.010

COVER

SHEET C1 OF 5

C1

Attachment A (10/21/21)

GROVE STREET EXTENDED

VALLEY ROAD EXTENDED

TMP 22-7
RIKKEN, TOOMAS & JUDITH B, TRUSTEES
ZONE: R-2
USE: SINGLE FAMILY ATTACHED
0.246 AC

TMP 22-8
RIKKEN, TOOMAS & JUDITH B, TRUSTEES
ZONE: R-2
USE: SINGLE FAMILY ATTACHED
0.14 AC

TMP 22-9
RIKKEN, TOOMAS & JUDITH B, TRUSTEES
ZONE: R-2
USE: SINGLE FAMILY ATTACHED
0.156 AC

TMP 22-10
RIKKEN, TOOMAS & JUDITH B, TRUSTEES
ZONE: R-2
USE: SINGLE FAMILY ATTACHED
0.158 AC

TMP 22-11
SMITH, MICHAEL & CHEYENNE SHEAFE
ZONE: R-2
USE: SINGLE FAMILY / RESIDENTIAL
0.16 AC

TMP 22-17
MOELLER, HENRY II & CAROL M, TRUSTEES
ZONE: R-2
USE: SINGLE FAMILY ATTACHED
0.281 AC

TMP 23-135
LORVEN INVESTMENTS, LLC
ZONE: R-2
USE: VACANT
0.266 AC

TMP 23-134
LORVEN INVESTMENTS, LLC
ZONE: R-2
USE: VACANT
0.239 AC

TMP 23-133
LORVEN INVESTMENTS, LLC
ZONE: R-2
ZONE: VACANT
0.147 AC

TMP 23-132
WINSLOW, MARY & LEONARD F, III, TRUSTEES
ZONE: R-2
USE: SINGLE FAMILY ATTACHED
0.192 AC

TMP 23-168-1
QIAO, HUI & XIAONAN WANG
ZONE: R-2
USE: SINGLE FAMILY ATTACHED
0.169 AC

N62°25'00"E
74.00'
66.50'
41.00'

S62°25'00"W
74.00'
66.50'
41.00'

N20°33'20"W
157.90'

S20°33'20"E
157.90'

20 0 20 40 60
Scale: 1"=20'

SHIMP ENGINEERING PC
LAND PLANNING - PROJECT MANAGEMENT

912 E. HIGH ST. 434.227.5140
CHARLOTTESVILLE VA, 22902 JUSTIN@SHIMP-ENGINEERING.COM

COMMONWEALTH OF VIRGINIA
JUSTIN M. SHIMP
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PRELIMINARY SITE PLAN
CITY OF CHARLOTTESVILLE, VA

1613 GROVE STREET

SUBMISSION:
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2021.09.29

FILE NO.
20.010

EXISTING CONDITIONS

SHEET C2 OF 5

C2

Attachment A (10/21/21)

SHIMP ENGINEERING PC
LAND PLANNING - PROJECT MANAGEMENT

912 E. HIGH ST. 434.227.5140
CHARLOTTESVILLE VA, 22902 JUSTIN@SHIMP-ENGINEERING.COM

COMMONWEALTH OF VIRGINIA
JUSTIN M. SHIMP
Lic. No. 45183
PROFESSIONAL ENGINEER

PRELIMINARY SITE PLAN
CITY OF CHARLOTTESVILLE, VA

1613 GROVE STREET

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PRELIMINARY PLAT

SHEET C3 OF 5

C3

Attachment A (10/21/21)

SHIMP ENGINEERING PC
LAND PLANNING - PROJECT MANAGEMENT

912 E. HIGH ST. 434.227.5140
CHARLOTTESVILLE VA, 22902 JUSTIN@SHIMP-ENGINEERING.COM

COMMONWEALTH OF VIRGINIA
JUSTIN M. SHIMP
Lic. No. 45183
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PRELIMINARY SITE PLAN
CITY OF CHARLOTTESVILLE, VA

1613 GROVE STREET

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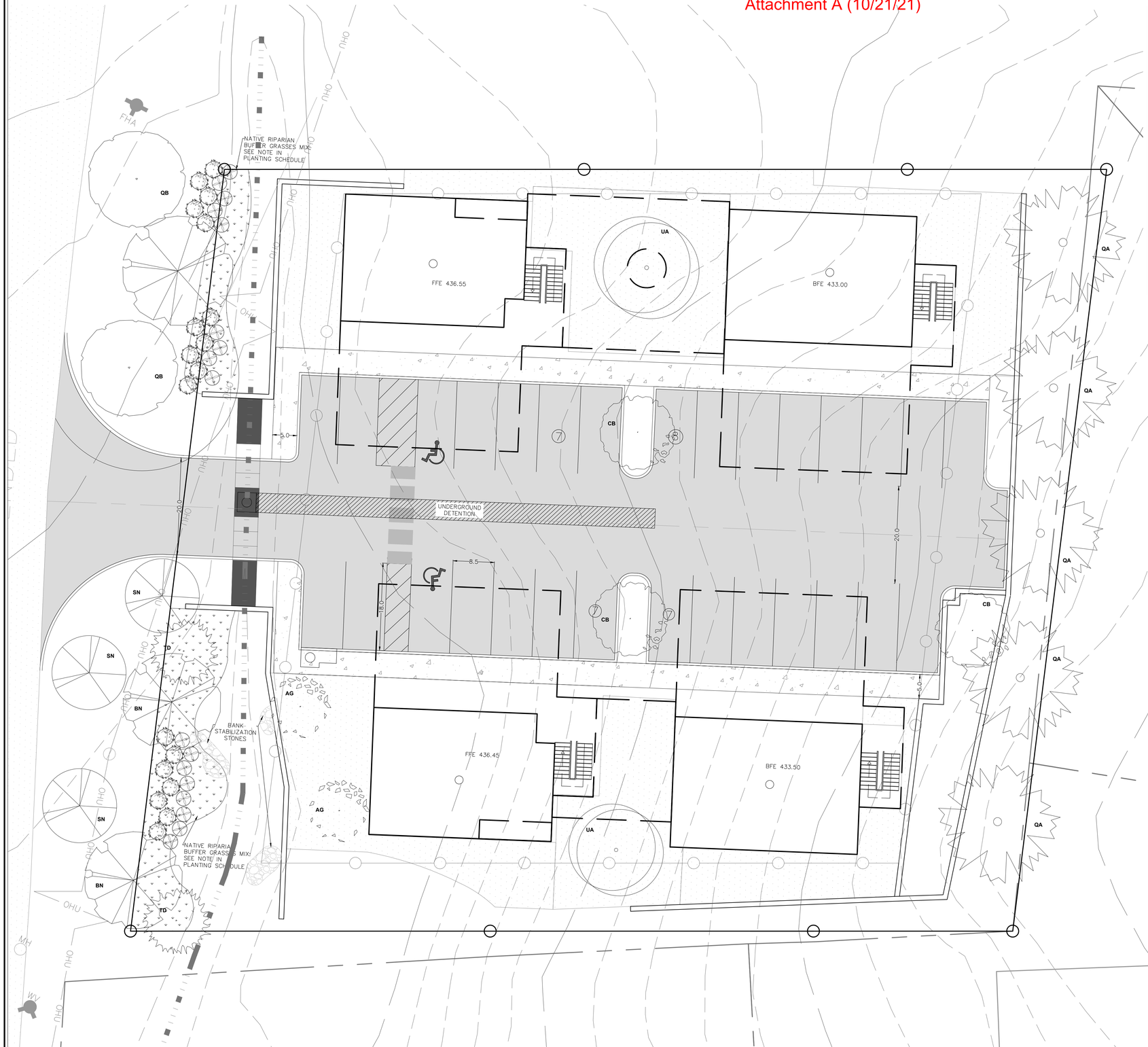
20.010

SITE PLAN

SHEET C4 OF 5

C4

Attachment A (10/21/21)



PROPOSED LANDSCAPE SCHEDULE

Symbol	Planting Type	Botanical Name	Common Name	Min. Cal./Height	Quantity	Canopy	Total Canopy
	Large Shade Tree	Quercus bicolor	Swamp White Oak	2" Cal.	2	299	598
	Large Shade Tree	Betulus nigra	River Birch	2" Cal.	3	397	1191
	Large Shade Tree	Taxodium distichum	Bald Cypress	2" Cal.	2	79	158
	Large Shade Tree	Ulmus americana	American Elm	2" Cal.	2	397	794
	Large Shade Tree	Quercus alba	White Oak	2" Cal.	5	243	1215
	Medium Shade Tree	Salix nigra	Black Willow	2" Cal.	3	707	2121
	Medium Shade Tree; Interior Parking Tree	Carpinus betulus	European Hornbeam	2" Cal.	3	177	531
	Small Flowering Tree	Amelanchier x grandiflora	Serviceberry	6–7' Ht.	2	130	260
	Deciduous Shrub	Sambucus canadensis	Elderberry	24–36" Ht.	17		
	Deciduous Shrub	Viburnum prunifolium	Blackhaw Viburnum	24–36" Ht.	18		
	Riparian Buffer		Native Grasses Mix		0.025 AC		
						TOTAL CANOPY PROVIDED	6868 SF
						TOTAL CANOPY REQUIRED	2844 SF

SITE REQUIREMENT (SEC. 34–869): R–3, 10% CANOPY REQUIRED.
SITE AREA 28,401.12 SF x 10% = 2,840.12 SF
CANOPY REQUIRED: 2,840.12 SF
CANOPY PROVIDED: 6,868 SF

STREET TREES (SEC. 34–870): 1 LARGE SHADE TREE, 40' O.C. OR 1 MEDIUM SHADE TREE, 25' O.C.
PROVIDED: VALLEY ROAD EXT – 2 LARGE SHADE TREES & 3 MEDIUM SHADE TREES

INTERIOR PARKING LANDSCAPING (SEC 34–873(d)(1–2)): 5% OF PAVED PARKING AREA.
6175 SF x 5% = 308.75 SF
LANDSCAPE REQUIRED: 308.75 SF
LANDSCAPE PROVIDED: 345.35 SF

1 TREE PER 8 SPACES
28 PARKING SPACES (28/8 = 3.5)
REQUIRED: 3 INTERIOR PARKING TREES
PROVIDED: 3 INTERIOR PARKING TREES

RIPARIAN BUFFER NATIVE GRASSES MIX:
Mixture should include the following or equivalent types: switchgrass (Panicum virgatum), Virginia wild rye (Elymus virginicus), river oats (Chasmanthium latifolium), long hair sedge (Chasmanthium latifolium), soft rush (Juncus effusus)

Bank stabilization stones shall be installed following regrading of the stream bank

NOTES:
1. Contractor to apply mulch bedding around all proposed trees and shrubs. All other landscaped areas shall be sodded.
2. All site plantings of trees and shrubs shall be allowed to reach, and be maintainted at, mature height; the topping of trees is prohibited. Shrubs and trees shall be pruned minimally and only to support the overall health of the plant.
3. All landscaping and screening shall be maintained in a healthy condition by the current owner or property owners' association and replaced when necessary. Replacement material shall comply with the approved landscape plan.

20 0 20 40 60
Scale: 1"=20'

SHIMP ENGINEERING PC
LAND PLANNING - PROJECT MANAGEMENT

912 E. HIGH ST. 434.227.5140
CHARLOTTESVILLE VA, 22902 JUSTIN@SHIMP-ENGINEERING.COM

COMMONWEALTH OF VIRGINIA
JUSTIN M. SHIMP
Lic. No. 45183
PROFESSIONAL ENGINEER
NOT RELEASED FOR REVIEW

PRELIMINARY SITE PLAN
CITY OF CHARLOTTESVILLE, VA

1613 GROVE STREET

SUBMISSION:
2020.07.14
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FILE NO.
20.010

LANDSCAPE PLAN

SHEET C5 OF 5

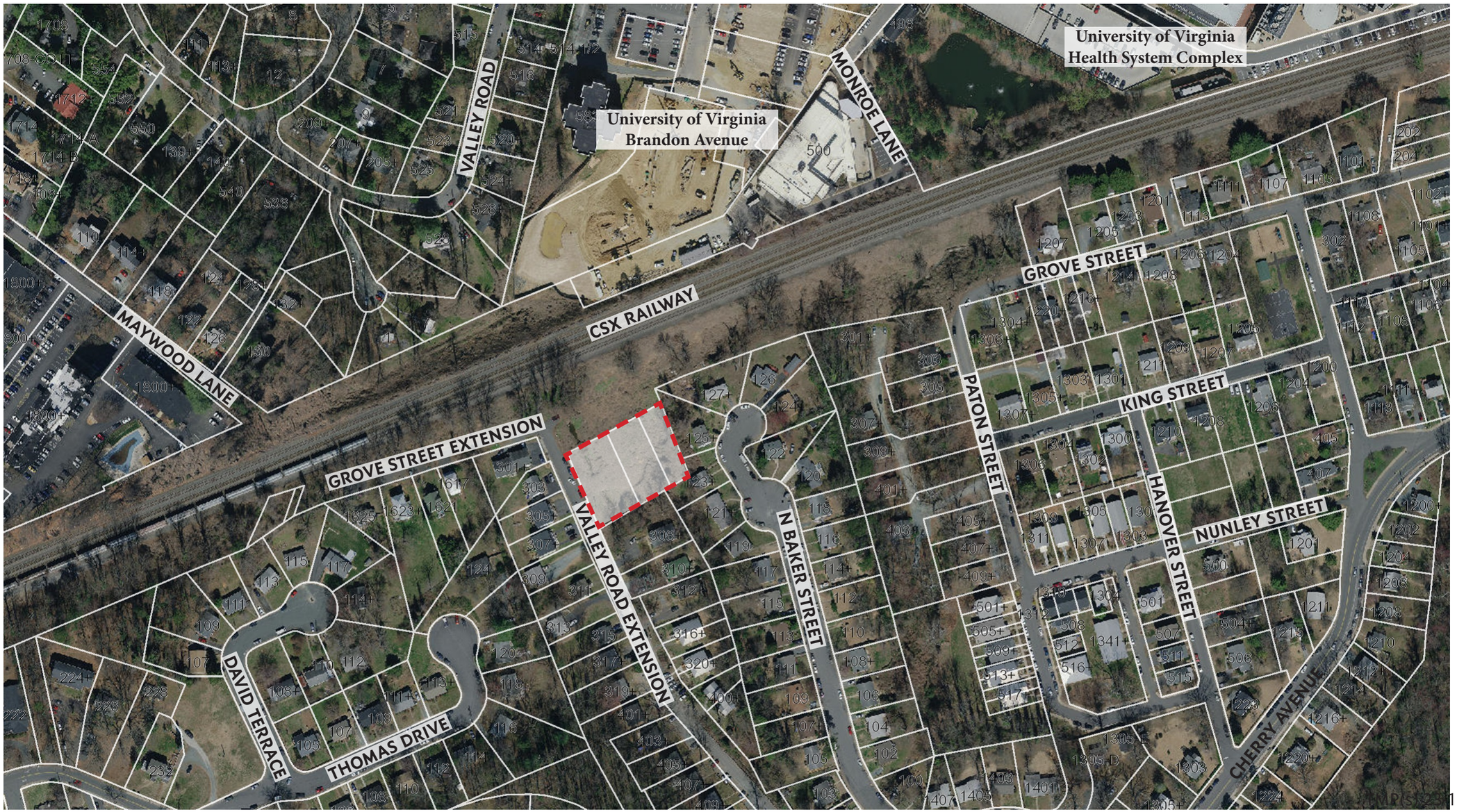
C5

Attachment B (10/21/21)

REZONING + SPECIAL USE PERMIT
APPLICATION EXHIBIT

1613 GROVE STREET

SITE CONTEXT



100 0 100 200 300

133, 23-134, 23-135

REVISED 29 SEPTEMBER 2021
Revised 22 June 2021
Submitted 14 July 2020

project: 20.010

SHIMP ENGINEERING, P.C.

1613 GROVE STREET
SITE & REZONING INFO

OWNER/DEVELOPER
Lorven Investments, LLC
4776 Walbern Ct
Chantilly, VA 20151

TMP(s)
23-133, 23-134, 23-135

ACREAGE
0.652

NEIGHBORHOOD
Fifeville

FLOODZONE
According to the FEMA Flood Insurance Rate Map, effective date February 4, 2005 (Community Panel 51003C0269D), this property does not lie within a Zone X 100-year floodplain.

USE
EXISTING: Vacant
PROPOSED: Multifamily

ZONING
EXISTING: R2
PROPOSED: R3, with concurrent special use permit submitted for increased density (21 DUA to 22-43 DUA)

DENSITY
COMPREHENSIVE PLAN DESIGNATION: Low density residential (<15 DUA)
PROPOSED: 28 units proposed; 43 DUA

BUILDING HEIGHT
Per Section 34-353 of the Charlottesville Zoning Ordinance, a maximum building height of 45' shall be permitted. Proposed building heights are less than 35'.

SETBACKS
Per Section 34-353 of the Charlottesville Zoning Ordinance, setbacks shall be permitted as follows:
FRONT MINIMUM: 25'
SIDE MINIMUM: 14'*
REAR MINIMUM: 25'

*For 22-43 DUA, side setbacks shall be 1 foot/3 feet in building height, 10' minimum. Maximum allowable building height is 45'. Proposed building heights are less than 35'.

Side setback to be reduced to 5' from the northern boundary (adjacent to the railroad ROW) with SUP exception

TMP(s) 23-133, 23-134, 23-135

REVISED 20 SEPTEMBER 2021
Revised 22 June 2021
Submitted 14 July 2020

project: 20.010

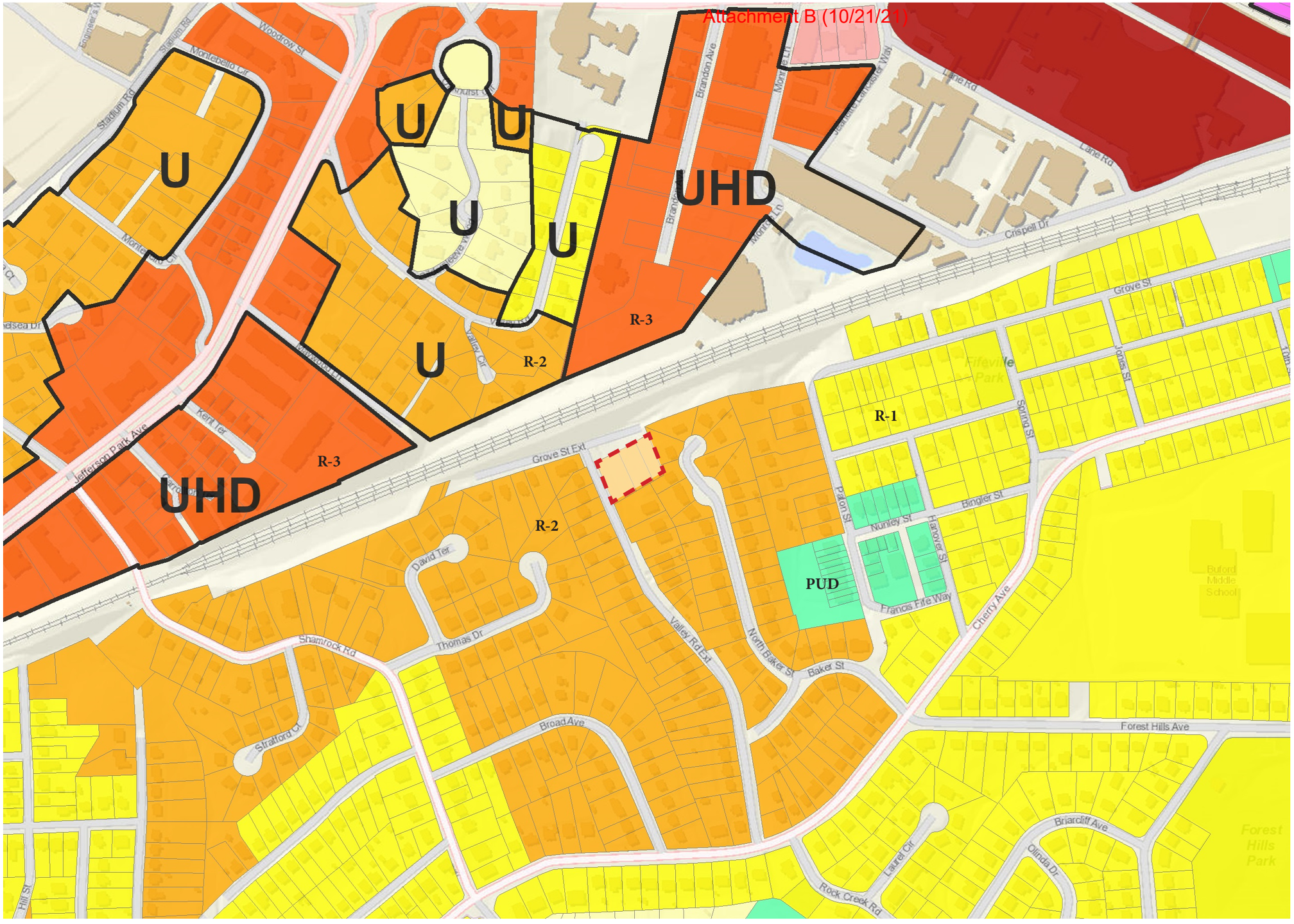
SHIMP ENGINEERING, P.C.

REZONING + SPECIAL USE PERMIT
APPLICATION EXHIBIT

1613 GROVE STREET

ZONING MAP

Sheet 3 of 7



400 0 400 800 1200

Graphic Scale: 1”=400’

TMP(s) 23-133, 23-134, 23-135

REVISED 29 SEPTEMBER 2021
Revised 22 June 2021
Submitted 14 July 2020

project: 20.010

SHIMP ENGINEERING, P.C.

Attachment B (10/21/21)

REZONING + SPECIAL USE PERMIT
APPLICATION EXHIBIT

1613 GROVE STREET
LAND COVERAGE

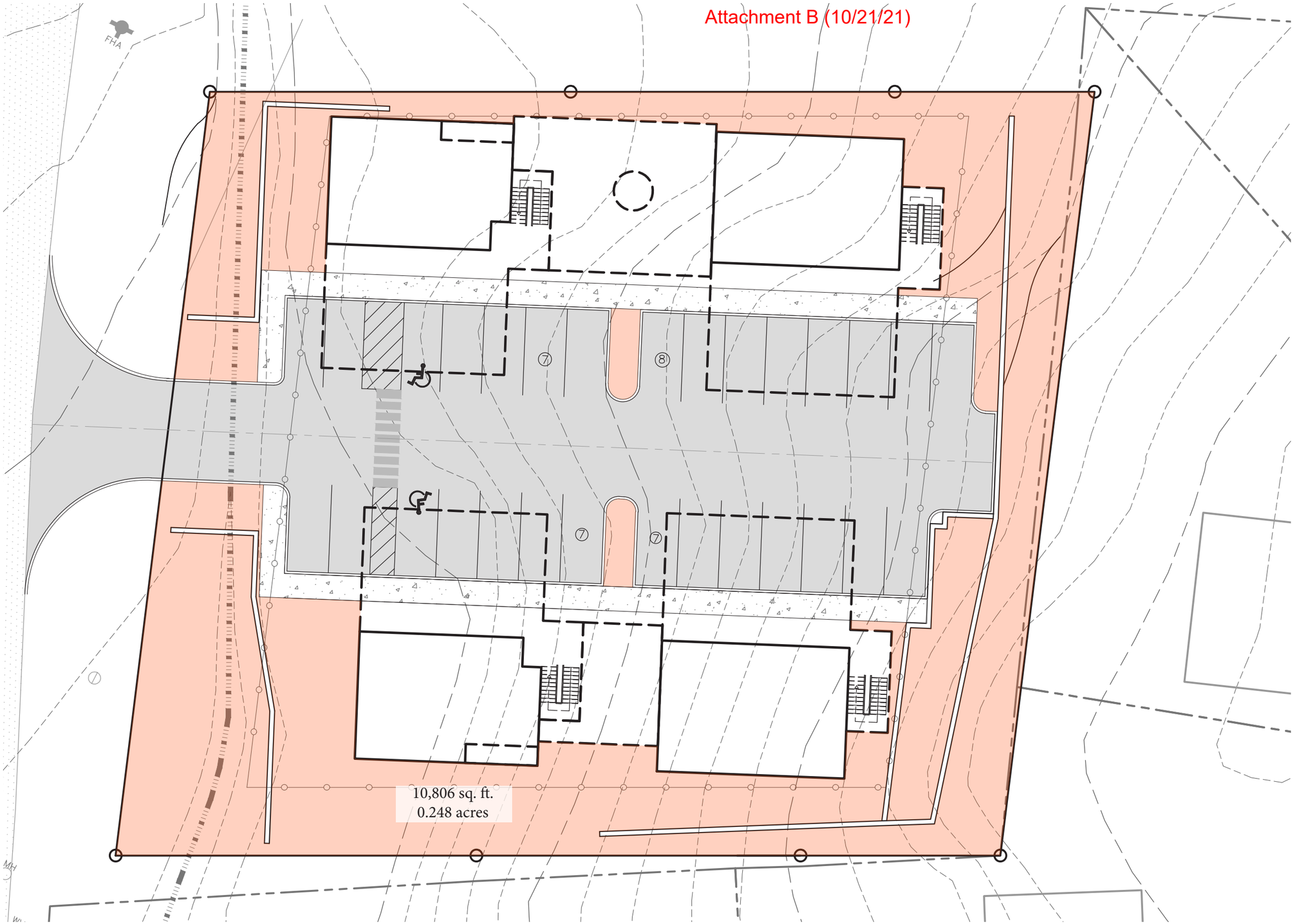
Sheet 4 of 7

Per Sec. 34-353 of the Charlottesville Zoning Ordinance, land coverage in R-3 zoning districts shall not exceed 80% of the total site for 22-87 DUA.

Total site area is 0.652 AC or 28,401.12 sq. ft.

Required open space is 20% of total site area, or 0.1304 AC or 5,680.224 sq. ft.

Total proposed open space is 0.248 AC or 10,806 sq. ft.



20 0 20 40 60

Graphic Scale: 1”=20’

TMP(s) 23-133, 23-134, 23-135

REVISED 29 SEPTEMBER 2021
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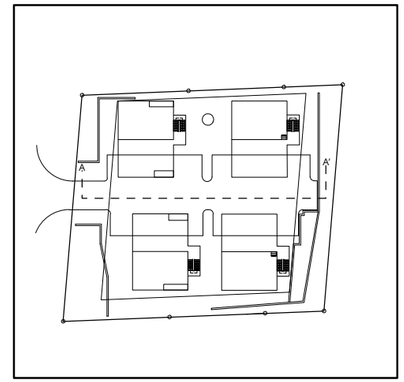
SHIMP ENGINEERING, P.C.

REZONING + SPECIAL USE PERMIT
APPLICATION EXHIBIT

1613 GROVE STREET

SITE SECTIONS

Sheet 5 of 7



SITE ELEVATION 'A - A'

10 0 10 20 30

Graphic Scale: 1"=10'

TMP(s) 23-133, 23-134, 23-135

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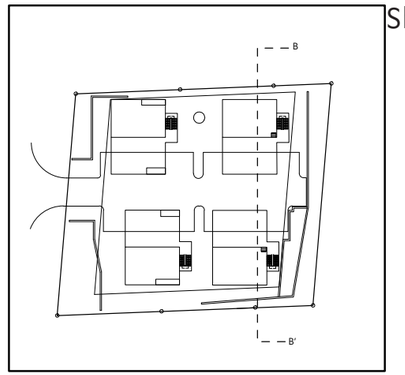
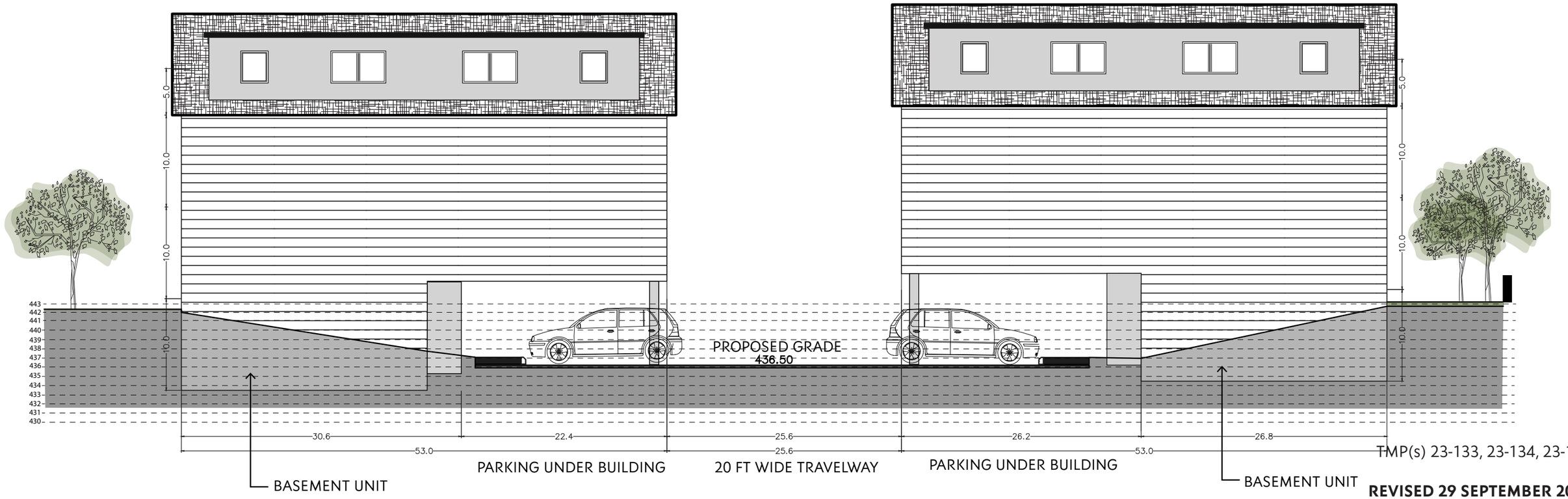
REZONING + SPECIAL USE PERMIT
APPLICATION EXHIBIT

1613 GROVE STREET

SITE SECTIONS



SITE ELEVATION 'B - B'



10 0 10 20 30

Graphic Scale: 1"=10'

TMP(s) 23-133, 23-134, 23-135

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SHIMP ENGINEERING, P.C.

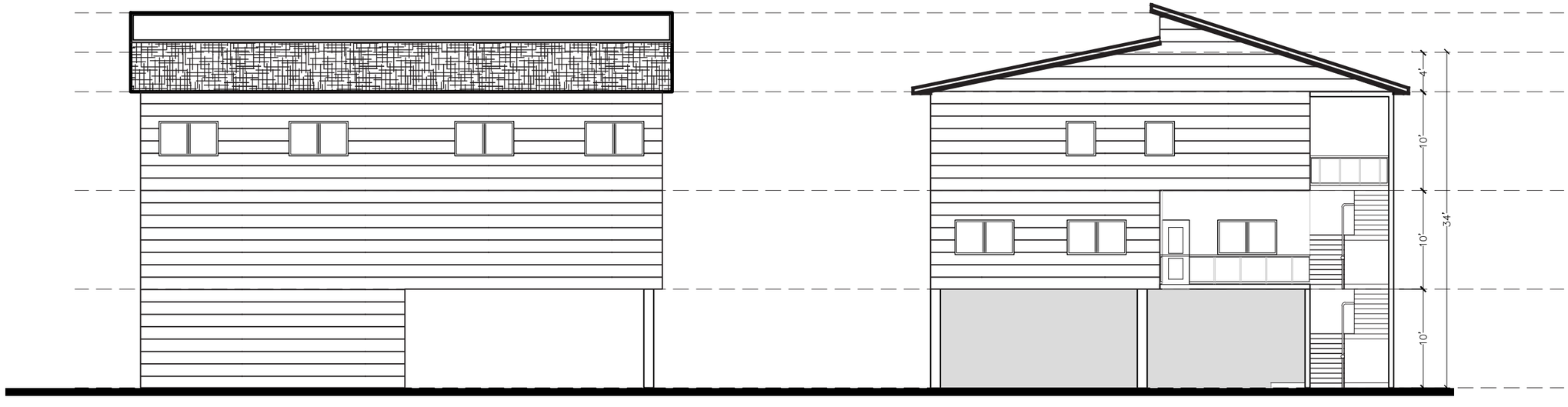
Attachment B (10/21/21)

REZONING + SPECIAL USE PERMIT
APPLICATION EXHIBIT

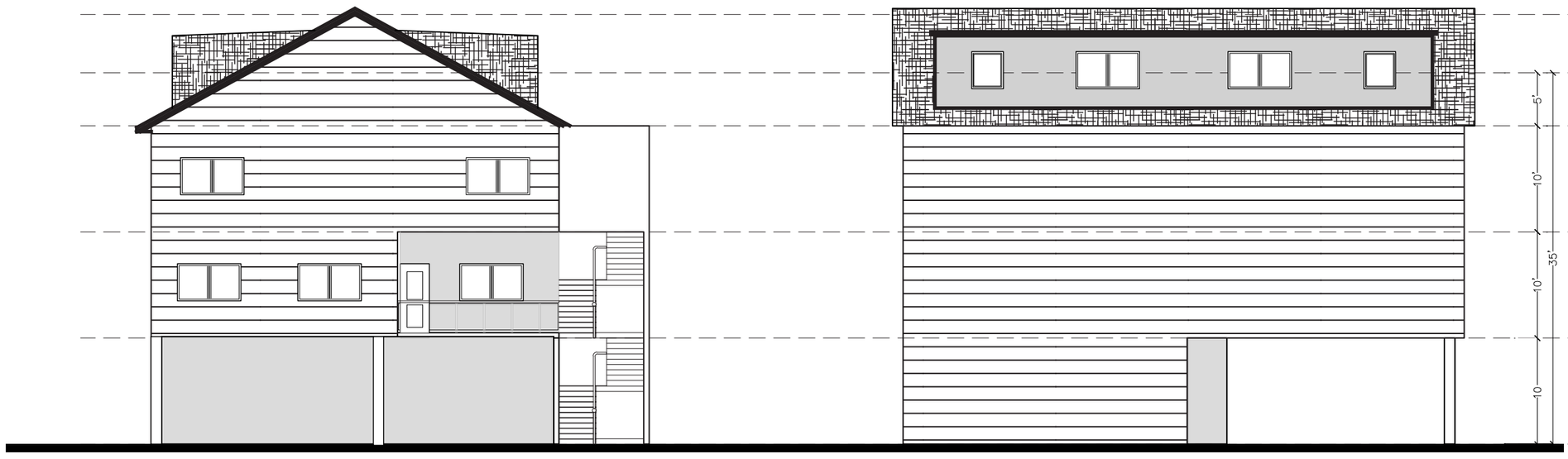
1613 GROVE STREET

ELEVATIONS

UNIT 1 FRONT & SIDE ELEVATIONS



UNIT 2 FRONT & SIDE ELEVATIONS



TMP(s) 23-133, 23-134, 23-135

REVISED 29 SEPTEMBER 2021
Revised 22 June 2021
Submitted 14 July 2020

project: 20.010

SHIMP ENGINEERING, P.C.

SHIMP ENGINEERING, P.C.
Design Focused Engineering

Project Narrative For: **ZMA and SUP 1613 Grove St Ext**

Parcel Description: **Tax Map 23, Parcels 133, 134, 135**

Initial Submittal: **July 14, 2020**

Revision 1: **January 29, 2021**

Revision 2: **April 15, 2021**

Revision 3: **June 22, 2021**

Revision 4: **September 29, 2021**

Pre-App Meeting Date: **March 12, 2020**

TAX MAP PARCEL NO.	ACREAGE	EXISTING ZONING	PROPOSED ZONING	COMP PLAN DESIGNATION
TMP 23-133	0.147	R-2	R-3	Low-Density Residential
TMP 23-134	0.239	R-2	R-3	Low-Density Residential
TMP 23-135	0.266	R-2	R-3	Low-Density Residential
Total:	0.652			

Location:

The parcels front an unimproved portion of Grove Street Extended with parcel 23-135 abutting Valley Road Extended. The properties are located within the Fifeville Neighborhood and are located along the edge of the land use map of the Cherry Avenue Small Area Plan Draft. The CSX railroad runs parallel to the properties' north boundaries.

Surrounding Uses:

The new parcel will have frontage on Valley Road Extended. The property is bordered by two family residential structures to the east and south and by an unimproved section of Grove St. Ext and CSX railroad right of way to the north. Directly north of the CSX ROW is property owned by the University of Virginia that is subject to the Brandon Avenue Master Plan.

Project Proposal:

Lorven Investments, LLC is the owner (the "owner") of tax map parcels 23-133, 23-134 and 23-135 in the City of Charlottesville (collectively, the "property"). On behalf of the owner, we request a rezoning and special use permit to allow for a cluster of neighborhood scale multi-family buildings with a total of 28 residential units on the property. To realize this housing opportunity, we request to rezone the property from Two-family Residential (R-2) to Multi-family Residential (R-3). Concurrent with the rezoning request, we request a special use permit for additional residential density of up to 43 dwelling units per acre. To accommodate a multi-family development on the property, the existing interior boundary lines will be vacated to create one .652 acre parcel (the "new parcel"). In conjunction with the special use

permit request, and in accordance with modifications allowed by Sec. 34-162, we request a reduction of the northern side setback (adjacent to the unimproved portion of Grove St. Ext) of the new parcel to 5' and for an exception from Sec.34-353(B)(4) which requires the distance between the façade of a multifamily dwelling having between 22-43 DUA and the boundary of any low density residential district to be 50 feet.

We propose a cluster of four (4) neighborhood-scale multi-family buildings that in total will house 28 residential units. The buildings will be organized on the property in a skewed quadrant and will be constructed on the site to create different areas for outdoor leisure and recreation space between and around the buildings. Each building is proposed to have (7) units and of the total 28 units, eight (8) of the units are proposed as one bedroom units and twenty (20) of the units are proposed as two bedroom units. Parking is provided on site, in accordance with City parking requirements, to serve the parking needs of future residents. The buildings are designed to relegate the parking from Valley Road Extended and most of the parking spaces are accommodated underneath the overhang of the buildings, limiting the amount of impervious surface on-site required to accommodate both the residential units and the required parking areas.

The site, including the banks of Rock Creek, is currently overtaken with Kudzu, an invasive species, and the preliminary site plan included with this special use permit request demonstrates a native replanting design along the banks that will contribute to a robust canopy and green screen along Valley Road Extended.

The buildings are proposed at heights of less than 35', as shown in the elevations included with this submission package, these proposed building heights are less than the 45' maximum by-right allowance for the R-3 Residential Zoning District. The property is bordered by R-2 zoned properties which are subject to a maximum height of 35'. Just across the railroad right-of-way, just north of the property, there are B-1 and UHD zoned properties which have a maximum height of 45' and 50' respectively. The buildings are designed to be 10' floor-to-floor at three stories above grade, with the easternmost buildings having basement apartments. The two easternmost buildings will be constructed into the hillside with a height of approximately 28' above grade. The buildings adjacent to Valley Street Extended do not have basement apartments, resulting in a height of approximately 33' above grade. The property sits at a lower elevation than most of its surrounding context; the variation in grade between this site and its surroundings contributes to minimizing the scale and mass of the buildings. The proposed finish floor elevation of the buildings is between 436' and 443'(with the easternmost buildings having a BFE of 433'). The finished floor elevation of the structure to the east is approximately 462', the finished floor elevation of the structure to the south is approximately 442', the approximate floor elevations of the properties opposite Valley St. are 440', and the ridge of the adjacent railroad right-of-way is 479'.

The project design will establish:

1) A neighborhood-scale multi-family housing development with off-street parking in close proximity to major regional employers
2) Greenspace and green screens, providing open space for future residents that is inviting and supports the enhancement of Rock Creek, and
3) Intentional recreational areas for residents that encourage outdoor leisure and play

Public Need or Benefit

The Comprehensive Regional Housing Study and Needs Analysis completed by Partners for Economic Solutions in 2019 states in the executive summary that, "over the past two decades,

housing prices in Planning District 10 have increased rapidly as new construction failed to keep pace with the increase in demand at all but the highest rent and price levels."[1] This proposed project will contribute to the "missing middle" housing stock and help to meet demand for housing in Charlottesville City limits.

R-3 Justification

The proposed development is consistent with the intent of the R-3 zoning district which states, "The purpose of the multifamily residential zoning district is to provide areas for medium- to high-density residential development" and that R-3 consists, "of medium-density residential areas in which medium-density residential developments, including multifamily uses, are encouraged." This project proposes a medium density multi-family development, consistent with the intent of the R-3 district.

Development of the property aligns with the goals and opportunities of the Fifeville Neighborhood as outlined in the Cherry Avenue Small Area Plan Draft. The SWOT analysis compiled by the neighborhood revealed that residents feel there is a lack of affordability in the neighborhood, pricing out long-term community members. While there is fear that development will change the neighborhood, community members still felt there is a strong opportunity to improve housing options within Fifeville. With new development, "additional housing may help residents remain in the community, even if they move to a new home within the neighborhood" (43). The multifamily development on Grove Street Extended could be an opportunity to address the challenge of meeting housing demand in the largely single-family zoning district in the Fifeville neighborhood. 1613 Grove Street is ideal for vacant lot development with effective density. The property is located at the end of Valley Road Extended's block of duplexes and two-family dwelling units. A medium-density multifamily development would not be out of character in this portion of the neighborhood and will be designed in a manner to complement, not overshadow, the existing neighborhood context. The structures would not be visible from main thoroughfares of the Fifeville neighborhood, minimizing overall impact to the small-town feel that community members seek to preserve, while demonstrating a different level of density that neighbors could experience. Allowing for this type of development where impact is minimal would help the community better understand the built condition of the desired density, affordability, and housing types they envision, without compromising the character of the neighborhood nor displacing any current residents.

Generous green screens will be planted at the edges of the property which will contribute to a robust landscape program on the site, adding to the tree canopy in the neighborhood while providing sufficient privacy for future residents. This will ensure that the tree and green space character of the neighborhood local streets will not only be preserved but enhanced.

Consistency with the Comprehensive Plan:

The property is located within the Western portion of the Fifeville Neighborhood and is located on the Western-most edge of the Cherry Avenue Small Area Plan Draft. The property fronts an unimproved portion of Grove Street Extended and extends along Valley Road Extended. Rock Creek is located on the western edge of tax map parcel 23-135, parallel to Valley Road Extended.

[1] "Comprehensive Regional Housing Study and Needs Analysis." Partners for Economic Solutions. March 22, 2019

Although this area is designated as Low-Density Residential on the future land use map, the Cherry Avenue Small Area Plan Draft encourages re-examination of allowable uses in the zoning code and exploration of methods to increase the number of affordable housing options in low-density portions of the neighborhood. A zoning map amendment for this property will contribute to the enhancement of housing options in the neighborhood and this proposed design contributes to protecting the character of the area.

This rezoning will achieve the intent of several of the City's housing goals including: creating quality housing opportunities for all and growing the City's housing stock for residents of all income levels.

The development is consistent with the Comprehensive Plan in the following ways:

Chapter 4 Environment

- *Goal 2: Promote practices throughout the City that contribute to a robust urban forest.* The preliminary site plan included with this rezoning request shows a landscape plan that would add a variety of native trees and plants to the site along the banks of Rock Creek, along the borders of the property, and internally in parking and recreational areas.
- *Goal 4: Improve public and private stormwater infrastructure while protecting and restoring stream ecosystems.* The proposed development will adhere to all local and state stormwater regulations. A native planting stream buffer is proposed along the banks of Rock Creek which will help to contribute to the restoration of the stream ecosystem. At present, the banks of the stream are unprotected from stormwater runoff and are overtaken by invasive plant species.

Chapter 5 Housing

- *Goal 3: Grow the City's housing stock for residents of all income levels.* A medium-density multi-family development on this property is an opportunity to incorporate more housing options throughout the City and help the City attain its goal of achieving a mixture of incomes and uses in as many areas of the City as possible. The owner is committed to providing affordable housing within this development, and of the 28 units, eight (8) one bedroom units are proposed as affordable. A proffer statement has been submitted in conjunction with this rezoning request, committing to eight (8) affordable units if the property is rezoned to R-3.

The City is also actively working through an update to the Comprehensive Plan and the future land use map with the hopes of adopting an updated plan in late 2021. The property is designated as "general residential" on the most recent future land use map draft (dated August 2021) and the project proposal is consistent with various goals of the draft plan, such as:

Housing

- *Goal 2: Diverse Housing Throughout the City: Support a wide range of rental and homeownership housing choices that are integrated and balanced across the city, and that meet multiple City goals including community sustainability, walkability, bikeability, ADA accessibility, public transit use, increased support for families with children and low-income households, access to food, access to local jobs, thriving local businesses, and decreased vehicle use.*

Environment, Climate, and Food Equity

- *Goal 1: Climate Change, Emissions, and Energy: Reduce community greenhouse gas (CHG) emissions and the city's overall carbon footprint to meet goals established for 2030 (45% reduction in greenhouse gas emissions from 2011 levels) and 2050 (carbon neutrality).*

  By creating more housing in close proximity to schools, parks, and places of employment the need to utilize a car for every trip out of the house is reduced. 28 units in this location would put more residents within a half mile walk of an elementary school, a .8 mile walk or bike to an elementary school, and a one mile walk/bike/transit ride to a major employment center at the UVA health system.

Land Use, Urban Form, and Historic and Cultural Preservation:

- *Goal 2*: *Balance Conservation and Preservation with Change: Protect and enhance the existing distinct identities of the city's neighborhoods and places while promoting and prioritizing infill development, housing options, a mix of uses, and sustainable reuse in our community.*

  This infill development promotes effective density within structures that are designed within a mass and form that resembles a large single family home or two family structure. The structures are sighted to be set down on the site, working with the grade, to minimize the appearance of the structures from the surrounding properties. As a vacant site, this property can accommodate this infill development without compromising existing structures.

Impacts on Public Facilities & Public Infrastructure:

American Community Survey (ACS) 5 year estimates indicate the average household size in Charlottesville is 2.38 people[2].Using the ACS average, a multi-family development with a maximum of 28 proposed units could potentially yield 67 new residents within Police District 7 and Ridge Street Station Fire District. It should be noted this household size is for all unit sizes and is not limited to one or two-bedroom households.

Despite the additional density, vehicular trips generated by the development are expected to be minimal, and thus will not greatly impact congestion on Cherry Avenue, which is a concern expressed in the Cherry Avenue Small Area Plan. A CAT bus stop is located a short distance from the property at the intersections of Cherry Avenue and Valley Road Extended and the development intends to provide bike lockers for residents. It is expected that these two alternative transportation methods will lower the already low trip estimate.

The Charlottesville Bicycle and Pedestrian Master Plan has other pedestrian-friendly infrastructure proposed (the aforementioned greenway tunnel and multi-use pathway) that will connect Fifeville and the immediate property to Charlottesville, encouraging even more pedestrian trips in the future.

Impacts on Schools:

This property lies within the Johnson Elementary School district. After attending neighborhood elementary schools, all Charlottesville students attend Walker Upper Elementary School, Buford Middle School, and Charlottesville High School.

[2] ACS 2013-2017 5 YR Estimates Table B25010 "Average Household Size of Occupied Housing Units by Tenure"

ACS 2018 5 year estimates show that there are an estimated 4,800 residents between the ages of 5-17 within City limits.[3] By dividing this estimate by the number of occupied housing units in the city, 18,613, it can be approximated that there are approximately .26 children per housing unit in Charlottesville.[4] Since 28 units are proposed on the site, it is estimated there may be an additional seven school-aged children within the development.

Impacts on Environmental Features:

All design and engineering for improving the property will comply with applicable City and State regulations for erosion and sediment control and stormwater management. Rock Creek (located at the western portion of tax map parcel 23-135) will be protected during and after construction.

Stream restoration along Rock Creek near the property frontage is proposed as a component of this application. Currently, the banks of Rock Creek are overrun with Kudzu and don't have stabilization measures in place to ensure the integrity of the bank over the long term. The restoration plan included with this application proposes the installation of stabilization stones and native trees and grasses that was informed by the Virginia Department of Conservation[5], which provides guidelines for native species adjacent to streams, creating stream flow and erosion control, nutrient filtration, and wildlife habitats.

Compliance with USBC Regulations:

The proposed project will comply with all applicable USBC regulations.

Proffers to Address Impacts:

As a condition of rezoning approval, the owner will provide a cash contribution for improvements to pedestrian infrastructure within the Fifeville Neighborhood to improve pedestrian connectivity and safety along that street. The owner proposes to proffer a total of $48,000 prior to issuance of certificate of occupancy of the seventh dwelling unit on the property.

The $48,000 contribution is consistent with providing just over 700 linear feet of sidewalk per the City's 2019 sidewalk fund calculator which priced each linear foot of sidewalk at $67.75.

Additionally, the owner has committed to providing eight (8) 1 bedroom affordable housing units on the property.

[3] ACS 2018 5 YR Estimates Table DP05 "ACS Demographic and Housing Estimates"
[4] ACS 2018 5 YR Estimates Table DP04 "Selected Housing Characteristics"
[5] Virginia Department of Conservation, "Virginia Riparian Buffer Zones: Native Plants for Conservation, Recreation & Landscaping."

Attachment D (10/21/21)

Affordable Dwelling Unit Ordinance Worksheet-1613 Grove St.

Step 1: Total Floor Area Ratio (FAR) of Site

A.	Total size of development site:	0.65 acres				
B.	Total square footage of site:	0.65 (# of acres)	x	43,560.00	=	28,401.12 square feet (sf)
C.	1.0 Floor Area Ratio (FAR):	28,401.12 *(total sf of site)*				
D.	Gross Floor Area (GFA) of **ALL** buildings/uses:	25,598.00 sf				
E.	Total site FAR:	25,598.00 *(total GFA of site)*	÷	28,401.12 *(1.0 FAR)*	=	0.90
F.	Is E greater than or equal to 1.0 FAR?	NO: Your proposed development does not trigger the ADU ordinance.				
		YES: Proceed to Step 2 or Step 3.				

Step 2: Number of ADUs Required

G.	GFA in excess of 1.0 FAR:	*(D: total site GFA)*	-	*(B: total SF of site)*	=	0.00
H.	Total GFA of ADUs required:	0.00 *(G: GFA in excess of 1.0 FAR)*	x	0.05	=	0.00
I.	Equivalent density based on Units Per Acre:					
	i. Dwelling Units per Acre (DUA) approved by SUP:	43.00				
	ii. SF needed for ADUs:	0.00 *(H: Total GFA of ADUs)*	÷	43,560.00	=	0.0000000 acres
	iii. Total number of ADUs required:	0.0000000 *(ii: ADU acreage)*	x	43.00 *(i: DUA approved)*	=	0.00

Step 3: Cash-in-Lieu Payment

J. Cash-in-Lieu Amount Residential: _____ x $2.370 = **$0.00**

K. Cash-in-Lieu Amount Mixed-Use:

Total GFA of development site:			
GFA Occupied Commercial Space:			
GFA Occupied Residential Space:			
Total GFA Occupied Space:	0.00	% Residential:	#DIV/0!
GFA Non-Occupied Space*:	0.00	Propotionate amount of non-occupied space GFA for residential use:	#DIV/0!

Amount of Payment: #DIV/0! x $2.370 = #DIV/0!

**GFA of non-occupied space shall include: (i) basements, elevator shafts and stairwells at each story, (ii) spaces used or occupied for mechanical equipment and having a structural head room of six (6) feet six (6) inches or more, (iii) penthouses, (iv) attic space, whether or not a floor has been laid, having a structural head room of six (6) feet six (6) inches or more, (v) interior balconies, and (vi) mezzanines. GFA shall not include outside balconies that do not exceed a projection of six (6) feet beyond the exterior walls of the building; parking structures below or above grade; or and roof top mechanical structures.*

Step 4: Minimum Term of Affordability

L. Residential Project

i. Households earning up to 80% AMI:

Unit Type	Eff.	1BR	2BR	3BR	4BR	5BR	6BR
Number of Units							
Market Rent							
HUD Fair Market Rents	$752.00	$1,027.00	$1,179.00	$1,478.00	$1,772.00	$2,037.00	$2,303.00
HUD Utility Allowance							
Difference per Month	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Annual Cost of ADU	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Total Annual Cost of ADUs: 0.00 *(Sum of Annual Cost of ADU)*

Minimum Term of Affordability*: #DIV/0! *(Cash-in-lieu payment / Total annual cost of ADUs)*

***If answer is less than 5, then minimum term of affordability will be 5 years.**

M. Mixed-Use Project

i. Households earning up to 80% AMI:

Unit Type	Eff.	1BR	2BR	3BR	4BR	5BR	6BR
Number of Units							
Market Rent							
HUD Fair Market Rents	$752.00	$1,027.00	$1,179.00	$1,478.00	$1,772.00	$2,037.00	$2,303.00
HUD Utility Allowance							
Difference per Month	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Annual Cost of ADU	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Total Annual Cost of ADUs: 0.00 *(Sum of Annual Cost of ADU)*

Minimum Term of Affordability: #DIV/0! *(Cash-in-lieu payment / Total annual cost of ADUs)*

***If answer is less than 5, then minimum term of affordability will be 5 years.**

BEFORE THE CITY COUNCIL OF THE CITY OF CHARLOTTESVILLE, VIRGINIA
IN RE: PETITION FOR REZONING (City Application No. ZM20-00003)
STATEMENT OF **PRELIMINARY** PROFFER CONDITIONS
For 1613 Grove Street Ext.

City of Charlottesville Tax Map 23 Parcels 133, 134, 135

TO THE HONORABLE MAYOR AND MEMBERS OF THE COUNCIL OF THE CITY OF CHARLOTTESVILLE

Lorven Investments, LLC is the owner (the "Owner") of Tax Parcels 230133000, 230134000, 230135000 (collectively, the "Property") which is the subject of rezoning application ZM20-00003, a project known as "1613 Grove Street Ext." (the "Project"). The Owner seeks to amend the current zoning of the Property subject to certain voluntary conditions set forth below. Each signatory below signing on behalf of the Owner covenants and warrants that it is an authorized signatory of the Owner for this Proffer Statement.

In furtherance of the Project, the Owner hereby proffers for City Council's consideration voluntary development conditions, which the Owner agrees are reasonable. The Owner agrees that, if the Property is rezoned as requested, the use and development of the Property will be subject to and in accordance with the following conditions:

1. **Valley Road Extended Sidewalk Improvements:**
   a. Prior to the issuance of certificate of occupancy from the City's building official for the seventh (7^{th}) dwelling unit on the Property, the Owner shall contribute Forty-Eight Thousand Dollars ($48,000.00) to the City of Charlottesville's Capital Improvement Program (CIP) as a cash contribution for construction of pedestrian improvements within the Fifeville Neighborhood.

2. **Affordable Housing:**
   The Owner shall provide affordable housing within the Property, as follows:

   a. For the purposes of this Proffer, the term "For-Rent Workforce Affordable Dwelling Unit" means a dwelling unit where the monthly cost of rent, including any tenant paid utilities, does not exceed 125% of the Fair Market Rent by unit bedrooms for the Charlottesville MSA, the aforementioned Fair Market Rent is established annually by the federal Department of Housing and Urban Development (HUD).
   b. For the purposes of this Proffer, the term "For-Rent Affordable Dwelling Unit" means a dwelling unit where the monthly cost of rent, including any tenant paid utilities, does not exceed the Fair Market Rent by unit bedrooms for the Charlottesville MSA, the aforementioned Fair Market Rent is established annually by the federal Department of Housing and Urban Development (HUD).

c. Fourteen percent (14%) of all dwelling units constructed within the area of the Property shall be For-Rent Workforce Affordable Dwelling Units and an additional fourteen percent (14%) of all dwelling units constructed within the area of the Property shall be For-Rent Affordable Dwelling Units (collectively, the "Required Affordable Dwelling Units") for a total of 28% of dwelling units constructed within the area of the Property provided as Required Affordable Dwelling Units. The Required Affordable Dwelling Units shall be identified on a layout plan, by unit, prior to the issuance of any certificate of occupancy for a residential unit within the Property ("Initial Designation"). The Owner reserves the right, from time to time after the Initial Designation, and subject to approval by the City, to change the unit(s) reserved as Workforce-Affordable Dwelling Units and Affordable Dwelling Units, and the City's approval shall not unreasonably be withheld so long as a proposed change does not reduce the number of Required Affordable Dwelling Units and does not result in an Affordability Period shorter than required by these proffers with respect to any of the Required Affordable Dwelling Units.
    i. The Required Affordable Dwelling Units shall be reserved as such throughout a period of at least ten (10) years from the date on which the unit receives a certificate of occupancy from the City's building official ("Rental Affordability Period"). All Rental Affordable Dwelling Units shall be administered in accordance with one or more written declarations of covenants within the land records of the Charlottesville Circuit Court, in a form approved by the Office of the City Attorney.
    ii. On or before July 1 of each calendar year the then current owner of each Required Affordable Dwelling Unit shall submit an Annual Report to the City, identifying each Required Affordable Dwelling Unit by address and location, and verifying the Household Income of the occupant of each Required Affordable Dwelling Unit.

d. The land use obligations referenced in 2.c.i and 2.c.ii shall be set forth within one or more written declarations of covenants recorded within the land records of the Charlottesville Circuit Court, in a form approved by the Office of the City Attorney, so that the Owner's successors in right, title and interest to the Property shall have notice of and be bound by the obligations. In the event of re-sale of any of the required Affordable dwelling Units that reduces the number of required Affordable Dwelling Units below the thresholds set forth in this proffer, the declaration of covenants shall provide a mechanism to ensure that an equivalent Affordable Dwelling Unit is created within the City of Charlottesville, either on or off of the Subject Project, that satisfies the requirements contained herein for the remainder of the Affordability Period.

WHEREFORE, the undersigned Owner stipulates and agrees that the use and development of the Property shall be in conformity with the conditions hereinabove stated, and request that the Property be rezoned as requested, in accordance with the Zoning Ordinance of the City of Charlottesville.

By: _____
Lorven Investments, LLC Manager/Member

Print Name: _____

Owner's Address: _____

CITY OF CHARLOTTESVILLE

DEPARTMENT OF NEIGHBORHOOD DEVELOPMENT SERVICES

STAFF REPORT

PLANNING COMMISSION REGULAR MEETING

APPLICATION FOR A CRITICAL SLOPE WAIVER

APPLICATION NUMBER: P20-00008

DATE OF MEETING: October 21, 2021

Project Planner: Brian Haluska, AICP
Date of Staff Report: October 4, 2021

Applicant: BKKW, LLC
Applicant's Representative(s): Kurt Keesecker
Current Property Owner: BKKW, LLC
Application Information
Property Street Address: Lyman Street
Tax Map & Parcel/Tax Status: 590289200 and 590358E00 (real estate taxes paid current – Sec. 34-12)
Total Project Area (Limits of Disturbance): 8,613 square feet
Total Area of Critical Slopes on Parcels: 2,415 square feet | 28%
Area of Proposed Critical Slope Disturbance: 2,415 square feet | 100% of total critical slopes area on parcel | 5.4% of total critical slopes area
Comprehensive Plan (General Land Use Plan): Low Density Residential
Current Zoning Classification: R-2 with an Infill Special Use Permit
Overlay District: None

Applicant's Request (Summary)

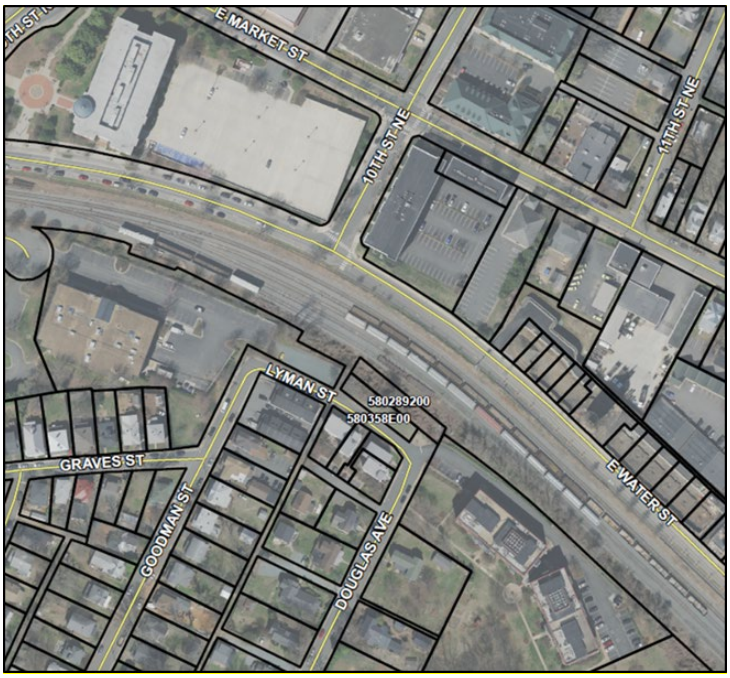
BKKW, LLC is requesting a waiver from Section 34-1120(b) of the City Code (Critical Slope Ordinance) to allow for construction of a development that would include up to three residential units. Improvements specific to areas where critical slopes would be impacted should the waiver be approved are shown on the Critical Slope Exhibit (**Attachment B**) and include portions of all proposed lots in the development

Existing critical slopes areas located on this Property include 2,415 square feet or 28 percent of the site. The applicable definition of "critical slope" is as follows:

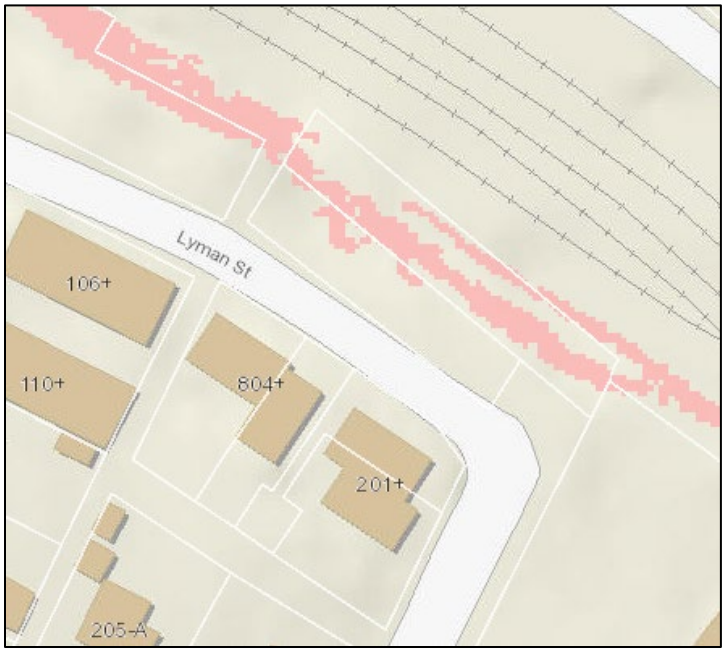
Any slope whose grade is 25% or greater, **and** (a) a portion of the slope has a horizontal run of greater than 20 feet, and its total area is 6,000 SF or greater, **and** (b) a portion of the slope is within 200 feet of a waterway. *See* City Code Sec. 34-1120(b)(2).

Based on the information presented within the application materials, Staff verifies that the area for which this waiver is sought meets all of the above-referenced components of the definition of "critical slope".

Vicinity Map



Critical Slopes per the Zoning Ordinance



Standard of Review

Per Sec. 34-1120(6)(d): The planning commission shall make a recommendation to city council in accordance with the criteria set forth in this section, and city council may thereafter grant a modification or waiver upon making a finding that:

(i)The public benefits of allowing disturbance of a critical slope outweigh the public benefits of the undisturbed slope (public benefits include, but are not limited to, stormwater and erosion control that maintains the stability of the property and/or the quality of adjacent or environmentally sensitive areas; groundwater recharge; reduced stormwater velocity; minimization of impervious surfaces; and stabilization of otherwise unstable slopes); or

(ii)Due to unusual size, topography, shape, location, or other unusual physical conditions, or existing development of a property, one (1) or more of these critical slopes provisions would effectively prohibit or unreasonably restrict the use, reuse or redevelopment of such property or would result in significant degradation of the site or adjacent properties.

If the recommendation is for City Council to grant the requested waiver, the Planning Commission may also make recommendations as to the following: In granting a modification or waiver, city council may allow the disturbance of a portion of the slope, but may determine that there are some features or areas that cannot be disturbed. These include, but are not limited to:

(i)Large stands of trees;

(ii)Rock outcroppings;
(iii)Slopes greater than 60%.

City council shall consider the potential negative impacts of the disturbance and regrading of critical slopes, and of resulting new slopes and/or retaining walls. City council may impose conditions as it deems necessary to protect the public health, safety or welfare and to insure that development will be consistent with the purpose and intent of these critical slopes provisions. Conditions shall clearly specify the negative impacts that they will mitigate. Conditions may include, but are not limited to:

(i)Compliance with the "Low Impact Development Standards" found in the City Standards and Design Manual.
(ii)A limitation on retaining wall height, length, or use;
(iii)Replacement of trees removed at up to three-to-one ratio;
(iv)Habitat redevelopment;
(v)An increase in storm water detention of up to 10% greater than that required by city development standards;
(vi)Detailed site engineering plans to achieve increased slope stability, ground water recharge, and/or decrease in stormwater surface flow velocity;
(vii)Limitation of the period of construction disturbance to a specific number of consecutive days;
(viii)Requirement that reseeding occur in less days than otherwise required by City Code.

Project Review and Analysis

Each applicant for a critical slopes waiver is required to articulate a justification for the waiver, and to address how the land disturbance, as proposed, will satisfy the purpose and intent of the Critical Slopes Regulations, as found within City Code Sec. 34-1120(b)(1). The applicant has provided information in the attached critical slopes waiver narrative **(Attachment A)** for Application Finding #1 and #2.

Staff Analysis 34-1120(b)(d)(i) Application Finding #1:

Staff does not recommend a waiver on the basis of Finding 1 for this application.

Staff Analysis 34-1120(b)(d)(ii) Application Finding #2 :
Engineering Department:

“Due to unusual size, topography, shape, location, or other unusual physical conditions, or existing development of a property, one (1) or more of these critical slopes provisions would

effectively prohibit or unreasonably restrict the use, reuse or redevelopment of such property or would result in significant degradation of the site or adjacent properties."

However, since the original submittal did not included sequences of construction, or clear narrative specifying how the slopes/downstream waters will be protected during construction, and in accordance with the following City Code section: "No modification or waiver granted shall be detrimental to the public health, safety or welfare, detrimental to the orderly development of the area or adjacent properties, or contrary to sound engineering practices."

City Engineering recommends the following conditions:

1) Site Plans (VESCP Plan component) should include, at a minimum, 4 stages/phases of ESC controls, the first shall be "Initial/Preliminary Controls" and outfall construction, the second (if required) shall include the establishment of a sediment trap and associated conveyances.
2) "Super Silt Fence" (chain linked backing) shall be installed where perimeter silt fence is specified.

Planning Department: The specific physical characteristics of the site meet the standards required in Finding #2. The front parcel of the development is constrained by an underground utility easement, requiring that the units shown in the applicants' rezoning and SUP application be built on the back parcel, where the critical slopes are located.

The site layout of the currently proposed development is consistent with the materials presented by the applicant when the parcels were rezoned and granted an infill SUP by City Council.

Staff Recommendation

Staff recommends the Planning Commission recommend to City Council to grant the critical slope waiver on the basis that "due to unusual physical conditions, one (1) or more of these critical slopes provisions would effectively prohibit or unreasonably restrict the use of such property."

Recommended Conditions

1) Site Plans (VESCP Plan component) should include, at a minimum, 4 stages/phases of ESC controls, the first shall be "Initial/Preliminary Controls" and outfall construction, the second (if required) shall include the establishment of a sediment trap and associated conveyances.
2) "Super Silt Fence" (chain linked backing) shall be installed where perimeter silt fence is specified.

Suggested Motions

1. "I move to recommend approval of the critical slope waiver for Tax Map and Parcel 590289200 and 590358E00, as requested, with the conditions listed in the staff report, based on a finding that [*reference at least one*]:
    - The public benefits of allowing the disturbance outweigh the benefits afforded by the existing undisturbed critical slope, per Section 34-1120(b)(6)(d)(i) [Not Recommended]
    - Due to unusual physical conditions, or the existing development of the property, compliance with the City's critical slopes regulations would prohibit or unreasonably restrict the use or development of the property, per Section 34-1120(b)(6)(d)(ii) [Recommended]

2. "I move to recommend denial of the steep slope waiver for Tax Map and Parcel 590289200 and 590358E00.

Attachments

A. Application and Narrative
B. Critical Slope Exhibit

WAIVER REQUEST FORM

Please Return To: City of Charlottesville
Department of Neighborhood Development Services
PO Box 911, City Hall
Charlottesville, Virginia 22902
Telephone (434) 970-3182 Fax (434) 970-3359

For a Critical Slopes Waiver Request, please include one of the following application fees: $75 for single-family or two-family projects; $500 for all other project types. **additional application form required*
For all other Waiver Requests, please include one of the following application fees: $50 for single-family or two-family projects; $250 for all other project types.

Project Name/Description Lyman Street Residences Parcel Number 580289200
Address/Location Lyman Street
Owner Name BKKW, LLC Applicant Name BKKW, LLC (contact Kurt Keesecker)

Applicant Address: 113 4th St, STE 100 Charlottesville, VA 22902
Phone (H) _____ (W) 434-971-7160 (F) _____
Email: kkeesecker@brw-architects.com

Waiver Requested (review Zoning Ordinance for items required with waiver submissions):

___ Sidewalk
*Contact Staff for Supplemental Requirements
___ Drainage/Storm Water Management
___ Off-street Parking
___ Site Plan Review
___ Lighting
___ Landscape
___ Signs
___ Setbacks
_X_ Critical Slopes **additional application form required*
___ Communication Facilities
___ Other
___ Stream Buffer Mitigation Plan

Description of Waiver Requested: Waiver for disturbance of 2,415 sf critical slopes on site.

Reason for Waiver Request: According to SP201900011, buildings must be located on TMP 58-289.2. The location of the critical slopes on this property make it impossible to build without disturbing them.

_____ 12-21-20
Applicant Signature Date

_____ _____
Property Owner Signature (if not applicant) Date

For Office Use Only: Date Received: _____

Review Required: Administrative_____ Planning Commission _____ City Council _____
Approved: _____ Denied: _____
_____
Director of NDS
Comments: _____

J:\NEIGHPLAN\FORMS 2012 Edited on 10/31/2012

P21-0009

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CRITICAL SLOPES WAIVER REQUEST SUPPLEMENT

Applicant:	**BKKW, LLC** **Contact: Kurt Keesecker** **kkeesecker@brw-architects.com**
Project Description:	**Lyman Street Residences** **Three single family dwellings per SP19-00011**
Ex. Conditions:	**Vacant land**
Total Site Area:	**8,613 sf**
Zoning:	**R-2**
Percentage of Area Made up of Critical Slopes:	**2,415 sf / 8,613 sf = 28.04%** **[Out of approximately 44,582 sf total]**
Critical Slope Disturbance:	**2,415 sf** **28.04% of site area, 5.42% of total area**

Finding #2. *Due to unusual size, topography, shape, location, or other unusual physical conditions, or existing development of a property, one (1) or more of these critical slopes provisions would effectively prohibit or unreasonably restrict the use, reuse or redevelopment of such property or would result in significant degradation of the site or adjacent properties.*

The slopes on this site are manmade, created with the construction of the railroad. The slopes drain to a manmade channel just behind the site. This channel is purely for conveying stormwater runoff in the area and has no wildlife inhabiting it. Stormwater is captured and treated on site such that stormwater velocities leaving the site in post-development are less than in pre-development.

SP1900011 was approved with the general layout as shown in the Critical Slopes Exhibit. One of the conditions of approval is that the front parcel remain used largely for parking and plantings. Additionally, there is a public waterline that runs through the front parcel (58-358E), and an unusual jog in the parcel boundary which both significantly restrict the buildable area of that parcel. Locating the buildings on TMP 58-289.2 is the most feasible due to constraints on site.

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113 4th St. NE; STE 100
CHARLOTTESVILLE, VA 22902
TEL: (434) 262-0169
LINE-GRADE.COM

Please address how Finding #1 and/or Finding #2 will be met utilizing the "critical slope provisions" noted below.

1. *Erosion affecting the structure integrity of those features.*
   The manmade critical slopes that exist on site will be mostly removed, as three new residences with basements will be put in their place. The runoff from the building roofs will be captured and routed to a bioretention cell before being released at a controlled flow rate. Runoff from the front of the site nearest Lyman Street will be captured and routed to an underground detention system, where it is then released at a controlled flow rate onto rip rap.

2. *Stormwater and erosion-related impacts on adjacent properties.*
   There are no properties immediately downstream, this site outlets to a manmade channel alongside the railroad tracks. Stormwater peak flow rates from 1 and 10 yr storms are less in the post-development phase than in pre-development.

3. *Stormwater and erosion-related impacts to environmentally sensitive areas such as streams and wetlands.*
   No streams or wetlands are immediately downstream. A majority of the runoff from impervious surfaces is captured in bioretention cells, which provide some sediment and phosphorous removal from stormwater.

4. *Increased stormwater velocity due to loss of vegetation.*
   The stormwater is released at a lower rate in post-development due to the detention on-site, so this will not occur.

5. *Decreased groundwater recharge due to changes in site hydrology.*
   The existing soil is HSG D, meaning it has very low infiltration rates to begin with. The front half of the site is to remain turf and will be graded to a less steep condition than in pre-development, allowing for increased groundwater recharge in that area.

6. *Loss of natural or topographic features that contribute substantially to the natural beauty and visual quality of the community such as loss of tree canopy, forested areas and wildlife habitat.*
   This site is overgrown and unusable in its current state. It does not serve wildlife as it is directly adjacent to the railroad. As proposed, the front yard of this site will be replanted with large street trees and a mixture of shrubs and grasses to restore natural beauty.

   Please list all attachments that should be viewed as support to the above explanations.

   -Original topographic survey by Lincoln Surveying (at a reduced scale)
   -Critical Slopes Exhibit by Line and Grade

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Please sign the following statement.

I certify that, to the best of my knowledge, the information I have provided above is based on sound engineering and surveying data and that this site has been carefully inspected and reviewed for the purposes of completing this application accurately. I certify that as the property owner/applicant I have not given false information that may affect the decisions made regarding this development.

BKKW, LLC

Property Owner

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Applicant

Please do not write below this line. For office use only.

Planner's Comments/Recommendations:

Engineer's Comments/Recommendations:

THIS TOPOGRAPHIC SURVEY OF TAX MAP 58 PARCELS 289.2 & 358E SITUATED ALONG LYMAN STREET WERE COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF THOMAS B. LINCOLN FROM AN ACTUAL ☒ GROUND OR ☐ AIRBORNE SURVEY MADE UNDER MY SUPERVISION; THAT THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED ON NOVEMBER 14, 2011; AND THAT THIS PLAT, MAP, OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

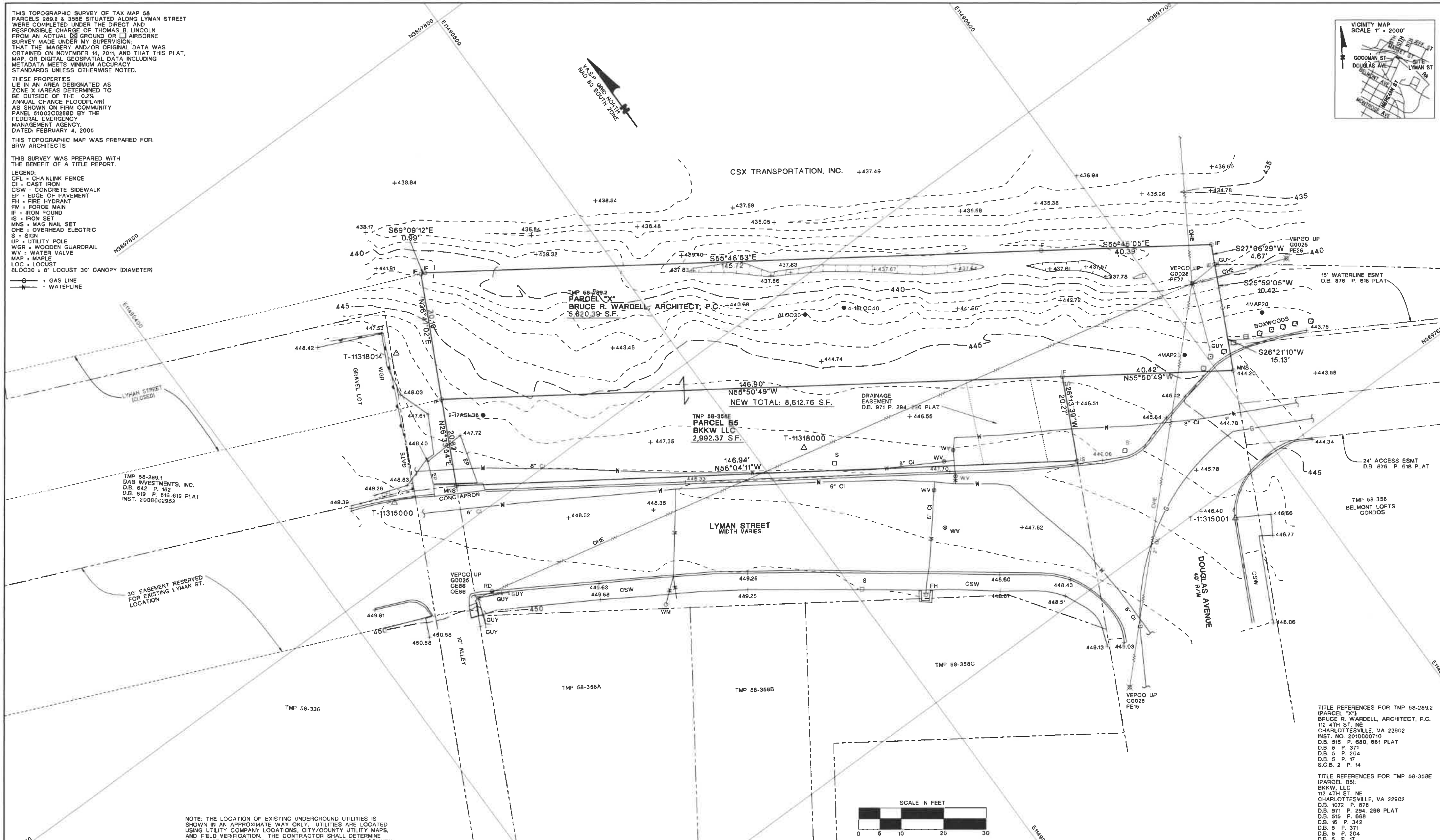
THESE PROPERTIES LIE IN AN AREA DESIGNATED AS ZONE X (AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS SHOWN ON FIRM COMMUNITY PANEL 51003C0288D BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY. DATED: FEBRUARY 4, 2005

THIS TOPOGRAPHIC MAP WAS PREPARED FOR: BRW ARCHITECTS

THIS SURVEY WAS PREPARED WITH THE BENEFIT OF A TITLE REPORT.

LEGEND:
CFL = CHAINLINK FENCE
CI = CAST IRON
CSW = CONCRETE SIDEWALK
EP = EDGE OF PAVEMENT
FH = FIRE HYDRANT
FM = FORCE MAIN
IF = IRON FOUND
IS = IRON SET
MNS = MAG NAIL SET
OHE = OVERHEAD ELECTRIC
S = SIGN
UP = UTILITY POLE
WGR = WOODEN GUARDRAIL
WV = WATER VALVE
MAP = MAPLE
LOC = LOCUST
8LOC30 = 8" LOCUST 30' CANOPY (DIAMETER)

—G— = GAS LINE
—W— = WATERLINE



NOTE: THE LOCATION OF EXISTING UNDERGROUND UTILITIES IS SHOWN IN AN APPROXIMATE WAY ONLY. UTILITIES ARE LOCATED USING UTILITY COMPANY LOCATIONS, CITY/COUNTY UTILITY MAPS, AND FIELD VERIFICATION. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

SURVEY CONTROL			
NORTHING	EASTING	ELEVATION	DESCRIPTION
3897714.197	11490424.783	448.80	T-11315000
3897593.593	11490583.003	446.45	T-11315001
3897667.465	11490510.541	447.36	T-11318000
3897742.573	11490446.028	447.80	T-11318014

SCALE IN FEET
0 5 10 20 30

TITLE REFERENCES FOR TMP 58-289.2 (PARCEL "X"):
BRUCE R. WARDELL, ARCHITECT, P.C.
112 4TH ST. NE
CHARLOTTESVILLE, VA 22902
INST. NO. 2010000710
D.B. 515 P. 680, 681 PLAT
D.B. 5 P. 371
D.B. 5 P. 204
D.B. 5 P. 17
S.C.B. 2 P. 14

TITLE REFERENCES FOR TMP 58-358E (PARCEL B5):
BKKW, LLC
112 4TH ST. NE
CHARLOTTESVILLE, VA 22902
D.B. 1072 P. 878
D.B. 971 P. 294, 296 PLAT
D.B. 515 P. 668
D.B. 16 P. 342
D.B. 5 P. 371
D.B. 5 P. 204
D.B. 5 P. 17

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Innovation. Integrity. Vision.
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CHARLOTTESVILLE, VIRGINIA 22901
OFFICE: 434-974-1417
FAX: 434-974-1776
www.lincolnsurveying.com

COMMONWEALTH OF VIRGINIA
PDF
THOMAS B. LINCOLN
LIC. NO. 1326
COPY
LAND SURVEYOR

TOPOGRAPHIC MAP OF TAX MAP 58 PARCELS 289.2 & 358E SITUATED ALONG LYMAN STREET CHARLOTTESVILLE, VIRGINIA

DATE: NOVEMBER 14, 2011

SCALE: 1" = 10'
CONTOUR INTERVAL: 1'
NAVD '88 VERTICAL DATUM
SHEET 1 OF 1

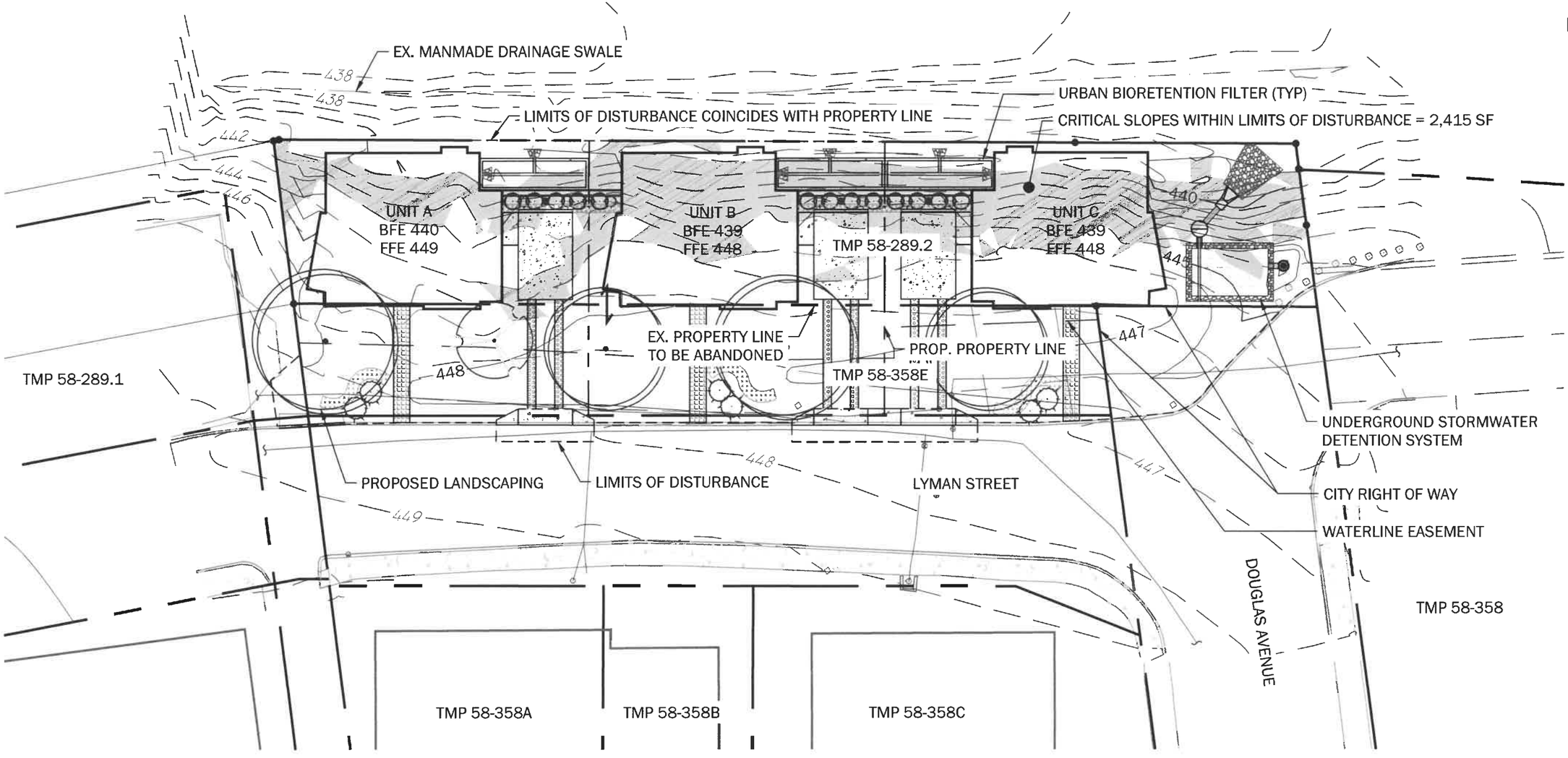
DATA9 \ 87\ 87001327\ 87001327_TS_11319.PRO 87-0013-27

LEGEND

382	EX. CONTOUR		ORNAMENTAL GRASS
382	PROP. CONTOUR		PROP. CONCRETE
	CHANNEL CENTERLINE		PERMEABLE WALKWAY
	CRITICAL SLOPES		PERMEABLE DRIVEWAY PAVERS

COMMONWEALTH OF VIRGINIA
12/23/20
DANIEL C. HYER
LIC. No. 45596
PROFESSIONAL ENGINEER

DCH



1" = 20': 0 20 40

CRITICAL SLOPES EXHIBIT

LYMAN STREET RESIDENCES

CHARLOTTESVILLE, VIRGINIA

DATE 12/23/2020
PROJECT 2011001

THE WORK OF LINE + GRADE

CITY OF CHARLOTTESVILLE

DEPARTMENT OF NEIGHBORHOOD DEVELOPMENT SERVICES

STAFF REPORT

PLANNING COMMISSION MEETING

APPLICATION FOR APPROVAL OF A PRELIMINARY SITE PLAN

APPLICATION NUMBER: P21-0008

DATE OF MEETING: October 21, 2021

Project Planner: Brian Haluska
Date of Staff Report: October 8, 2021

Applicant: BKKW, LLC
Applicant's Representative(s): Kurt Keesecker
Current Property Owner: BKKW, LLC
Property Street Address: 0 Lyman Street
Tax Map & Parcel: 580289200 and 580358E00
Current Zoning Classification: R-2 Residential
Overlay District: None
Reason for Planning Commission Review: Preliminary site plan reflects the proposed development of a property that is the subject of an approved special permit per Sections 34-820(d)

Vicinity Map

Standard of Review

Site plan approval is a ministerial function of Planning Commission in which no discretion is involved. If this preliminary site plan contains all required information, then it must be granted approval. If Planning Commission disapproves this plan, it shall set forth in writing the specific reasons therefor. As per Section 34-823(c), the reasons for disapproval shall identify deficiencies in this plan which cause the disapproval, by reference to specific ordinances, laws, or regulations. If this plan is disapproved, Planning Commission must also generally identify modifications or corrections that will permit approval of this plan.

Applicant's Request (Summary)

Mr. Kurt Keesecker of BKKW, LLC is seeking Planning Commission approval for the Lyman Street Preliminary Site Plan. This preliminary site plan proposes three (3) residential units fronting on Lyman Street. On April 1, 2019, City Council approved Special Use Permit SP18-00011 authorizing an infill special use permit at this location. As per the City's Zoning Ordinance, Planning Commission shall review this preliminary site plan because it reflects the proposed development of property that is subject to a Special Use Permit.

Site Plan Requirements

A. Compliance with the City's Erosion and Sediment Control ordinance (Chapter 10)

Staff has determined that this preliminary site plan complies with the City's Erosion and Sediment Control ordinance. Erosion and Sediment Control plans are included as site plan Sheets C2.0 through C2.4, and Stormwater Management Plans are included as site plan Sheets C6.0 and C6.1.

B. Compliance with applicable R-2 Commercial District zoning regulations (Sections 34-350 - 34-420)

The property is zoned R-2 Residential District. The project complies with all requirements of the R-2 Residential District and the approved infill special use permit previously approved by City Council..

C. Compliance with general standards for site plans (Section 34-827)

Staff has determined that this site plan contains the following information as required:

1. General site plan information, including but not limited to project, property, zoning, site, and traffic information: **Found on Sheet C0.0.**
2. Existing condition and adjacent property information: **Found on Sheet C1.0.**
3. Phasing plan: **The project will be constructed in one phase.**

4. Topography and grading: **Found on Sheet C4.0.**
5. Existing landscape and trees: **Found on Sheet C1.0.**
6. The name and location of all water features: **N/A.**
7. One hundred-year flood plain limits: **N/A.**
8. Existing and proposed streets and associated traffic information: **Found on Sheet C1.0. No new roads are proposed.**
9. Location and size of existing water and sewer infrastructure: **Found on Sheets C1.0.**
10. Proposed layout for water and sanitary sewer facilities and storm drain facilities: **Found of Sheet C5.0.**
11. Location of other existing and proposed utilities and utility easements: **Found on Sheet C5.0.**
12. Location of existing and proposed ingress to and egress from the property, showing the distance to the centerline of the nearest existing street intersection: **Found on Sheet C3.0.**
13. Location and dimensions of all existing and proposed improvements: **Found on Sheets C3.0 and C3.1.**
14. All areas intended to be dedicated or reserved for public use: **N/A.**
15. Landscape plan: **Found on Sheet C7.0.**
16. Where deemed appropriate by the director due to intensity of development:
    a. Estimated traffic generation figures for the site based upon current ITE rates: **Found on Sheet C0.2.**
    b. Estimated vehicles per day: **Found on Sheet C0.2.**

D. Additional information to be shown on the site plan as deemed necessary by the director or Commission in order to provide sufficient information for the director or Commission to adequately review the site plan.

The Special Use Permit granted by City Council on April 1, 2019 includes the following conditions, which are provided on **Sheet C0.2** of the preliminary site plan.

1. Three (3) buildings, to be constructed as single-family dwellings (the "SFDS"), each on its own separate lot and with each building fronting on Lyman Street. **Found on Sheet C3.0**

2. Each lot containing a single-family dwelling shall have an area no less than 2500 square feet (SF) and no more than 3500 SF; each such lots shall have frontage on Lyman Street of no less than 34 feet and no more than 65 feet; and each such lot shall have side yards of at least 2 feet, but no required front or rear yard areas. **Found on Sheet C3.0**

3. Each single-family lot, and the land on which it is constructed, may be used and occupied in any manner authorized within §34-420 of the R-2 zoning district regulations, including, without limitation, internal accessory apartments. **Found on Sheet C0.0.**
4. The land area currently identified as Tax Pacel 358E will not contain any buildings or structures (other than the SFDS) and will be used predominantly for access and parking for the SFDS described above and as landscaped open space with plantings, and for any additional driveway or parking as may be necessary to serve internal accessory apartments established within the SFDS. **Found on Sheet C3.0**
5. The general design and height of all buildings, the layout of the entire development shall be in all material aspects the same as depicted within the site plan dated December 21, 2018, revised February 28, 2019, and the narrative materials accompanying application No. SP19-00011. **Found on Sheet C3.0**

E. Compliance with Additional Standards for Specific Uses (Sections 34-930 - 34-938)
No improvements regulated by these sections are proposed.

Public Comments Received

Site Plan Conference Required by Z.O. Sec. 34-821
The city held a site plan conference on March 17th, 2021 beginning at 10:00 on a virtual platform. Property owners within 500 feet, and the Belmont-Carlton Neighborhood Association were notified of the meeting per requirements in Section 34-41(c)(2).

Recommendation

Staff recommends approval of the preliminary site plan.

Attachments

1. Preliminary Site Plan dated August 6, 2021
2. Special Use Permit Resolution dated April 15, 2019
3. Conceptual Site Plan Associated with SUP dated December 21, 2018

LYMAN STREET RESIDENCES

PRELIMINARY SITE PLAN

CHARLOTTESVILLE, VIRGINIA

PROJECT SUMMARY

NAME OF PROJECT: LYMAN STREET RESIDENCES

PROJECT ADDRESS: 0 LYMAN STREET
CHARLOTTESVILLE, VA 22902

DEVELOPMENT TYPE: RESIDENTIAL

PROJECT SUMMARY: THREE SINGLE FAMILY DWELLINGS ON VACANT LAND

APPLICANT/OWNER:

CONTACT: BRUCE WARDELL + KURT KEESECKER
BKKW, LLC
ADDRESS: 112 4TH ST NE; STE 100
CHARLOTTESVILLE, VA 22902
PHONE: 434-971-7160
EMAIL: BWARDELL@BRW-ARCHITECTS.COM
KKEESECKER@BRW-ARCHITECTS.COM

ENGINEER OF RECORD:

CONTACT: LINE AND GRADE CIVIL ENGINEERING
DANIEL C. HYER, PE
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CHARLOTTESVILLE, VA 22902
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SOURCE OF SURVEY AND TOPOGRAPHY:

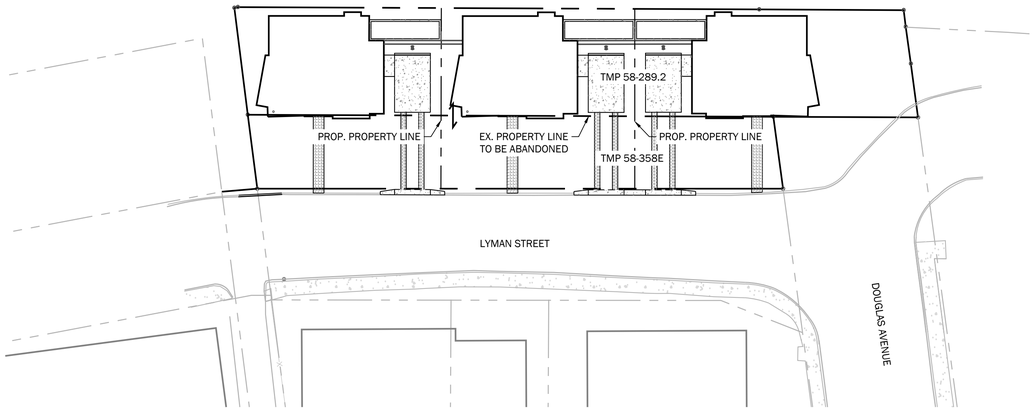
SOURCE: LINCOLN SURVEYING (04/30/21)
VERIFIED BY DANIEL HYER (11/10/20) + (05/04/21)
CONTACT: CHRIS KEAN
ADDRESS: 632 BERKMAR CIRCLE
CHARLOTTESVILLE, VA 22901
PHONE: 434-974-1417
EMAIL: CHRIS.KEAN@LINCOLNSURVEYING.COM

PARCELS:

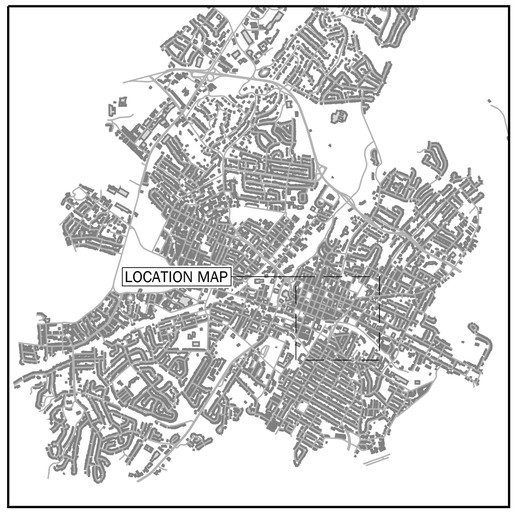
PARCEL ID: 580289200
OWNER: BKKW, LLC
CONTACT: BRUCE WARDELL + KURT KEESECKER
ZONED: R-2
PLANNING CONSIDERATIONS: CRITICAL SLOPES
SP19-00011
LEGAL AREA: 0.129 AC

PARCEL ID: 580358E00
OWNER: BKKW, LLC
CONTACT: BRUCE WARDELL + KURT KEESECKER
ZONED: R-2
PLANNING CONSIDERATIONS: CRITICAL SLOPES
SP19-00011
LEGAL AREA: 0.069 AC

PROPOSED SITE PLAN REQUIREMENTS		ALLOWED OR REQ'D
BUILDING HEIGHT:		
	MAX HEIGHT ALLOWED =	35 FT
	PROPOSED BUILDING HEIGHT =	30 FT
SETBACKS:		
SP19-00011	MIN FRONT BUILDING SETBACK =	NONE
	MAX FRONT BUILDING SETBACK =	NONE
	REAR BUILDING SETBACK =	NONE
	SIDE BUILDING SETBACK =	2 FT
	PARKING SETBACK =	NONE
BUILDING FOOTPRINTS:		
	PROPOSED BUILDINGS	
	(3) BUILDINGS 915 SF EACH	2,745 SF
LAND USE:		
	EXISTING UNDEVELOPED AREA	8,613 SF
	PROPOSED PARKING AREA	765 SF
	PROPOSED BUILDING AREA	2,745 SF
	PROPOSED WALKWAYS, WALLS	433 SF
	TOTAL PROPOSED IMPERVIOUS AREA	**3943 SF**
	PROPOSED PERCENT IMPERVIOUS AREA	**46%**
PARKING REQUIRED:		
Sec. 34-984	SINGLE FAMILY DWELLINGS: 1 SPACE / DWELLING UNIT	
	TOTAL REQUIRED PARKING =	**3 SPACES**
	HANDICAP SPACES REQUIRED =	**0 SPACES**
TREE CANOPY COVER:		
SEE LANDSCAPE PLAN FOR CALCULATIONS		



SITE MAP
SCALE: 1" = 20'



VICINITY MAP
SCALE: 1" = 4000'

LOCATION MAP
SCALE: 1" = 500'

DESIGN INFORMATION:

DESIGN MANUALS REFERENCED:
CITY OF CHARLOTTESVILLE SADM
2016 VDOT ROAD AND BRIDGE STANDARDS

ADDITIONAL INFORMATION:
DISTURBANCE AREA: 0.22 AC (9,678 SF)
PROPOSED IMPERVIOUS AREA: 3,943 SF
MISS UTILITY TICKET NO.: A131801842-00A
B110600703-00B
(04/16/21)
12 DIGIT HUC CODE: 020802040401

UTILITY OWNERS:

COMM.:	COMCAST, TING, VERIZON
GAS:	CITY OF CHARLOTTESVILLE
WATER:	CITY OF CHARLOTTESVILLE
STORM SEWER:	PRIVATE
SANITARY SEWER:	CITY OF CHARLOTTESVILLE

Sheet List Table

SHEET NUMBER	SHEET TITLE	PSP	FSP
C0.0	Title Sheet	●	○
C0.1	General Notes	●	○
C0.2	Site Calculations	●	○
C1.0	Existing Conditions and Demolition	●	○
C2.0	Erosion and Sediment Control Narrative	○	○
C2.1	Erosion and Sediment Control Plan Ph 1	○	○
C2.2	Erosion and Sediment Control Plan Ph 2	○	○
C2.3	Erosion and Sediment Control Plan Ph 3	○	○
C2.4	Erosion and Sediment Control Plan Details	○	○
C3.0	Site Plan	●	○
C3.1	Site Plan Details	●	○
C4.0	Grading Plan	●	○
C5.0	Utility Plan	●	○
C5.1	Utility Details and Profiles	●	○
C6.0	Stormwater Management Plan	●	○
C6.1	Stormwater Management Details	●	○
C7.0	Landscape Plan	●	○
X1.0	Survey	●	○
	TOTAL SHEETS	13	

SUBMITTAL LOG

SUBMISSION	DESCRIPTION	RECIPIENT	SUBMITTAL DATE
1	PRELIMINARY	NDS	12/23/2020
2	PRELIMINARY	NDS	5/11/2021
3	PRELIMINARY	NDS	08/06/2021

NDS DIRECTOR SIGNATURE DATE

CITY ENGINEER SIGNATURE DATE

LINE + GRADE
CIVIL ENGINEERING

LYMAN STREET RESIDENCES
PRELIMINARY SITE PLAN
CHARLOTTESVILLE, VIRGINIA

TITLE SHEET

COMMONWEALTH OF VIRGINIA
08/06/2021
DANIEL C. HYER
Lic. No. 45596
PROFESSIONAL ENGINEER

APPROVED	DCH
SUBMISSION NO.	3
PROJECT	2011001

THE WORK OF LINE + GRADE

C0.0

GENERAL CONSTRUCTION NOTES:

1. ALL CONSTRUCTION METHODS AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS (VDOT RBS&S), VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, THE RULES AND REGULATIONS WATER AND SANITARY SEWER CONSTRUCTION SPECIFICATIONS AND STANDARDS FOR THE PLAN APPROVING AUTHORITY AND ANY OTHER APPLICABLE FEDERAL, STATE, OR LOCAL ORDINANCES, CODES, AND LAWS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL CONDITIONS, MATERIALS, DIMENSIONS LOCATIONS AND EXISTING ELEMENTS TO REMAIN IN THE FIELD BEFORE PROCEEDINGS WITH ANY WORK. IF CONDITIONS VARY FROM WHAT IS REPRESENTED IN THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.
3. EXISTING CONSTRUCTION SHOWN IN THESE DRAWINGS SHALL BE USED AS RELATIVE REFERENCES AND ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR IF DEEMED CRITICAL FOR PROPER EXECUTION OF THE WORK.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DUST CONTROL MEASURES.
5. PROVIDE ADEQUATE PROTECTION FOR THE EXISTING BUILDINGS, BUILDING OCCUPANTS, VEHICLES AND PEDESTRIANS AT ALL TIMES IN ACCORDANCE WITH OSHA AND ALL APPLICABLE STATE AND LOCAL CODES.
6. MATERIALS AND EQUIPMENT SHALL BE STORED IN APPROVED AREAS TO PREVENT IMPACTS ON VEHICLES AND PEDESTRIANS. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR MEASURES TAKEN TO ENSURE VEHICULAR AND PEDESTRIAN SAFETY THROUGH THE ENTIRE DURATION OF THE WORK. SAFETY IS PARAMOUNT.
7. EQUIPMENT AND MATERIALS SHALL BE STORED IN DESIGNATED AREAS AND SHALL NOT ENCUMBER THE OWNER'S OPERATIONS, SURROUNDING RIGHT OF WAY, OR ADJOINING GROUNDS.
8. ALL WORK AREAS SHALL BE CLEANED DAILY.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF BUILDINGS ADJACENT TO WORK AREAS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS OF DAMAGES RESULTING FROM CONSTRUCTION ACTIVITIES.
10. SECTION CUTS AND DETAIL CALLOUTS INDICATED IN THE DRAWINGS ARE TYPICAL FOR THE PROJECT. THEY ARE TO BE CONSIDERED TYPICAL FOR SIMILAR CONDITIONS AND HAVE NOT BEEN SHOWN EVERYWHERE THEY APPLY.
11. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SAFETY.
12. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL CONSTRUCTION.
13. SYMBOLS IN THE DRAWINGS ARE NOT TO SCALE.
14. ALL WORK SHALL BE LAID-OUT PRIOR TO INSTALLATION OF NEW WORK BASED ON MEASUREMENT OF EXISTING CONSTRUCTION AND EXISTING CONSTRUCTION DESIGNATED TO REMAIN AS PART OF THE PROJECT. DO NOT START INSTALLATION OF WORK UNTIL LAY-OUT IS COMPLETE AND POTENTIAL CONFLICTS HAVE BEEN IDENTIFIED AND ADDRESSED.
15. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL DAMAGE TO THE EXISTING BUILDINGS AND ADJACENT GROUNDS AND PROPERTY CAUSE BY THE CARELESSNESS OR NEGLECT OF HIS WORKMEN. DAMAGE TO PORTIONS OF THE PROPERTY NOT SUBJECT TO WORK UNDER THE CONTRACT SHALL BE REPAIRED TO THE FULL SATISFACTION OF THE OWNER AND ENGINEER, AT THE CONTRACTOR'S EXPENSE.
16. PROTECTION OF THE WORK: PROTECT EFFECTIVELY ALL MATERIALS AND EQUIPMENT DURING THE ENTIRE PERIOD OF CONSTRUCTION. REPLACE MATERIALS AND EQUIPMENT DAMAGED, LOST OR STOLEN WITHOUT ADDITIONAL COST TO THE OWNER.
17. PROTECT EXISTING MATERIALS DURING INSTALLATION OF TEMPORARY PROTECTION AND CONSTRUCTION. DO NOT DEFACE OR REMOVE EXISTING MATERIALS IF INTENDED TO STAY. ATTACHMENTS OF TEMPORARY PROTECTION TO EXISTING CONSTRUCTION SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
18. OBTAIN ENGINEER REVIEW AND WRITTEN APPROVAL IN THE FORM OF A CONSTRUCTION CHANGE DIRECTIVE OR SUPPLEMENTAL INSTRUCTION BEFORE MAKING CHANGES OR ADDITIONS TO CONSTRUCTION OR REMOVING MATERIALS THAT WERE INTENDED TO REMAIN.
19. NOTIFY ENGINEER OF VISIBLE CHANGES IN THE INTEGRITY OF MATERIALS OR COMPONENTS WHETHER DUE TO ENVIRONMENTAL CAUSES INCLUDING BIOLOGICAL ATTACK, UV DEGRADATION, FREEZING OR THAWING OR DUE TO STRUCTURAL DEFECTS INCLUDING CRACKS, MOVEMENT OR DISTORTION. DO NOT PROCEED WITH WORK IN QUESTION UNTIL DIRECTED BY THE ENGINEER.
20. WHERE MISSING FEATURES ARE INDICATED TO BE REPAIRED OR REPLACED, PROVIDE FEATURES WHOSE DESIGNS ARE BASED ON ACCURATE DUPLICATIONS RATHER THAN ON CONJECTURAL DESIGNS, SUBJECT TO APPROVAL OF THE ENGINEER.
21. WHERE WORK REQUIRES EXISTING FEATURES TO BE REMOVED, CLEANED AND REUSED, PERFORM THESE OPERATIONS WITHOUT DAMAGE TO THE MATERIALS THEMSELVES, TO ADJACENT MATERIALS, OR TO THE SUBSTRATE. WHEN CLEANING, MATCH SAMPLES OF EXISTING MATERIALS THAT HAVE BEEN CLEANED AND IDENTIFIED FOR ACCEPTABLE CLEANING LEVELS. AVOID OVER CLEANING TO PREVENT DAMAGE TO EXISTING MATERIALS DURING CLEANING.
22. TEMPORARY MATERIALS MAY BE NEW OR USED, BUT MUST BE ADEQUATE IN FOR REQUIRED USAGE, MUST NOT CREATE UNSAFE CONDITIONS AND MUST NOT VIOLATE REQUIREMENTS OF APPLICABLE CODES AND STANDARDS.
23. CONTRACTOR SHALL PROVIDE AND MAINTAIN ADEQUATE FIRE PROTECTION IN THE FORM OF FIRE EXTINGUISHER OR OTHER EFFECTIVE MEANS OF EXTINGUISHING FIRE, READY FOR INSTANT USE, DISTRIBUTED AROUND THE PROJECT AND IN AND ABOUT TEMPORARY, INFLAMMABLE STRUCTURES DURING CONSTRUCTION OF WORK. EXISTING FIRE HOSE CONNECTIONS SHALL BE ACCESSIBLE AT ALL TIMES BY FIRE DEPARTMENT PERSONNEL. MATERIAL SAND DEBRIS SHALL NOT BE STORED IN FRONT OF THE CONNECTION, THUS PREVENTING ACCESS. THE CONTRACTOR SHALL COORDINATE ACCESS PROCEDURES WITH THE FIRE MARSHALL.
24. GASOLINE AND OTHER FLAMMABLE LIQUIDS SHALL BE STORED AND DISPENSED FROM UL LISTED SAFETY CONTAINERS IN CONFORMANCE WITH THE NATIONAL BOARD OF FIRE UNDERWRITERS' RECOMMENDATIONS.
25. SUBMITTALS ARE NOT REQUIRED IF CONTRACTOR ELECTS TO USE THE PROPRIETARY PRODUCTS LISTED. SUBMITTALS WILL BE REQUIRED IF CONTRACTOR WISHES TO USE ALTERNATE PRODUCTS. ALL ALTERNATE PRODUCTS ARE SUBJECT TO REVIEW AND APPROVAL BY THE ENGINEER AND OWNER.
26. CONTRACTOR SHALL CALL MISS UTILITY AT 1-800-552-7001 BEFORE CONSTRUCTION COMMENCES.
27. TREE AND PLANT ROOTS OR BRANCHES THAT MAY INTERFERE WITH THE WORK SHALL BE TRIMMED OR CUT ONLY WITH THE APPROVAL OF THE OWNER AND ENGINEER. ANY TREES OR PLANTS WHICH ARE SHOWN TO REMAIN THAT DO NOT INTERFERE WITH THE WORK, BUT ARE DAMAGED BY CONTRACTOR OR HIS SUB-CONTRACTORS, SHALL BE REPLACED BY CONTRACTOR AT NO ADDITIONAL COST.

WORK AREA PROTECTION AND MAINTENANCE:

1. CLEARING AND GRUBBING SHALL BE CONFINED TO THOSE AREAS NEEDED FOR CONSTRUCTION, AND AS SHOWN IN THE DRAWINGS.
2. DISTURBED AREAS BEYOND THE ROADWAY CURB AND WHERE INDICATED ON THE PLANS SHALL RECEIVE TOPSOIL AS NECESSARY AND AS DIRECTED. SEEDING MIXTURE SHALL BE DETERMINED BY THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK SECTION 3.32
3. CONTRACTOR IS PERMITTED TO WORK IN THE PUBLIC RIGHT-OF-WAY AND ANY TEMPORARY OR PERMANENT EASEMENT SHOWN ON THE PLANS. HOWEVER, CONTRACTOR SHALL NOTIFY PROPERTY OWNER(S) FORTY-EIGHT (48) HOURS PRIOR TO WORKING ON ANY PRIVATE PROPERTY TO COORDINATE ACCESS AND TO DETERMINE A STORAGE AREA FOR MATERIALS IF NEEDED. COORDINATION OF ACCESS TO PUBLIC RIGHT-OF-WAY AND STORAGE OF MATERIALS THEREON SHALL BE COORDINATED WITH THE ENGINEER. CONTRACTOR'S FAILURE TO NOTIFY AND COORDINATE WITH PROPERTY OWNERS AND/OR THE ENGINEER MAY RESULT IN DELAYS. NO ADDITIONAL COMPENSATION OR TIME FOR PERFORMANCE WILL BE GIVEN FOR ANY SUCH DELAYS.
4. CONTRACTOR SHALL, AT HIS EXPENSE, MAINTAIN THE WORK SITE IN A CLEAN AND ORDERLY APPEARANCE AT ALL TIMES. ALL DEBRIS AND SURPLUS MATERIAL COLLECTED SHALL BE DISPOSED OF OFF THE WORK SITE BY CONTRACTOR, AT HIS EXPENSE.
5. EXISTING LAWNS, TREES, SHRUBS, FENCES, UTILITIES, CULVERTS, WALLS, WALKS, DRIVEWAYS, POLES, SIGNS, RIGHT-OF-WAY MONUMENTS, MAILBOXES AND THE LIKE SHALL BE PROTECTED FROM DAMAGE DURING THE WORK. ANY DAMAGE CAUSED TO SUCH ITEMS SHALL BE REPAIRED OR REPLACED BY CONTRACTOR AT NO ADDITIONAL COST. PROPERTY PINS DISTURBED BY CONTRACTOR THAT ARE NOT SHOWN ON THE PLANS TO BE DISTURBED SHALL BE RESTORED BY LICENSED SURVEYOR AT THE CONTRACTOR'S EXPENSE.
6. MEASURES TO CONTROL EROSION AND SEDIMENT SHALL BE PROVIDED PURSUANT TO AND IN COMPLIANCE WITH CURRENT FEDERAL, STATE AND LOCAL REGULATIONS. THE INFORMATION CONTAINED IN THE CONSTRUCTION PLANS AND/OR APPROVAL OF THE PLANS SHALL IN NO WAY RELIEVE THE CONTRACTOR OR HIS AGENT OF ANY LEGAL RESPONSIBILITY WHICH MAY BE REQUIRED BY THE CODE OF VIRGINIA OR ANY ORDINANCE ENACTED BY THE CITY OF CHARLOTTESVILLE. CONTRACTOR SHALL PROVIDE THE NECESSARY DIVERSION DITCHES, DIKES, OR TEMPORARY CULVERTS REQUIRED TO PREVENT MUD AND DEBRIS FROM BEING WASHED ONTO THE STREETS OR ADJACENT PROPERTY. CONTRACTOR'S VEHICLES SHALL BE KEPT CLEAN TO PREVENT MUD OR DUST FROM BEING DEPOSITED ON STREETS. NO AREA SHALL BE LEFT DENUDED FOR MORE THAN SEVEN (7) CALENDAR DAYS.
7. CONTRACTOR SHALL CLEAN UP, RESTORE, SEED AND MAINTAIN ALL DISTURBED AREAS IMMEDIATELY UPON COMPLETION OF WORK. TOPSOIL SEED, FERTILIZER AND MULCH SHALL BE PLACED IN ACCORDANCE WITH CITY OF CHARLOTTESVILLE STANDARDS ON ALL DISTURBED AREAS. A PERMANENT STAND OF GRASS ADEQUATE TO PREVENT EROSION SHALL BE ESTABLISHED PRIOR TO FINAL ACCEPTANCE. ALL EROSION AND SEDIMENT CONTROLS SHALL BE REMOVED WITHIN 30 DAYS AFTER THE PROJECT IS STABILIZED. (MS-18)
8. FOR FURTHER REQUIREMENTS AND DETAILS OF TREE PRESERVATION, PLANTING, EROSION AND SEDIMENT CONTROL, REFER TO THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
9. AN EROSION AND SEDIMENT CONTROL CERTIFIED RESPONSIBLE LAND DISTURBER (CRLD) IS REQUIRED FOR ALL LAND DISTURBANCE ACTIVITIES.
10. THE CONTRACTOR SHALL PROPERLY INSTALL AND MAINTAIN EROSION AND SEDIMENT CONTROLS FOR THE LIFE OF THE PROJECT; AND ROUTINELY CHECK CONTROL DEVICES BEFORE, DURING AND AFTER STORM EVENTS.

UTILITIES:

1. PRIOR TO CONSTRUCTION OR EXCAVATION, THE CONTRACTOR SHALL ASSUME RESPONSIBILITY OF LOCATING ANY AND ALL UNDERGROUND UTILITIES (PUBLIC OR PRIVATE) THAT MAY EXIST WITHIN OR CROSS THROUGH THE AREA OF CONSTRUCTION WHETHER OR NOT THEY ARE SHOWN ON THE PLANS. PRIOR TO ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL CALL 'MISS UTILITY OF VIRGINIA' AT 1-800-552-7001. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING, AT HIS SOLE EXPENSE, ANY EXISTING UTILITY DAMAGED DURING CONSTRUCTION.
2. THE PLAN DOES NOT GUARANTEE THE EXISTENCE, NONEXISTENCE, SIZE, TYPE, LOCATION, ALIGNMENT, OR DEPTH OF ANY OR ALL UNDERGROUND UTILITIES OR OTHER FACILITIES. WHERE SURFACE FEATURES (MANHOLES, CATCH BASINS, VALVES, ETC.) ARE UNAVAILABLE OR INCONCLUSIVE. INFORMATION SHOWN MAY BE FROM UTILITY OWNER'S RECORDS AND/OR ELECTRONIC LINE TRACING, THE RELIABILITY OF WHICH IS UNCERTAIN. THE CONTRACTOR SHALL PERFORM TEST EXCAVATIONS OR OTHER INVESTIGATION AS NECESSARY TO VERIFY LOCATION AND CLEARANCES.
3. WHEN THE WORK CROSSES EXISTING UTILITIES, THE EXISTING UTILITIES SHALL BE ADEQUATELY SUPPORTED AND PROTECTED FROM THE DAMAGE DUE TO THE WORK. ALL METHODS FOR SUPPORTING AND MAINTAINING THE EXISTING UTILITIES SHALL BE APPROVED BY THE RESPECTIVE UTILITY COMPANY AND/OR THE ENGINEER. CONTRACTOR SHALL EXERCISE CARE TO INSURE THAT THE GRADE AND ALIGNMENT OF EXISTING UTILITIES ARE MAINTAINED AND THAT NO JOINTS OR CONNECTIONS ARE DISPLACED. BACKFILL SHALL BE CAREFULLY PLACED AND COMPACTED TO PREVENT FUTURE DAMAGE OR SETTLEMENT TO EXISTING UTILITIES. ANY UTILITIES REMOVED AS PART OF THE WORK, AND NOT INDICATED TO BE REMOVED OR ABANDONED, SHALL BE RESTORED USING MATERIALS AND INSTALLATION EQUAL TO THE UTILITY'S STANDARDS.
4. CONTRACTOR SHALL NOTIFY LANDOWNERS, TENANTS AND THE ENGINEER A MINIMUM OF 72 HOURS PRIOR TO THE INTERRUPTION OF ANY SERVICES. SERVICE INTERRUPTIONS SHALL BE KEPT TO A MINIMUM.
5. CONTRACTOR TO MAKE ANY NECESSARY ADJUSTMENTS TO ALL UTILITY JUNCTION BOXES, VALVE BOXES, MANHOLES, CLEAN-OUTS, AND OTHER GRADE RELATED ITEMS IN SIDEWALK, ROADWAY, AND/OR ADJACENT AREAS TO MATCH FINISHED GRADE. COSTS ARE TO BE INCLUDED UNDER THE VARIOUS UNIT BID ITEMS. NO SEPARATE PAYMENT WILL BE MADE.
6. PER THE VIRGINIA DEPARTMENT OF HEALTH WATERWORKS REGULATIONS (PART II, ARTICLE 3, SECTION 12 VAC 5-590 THROUGH 630), ALL BUILDINGS THAT HAVE THE POSSIBILITY OF CONTAMINATING THE POTABLE WATER DISTRIBUTION SYSTEM (HOSPITALS, INDUSTRIAL SITES, BREWERIES, ETC.) SHALL HAVE A BACKFLOW PREVENTION DEVICE INSTALLED WITHIN THE FACILITY. THIS DEVICE SHALL MEET SPECIFICATIONS OF THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE, SHALL BE TESTED IN REGULAR INTERVALS AS REQUIRED, AND TEST RESULTS SHALL BE SUBMITTED TO THE REGULATORY COMPLIANCE ADMINISTRATOR IN THE DEPARTMENT OF UTILITIES.
7. ALL BUILDINGS THAT MAY PRODUCE WASTES CONTAINING MORE THAN ONE HUNDRED (100) PARTS PER MILLION OF FATS, OIL, OR GREASE SHALL INSTALL A GREASE TRAP. THE GREASE TRAP SHALL MEET SPECIFICATIONS OF THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE, MAINTAIN RECORDS OF CLEANING AND MAINTENANCE, AND BE INSPECTED ON REGULAR INTERVALS BY THE REGULATORY COMPLIANCE ADMINISTRATOR IN THE DEPARTMENT OF UTILITIES.
8. CONTACT THE REGULATORY COMPLIANCE ADMINISTRATOR AT 970-3032 WITH ANY QUESTIONS REGARDING THE GREASE TRAP OR BACKFLOW PREVENTION DEVICES.

EARTH WORK AND SITE CONDITIONS:

1. EXCEPT AS OTHERWISE SHOWN ON THE PLANS, ALL CUTS AND FILLS SHALL BE NO GREATER THAN 3:1.
2. UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS, ALL FILL MATERIALS SHALL BE COMPACTED TO 95% OF THEORETICAL MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99 METHOD A, WITHIN PLUS OR MINUS 2% OF OPTIMUM MOISTURE, FOR THE FULL WIDTH AND THE DEPTH OF THE FILL.
3. THE CONTRACTOR SHALL ADD, CHANGE, OR RELOCATE EROSION AND SEDIMENT CONTROLS AT THE DIRECTION OF THE CITY OF CHARLOTTESVILLE E&S INSPECTOR TO THEIR SATISFACTION AT NO ADDITIONAL COST TO THE OWNER.
4. ALL GRADING AND IMPROVEMENTS TO BE CONFINED TO THE PROJECT AREA UNLESS OTHERWISE INDICATED.
5. PROPOSED GRADES SHALL BE FIELD ADJUSTED TO CONFORM TO THE INTENT OF THE TYPICAL SECTIONS. A SMOOTH GRADE SHALL BE MAINTAINED FROM THE BASELINE TO THE PROPOSED EDGE OF PAVEMENT OR FACE OF CURB TO PRECLUDE THE FORMING OF FALSE GUTTERS AND/OR PONDING OF WATER ON ALL PAVED SURFACES.
6. CONTRACTOR SHALL MAINTAIN A SMOOTH GRADE TO THE PROPOSED EDGE OF PAVEMENT OR FACE OF CURB TO PROVIDE POSITIVE DRAINGE ON ALL PAVED SURFACES. ANY AREAS WHERE WATER IS IMPOUNDED SHALL BE CORRECTED BY CONTRACTOR AT NO ADDITIONAL COST. POSITIVE DRAINAGE OF ALL ROADWAY AREAS TO THE STORM DRAIN INLETS OR OTHER ACCEPTABLE DRAINAGE CHANNELS AS NOTED ON THE PLANS IS REQUIRED.
7. CONTRACTOR SHALL MAINTAIN EXISTING STREAMS, DITCHES, DRAINAGE STRUCTURES, CULVERT AND FLOWS AT ALL TIMES DURING THE WORK. CONTRACTOR SHALL PAY FOR ALL PERSONAL INJURY AND PROPERTY DAMAGE WHICH MAY OCCUR AS A RESULT OF FAILING TO MAINTAIN ADEQUATE DRAINAGE.
8. ALL PIPES, DI'S AND OTHER STRUCTURES SHALL BE INSPECTED BY THE ENGINEER BEFORE BEING BACKFILLED OR BURIED. THE ENGINEER MAY REQUIRE CONTRACTOR, AT NO ADDITIONAL COST, TO UNCOVER AND RE-COVER SUCH STRUCTURES IF THE HAVE BEEN BACKFILLED OR BURIED WITHOUT SUCH INSPECTION.
9. ALL STORM CHANNELS, DRAINS, AND SEWER SYSTEMS SHALL BE CLEANED UPON COMPLETION OF THE PROPOSED WORK. SEDIMENT, CHEMICALS, AND/OR DEBRIS REMOVED FROM THESE SYSTEMS SHALL BE REMOVED AND DISPOSED OF PROPERLY.

MAINTENANCE OF TRAFFIC:

1. TEMPORARY STREET CLOSURE PERMIT REQUIRED FOR CLOSURE OF SIDEWALKS, PARKING SPACES AND ROADWAYS AND IS SUBJECT TO APPROVAL BY THE CITY OF CHARLOTTESVILLE TRAFFIC ENGINEER.
2. THE VIRGINIA WORK AREA PROTECTION MANUAL AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SHALL GOVERN ALL TEMPORARY TRAFFIC CONTROL OPERATIONS THROUGHOUT CONSTRUCTION OF THIS PROJECT. ADHERENCE TO APPLICABLE PROVISIONS OF THE MANUAL IS REQUIRED OF THE CONTRACTOR EVEN THOUGH DETAILED REFERENCE TO ALL SUCH PROVISIONS MAY NOT BE CONTAINED IN THE PLANS.
   GENERAL NOTES
3. ALL EXISTING RESIDENTIAL AND COMMERCIAL ENTRANCES SHALL BE MAINTAINED AT ALL TIMES, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
4. NO TEMPORARY PAVEMENT MARKING SHALL BE ALLOWED ON THE FINAL ASPHALT SURFACE COURSE.
5. THE CONTRACTOR SHALL MAINTAIN ALL LANES OF TRAVEL OPEN FROM 6:30 AM TO 9:00 AM AND 3:00 PM TO 5:00 PM UNLESS DEEMED UNNECESSARY BY THE ENGINEER. SHORT PERIODS OF ONE WAY FLAGGING OPERATIONS MAY BE CONDUCTED OUTSIDE THE HOURS MENTIONED ABOVE.
6. ALL TRAFFIC SIGNALS SHALL BE ADJUSTED AS DEEMED NECESSARY BY THE ENGINEER PRIOR TO ANY TRAFFIC CHANGES.
7. WHEN WORK IN THE EXCAVATION AREA IS DISCONTINUED FOR A SHORT PERIOD OF TIME, AS AT NIGHT, THE CONTRACTOR SHALL BACKFILL THE CUT AREAS ADJACENT TO THE BUSTING PAVEMENT WITH A 'FILLET OF MATERIAL'. THE FILLET SHALL BE COMPOSED OF THE SAME MATERIAL (EXCAVATION, BORROW, BASE COURSE, ETC.) ALL COSTS FOR PLACING AND REMOVING THIS FILLET OF MATERIAL SHALL BE INCLUDED IN THE PRICE BID FOR OTHER BID ITEMS OF WORK ON THIS PROJECT, AND NO ADDITIONAL CHARGE WILL BE ALLOWED.
8. EXISTING SURFACE, AGGREGATE BASE AND SUBBASE MATERIAL WHICH WILL BE DEMOLISHED OR OBLITERATED DURING CONSTRUCTION AND WHICH IS SUITABLE FOR MAINTENANCE OF TRAFFIC AS DETERMINED BY THE ENGINEER, SHALL BE SALVAGED AND UTILIZED FOR MAINTENANCE OF TRAFFIC PRIOR TO THE USE OF COMMERCIAL MATERIAL. WHEN NOT SPECIFIED AS A SEPARATE PAY ITEM, THE REMOVAL AND SALVAGING OF EXISTING SURFACES AND AGGREGATE BASE AND SUBBASE MATERIAL WILL BE MEASURED AND PAID FOR AS REGULAR EXCAVATION IN ACCORDANCE WITH SECTION 303 OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS.
9. CONSTRUCT ALL INTERSECTIONS AND DRIVEWAYS UNDER TRAFFIC.
10. IF USED, TEMPORARY TRAFFIC BARRIER SERVICE SHALL BE INSTALLED AND REMOVED SO AS NOT TO PRESENT ANY BLUNT END OR HAZARD TO THE MOTORING PUBLIC.
11. CONTRACTOR SHALL NOTIFY TRANSIT PROVIDERS A MINIMUM OF TWO WEEKS PRIOR TO ANY IMPACT OR DISRUPTION TO REGULAR SERVICE OR STOPS.
12. ALL EXISTING PAVEMENT MARKINGS CONFLICTING WITH PROPOSED CONSTRUCTION PAVEMENT MARKINGS (IF USED) SHALL BE ERADICATED.
13. INSTALLATION AND REMOVAL OF TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE SECTION 6G.25 OF THE WORK AREA PROTECTION MANUAL.
14. USE APPROPRIATE SIGNS TO SHIFT PEDESTRIAN TRAFFIC AS NEEDED.
15. CONTRACTOR SHALL ASSURE ENDS OF TEMPORARY CONCRETE BARRIER (IF USED) DO NOT OBSTRUCT INTERSECTION SIGHT LINES.

FIRE PREVENTION:

1. SMOKING SHALL ONLY BE ALLOWED IN DESIGNATED SPACES WITH PROPER RECEPTACLES. "NO SMOKING" SIGNS SHALL BE POSTED AT EACH BUILDING SITE AND WITHIN EACH BUILDING DURING CONSTRUCTION PER VIRGINIA STATEWIDE FIRE PREVENTION CODE.
2. OVERHEAD WIRING OR OTHER OVERHEAD OBSTRUCTIONS SHALL NOT BE LOWER THAN 13 FEET 6 INCHES OVER A PUBLIC STREET PER THE VIRGINIA STATEWIDE FIRE PREVENTION CODE.
3. CONTRACTOR SHALL ENSURE THAT BUILDING STREET NUMBERS ARE PLAINLY VISIBLE FROM THE FRONTAGE STREET AT ALL TIMES DURING CONSTRUCTION FOR EMERGENCY RESPONDERS, PER VIRGINIA STATEWIDE FIRE PREVENTION CODE.
4. AN APPROVED WATER SUPPLY FOR FIRE PROTECTION SHALL BE MADE AVAILABLE AS SOON AS COMBUSTIBLE MATERIALS ARRIVE ON SITE. WASTE AND COMBUSTIBLE DEBRIS SHALL BE REMOVED FROM THE BUILDING AT THE END OF EACH DAY AND DISPOSED OF IN ACCORDANCE WITH VIRGINIA STATEWIDE FIRE PREVENTION CODE.
5. OPERATIONS INVOLVING THE USE OF CUTTING AND WELDING SHALL BE DONE IN ACCORDANCE WITH CHAPTER 35 OF THE VIRGINIA STATEWIDE FIRE PREVENTION CODE.
6. FIRE EXTINGUISHERS SHALL BE PROVIDED WITH NOT LESS THAN ONE APPROVED PORTABLE FIRE EXTINGUISHER AT EACH STAIRWAY ON ALL FLOOR LEVELS WHERE COMBUSTIBLE MATERIALS HAVE ACCUMULATED IN ACCORDANCE WITH THE VIRGINIA STATEWIDE FIRE PREVENTION CODE.
7. VEHICULAR ACCESS FOR FIRE FIGHTING SHALL BE PROVIDED AT ALL CONSTRUCTION AND DEMOLITION SITES AND TO WITHIN 100 FEET OF TEMPORARY OR PERMANENT FIRE DEPARTMENT CONNECTIONS. VEHICULAR ACCESS SHALL BE CAPABLE OF SUPPORTING FIRE APPARATUS AND VEHICLE LOADING UNDER ALL WEATHER CONDITIONS IN ACCORDANCE WITH THE VIRGINIA STATEWIDE FIRE PREVENTION CODE.

CONCRETE AND ASPHALT:

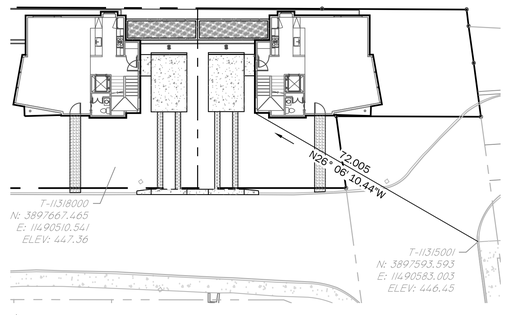
1. ALL CONCRETE AND ASPHALT SHALL CONFORM TO CITY OF CHARLOTTESVILLE STANDARDS AND DESIGN MANUAL AND VDOT ROAD AND BRIDGE SPECIFICATIONS: SECTION 217 FOR CONCRETE AND SECTION 315 FOR ASPHALT.
2. ALL PROPOSED MIX DESIGNS FOR CONCRETE AND ASPHALT SHALL SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO PLACEMENT.
3. A VDOT CERTIFIED CONCRETE FIELD TECHNICIAN SHALL BE PROCURED BY THE CONTRACTOR AND BE RESPONSIBLE FOR PERFORMING AND DOCUMENTING ALL CONCRETE TESTING AND INSPECTIONS PER CH. 4 OF THE VDOT MANUAL OF INSTRUCTION FOR THE MATERIALS DIVISION. STRENGTH TESTS SHALL BE PERFORMED AT 7 AND 28 DAYS OF CURING.
3. A VDOT CERTIFIED LEVEL II ASPHALT FIELD TECHNICIAN SHALL BE PROCURED BY THE CONTRACTOR AND BE RESPONSIBLE FOR PERFORMING AND DOCUMENTING ALL ASPHALT TESTING AND INSPECTIONS PER CH. 5 OF THE VDOT MANUAL OF INSTRUCTION FOR THE MATERIALS DIVISION.
4. CONCRETE INSPECTIONS ARE REQUIRED DURING SUBGRADE PREPARATION, STONE BASE PLACEMENT, CONCRETE FORM SETUP, REINFORCING STEEL PLACEMENT, AND PRIOR TO POURING. THE CITY INSPECTOR SHALL BE PRESENT FOR ALL THIRD PARTY TESTS.
5. ASPHALT INSPECTIONS ARE REQUIRED DURING SUBGRADE PREPARATION AND PRIOR TO STONE BASE PLACEMENT, BASE COURSE, AND EACH SUBSEQUENT LIFT OF ASPHALT. THE CITY INSPECTOR SHALL BE PRESENT FOR ALL THIRD PARTY TESTS.
6. ALL CONCRETE AND ASPHALT DELIVERY TICKETS SHALL BE CHECKED BY THE CITY INSPECTOR.
7. CONCRETE FINISHES WITHIN ROADWAY SHALL CONFORM TO VDOT R&B SPECS. INCIDENTAL CONCRETE (STAIRS, SIDEWALKS, CURBS, RAMPS, ETC) SHALL BE BROOM FINISHED RESULTING IN A CONSISTENT SURFACE ACCEPTABLE TO THE CITY ENGINEER. BROOM GROOVES SHALL BE BETWEEN $\frac{1}{16}$" AND $\frac{1}{8}$" DEEP.
8. CONCRETE AND ASPHALT WITHIN RIGHT-OF-WAY SHALL OR PUBLICLY MAINTAINED FACILITIES SHALL MEET SPECIFICATIONS IN TABLE 12-4 AND 12-5 BELOW.

TABLE 12-4: ALLOWABLE CONCRETE MIXES

MIX DESIGNATION	MIN. 28-DAY COMPRESSIVE STRENGTH	ALLOWABLE USES	NOTES
VDOT CLASS A3	3,000 PSI	UTILITY THRUST BLOCKING, ENCASEMENT	BURIED APPLICATIONS ONLY
VDOT CLASS A4, INTEGRALLY COLORED	4,000 PSI	ELEMENTS IN ROW (CURB & GUTTER, SIDEWALK, DRIVEWAYS, TRANSIT STOP SLABS, ETC) AND INCIDENTAL AND STRUCTURAL CONCRETE OTHER THAN ROW ELEMENTS	1. USE ROCKWOOD PIGMENTS/DAVIS COLORS #5084, OMAHA TAN. INTEGRALLY COLORED CONCRETE. 2. USE OF FLY ASH IN THIS MIX IS NOT ALLOWED. 3. ALL AGGREGATES USED ON A PROJECT MUST BE FROM A SINGLE SOURCE AND SHALL BE CONSISTENT IN COLOR.
VDOT CLASS A5, INTEGRALLY COLORED	5,000 PSI	CURBS AND SIDEWALKS SUBJECTED TO FREQUENT VEHICULAR IMPACTS	SEE NOTES FOR A4 CONCRETE ABOVE
VDOT FLOWABLE FILL	30 PSI	FILL MATERIAL FOR ABANDONED PIPES, BACKFILL MATERIAL.	1. USE AS DIRECTED BY CITY ENGINEER. 2. COORDINATE WITH CITY ENGINEER TO DETERMINE WHETHER A DIFFERENT COMPRESSIVE STRENGTH IS NEEDED.

TABLE 12-5: ALLOWABLE ASPHALT MIXES

MIX DESIGNATION	ALLOWABLE USES	NOTES
VDOT SM-9.5A SURFACE MIX	ROADWAY AND COMMERCIAL DRIVEWAY SURFACE/WEARING COURSE, WEDGE AND LEVELING COURSE, RESIDENTIAL DRIVEWAYS, ASPHALT SIDEWALKS, AND SHARED USE PATHS.	RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLE MATERIALS ARE ALLOWED IN CONFORMANCE WITH VDOT SPECIFICATIONS.
VDOT IM-19.0 INTERMEDIATE MIX	LOW SPEED ROADS, LONG-TERM TEMPORARY REPAIRS	
VDOT BM-25.0 BASE MIX	ROADWAY AND COMMERCIAL DRIVEWAY BASE COURSE	



1 BENCHMARK TIE-DOWN

1" = 20': 0 20 40

GENERAL SURVEY NOTES:

TOPOGRAPHY SOURCE: ACTUAL GROUND SURVEY (SEE ATTACHED SURVEY)
BASIS OF DATUM: HORIZONTAL: NAD-83 VIRGINIA SOUTH ZONE (GPS DERIVED)
VERTICAL: NAVD-88 (GPS DERIVED)
BENCHMARKS: (SEE IMAGES ABOVE)

LINE + GRADE
CIVIL ENGINEERING

LYMAN STREET RESIDENCES
PRELIMINARY SITE PLAN
CHARLOTTESVILLE, VIRGINIA

GENERAL NOTES

08/06/2021
DANIEL C. HYER
Lic. No. 45596

APPROVED	DCH
SUBMISSION NO.	3
PROJECT	2011001

THE WORK OF LINE + GRADE

C0.1

LEGEND

PROPOSED		EXISTING
S	SANITARY CENTERLINE	S
W	WATER CENTERLINE	W
	STORM SEWER	
GAS	GAS LINE	GAS
UGE	UNDERGROUND POWER	UGE
COMM	UNDERGROUND COMMUNICATIONS	COMM
OVHD	OVERHEAD UTILITY	OVHD
382	CONTOUR LINE	382
	CURB/CURB AND GUTTER	
	SPILL CURB WITH TRANSITION AREA	
	PAVEMENT MARKING LINE	
	BUILDING LINE	
	BUILDING OVERHEAD/PROJECTION	
	WALL	
	TREELINE	
	PROPERTY LINE	
	EASEMENT LINE	
	BUILDING SETBACK LINE	
	ROAD CENTERLINE	
	CHANNEL CENTERLINE	
	BERM CENTERLINE	
LOD	LIMITS OF DISTURBANCE	
	DRAINAGE DIVIDE	
	UTILITY POLE	
	ADA ACCESS PATH AND LANDING	
	DETECTABLE WARNING STRIP	
	SIGN	
12 4	PARKING/HANDICAP PARKING COUNTER	20 3
	ENTRYWAY/INGRESS/EGRESS SYMBOL	
	TREE	
	SHRUB	
	CONCRETE	
	BMP	
	RIPRAP	

ABBREVIATIONS

AC	ACRES	LP	LOW POINT
ADJ	ADJUST	LVC	LENGTH OF VERTICAL CURVE
APPROX	APPROXIMATE	MAX	MAXIMUM
BC	BACK OF CURB	MIN	MINIMUM
BLDG	BUILDING	ME	MATCH EXISTING
BM	BENCHMARK	NIC	NOT IN CONTRACT
BVCS	BEGIN VERTICAL CURVE STATION	N.T.S.	NOT TO SCALE
BVCE	BEGIN VERTICAL CURVE ELEVATION	OC	ON CENTER
BW	BOTTOM OF WALL	OD	OUTSIDE DIAMETER
CL	CENTERLINE	O/S	OFFSET
CF	CUBIC FEET	PC	POINT OF CURVATURE
CG	CURB AND GUTTER	PCC	POINT OF COMPOUND CURVATURE
CONC	CONCRETE	PI	POINT OF INTERSECTION
D OR Δ	DELTA ANGLE	PRC	POINT OF REVERSE CURVATURE
DIA	DIAMETER	PROP	PROPOSED
EC	EDGE OF CONCRETE	PT	POINT OF TANGENCY
EG	EXISTING GRADE	PVC	POINT OF VERTICAL CURVATURE
EL/ELEV	ELEVATION	PVI	POINT OF VERTICAL INTERSECTION
EP	EDGE OF PAVEMENT	PVT	POINT OF VERTICAL TANGENCY
EVCS	END VERTICAL CURVE STATION	R	RADIUS
EVCE	END VERTICAL CURVE ELEVATION	ROW	RIGHT-OF-WAY
EX	EXISTING	SAN	SANITARY SEWER
FG	FINISHED GRADE	SD	STORM DRAIN
FND	FOUNDATION	SF	SQUARE FEET
GRVL	GRAVEL	SMH	SANITARY MANHOLE
HC	HANDICAP	STA	STATION
HP	HIGH POINT	SW	SIDEWALK
ID	INSIDE DIAMETER	TC	TOP OF CURB
INV	INVERT	TEMP	TEMPORARY
LAT	LATERAL	THT	THROAT
LF	LINEAR FEET	TW	TOP OF WALL
LOD	LIMITS OF DISTURBANCE	TYP	TYPICAL
		WSEL	WATER SURFACE ELEVATION

ZONING NOTES:

SITE IS SUBJECT TO SPECIAL USE PERMIT SP19-00011 ALLOWING A COMMON PLAN OF DEVELOPMENT INCLUDING:

1. THREE (3) BUILDINGS, TO BE CONSTRUCTED AS SINGLE-FAMILY DWELLINGS (THE "SDFS"), EACH ON ITS OWN SEPARATE LOT AND WITH EACH BUILDING FRONTING ON LYMAN STREET;
2. EACH LOT CONTAINING A SINGLE-FAMILY DWELLING SHALL HAVE AN AREA NO LESS THAN 2500 SQUARE FEET (SF) AND NO MORE THAN 3500 SF; EACH SUCH LOT SHALL HAVE FRONTAGE ON LYMAN STREET OF NO LESS THAN 34 FEET AND NO MORE THAN 65 FEET; AND EACH SUCH LOT SHALL HAVE SIDE YARDS OF AT LEAST 2 FEET, BUT NO REQUIRED FRONT OR REAR YARD AREAS;
3. EACH SINGLE-FAMILY LOT, AND THE LAND ON WHICH IT IS CONSTRUCTED, MAY BE USED AND OCCUPIED IN ANY MANNER AUTHORIZED WITHIN §34-420 OF THE R-2 ZONING DISTRICT REGULATIONS, INCLUDING, WITHOUT LIMITATION, INTERNAL ACCESSORY APARTMENTS;
4. THE LAND AREA CURRENTLY IDENTIFIED AS TAX PARCEL 358E WILL NOT CONTAIN ANY BUILDINGS OR STRUCTURES (OTHER THAN THE SFDS), AND WILL BE USED PREDOMINANTLY FOR ACCESS AND PARKING FOR THE SFDS DESCRIBED ABOVE AND AS LANDSCAPED OPEN SPACE WITH PLANTINGS, AND FOR ANY ADDITIONAL DRIVEWAY OR PARKING AS MAY BE NECESSARY TO SERVE INTERNAL ACCESSORY APARTMENTS ESTABLISHED WITHIN THE SFDS; AND
5. THE GENERAL DESIGN AND HEIGHT OF ALL BUILDINGS, THE LAYOUT OF THE ENTIRE DEVELOPMENT AREA, AND THE CHARACTERISTICS OF THE DEVELOPMENT SHALL BE IN ALL MATERIAL ASPECTS THE SAME AS DEPICTED WITHIN THE SITE PLAN DATED DECEMBER 21, 2018, REVISED FEBRUARY 28, 2019, AND THE NARRATIVE MATERIALS ACCOMPANYING APPLICATION NO. SP19-00011

UTILITY DEMAND:

WATER FLOW (AVERAGE DAILY DEMAND)[1]

USE	DESIGN UNIT		QUANTITY	FLOW PER USE (GPD)
SINGLE FAMILY UNITS	400	3.5 PEOPLE/UNIT	3.00	1,200
			TOTAL WATER FLOW (GPD)	1,200
			AVERAGE FLOW PER HOUR (GPH)	50
			MAX HOUR (3 x AVERAGE HOUR) (GALLONS)	150
			PEAK HOUR (1.5 x AVERAGE HOUR) (GALLONS)	75

SEWER FLOW (AVERAGE DAILY FLOW)

USE	DESIGN UNIT		QUANTITY	FLOW PER USE (GPD)
SINGLE FAMILY UNITS	400	3.5 PEOPLE/UNIT	3.00	1,200
			TOTAL SEWER FLOW (GPD)	1,200
			AVERAGE FLOW PER HOUR (GPH)	50
			PEAK HOUR (4 x AVERAGE HOUR) (GALLONS)	200

Note 1: Average Flow Rates (From Table 9.2 Charlottesville Standards and Design Manual - Draft)
GPD = GALLONS PER DAY
GPH = GALLONGS PER HOUR

ITE TRIP GENERATION:

Use Description	ITE CODE	UNITS	TRIPS/UNIT	QTY	REDUCTION*	WEEKDAY TRAFFIC: VEHICLES PER DAY	PEAK HOUR FACTOR	AM PEAK HOUR: % IN	% OUT	IN	OUT	TOTAL TRIPS	PM PEAK HOUR: % IN	% OUT	IN	OUT	TOTAL TRIPS
Single Family Homes	210	1 Dwelling Units	9.57	3.00	-	29	1.00	37%	63%	1	2	3	63%	37%	2	1	3
					TOTALS:	**29**				**1**	**2**	**3**			**2**	**1**	**3**

LINE + GRADE
CIVIL ENGINEERING

LYMAN STREET RESIDENCES
PRELIMINARY SITE PLAN
CHARLOTTESVILLE, VIRGINIA

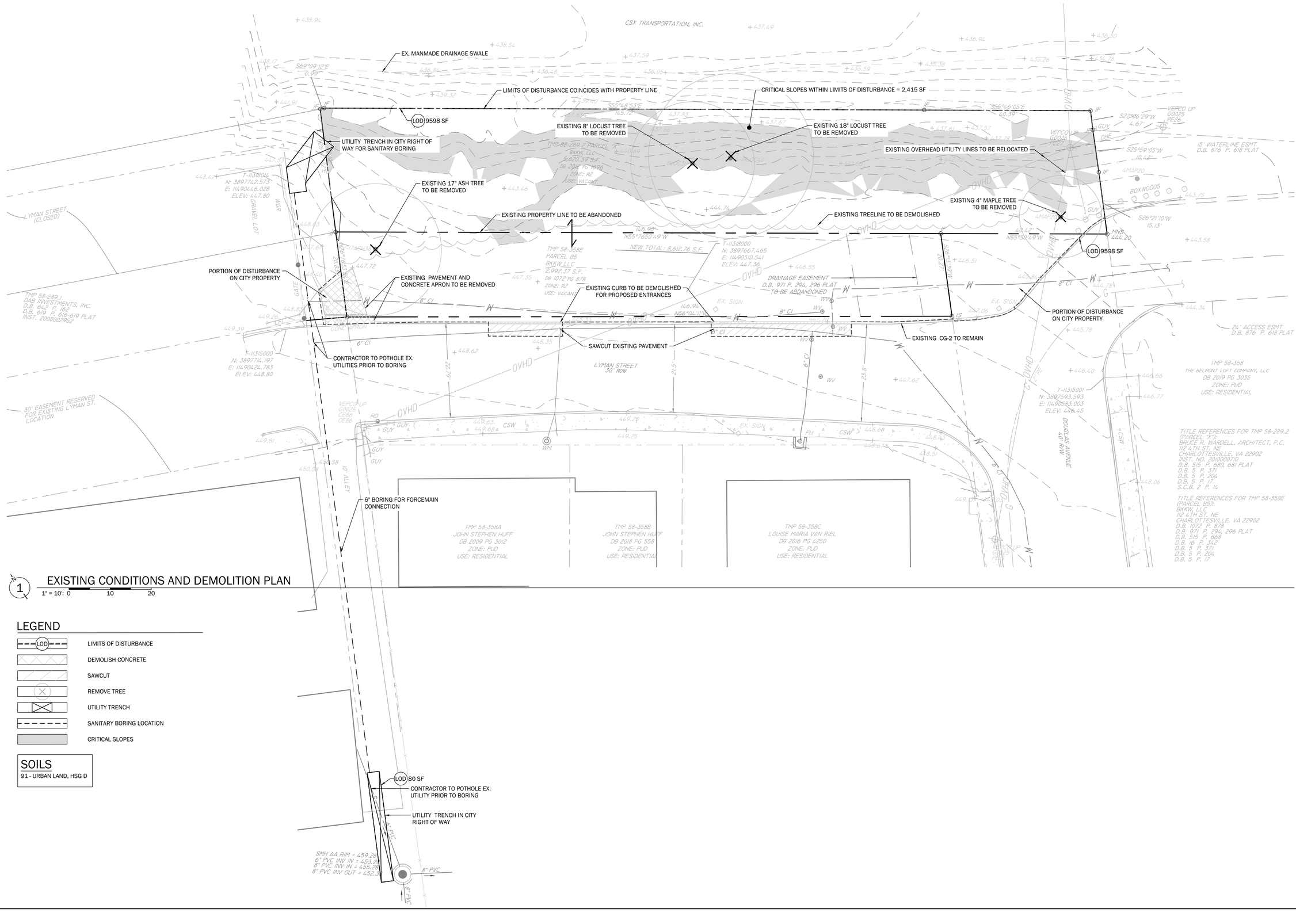
SITE CALCULATIONS

COMMONWEALTH OF VIRGINIA
08/06/2021
DANIEL C. HYER
Lic. No. 45596
PROFESSIONAL ENGINEER

APPROVED	DCH
SUBMISSION NO.	3
PROJECT	2011001

THE WORK OF LINE + GRADE

C0.2



1 EXISTING CONDITIONS AND DEMOLITION PLAN

1" = 10': 0 10 20

LEGEND

- LOD — LIMITS OF DISTURBANCE
- DEMOLISH CONCRETE
- SAWCUT
- REMOVE TREE
- UTILITY TRENCH
- SANITARY BORING LOCATION
- CRITICAL SLOPES

SOILS

91 - URBAN LAND, HSG D

LINE + GRADE
CIVIL ENGINEERING

LYMAN STREET RESIDENCES
PRELIMINARY SITE PLAN
CHARLOTTESVILLE, VIRGINIA

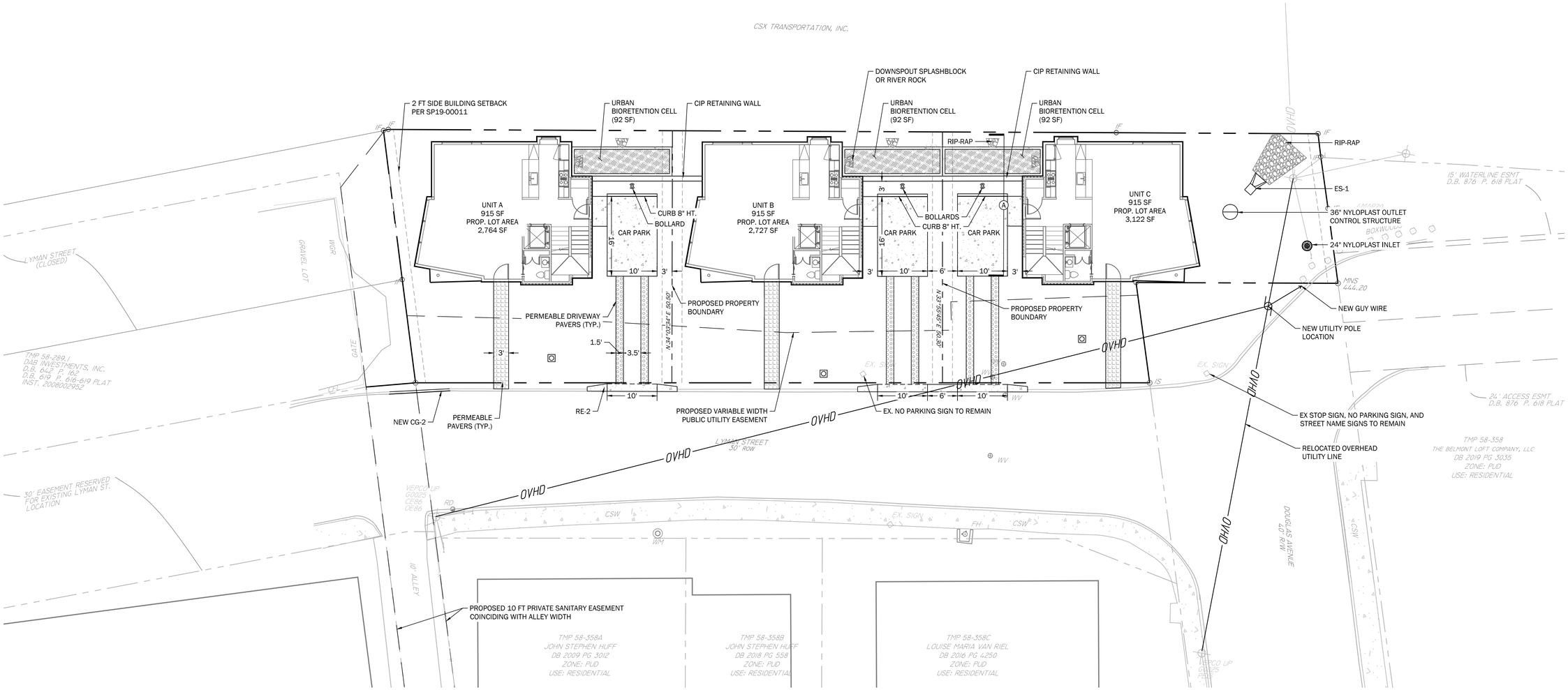
EXISTING CONDITIONS AND DEMOLITION

COMMONWEALTH OF VIRGINIA
08/06/2021
DANIEL C. HYER
Lic. No. 45596
PROFESSIONAL ENGINEER

APPROVED	DCH
SUBMISSION NO.	3
PROJECT	2011001

THE WORK OF LINE + GRADE

C1.0



1 SITE PLAN
1" = 10': 0 10 20

LEGEND

- EX. CONCRETE
- PROP. CONCRETE
- PERMEABLE WALKWAY
- PERMEABLE DRIVEWAY PAVERS
- URBAN BIORETENTION SURFACE

LINE + GRADE
CIVIL ENGINEERING

LYMAN STREET RESIDENCES
PRELIMINARY SITE PLAN
CHARLOTTESVILLE, VIRGINIA

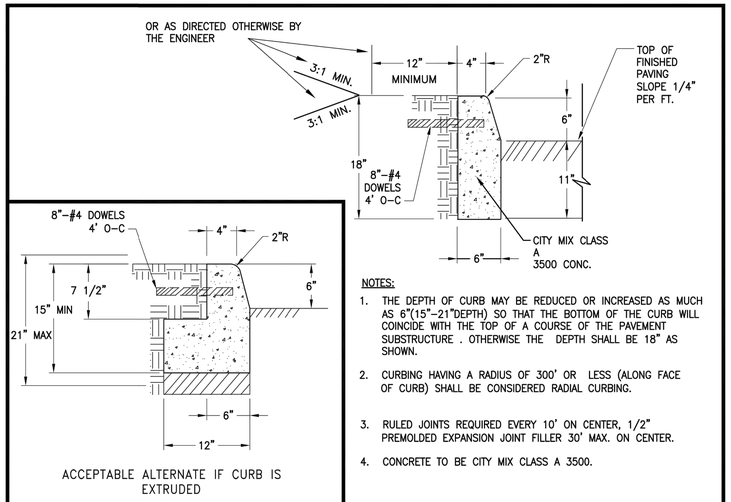
SITE PLAN

COMMONWEALTH OF VIRGINIA
08/06/2021
DANIEL C. HYER
Lic. No. 45596
PROFESSIONAL ENGINEER

APPROVED	DCH
SUBMISSION NO.	3
PROJECT	2011001

THE WORK OF LINE + GRADE

C3.0



NOTES:

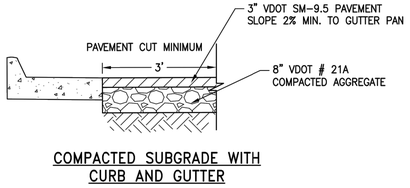
1. THE DEPTH OF CURB MAY BE REDUCED OR INCREASED AS MUCH AS 6"(15"-21"DEPTH) SO THAT THE BOTTOM OF THE CURB WILL COINCIDE WITH THE TOP OF A COURSE OF THE PAVEMENT SUBSTRUCTURE . OTHERWISE THE DEPTH SHALL BE 18" AS SHOWN.
2. CURBING HAVING A RADIUS OF 300' OR LESS (ALONG FACE OF CURB) SHALL BE CONSIDERED RADIAL CURBING.
3. RULED JOINTS REQUIRED EVERY 10' ON CENTER, 1/2" PREMOLDED EXPANSION JOINT FILLER 30' MAX. ON CENTER.
4. CONCRETE TO BE CITY MIX CLASS A 3500.

CITY OF CHARLOTTESVILLE

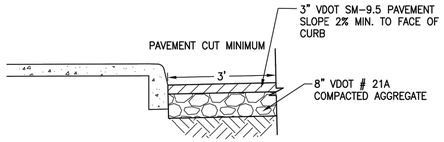
REVISION	DATE

CITY STANDARDS
STANDARD CURBING
SCALE: N.T.S. | STANDARD NUMBER: CG-2

1 CG-2



COMPACTED SUBGRADE WITH CURB AND GUTTER



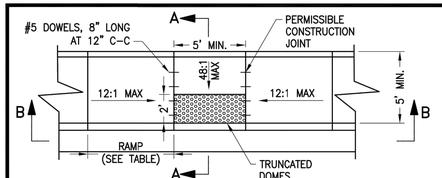
COMPACTED SUBGRADE WITH STANDARD SIDEWALK WITH CURB

CITY OF CHARLOTTESVILLE

REVISION	DATE

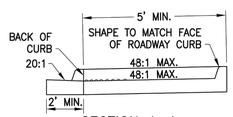
CITY STANDARDS
MINIMUM PAVEMENT PATCH
SCALE: N.T.S. | STANDARD NUMBER: PP-1

2 PP-1 PAVEMENT PATCH

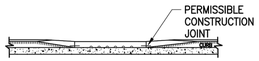


TANGENT PLAN

NOTE: FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE, SEE SHEET 1 OF 3.



SECTION A-A

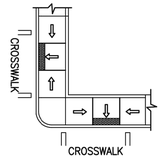


SECTION B-B

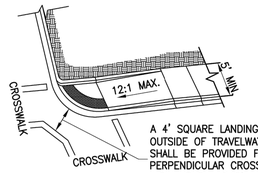
TYPE B
PARALLEL APPLICATION

ROADWAY GRADE (%)	MIN. RAMP LENGTH (FT) 4" CURB	6" CURB
0	4	6
1	5	7
2	5	8
3	6	9
4	8	12
5	10	15
6	14	15

NOTE: THE REQUIRED LENGTH OF A PARALLEL RAMP IS LIMITED TO 15 FEET, REGARDLESS OF THE SLOPE.



TYPICAL PLACEMENT AT INTERSECTION WITHIN CROSSWALK



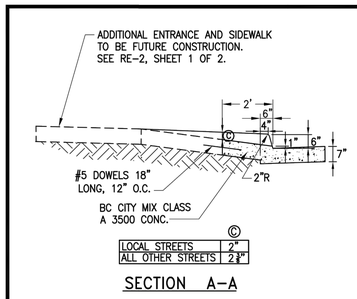
A 4' SQUARE LANDING AREA OUTSIDE OF TRAVELWAY SHALL BE PROVIDED FOR PERPENDICULAR CROSSWALK WITHIN THE MARKED CROSSWALK AREA.

CITY OF CHARLOTTESVILLE

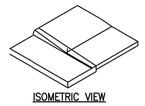
REVISION	DATE

CITY STANDARDS
CG-12 DETECTABLE WARNING SURFACE TYPE B (SHEET 2 OF 3)
SCALE: N.T.S. | STANDARD NUMBER: CG-12

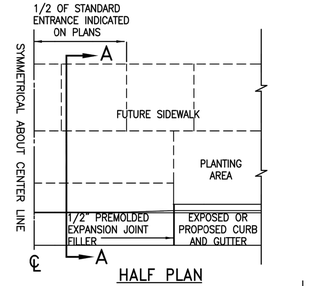
3 CG-12B



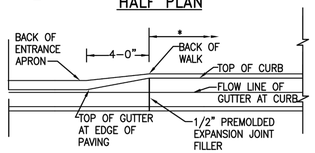
SECTION A-A



ISOMETRIC VIEW



HALF PLAN



ELEVATION AT CURB LINE

* 3' MIN. TO ADJACENT PROPERTY

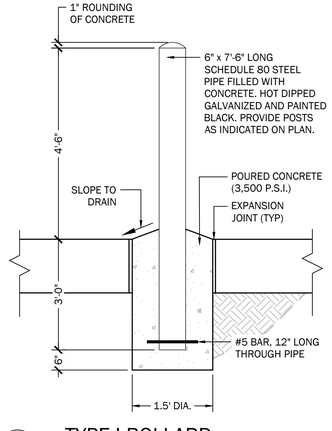
NOTE: STANDARD RESIDENTIAL ENTRANCES SHALL BE:
SINGLE ENTRANCE: 10' WITH CURB
12' WITH SHOULDER & DITCH
DOUBLE ENTRANCE: 20'

CITY OF CHARLOTTESVILLE

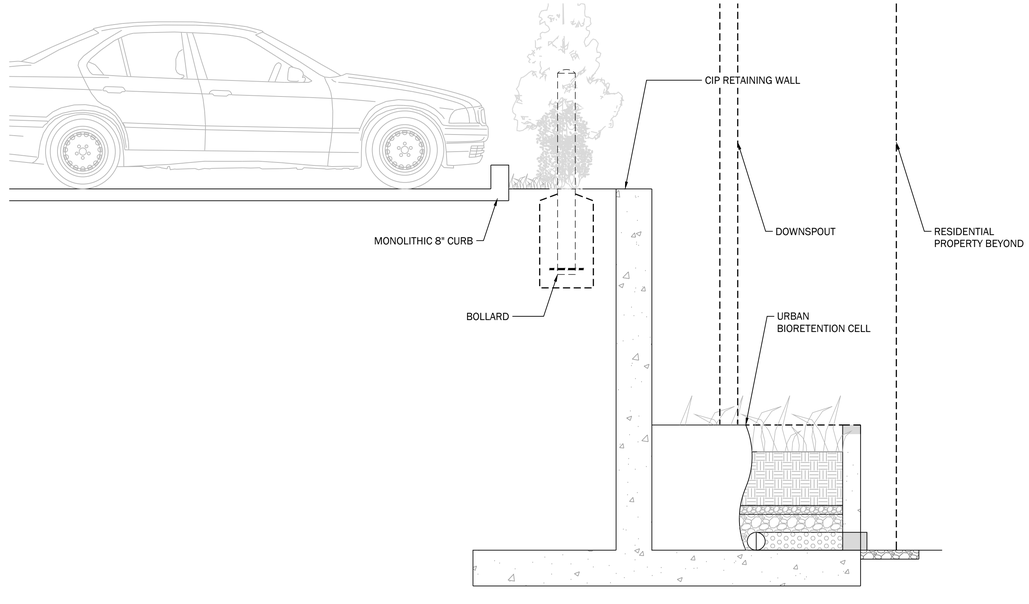
REVISION	DATE

CITY STANDARDS
STANDARD ENTRANCE ACROSS CURB & GUTTER ONLY (SHEET 2 OF 2)
SCALE: N.T.S. | STANDARD NUMBER: RE-2

4 RE-2 ENTRANCE ACROSS CURB AND GUTTER (2 OF 2)



5 TYPE I BOLLARD



6 SITE SECTION A
1" = 2': 0 2 4

LINE + GRADE
CIVIL ENGINEERING

LYMAN STREET RESIDENCES
PRELIMINARY SITE PLAN
CHARLOTTESVILLE, VIRGINIA

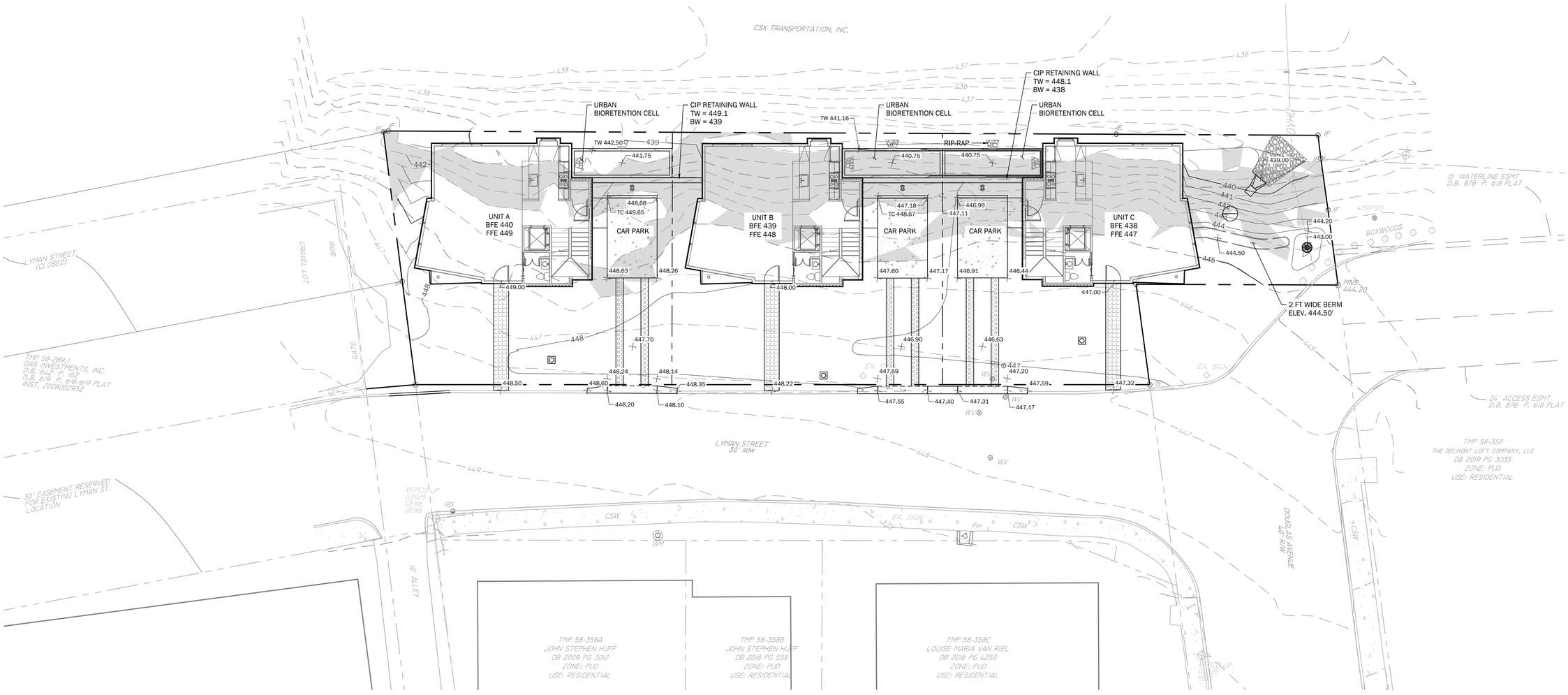
SITE PLAN DETAILS

COMMONWEALTH OF VIRGINIA
08/06/2021
DANIEL C. HYER
Lic. No. 45596
PROFESSIONAL ENGINEER

APPROVED	DCH
SUBMISSION NO.	3
PROJECT	2011001

THE WORK OF LINE + GRADE

C3.1



1 GRADING PLAN

1" = 10': 0 10 20

LEGEND

- EX. CONTOUR
- PROP. CONTOUR
- CHANNEL CENTERLINE
- CRITICAL SLOPES

LINE + GRADE
CIVIL ENGINEERING

LYMAN STREET RESIDENCES
PRELIMINARY SITE PLAN
CHARLOTTESVILLE, VIRGINIA

GRADING PLAN

COMMONWEALTH OF VIRGINIA
08/06/2021
DANIEL C. HYER
LIC. NO. 45596
PROFESSIONAL ENGINEER

APPROVED	DCH
SUBMISSION NO.	3
PROJECT	2011001

THE WORK OF LINE + GRADE

C4.0

CSX TRANSPORTATION, INC.

APS MODEL APC CLUSTER END SEAL OR SIMILAR

45° HORZ BEND

1.5" DR 11 IPS HDPE FORCE SEWER LATERAL FOR UNIT A

DOWNSPOUT TO SPLASHBLOCK OR RIVER ROCK

6" PERFORATED PVC

1.5" DR 11 IPS HDPE FORCE SEWER LATERAL FOR UNIT B

DOWNSPOUT TO SPLASHBLOCK OR RIVER ROCK

6" PERFORATED PVC

RIP-RAP

1.5" DR 11 IPS HDPE FORCE SEWER LATERAL FOR UNIT C

15" HDPE

RIP-RAP

ES-1

36" NYLOPLAST OUTLET CONTROL STRUCTURE

24" NYLOPLAST INLET

15" HDPE

6" PERFORATED PVC

NEW GUY WIRE

STORMTANK M20

NEW UTILITY POLE

(3) NEW UNDERGROUND ELECTRIC

RELOCATED OVERHEAD UTILITY LINE

UNIT A
BFE 440
FFE 449

UNIT B
BFE 439
FFE 448

UNIT C
BFE 438
FFE 447

CAR PARK

CAR PARK

CAR PARK

FORCED LATERALS CONNECT TO CITY SEWER MAIN WITHIN 6" HDPE CONDUIT DIRECTIONAL BORE TO EX. MANHOLE

PROPOSED VARIABLE WIDTH PUBLIC UTILITY EASEMENT

CONTRACTOR TO POTHOLE EX. UTILITIES PRIOR TO BORING

CORPORATION STOP WITH 5/8" WM

CORPORATION STOP WITH 5/8" WM

CORPORATION STOP WITH 5/8" WM

6" SCH 80 HDPE

LYMAN STREET (CLOSED)

LYMAN STREET 30' ROW

GRAVEL LOT

GATE

10' ALLEY

30' EASEMENT RESERVED FOR EXISTING LYMAN ST. LOCATION

15' WATERLINE ESMT. D.B. 876 P. 618 PLAT

24' ACCESS ESMT. D.B. 876 P. 618 PLAT

DOUGLAS AVENUE 40' R/W

TMP 58-289.1
D&B INVESTMENTS, INC.
D.B. 642 P. 162
D.B. 619 P. 616-619 PLAT
INST. 2008002952

TMP 58-358
THE BELMONT LOFT COMPANY, LLC
DB 2019 PG 3035
ZONE: PUD
USE: RESIDENTIAL

TMP 58-358A
JOHN STEPHEN HUFF
DB 2009 PG 3012
ZONE: PUD
USE: RESIDENTIAL

TMP 58-358B
JOHN STEPHEN HUFF
DB 2018 PG 558
ZONE: PUD
USE: RESIDENTIAL

TMP 58-358C
LOUISE MARIA VAN RIEL
DB 2016 PG 4250
ZONE: PUD
USE: RESIDENTIAL

PROPOSED 10 FT PRIVATE SANITARY EASEMENT COINCIDING WITH ALLEY WIDTH

6" SCH 80 HDPE

CONTRACTOR TO POTHOLE EX. UTILITY PRIOR TO BORING

SMH AA RIM = 459.28
6" PVC INV IN = 453.20
8" PVC INV IN = 455.23
8" PVC INV OUT = 452.73

APS MODEL APC CLUSTER END SEAL OR SIMILAR

(3) DR 11 IPS HDPE LATERALS INV IN 452.72'

8" PVC

6" PVC

8" PVC

1 UTILITY PLAN
1" = 10': 0 10 20

LEGEND

- PROP. 6" DIP SANITARY CASING
- PROP. FORCED SANITARY LATERAL
- PROP. STORM SEWER
- PROP. OVERHEAD ELECTRIC LINE
- PROP. UNDERGROUND ELECTRIC LINE
- PROP. WATER SERVICE LINE AND METER

LINE + GRADE
CIVIL ENGINEERING

LYMAN STREET RESIDENCES
PRELIMINARY SITE PLAN
CHARLOTTESVILLE, VIRGINIA

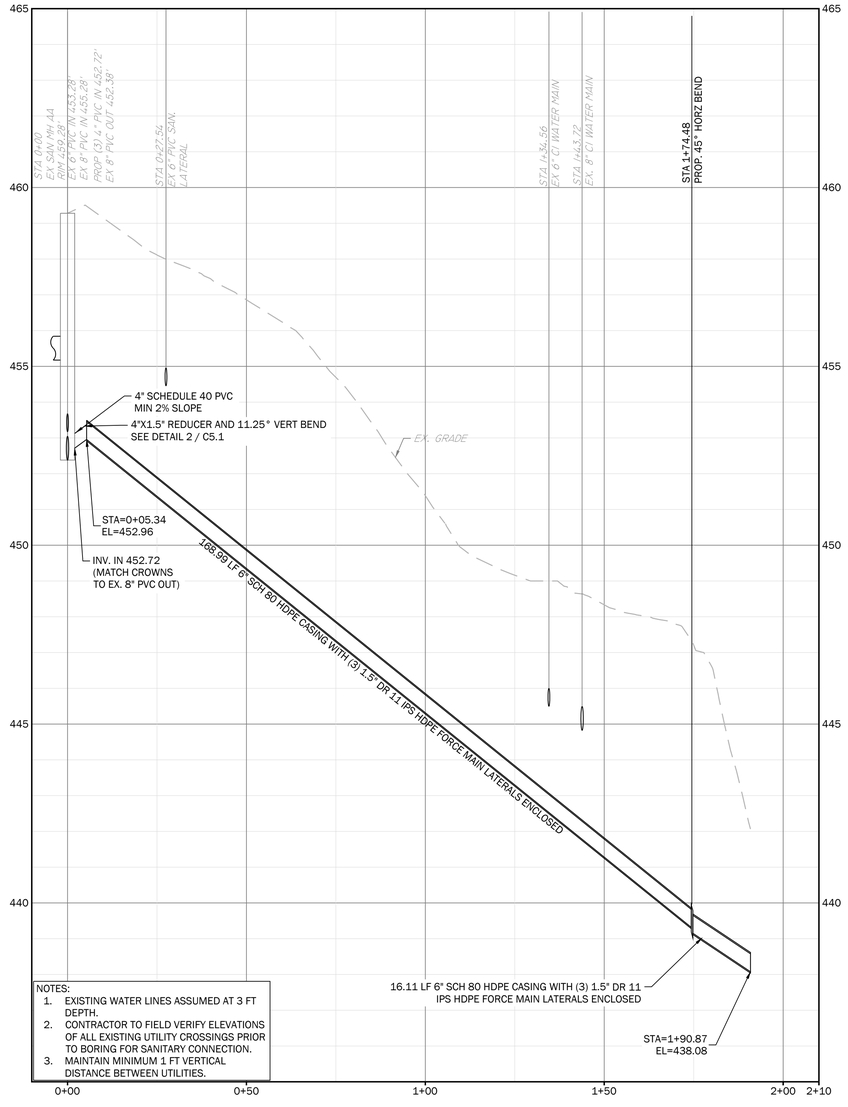
UTILITY PLAN

COMMONWEALTH OF VIRGINIA
08/06/2021
DANIEL C. HYER
Lic. No. 45596
PROFESSIONAL ENGINEER

APPROVED	DCH
SUBMISSION NO.	3
PROJECT	2011001

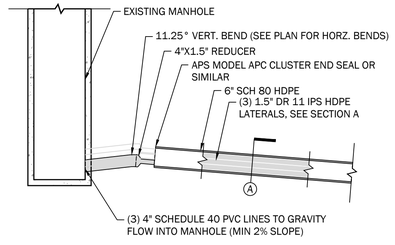
THE WORK OF LINE + GRADE

C5.0

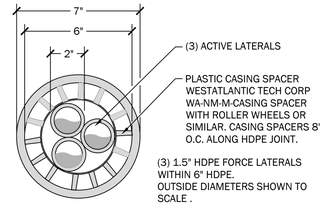


1 PROPOSED SANITARY PROFILE

H: 1" = 20': 0 20 40
V: 1" = 2': 0 2 4



2 CONNECTION DETAIL



3 SECTION A

LINE + GRADE
CIVIL ENGINEERING

LYMAN STREET RESIDENCES
PRELIMINARY SITE PLAN
CHARLOTTESVILLE, VIRGINIA

UTILITY DETAILS AND PROFILES

COMMONWEALTH OF VIRGINIA
08/06/2021
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APPROVED	DCH
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THE WORK OF LINE + GRADE

C5.1

Disturbance area (Ac) =	0.22

Outfall/ Study Point	ENERGY BALANCE COMPUTATIONS (1-YEAR STORM)							
	I.F.	Q_{PRE}	RV_{PRE}	RV_{POST}	$Q_{POST\text{-}ALLOWED}$		$Q_{POST\text{-}ACTUAL}$*
1	0.9	0.495 CFS	994 CF	1,163 CF	0.381 CFS	≥	0.364 CFS
2	0.9					≥	
3	0.9					≥	

**NOTE: COMPUTATIONS INCLUDE RUNOFF REDUCTION AND ROUTING.*

Outfall/ Study Point	PEAK FLOW COMPARISON					
	PRE-DEVELOPMENT			POST-DEVELOPMENT		
	Q_1	Q_2	Q_{10}	Q_1	Q_2	Q_{10}
1	0.495 CFS	0.692 CFS	1.304 CFS	0.364 CFS	0.572 CFS	1.214 CFS
2						
3						

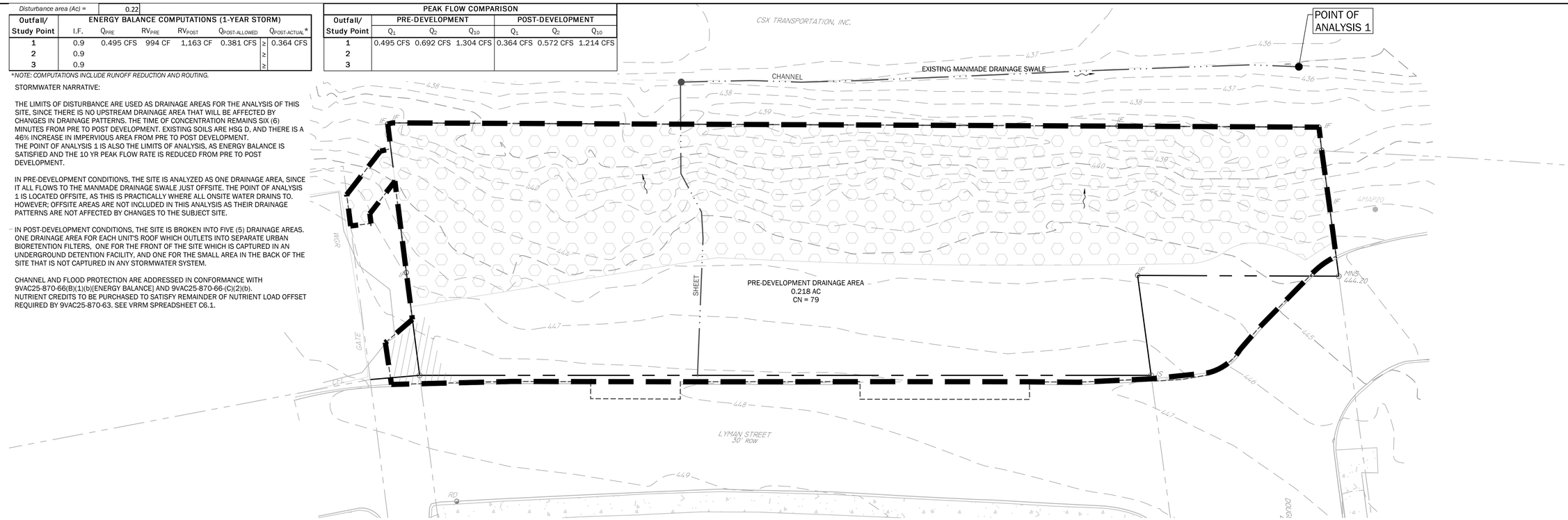
STORMWATER NARRATIVE:

THE LIMITS OF DISTURBANCE ARE USED AS DRAINAGE AREAS FOR THE ANALYSIS OF THIS SITE, SINCE THERE IS NO UPSTREAM DRAINAGE AREA THAT WILL BE AFFECTED BY CHANGES IN DRAINAGE PATTERNS. THE TIME OF CONCENTRATION REMAINS SIX (6) MINUTES FROM PRE TO POST DEVELOPMENT. EXISTING SOILS ARE HSG D, AND THERE IS A 46% INCREASE IN IMPERVIOUS AREA FROM PRE TO POST DEVELOPMENT. THE POINT OF ANALYSIS 1 IS ALSO THE LIMITS OF ANALYSIS, AS ENERGY BALANCE IS SATISFIED AND THE 10 YR PEAK FLOW RATE IS REDUCED FROM PRE TO POST DEVELOPMENT.

IN PRE-DEVELOPMENT CONDITIONS, THE SITE IS ANALYZED AS ONE DRAINAGE AREA, SINCE IT ALL FLOWS TO THE MANMADE DRAINAGE SWALE JUST OFFSITE. THE POINT OF ANALYSIS 1 IS LOCATED OFFSITE, AS THIS IS PRACTICALLY WHERE ALL ONSITE WATER DRAINS TO. HOWEVER; OFFSITE AREAS ARE NOT INCLUDED IN THIS ANALYSIS AS THEIR DRAINAGE PATTERNS ARE NOT AFFECTED BY CHANGES TO THE SUBJECT SITE.

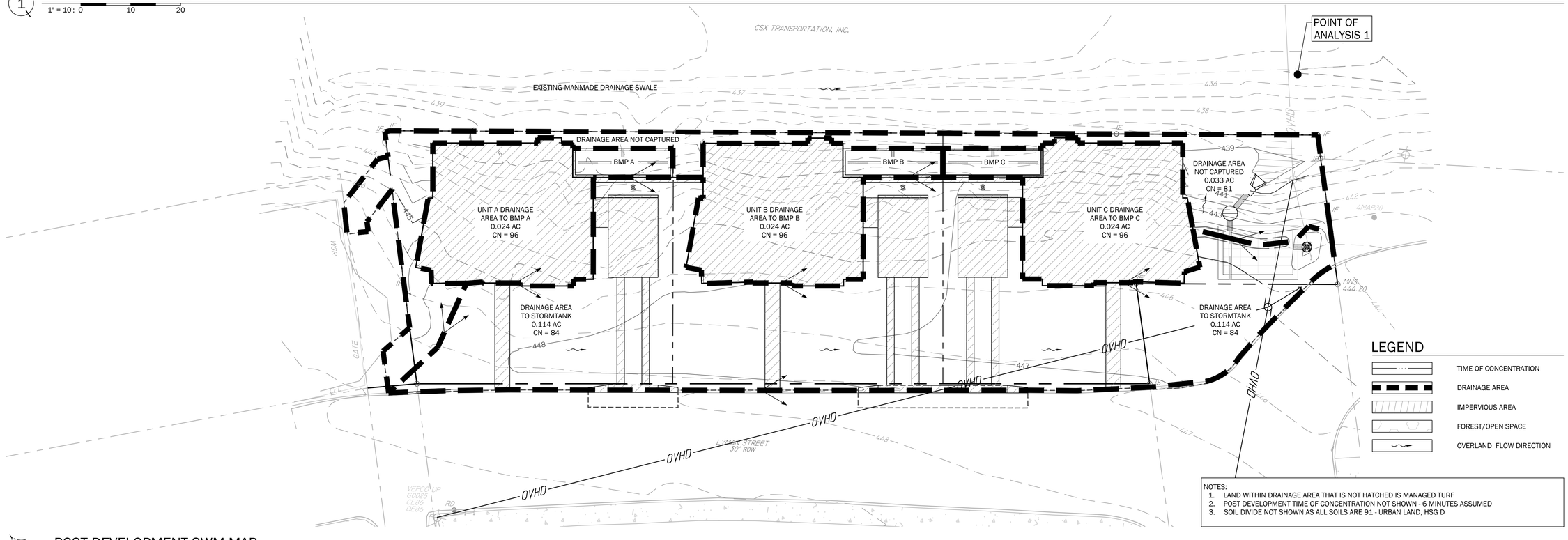
IN POST-DEVELOPMENT CONDITIONS, THE SITE IS BROKEN INTO FIVE (5) DRAINAGE AREAS. ONE DRAINAGE AREA FOR EACH UNIT'S ROOF WHICH OUTLETS INTO SEPARATE URBAN BIORETENTION FILTERS, ONE FOR THE FRONT OF THE SITE WHICH IS CAPTURED IN AN UNDERGROUND DETENTION FACILITY, AND ONE FOR THE SMALL AREA IN THE BACK OF THE SITE THAT IS NOT CAPTURED IN ANY STORMWATER SYSTEM.

CHANNEL AND FLOOD PROTECTION ARE ADDRESSED IN CONFORMANCE WITH 9VAC25-870-66(B)(1)(b)[ENERGY BALANCE] AND 9VAC25-870-66-(C)(2)(b). NUTRIENT CREDITS TO BE PURCHASED TO SATISFY REMAINDER OF NUTRIENT LOAD OFFSET REQUIRED BY 9VAC25-870-63. SEE VRRM SPREADSHEET C6.1.



1 PRE DEVELOPMENT SWM MAP

1" = 10': 0 10 20



2 POST DEVELOPMENT SWM MAP

1" = 10': 0 10 20

LEGEND

- TIME OF CONCENTRATION
- DRAINAGE AREA
- IMPERVIOUS AREA
- FOREST/OPEN SPACE
- OVERLAND FLOW DIRECTION

NOTES:
1. LAND WITHIN DRAINAGE AREA THAT IS NOT HATCHED IS MANAGED TURF
2. POST DEVELOPMENT TIME OF CONCENTRATION NOT SHOWN - 6 MINUTES ASSUMED
3. SOIL DIVIDE NOT SHOWN AS ALL SOILS ARE 91 - URBAN LAND, HSG D

LINE + GRADE
CIVIL ENGINEERING

LYMAN STREET RESIDENCES
PRELIMINARY SITE PLAN
CHARLOTTESVILLE, VIRGINIA

STORMWATER MANAGEMENT PLAN

COMMONWEALTH OF VIRGINIA
08/06/2021
DANIEL C. HYER
Lic. No. 45596
PROFESSIONAL ENGINEER

APPROVED	DCH
SUBMISSION NO.	3
PROJECT	2011001

THE WORK OF LINE + GRADE

C6.0

PRE-DEVELOPMENT

NOTE: THE TIME OF CONCENTRATION COMPUTATIONS SHOWN BELOW WERE PERFORMED WITH THE HYDRAFLOW: HYDROGRAPHS PROGRAM.

DRAINAGE AREA:

FLOW TYPE	LENGTH (FT)	SLOPE (%)	MANNING'S n	FLOW AREA (SF)	WETTED PERIMETER (FT)	VELOCITY (FPS)	TIME (MIN)
Sheet	60	16.95%	0.150			0.49	2.0
Channel	112	0.23%	0.026	11.20	8.00	3.46	0.5
					TOTAL Tc =		2.6
							Minimum 6.0 Assumed

POST-DEVELOPMENT

NOTE: ALL POST-DEVELOPMENT AREAS HAVE BEEN CONSERVATIVELY ASSUMED TO HAVE A TIME OF CONCENTRATION OF 6 MINUTES, WHICH IS THE MINIMUM UTILIZING TR-55 METHODOLOGY. THEREFORE, SINCE THIS MINIMUM WAS USED NO FURTHER TC ANALYSIS HAS BEEN PROVIDED FOR POST-DEVELOPMENT.

Urban Bioretention Level 1 (Std)

VA DEQ Spec. No. 9

Sizing

BMP B used as example for sizing - all BMPs have identical drainage areas and sizing

Required Tv = **83** CF *from VRRM spreadsheet*

Storage Depth = **1.36** *see below*

Layer	Depth (ft)	Void Ratio	Depth*Vr	*Min Depths*	*Max Depths*
Surface Ponding	0.5	1	0.5	N/A	1
Soil Media	1.5	0.25	0.375	2	4
Choking Layer	0.25	0.32	0.08	0.33	0.5
Gravel Storage	1	0.4	0.4	N/A	1

Top of Soil Media:	440.75
Top of Choking Layer:	**439.25**
Top of Gravel:	**439**
Bottom of Gravel/UD Inv:	**438**

Provided Surface Area = 92 SF

Additional Ponding Volume = 0 CF *Outside soil media footprint*

125 CF *Surface Area * Storage Depth + Additional Ponding*

Pretreatment

Downspout Splashblock or River Rock

Site Results (Water Quality Compliance)

Area Checks	D.A. A	D.A. B	D.A. C	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)	0.07	0.00	0.00	0.00	0.00	OK.
IMPERVIOUS COVER TREATED (ac)	0.07	0.00	0.00	0.00	0.00	OK.
MANAGED TURF AREA (ac)	0.01	0.00	0.00	0.00	0.00	OK.
MANAGED TURF AREA TREATED (ac)	0.01	0.00	0.00	0.00	0.00	OK.
AREA CHECK	OK.	OK.	OK.	OK.	OK.	

Site Treatment Volume (ft^3) 437

Runoff Reduction Volume and TP By Drainage Area

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	TOTAL
RUNOFF REDUCTION VOLUME ACHIEVED (ft^3)	93	0	0	0	0	93
TP LOAD AVAILABLE FOR REMOVAL (lb/yr)	0.16	0.00	0.00	0.00	0.00	0.16
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.08	0.00	0.00	0.00	0.00	0.08
TP LOAD REMAINING (lb/yr)	0.08	0.00	0.00	0.00	0.00	0.08
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	0.67	0.00	0.00	0.00	0.00	0.67

Total Phosphorus

		LINEAR PROJECT:
FINAL POST-DEVELOPMENT TP LOAD (lb/yr)	0.27	
TP LOAD REDUCTION REQUIRED (lb/yr)	0.18	
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.08	
TP LOAD REMAINING (lb/yr):	0.19	
REMAINING TP LOAD REDUCTION REQUIRED (lb/yr):	0.10	

Total Nitrogen (For Information Purposes)

POST-DEVELOPMENT LOAD (lb/yr)	1.96
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	0.67
REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr)	1.29

LINE + GRADE
CIVIL ENGINEERING

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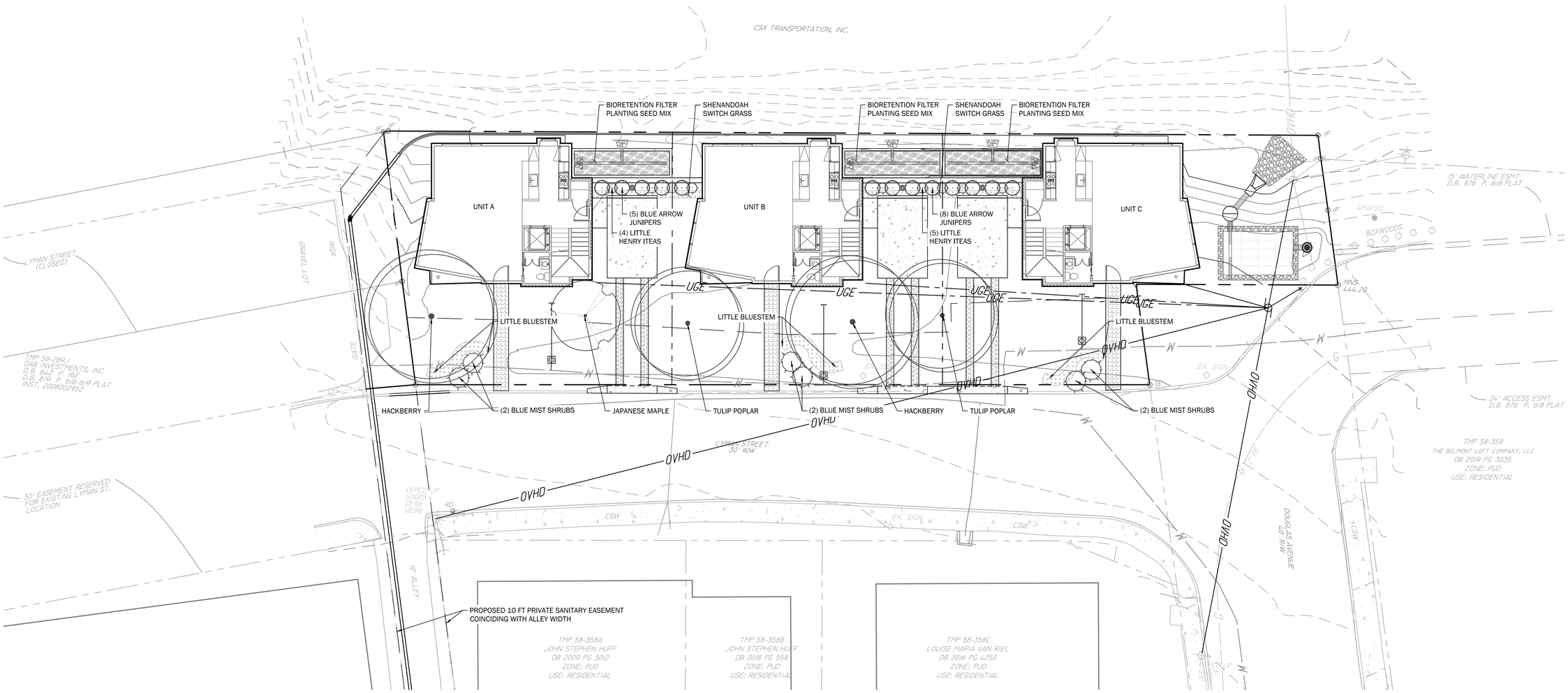
THE WORK OF LINE + GRADE

C6.1



1 LANDSCAPE PLAN
1" = 10': 0 10 20

LEGEND

- ORNAMENTAL GRASS
- BIORETENTION SEEDING
- PROP. TREE
- PROP. SHRUB

BIORETENTION FILTER PLANTING SEED MIX			*SEEDING AREA (AC) =* 0.00654
% OF MIX	COMMON NAME	BOTANICAL NAME	QUANTITY (LB)
COVER CROP	GRAIN RYE		0.19628
46%	RIVER OATS PA/VA ECOTYPE BLEND	CHASMANTHIUM LATIFOLIUM	0.04514
25%	FOX SEDGE PA ECOTYPE	CAREX VULPINOIDEA	0.02454
20%	VIRGINIA WILDRYE, PA ECOTYPE	ELYMUS VIRGINICUS	0.01963
4%	AUTUMN BENTGRASS, PA ECOTYPE	AGROSTIS PERENNANS	0.00393
3%	BLUNT BROOM SEDGE, PA ECOTYPE	CAREX SCOPARIA	0.00294
1%	SOFT RUSH	JUNCUS EFFUSUS	0.00098
1%	PATH RUSH, PA ECOTYPE	JUNCUS TENUIS	0.00098
BMP SEEDING RATE: 15 LB/AC		TOTAL BMP SEED: .09814 LBS	
COVER CROP SEEDING RATE: 30 LB/AC		TOTAL COVER CROP SEED: .19628 LBS	

PLANTING SCHEDULE					
	COMMON NAME	BOTANICAL NAME	SIZE	SPACING	QUANTITY PROVIDED
TREES					
	Hackberry	Celtis occidentalis	2" CAL.	40' OC	2
	Tulip Poplar	Liriodendron tulipifera	2" CAL.	40' OC	2
	Japanese Maple	Acer palmatum	6-7' HT.		1
SHRUBS					
	Blue Arrow Juniper	Juniperus scopulorum 'Blue Arrow'		4' OC	13
	Little Henry Itea	Itea virginica 'Little Henry'		4' OC	9
	Blue Mist Shrub	Caryopteris 'Longwood Blue Mist'	1' HT.	3' OC	6
ORNAMENTAL GRASS					
	Shenandoah Switchgrass	Panicum virgatum 'Shenandoah'			
	Little Bluestem	Schizachyrium scoparium			
SEEDING					
	SEE BIORETENTION SEED MIX AND PERMANENT SEEDING SCHEDULE				

LANDSCAPE AND CANOPY CALCULATIONS

SITE AREA	8613	SF
	0.198	AC
CANOPY REQUIRED FOR R2 ZONING (15%)[1]	1291.95	SF

SOURCE	PLANTING/SPECIES	BOTANICAL NAME	QTY	HEIGHT OF PLANTING (X)	GROWTH OVER 10 YEARS (Y)	TOTAL 10 YEAR HEIGHT (T)	WIDTH TO HEIGHT RATIO (R)	10 YEAR WIDTH (D)	10 YEAR CANOPY AREA
*Street Trees (Large Canopy)	Hackberry	Celtis occidentalis	2	10.00	20.00	30.00	0.90	27.00	1,145 SF
*Street Trees (Large Canopy)	Tulip Poplar	Liriodendron tulipifera	2	12.00	25.00	37.00	0.60	22.20	774 SF
Small Flowering Trees	Japanese Maple	Acer palmatum	1	6.00	10.00	16.00	0.90	14.40	163 SF

Footnotes:
1) Per 34-869(a)(1)

CANOPY AREA REQUIRED =	1,292 SF
CANOPY AREA PROVIDED =	2,081 SF

**ALL PROPOSED STREET TREES TO BE 2" MINIMUM CALIPER AT PLANTING*

NOTE TO CONTRACTOR: CONTRACTOR SHALL PRESERVE ALL TREES NOT SPECIFICALLY SHOWN TO BE REMOVED. IF ANY EXISTING TREE SHOWN TO REMAIN DOES NOT SURVIVE CONSTRUCTION, IT SHALL BE REPLACED UPON COMPLETION OF THE PROPOSED WORK. TREES REPLACED IN THIS MANNER SHALL CONFORM TO THE CERTIFICATE OF APPROPRIATENESS AND ENTRANCE CORRIDOR REQUIREMENTS. SPECIES SHALL BE SELECTED FROM THE CITY APPROVED TREE LIST.

LINE + GRADE
CIVIL ENGINEERING

LYMAN STREET RESIDENCES
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LANDSCAPE PLAN

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APPROVED DCH
SUBMISSION NO. 3
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THE WORK OF LINE + GRADE

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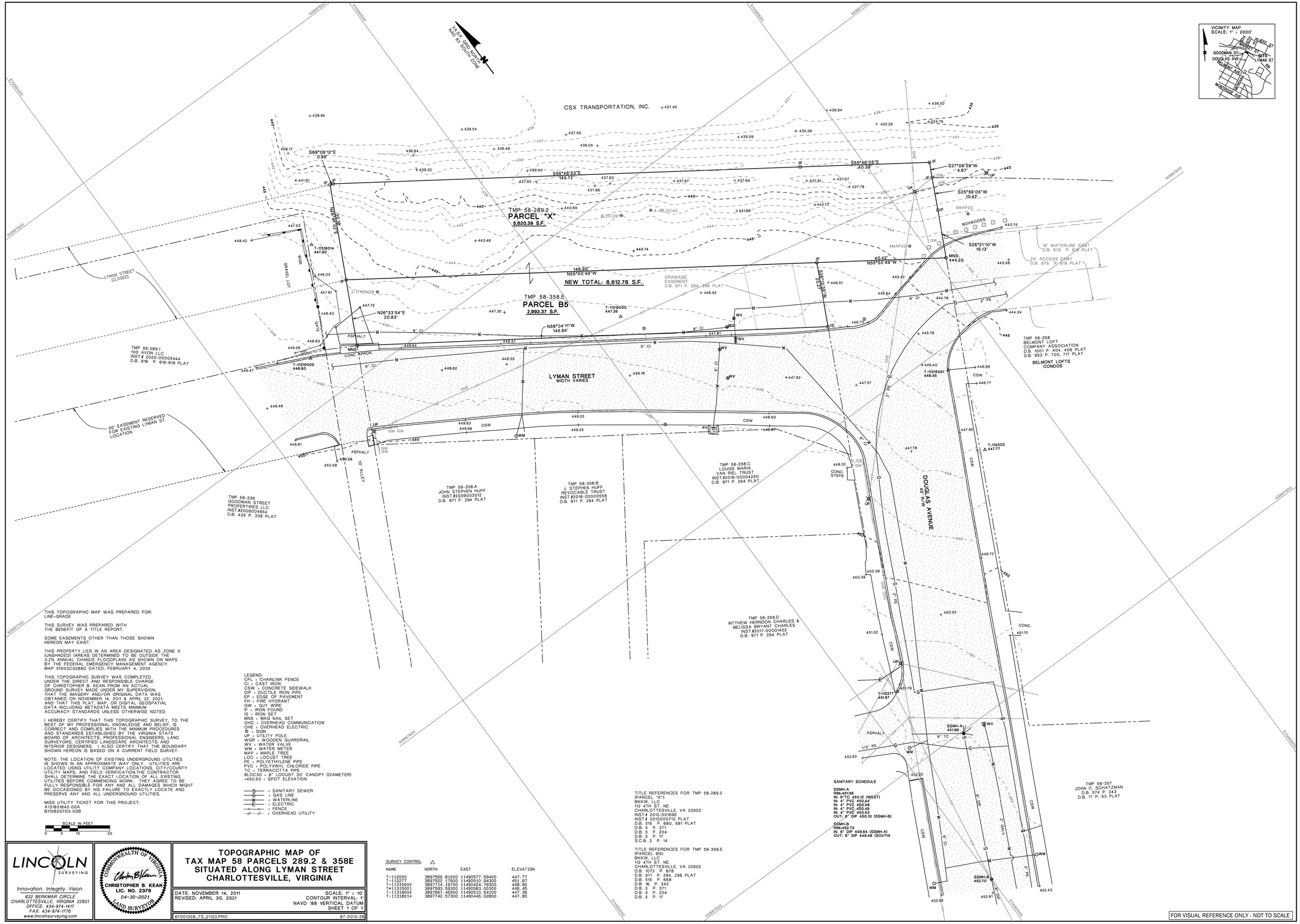


THIS TOPOGRAPHIC MAP WAS PREPARED FOR:
LINE+GRADE

THIS SURVEY WAS PREPARED WITH
THE BENEFIT OF A TITLE REPORT.

SOME EASEMENTS OTHER THAN THOSE SHOWN
HEREON MAY EXIST.

THIS PROPERTY LIES IN AN AREA DESIGNATED AS ZONE X (UNSHADED) (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS SHOWN ON MAPS BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, MAP 51003C0288D DATED: FEBRUARY 4, 2005

THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF CHRISTOPHER B. KEAN FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION; THAT THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED ON NOVEMBER 14, 2011 & APRIL 22, 2021, AND THAT THIS PLAT, MAP, OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY, TO THE BEST OF MY PROFESSIONAL KNOWLEDGE AND BELIEF, IS CORRECT AND COMPLIES WITH THE MINIMUM PROCEDURES AND STANDARDS ESTABLISHED BY THE VIRGINIA STATE BOARD OF ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED LANDSCAPE ARCHITECTS AND INTERIOR DESIGNERS. I ALSO CERTIFY THAT THE BOUNDARY SHOWN HEREON IS BASED ON A CURRENT FIELD SURVEY.

NOTE: THE LOCATION OF EXISTING UNDERGROUND UTILITIES IS SHOWN IN AN APPROXIMATE WAY ONLY. UTILITIES ARE LOCATED USING UTILITY COMPANY LOCATIONS, CITY/COUNTY UTILITY MAPS, AND FIELD VERIFICATION.THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THEY AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

MISS UTILITY TICKET FOR THIS PROJECT:
A131801842-00A
B110600703-00B

LEGEND:
CFL = CHAINLINK FENCE
CI = CAST IRON
CSW = CONCRETE SIDEWALK
DIP = DUCTILE IRON PIPE
EP = EDGE OF PAVEMENT
FH = FIRE HYDRANT
GW = GUY WIRE
IF = IRON FOUND
IS = IRON SET
MNS = MAG NAIL SET
OHC = OVERHEAD COMMUNICATION
OHE = OVERHEAD ELECTRIC
Φ = SIGN
UP = UTILITY POLE
WGR = WOODEN GUARDRAIL
WV = WATER VALVE
WM = WATER METER
MAP = MAPLE TREE
LOC = LOCUST TREE
PE = POLYETHYLENE PIPE
PVC = POLYVINYL CHLORIDE PIPE
TC = TERRACOTTA PIPE
BLOC30 = 8" LOCUST 30' CANOPY (DIAMETER)
+450.50 = SPOT ELEVATION

S = SANITARY SEWER
G = GAS LINE
W = WATERLINE
E = ELECTRIC
F = FENCE
OHE = OVERHEAD UTILITY

SCALE IN FEET
0 5 10 20

SURVEY CONTROL △

NAME	NORTH	EAST	ELEVATION
T-112000	3897565.81000	11490577.59400	447.77
T-112277	3897522.17600	11490510.94300	451.87
T-11315000	3897714.19700	11490424.78300	448.80
T*11315001	3897593.59300	11490583.00300	446.45
T-11318000	3897667.46500	11490510.54100	447.36
T-11318014	3897742.57300	11490446.02800	447.80

LINCOLN SURVEYING
Innovation. Integrity. Vision.
632 BERKMAR CIRCLE
CHARLOTTESVILLE, VIRGINIA 22901
OFFICE: 434-974-1417
FAX: 434-974-1776
www.lincolnsurveying.com

COMMONWEALTH OF VIRGINIA
CHRISTOPHER B. KEAN
LIC. NO. 2378
04-30-2021
LAND SURVEYOR

TOPOGRAPHIC MAP OF TAX MAP 58 PARCELS 289.2 & 358E SITUATED ALONG LYMAN STREET CHARLOTTESVILLE, VIRGINIA

DATE: NOVEMBER 14, 2011
REVISED: APRIL 30, 2021

SCALE: 1" = 10'
CONTOUR INTERVAL: 1'
NAVD '88 VERTICAL DATUM
SHEET 1 OF 1

87001328_TS_21120.PRO

87-0013-28

FOR VISUAL REFERENCE ONLY - NOT TO SCALE

RESOLUTION
GRANTING A SPECIAL USE PERMIT
FOR INFILL DEVELOPMENT ON TWO PARCELS
FRONTING ON LYMAN STREET

WHEREAS, BKKW, LLC is the owner ("Landowner") of certain property fronting on Lyman Street, designated on 2018 City Tax Map 58 as Parcels 289.2 and 358E ("Subject Property"), and pursuant to City Code §34-165, the Landowner requests a special use permit to authorize an infill development project, as more particularly described within the application materials submitted by the Landowner in connection with City Application No. SP19-00011; and

WHEREAS, the zoning classification of the Subject Property is R-2 (Two Family Residential); and

WHEREAS, the purpose of the application is to allow construction of a specific infill development project within the Subject Property, consisting of the following:

> A common plan of development for the land area within Parcels 289.2 and 358E, including: (i) three (3) buildings, to be constructed as single-family dwellings (the "SFDs"), each on its own separate lot and with each building fronting on Lyman Street; (ii) each lot containing a single-family dwelling shall have an area no less than 2500 square feet (SF) and no more than 3500 SF; each such lot shall have frontage on Lyman street of no less than 34 feet and no more than 65 feet; and each such lot shall have side yards of at least 2 feet, but no required front or rear yard areas; (iii) each single-family lot, and the land on which it is constructed, may be used and occupied in any manner authorized within §34-420 of the R-2 zoning district regulations, including, without limitation, internal accessory apartments; (iv) the land area currently identified as tax Parcel 358E will not contain any buildings or structures (other than the SFDs), and will be used predominantly for access and parking for the SFDs described above and as landscaped open space with plantings, and for any additional driveway or parking as may be necessary to serve internal accessory apartments established within the SFDs; and (v) the general design and height of all buildings, the layout of the entire development area, and the characteristics of the development shall be in all material aspects the same as depicted within the site plan dated December 21, 2018, revised February 28, 2019, and the narrative materials accompanying Application No. SP19-00011 (hereinafter, the "Infill Project"); and

WHEREAS, a public hearing on the proposed Infill Project was conducted jointly by the Planning Commission and City Council on March 12, 2019, following notice to the public and to adjacent property owners as required by Virginia Code §15.2-2204 and City Code §34-44; and

WHEREAS, based on the representations, information, and materials included within the application materials submitted by the Landowner in connection with SP19-00011, and upon consideration of: information and analysis set forth within the Staff Report; factors set forth in City Code §34-157, §34-165, and §34-166; the recommendation of the Planning Commission; and comments received at the joint public hearing, this Council finds that the Infill Project is appropriate in the location requested and may be approved subject to suitable regulations and safeguards;

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Charlottesville, **THAT** a Special Use Permit is hereby granted to authorize the Infill Project defined above within this Resolution to be constructed on the Subject Property, including, without limitation, approval of modified yard regulations, density standards, and parking standards otherwise applicable within the R-2 zoning district. Minor adjustments of the dimensional regulations set forth above, within the definition of this "Infill Project" shall be permitted when necessary for compliance with engineering, stormwater, utility or other legal requirements, any such adjustments not to exceed five percent (5%) of the dimensions included within the definition of "Infill Project". Nothing set forth within this Resolution shall be construed as limiting or requiring any particular architectural details or features, including, without limitation: exterior finishes or construction materials, window or door locations, etc.

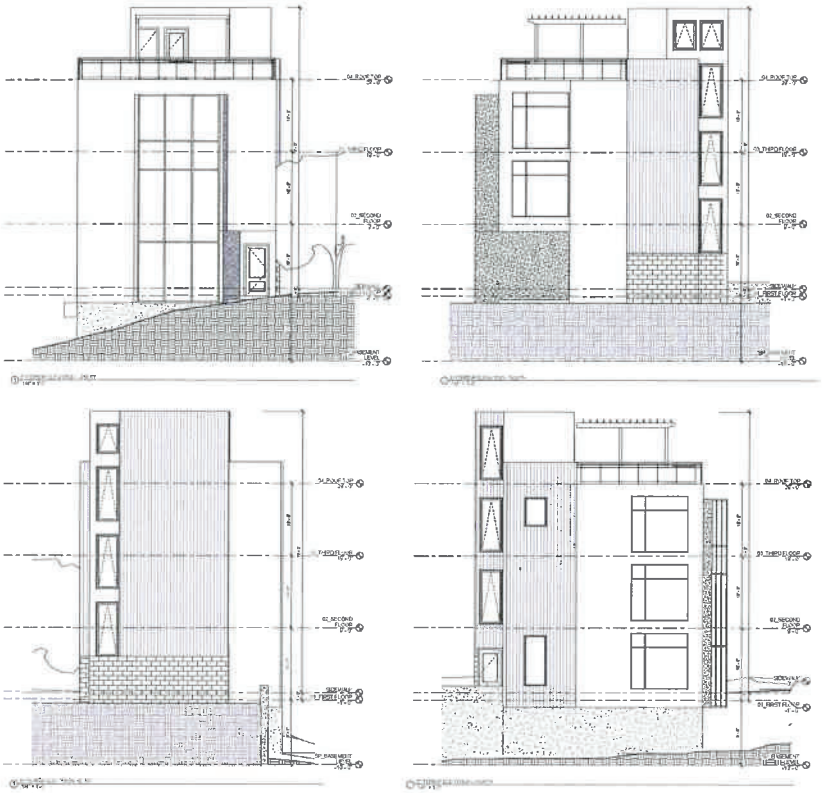
Approved by Council
April 15, 2019

Kyna Thomas

Kyna Thomas
Clerk of Council

BUILDING MASS DIAGRAM NTS

34-158(a)(4): a building massing diagram, and building elevations



BUILDING ELEVATIONS NTS

CITY OF CHARLOTTESVILLE

DEPARTMENT OF NEIGHBORHOOD DEVELOPMENT SERVICES

STAFF REPORT

PLANNING COMMISSION PRELIMINARY DISCUSSION

APPLICATION FOR A SPECIAL USE PERMIT

DATE OF THE MEETING: October 21, 2021

Project Planner: Matt Alfele
Date of Staff Report: October 6, 2021

Applicant: Aspen Heights Partners
Applicant's Representative(s): Mitchell Matthews Architects
Current Property Owner: Lamson, Norman, TR Gadient JPS LD TR and H & F, LLC

Application Information

Property Street Address: 2005 & 2007 Jefferson Park Avenue and 104 Observatory Avenue
Tax Map & Parcel: 170103000, 170103100, and 170104000
Total Square Footage/ Acreage Site: Approx. 1.711 acres (74,531 square feet)
Comprehensive Plan (General Land Use Plan): High Density Residential
Current Zoning Classification: R-3 Residential
Overlay District: Entrance Corridor

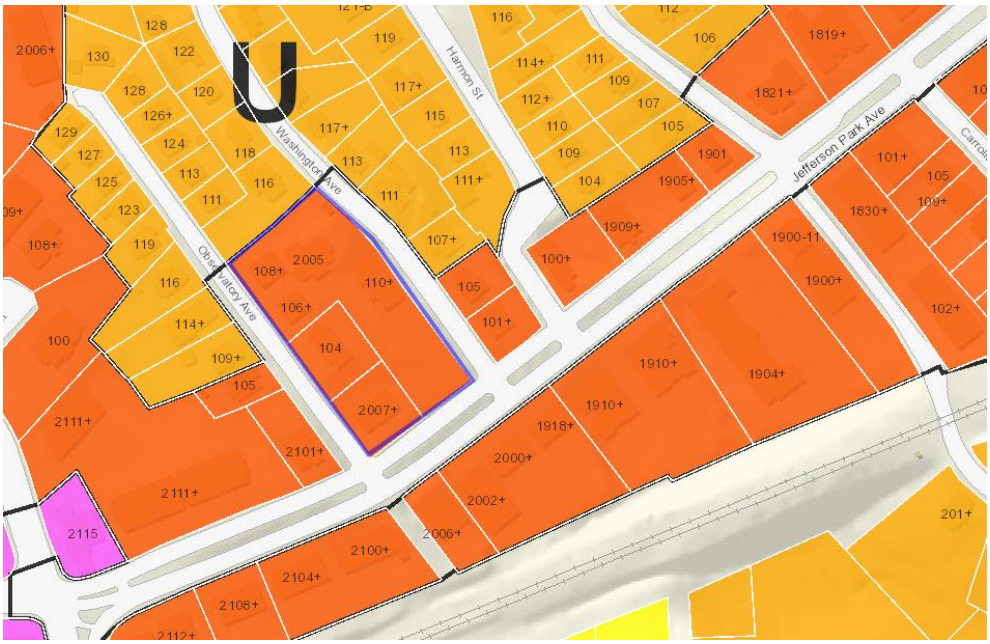
Purpose of Meeting and Applicant's Request (Summary)

John Matthews, (Mitchell Mathews Architects) representing the applicant, is proposing to develop the 1.7 acres of land located at 2005/2007 JPA and 104 Observatory Ave for residential use outside the current by-right density designation. The Comprehensive Land Use Map for this area calls for High Density Residential. Prior to submitting an application to the City for a Special Use Application and Entrance Corridor approval, Mr. Matthews and his team are looking for feedback from the Planning Commission on the proposed project.

Vicinity Map

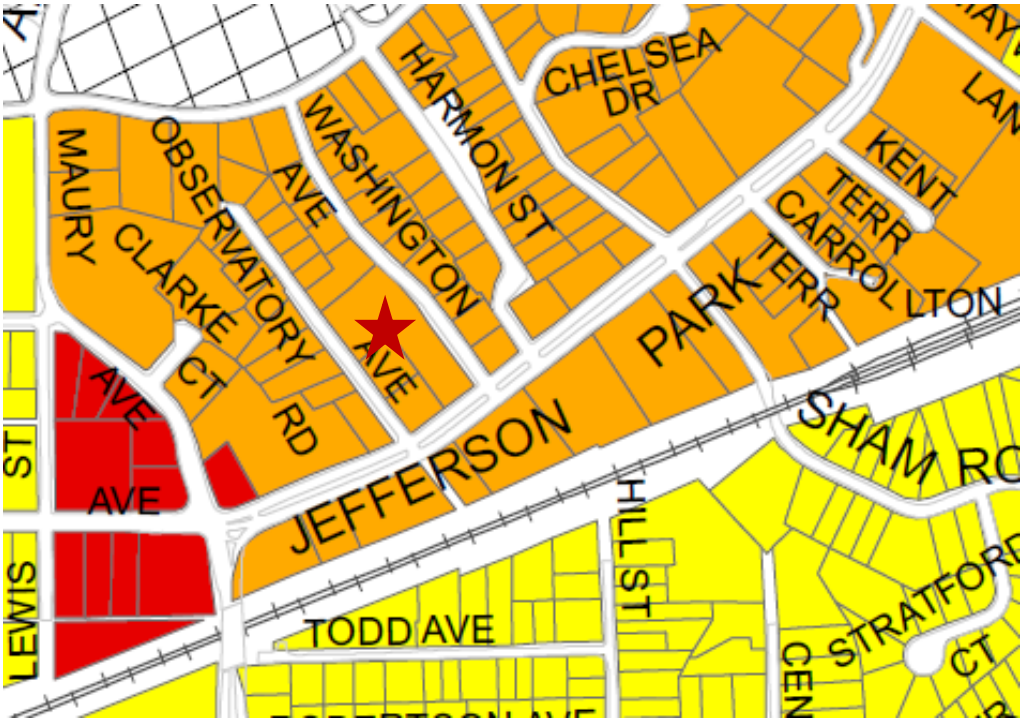
Context Map 1

Context Map 2- Zoning Classifications



KEY - Orange: R-2U, Red: R-3, Purple: Neighborhood Commercial

Context Map 3- General Land Use Plan, 2013 Comprehensive Plan



KEY: Yellow: Low Density Residential, Red: Neighborhood Commercial, & Orange: High Density Residential

Proposed Discussion points for the Planning Commission:

1. Is a DUA of 70 at this location appropriate?
2. Is a height of 75' appropriate for this location?
3. Is the rear setback appropriate to protect the existing R-2U district?

Attachments

A. Applicant Materials

Attachment A

2005 JEFFERSON PARK AVENUE

CHARLOTTESVILLE, VA

SPECIAL USE PERMIT & ENTRANCE CORRIDOR INFORMAL REVIEW

MITCHELL MATTHEWS ARCHITECTS

SEPTEMBER 23, 2021

Attachment A

REQUEST FOR INFORMAL REVIEW OF SPECIAL USE PERMIT REQUESTS (LISTED BELOW) AND ENTRANCE CORRIDOR CERTIFICATE OF APPROPRIATENESS

INTRODUCTION: 2005 JPA is a proposed multi-family residential development on Jefferson Park Avenue. The project consists of residential units over parking and is situated in close proximity (walking distance) to the University of Virginia's central grounds. The project is within an entrance corridor.

LOCATION: 2005, 2007 Jefferson Park Avenue and 104 Observatory Avenue, an assemblage of 3 lots, with frontage on Jefferson Park Avenue between Observatory Avenue and Washington Avenue.

ZONING: The property is currently zoned R-3 in the City of Charlottesville.

PROPOSED USE: Multi-Family Residential

SPECIAL USE PERMIT REQUEST: A Special Use Permit (SUP) is being requested for:

1) Additional Density:

Allowable by right: Up to 21 DUA	Allowable by SUP: Up to 87 DUA.	PROPOSED: 70 DUA

2) Additional Height:

Allowable by right: 45' max	Allowable by SUP: Up to 101' (44-87 DUA)	PROPOSED: 75', from average grade plane

3) Rear yard setback reduction:

	Required: 75' (for 44-87 DUA), with a 25' S-3 buffer	PROPOSED: 36', with a 25' S-3 buffer

JUSTIFICATION FOR THE SPECIAL USE PERMIT FOLLOWS. REFER TO SECTION 1 (page 6) FOR INFORMATION ON THE SURROUNDING CONTEXT. REFER TO SECTION 2 (page 14) FOR ANALYSIS OF THE COMPREHENSIVE PLAN VISION FOR THIS AREA THROUGH THE LAST FEW DECADES. REFER TO SECTION 3 (page 24) FOR ILLUSTRATIVE INFORMATION EXPLAINING THE PROPOSED PROJECT.

Attachment A

1. **Whether the proposed use or development will be harmonious with existing patterns of use and development within the neighborhood:** The proposed multi-family residential project is harmonious with the existing patterns of use in this neighborhood – residential, predominately student rentals. The neighborhood is coincident with Census Tract 6.0, which is characterized by 93% of the current dwellings being renter-occupied and 79% being non-family household types. The proposed project is also consistent with the goals of the current zoning ordinance, and recently approved projects on Jefferson Park Avenue. This project promotes a sustainable community – making efficient use of the land and placing carefully designed student housing in close proximity to UVA. We anticipate that the scale, material choices and detailing of this proposed residential building will strengthen the character of Jefferson Park Avenue and the whole JPA neighborhood.

2. **Whether the proposed use or development and associated public facilities will substantially conform to the city's comprehensive plan:** The redevelopment of 2005 JPA conforms to both the current and proposed comprehensive plans in the following areas:

Chapter 1: Land Use:

Goal #1: Sense of Place. This stretch of Jefferson Park Avenue is commonly considered a student housing corridor between UVA / UVA Hospital and the Fry's Spring / Fontaine Ave Neighborhood Commercial area. It is predominately vehicular oriented and classified in the Streets that Work typology as Mixed Use B, the equivalent of West Main Street, Millmont Street, Cherry Avenue, and University Avenue. It is a multi-modal street that supports higher density development projects. The vitality of the street comes from its intensity of use for transportation – thus its designation as an Entrance Corridor. A wide range of residential densities and diverse architectural styles currently defines its character. JPA embodies the evolution of off-campus student housing around the University of Virginia. It is currently a corridor that is evolving, as expected. The ongoing comprehensive plan re-write currently envisions it as an urban mixed-use corridor, defined as higher-intensity mixed-use development linking employment, commercial and civic hubs. This project bridges between the current ordinance and the future vision of the corridor, by contributing to the establishment of a vibrant, engaged sense of place that can be replicated along Jefferson Park Avenue - one of a walkable, people-focused, urban project that aids the city in its supply of housing stock.

Goal #2: Mixed Use. The project allows for an amenity space at street level for potential conversion to future commercial use – while still fitting the definition of an ancillary consumer service business, allowable within R-3 zoning. This will create a compatible condition that both meets current zoning, the 2013 comprehensive plan's goal of a mix of uses within walking distance of residential that encourages small businesses, and the future vision outlined in the ongoing comprehensive plan work.

Chapter 5: Housing:

The proposed redevelopment of 2005 JPA will increase the neighborhood's housing stock in a location that can both support increased density and that has been earmarked by the City for increased residential use. Specifically, it will increase purpose-built student housing, which will decrease the pressure on single-family residential neighborhoods that are increasingly being populated by student rentals, such as the adjacent Fry's Spring Neighborhood, or the growth and expansion experienced on other sides of the University, into the Lewis Mountain and the 10th and Page neighborhoods. Displacement within established neighborhoods and affordability issues across the city are directly related to the historical lack of student housing supply.

Goal #1: Housing's Impact on City Goals & Vision Of utmost importance is an increase in city housing stock alongside the equitable impact of such development. Placing increased height and reasonable residential density in a predominately student rental neighborhood, along a transit oriented corridor, supports the city's goals and vision.

Goal #3: Grow the City's Housing Stock Not only will this residential project add to the city's existing housing stock, it will also trigger the affordable housing ordinance, supporting affordable housing throughout the city.

Goal #8: Sustainability Principles This residential building expands the diversity of housing choices in this area of the city, thereby balancing offerings with other areas such as along the West Main Street corridor, or Millmont Street. Increased density in close proximity to UVA, where increased density is desirable, promotes a more sustainable city.

Chapter 6: Transportation:

The proposal will allow students to live in easy walking distance to both UVA and nearby commercial areas (the Corner and Fontaine)—as well as in close proximity to a bus stop - helping to minimize the use of private automobile transportation.

Goal #1: Complete Streets Observatory Avenue and Washington Ave will both benefit from increased pedestrian infrastructure as a result of this project. Jefferson Park Avenue is already a multi-modal through corridor with sufficient pedestrian, bicycle, and vehicular infrastructure to accommodate this project.

Goal #2: Land Use & Community Design The proposed development will increase pedestrian safety on all three adjacent streets by minimizing vehicular access points – an improvement over current conditions. All parking will be on site and hidden from view below grade, lessoning the existing pressure for on street parking and assisting in the creation of a more pedestrian friendly environment. Ample on-site bicycle storage facilities will be provided.

Chapter 7: Historic Preservation and Urban Design:

Goal #8: Entrance Corridors This proposed project will be a quality development along one of the city's most frequented entrance corridors. Street trees and other landscape elements will enhance the streetscape and contribute to the urban design.

3. **Whether proposed use or development of any buildings or structures will comply with all applicable building code regulations:** The structures and site will be designed to comply with all applicable building code regulations.

Attachment A

4. **Whether the proposed use or development will have any potentially adverse impacts on the surrounding neighborhood, or the community in general; and if so, whether there are any reasonable conditions of approval that would satisfactorily mitigate such impacts. Potential adverse impacts to be considered include, but are not necessarily limited to, the following:**

   a. **Traffic or parking congestion;** The project is located near the University of Virginia's central grounds; given this proximity, it is anticipated that residents would not commute daily by car, but would predominately walk. The project's parking enters from Washington Avenue, which is a through street between JPA and Stadium Road, as opposed to Observatory Avenue, which is a dead end. Similarly, the project is near the commercial area at the intersection of JPA Extended, Fontaine Ave, and Maury Ave, providing convenient walk-able services and dining options nearby. The site is also located along the free trolley line, with an existing stop approximately a block away. JPA has significant bike infrastructure in place and the project will provide ample on-site bicycle storage facilities. The project is taking advantage of a portion of available parking reductions to balance market demand with actual spaces provided. All of these conditions will limit the potential traffic and parking congestion.

   b. **Noise, lights, dust, odor, fumes, vibration, and other factors, which adversely affect the natural environment;** No activities are anticipated that will adversely affect the natural environment. All exterior lighting will comply with the city's dark sky ordinance. The same functions currently on site will continue on site.

   c. **Displacement of existing residents or businesses;** This project replaces 17 current residential units with 119 units – creating an overall gain of 102 units. Construction will not begin until all leases and occupancies for current tenants have terminated.

   d. **Discouragement of economic development activities that may provide desirable employment or enlarge the tax base;** 2005 JPA will not discourage economic development, but rather will contribute to the vibrancy of a mixed use area along JPA, providing patrons to nearby commercial establishments. It will help spur the development and investment in this area by providing a residential population base in need of additional goods and services.

   e. **Undue density of population or intensity of use in relation to the community facilities existing or available;** The proposed population and intensity of use are consistent with those anticipated under the current zoning designation and under all previous, current and proposed versions of the Comprehensive Plan. No adverse effects to the existing or available community facilities are expected. The project will likely have a positive effect of restoring detached single-family housing units within nearby neighborhoods like Fry's Spring, to their intended occupancy as single-family households. The request of 70 DUA is below the maximum available (87 DUA) under an SUP for this zoning district.

   f. **Reduction in the availability of affordable housing in the neighborhood;** The proposed development will comply with the affordable housing ordinance through one of the three mechanisms available – to be determined at a later date. The site does not currently accommodate affordable housing – all units are market rate; therefore no committed affordable housing units will be lost.

   g. **Impact on school population and facilities;** While the units are planned to be market rate rental units and available to the general public, given its proximity to UVA, it is anticipated that students, possibly young professionals and/or employees at the medical school and hospital will primarily occupy the units. It is expected that the project will have minimal to no impact on the school population and facilities.

   h. **Destruction of or encroachment upon conservation or historic districts;** The proposed project is not within a conservation or historic district. No individually protected properties exist on this site. The project is within an entrance corridor overlay district and ERB review will be required.

   i. **Conformity with federal, state and local laws, as demonstrated and certified by the applicant;** The proposed project will conform to all applicable federal, state, and local laws.

   j. **Massing and scale of project.** From the street, the building massing originates with a two-story base along Jefferson Park Avenue, which disappears into grade along the two side streets due to the substantial (30') elevation drop across the site. Above this, the massing of the building is a U-shape – with the open end facing JPA. This arrangement creates two narrow residential wings projecting towards the street, one extending farther than the other – reducing the massing and scale of the project along the JPA streetscape. At the more prominent corner of the site, at Washington Avenue, the base and upper levels merge into a vertical expression denoting both the primary, street-level pedestrian entrance, as well as the primary amenity spaces within. This vertical massing is carved away at the top floor to create an outdoor terrace. A series of terraces and stairways mediate the rising grade along JPA.

   The scale of the project is comparable to other projects along Jefferson Park Avenue, albeit with a more engaging streetscape and a more urban or contemporary form and aesthetic. The scale of the project changes relative to the elevation change across the site. The scale is consistent with the proposed Urban Mixed Use Corridor zoning description – calling for 5 stories up to 8 along key neighborhood corridors designated in the Streets that Work plan (such as JPA). At the western façade, adjacent to R-2U zoning, the proposed project is 5 stories in height – consistent with the ongoing comprehensive plan height designation for the proposed adjacent zoning designation – Higher-Intensity Residential.

   Overall, the proposed massing and scale of the proposed project is consistent with the current ordinance and the ongoing comprehensive planning work.

5. **Whether the proposed use or development will be in harmony with the purposes of the specific zoning district in which it will be placed:** The proposed use will not change from its current use. The development is in harmony with the purposes of the zoning district, which calls for medium-density residential, including multi-family.

6. **Whether the proposed use or development will meet applicable general and specific standards set forth within the zoning ordinance, subdivision regulations, or other city ordinances or regulations;** The proposed use is identical to the current use. This development is within the city's allowable uses, density (with SUP), and height (with SUP) provided for in this zoning district. The property is located within an entrance corridor overlay district and is subject to review by the Entrance Corridor Review Board. An application will be submitted to the ERB for concurrent review with the SUP application.

Attachment A

(1) A site plan when required by section 34-802 of the City Code; *To be submitted with application at a later date.*

(2) A written disclosure of the information required by section 34-8 of the City Code and, if the applicant is not the owner of the property, written evidence of his status as (i) the authorized agent of the property owner, or (ii) a contract purchaser of the property whose application is with the permission of the property owner; *To be provided in the application at a later date.*

(3) For developments including any non-residential uses, and developments proposing the construction of three (3) or more single- or two-family dwellings, the applicant shall provide a completed low-impact development ("LID") methods worksheet; *To be provided in the application at a later date.*

(4) For applications proposing the alteration of the footprint or height of an existing building, or the construction of one (1) or more new buildings: (i) a building massing diagram and (ii) elevations; *See accompanying graphic materials.*

(5) Information and data identifying how many, if any, existing dwelling units on the development site meet the city's definition of an "affordable dwelling unit" and whether any such existing units, or equivalent affordable units, will remain following the development; *Existing units on site do not meet the city's definition of "affordable dwelling units". Existing units will be replaced for a net gain of 102 units.*

(6) Other supporting data sufficient to demonstrate compliance with the purposes and standards of this Zoning Ordinance, including, without limitation, graphic materials that illustrate the context of the project as well as information and data addressing the factors set forth within section 34-157 above. *See accompanying graphic materials.*

Attachment A

The project site is located on the southeastern side of the City, within blocks of the University's Central Grounds. It is situated in the middle of the JPA neighborhood, which is predominately renter occupied according to both recent census data and GIS records. The site is one block away from a commercial node, at the intersection of Maury Avenue and Jefferson Park Avenue. The project spans between two sides streets, Observatory Avenue - a dead end, and Washington Avenue, a through street between JPA and Stadium Road. The site has only one continguous parcel or neighbor to the rear, which is renter occupied. All parcels across the bordering streets - JPA, Observatory Ave and Washington Ave, are renter occupied, less one - which sits diagonally to the rear corner of the site along Observatory Avenue.

The existing zoning of R-3, approved in 2009, stretches the length of JPA, on the northwest side, while University High Density was designated for the opposite side of the street and R-2U stretches behind to Stadium Road.

Existing conditions along JPA are varied. Newer projects range in scale from five to nine stories facing JPA. These projects have limited engagement with the street, presumably due to topographic challenges. Similarly, the 2005 JPA site drops 37' across the site.

SECTION 1
EXISTING CONDITIONS

SECTION 1:

Attachment A

2005 JPA
Charlottesville VA
09.23.2021

VICINITY MAP

All grades, counts and quantities are approximate and will change as design proceeds.

MITCHELL / MATTHEWS
ARCHITECTS & PLANNERS
434.979.7550

Attachment A

Demographics

† Margin of error is at least 10 percent of the total value. Take care with this statistic.

Age

21.5

Median age

about two-thirds of the figure in Charlottesville: 31.6

about two-thirds of the figure in Charlottesville city: 31.6

Population by age range

Population by age category

Housing

Units & Occupancy

1,385

Number of housing units

Charlottesville: 20,642

Charlottesville city: 20,642

Occupied vs. Vacant

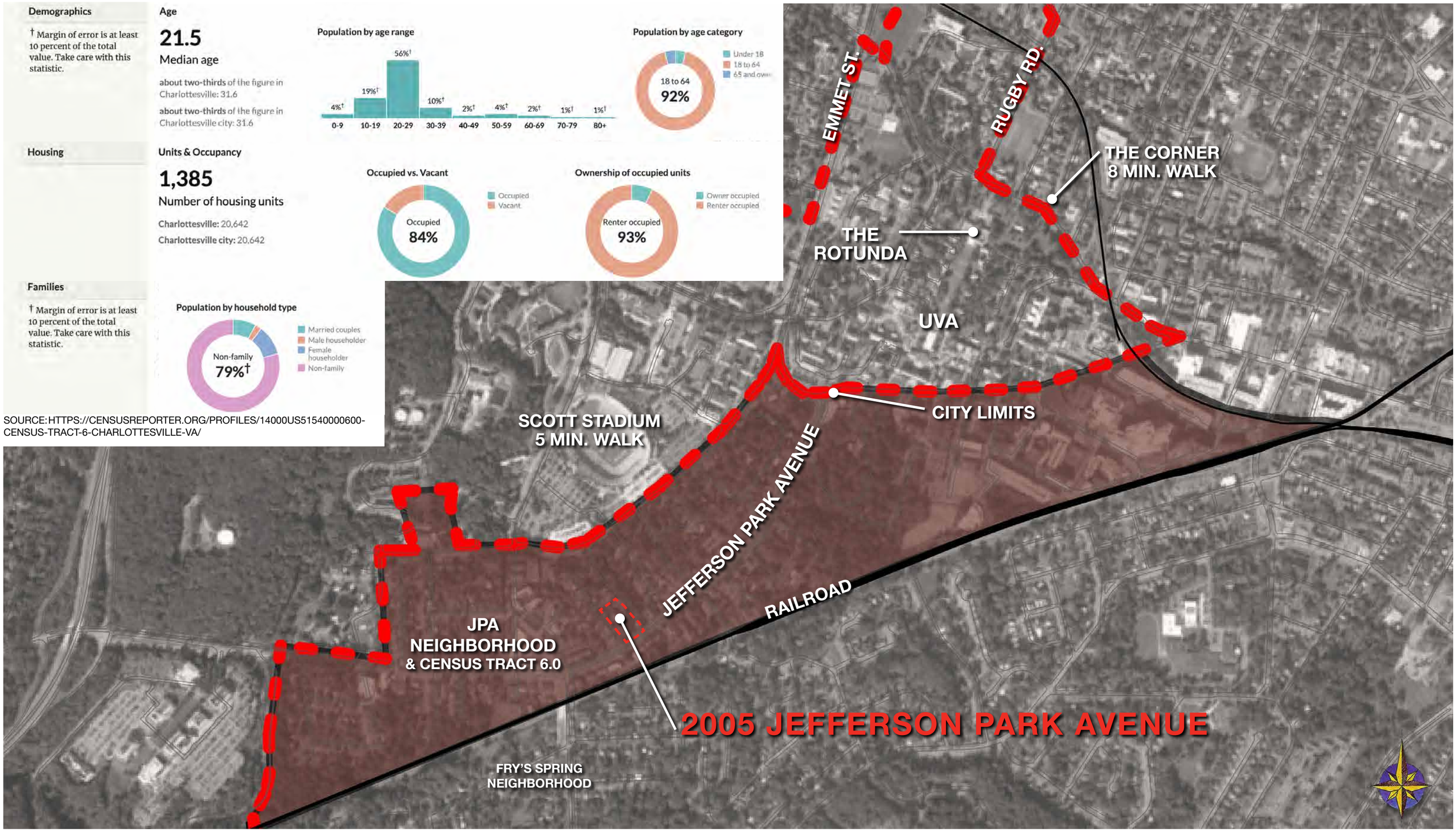
Ownership of occupied units

Families

† Margin of error is at least 10 percent of the total value. Take care with this statistic.

Population by household type

SOURCE: HTTPS://CENSUSREPORTER.ORG/PROFILES/14000US51540000600-CENSUS-TRACT-6-CHARLOTTESVILLE-VA/



2005 JPA
Charlottesville VA
09.23.2021

NEIGHBORHOOD MAP

All grades, counts and quantities are approximate and will change as design proceeds.

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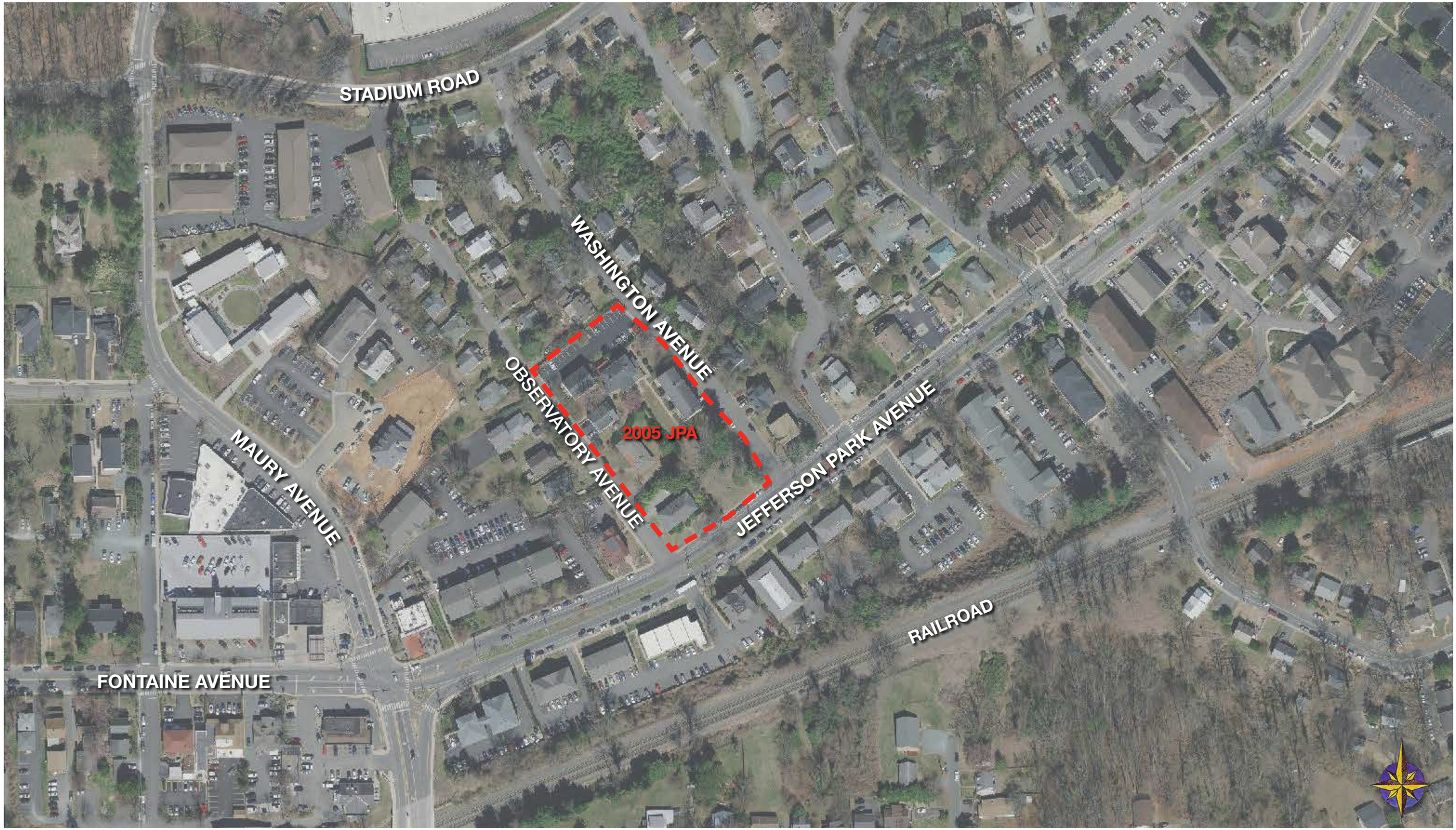

2005 JPA
Charlottesville VA
09.23.2021

LOCATION MAP

All grades, counts and quantities are approximate and will change as design proceeds.

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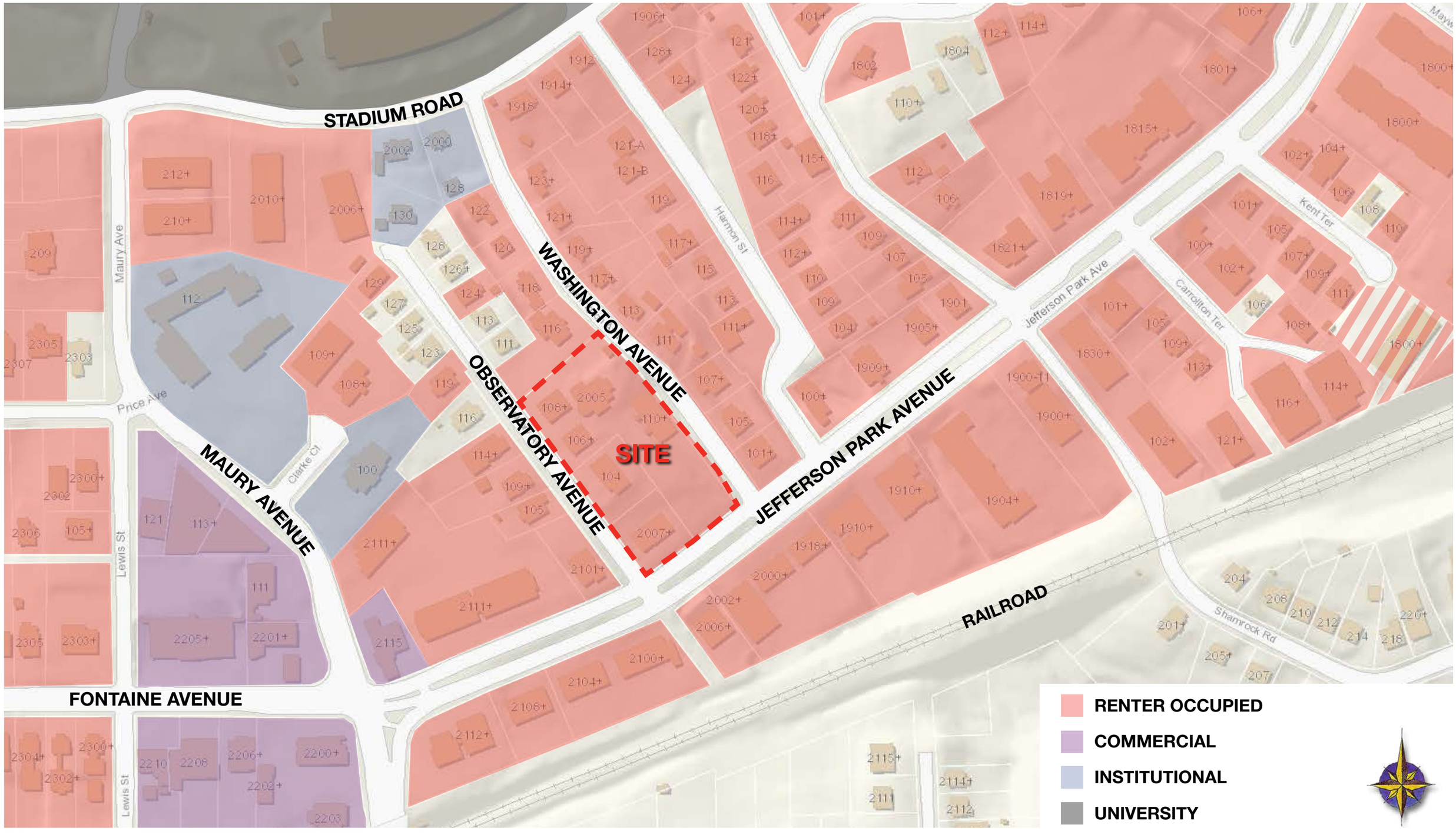

2005 JPA
Charlottesville VA

09.23.2021

RENTER OCCUPIED AND OTHER USES

All grades, counts and quantities are approximate and will change as design proceeds.

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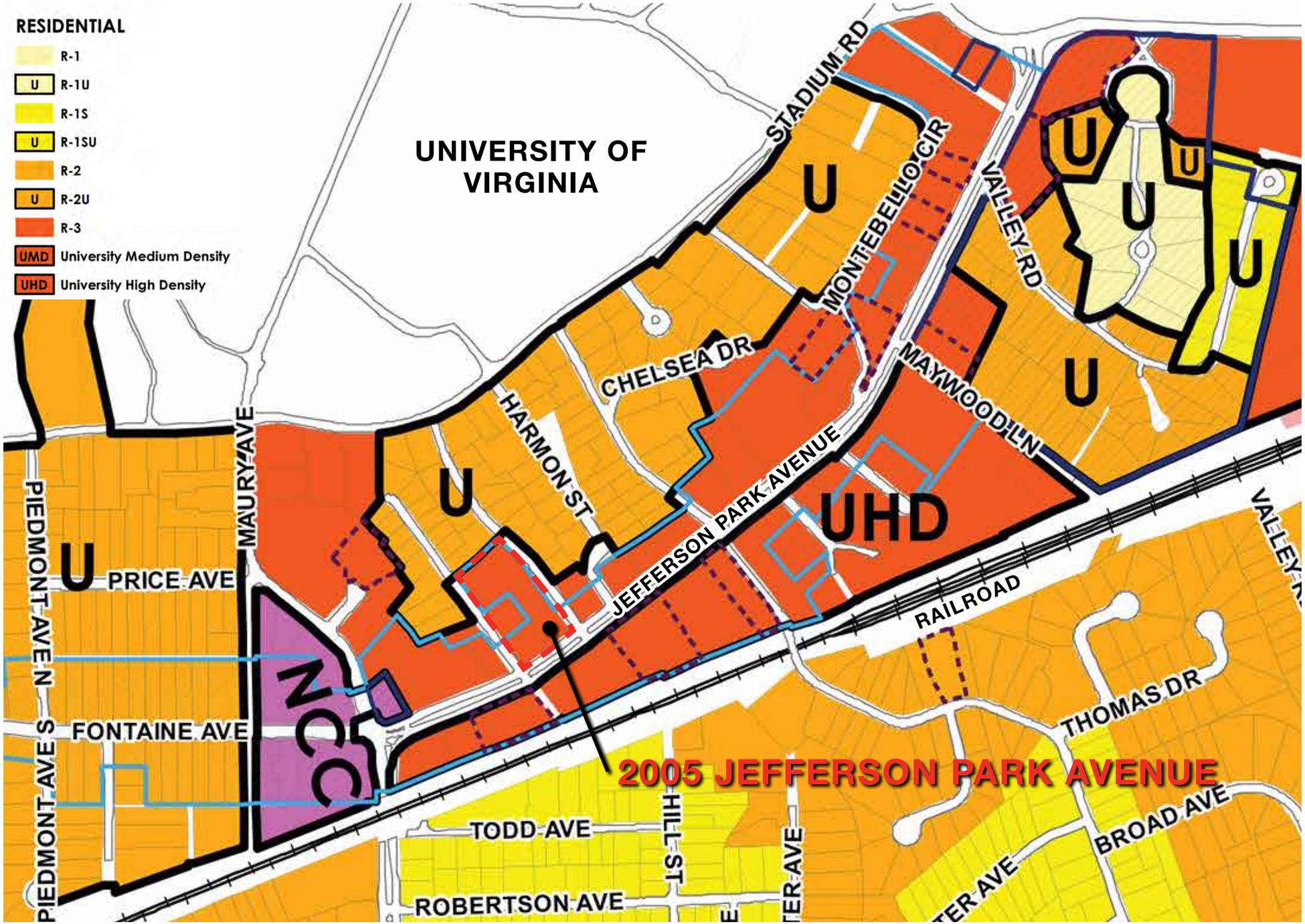
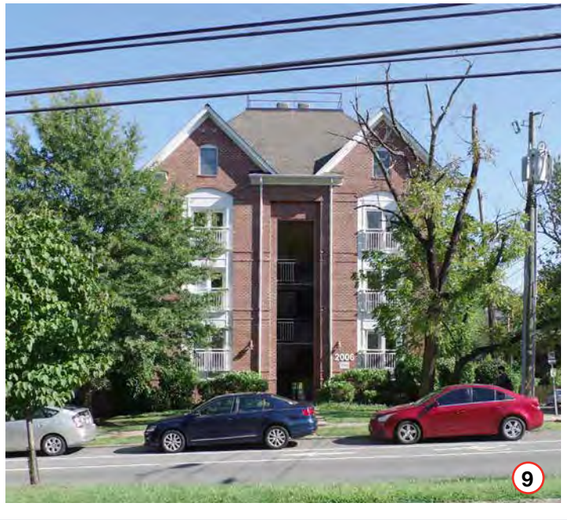
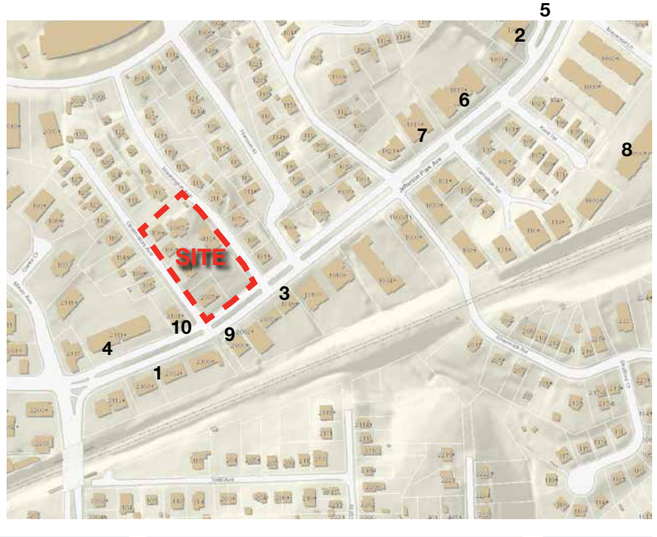


Location	**2005 Jefferson Park Ave.**
Area	**1.711 acres** (74, 531.16 SF)
Zone	**R-3**
Residential Units	up to **21 DUA** *(by right)* **22 - 87 DUA** *(by SUP)*
Parking	Two bedroom apt. or smaller: **1 space** Three or Four bedroom apt.: **2 spaces**
Height	**45'** (max) *(by right)* **80'** (22-43 DUA, *by SUP*) **101'** (44-87 DUA, *by SUP*)
Setbacks (front)	**26.35'** (average of neighboring properties)
Setbacks (side)	**20'** (corner, both sides)
Setbacks (rear)	**25' min.** **50'** (22-43 DUA, adjacent to low density residential) **75'** (44-87 DUA, adjacent to low density residential) (25' Type S-3 buffer, above 21 DUA)
Overlays	**Entrance Corridor**

Attachment A





2005 JPA
Charlottesville VA

09.23.2021

NEIGHBORHOOD CONTEXT PHOTOS - JPA CORRIDOR

All grades, counts and quantities are approximate and will change as design proceeds.

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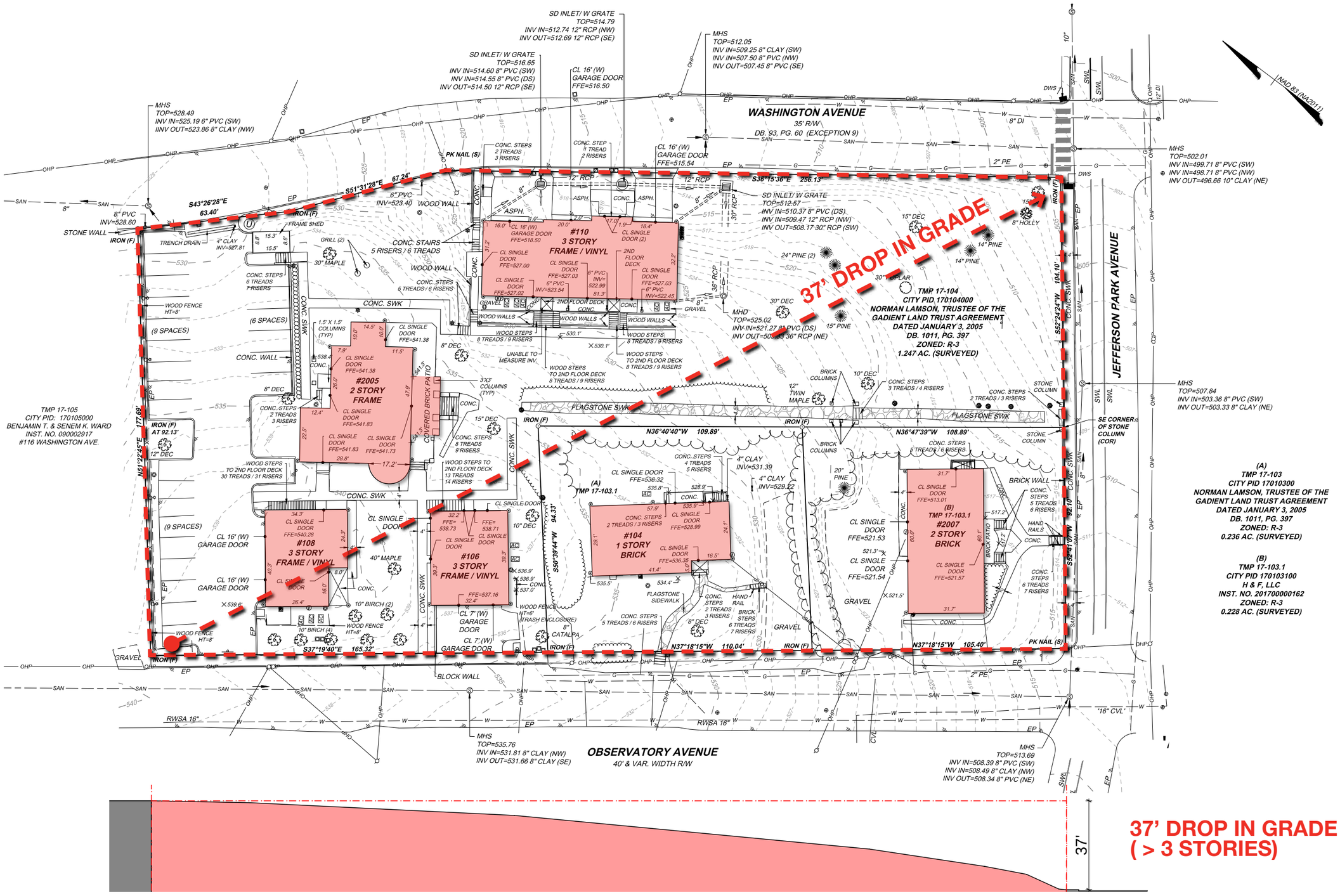
Attachment A



Attachment A

Additional justification for height and density (SUP REQUEST):

Comprehensive Plan Trends 2001 - PRESENT

The comprehensive plans of the past 20 years show the community's expectation for increased density and height along the JPA corridor, specifically serving the residential needs of UVA students, as demonstrated by the exhibits in this section.

Two decades ago, in the 2001 Comprehensive Plan, neighborhoods identified the conversion of single-family owner occupied residential homes to rental units to accommodate the increasing demand for student rentals as problematic. The Neighborhoods also identified locations closest to UVA as preferable by students. The planning commission identified higher density along transit corridors as preferable.

The 2003 Comprehensive Plan Land Use Map shows the same conditions as the present zoning.

The 2011 Housing Survey shows a density of housing units congregated 1) in the Venable neighborhood - both behind the Corner and along Madison Avenue, 2) along JPA, and 3) at public housing sites. Additions to this map have been made based on incomplete data of known built or under construction projects, showing the last decades' progress of additional housing units. While projects along West Main Street have garnered lots of attention locally, multi-family residential projects have generally been dispersed across the city's medium to high intensity zoning districts. Other than the projects along West Main Street, no significant, new, purpose-built student housing has been created in close proximity to Central Grounds, even as expectations for it to occur along the JPA corridor have grown.

The 2013 Comprehensive Plan modified the zoning in the JPA neighborhood to increase its density. Rather than UHD, R-3 and R-2U spanning east to west between the railroad and Stadium Road, the entire area was designated as High-Density residential. This vision eliminated the different designation between the 2005 JPA site and the adjacent parcel to the rear.

The 2018 draft land use maps continued this trend, treating the entire cross section of the neighborhood as the same residential density - east to west, north to south, less the commercial area at the intersection of Maury and JPA and extending west along Fontaine.

The ongoing comprehensive plan work returns to a vision of a higher density *or intensity* corridor - albeit with the same designation on either side of JPA and with the addition of a mixed-use condition rather than solely residential. The adjacent parcel to the rear, is proposed as a different designation (higher-intensity residential), with a suggested height of 5 stories. The 2005 JPA site is designated as Urban Mixed-use Corridor and suggests height may range from 5 to 8 stories. Upon implementation of these anticipated changes, the heights and densities of the two designations become more similar.

SECTION 2
COMP. PLAN TRENDS

SECTION 2:

Conversion of Owner Units to Rental: The Housing Strategy, identified the conversion of owner occupied units to rental units and the declining percentage of owner occupied properties in the community as a major concern. There has been a great deal of discussion about how we impact this trend and turn it around to our betterment, including the City becoming actively involved by providing downpayment assistance, by providing tax breaks, and even through assisting in the construction of infrastructure to serve new developments that would in turn lower development costs and reduce the price of housing. **Source: Neighborhoods**

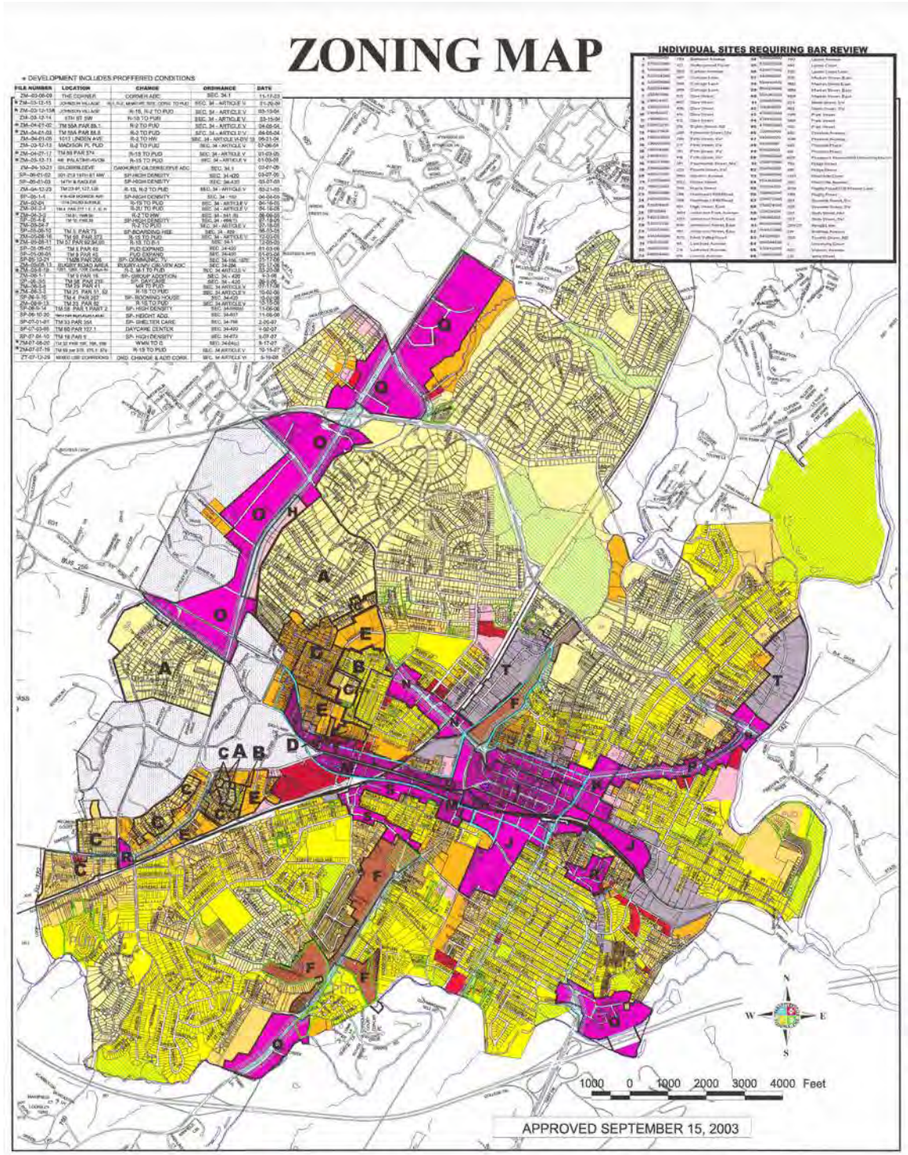
University Housing: The impacts of the University on neighborhoods are apparent to all that have been involved in this planning process. It is apparent that the University will only house 30% to 35% of its students on grounds in the future. It is becoming apparent also that students desire to live off grounds and in areas nearby the grounds and activities on the Corner. The neighborhoods are suffering because as more and more students desire to live in close proximity to the grounds, homes are being converted. **Source: Neighborhoods**

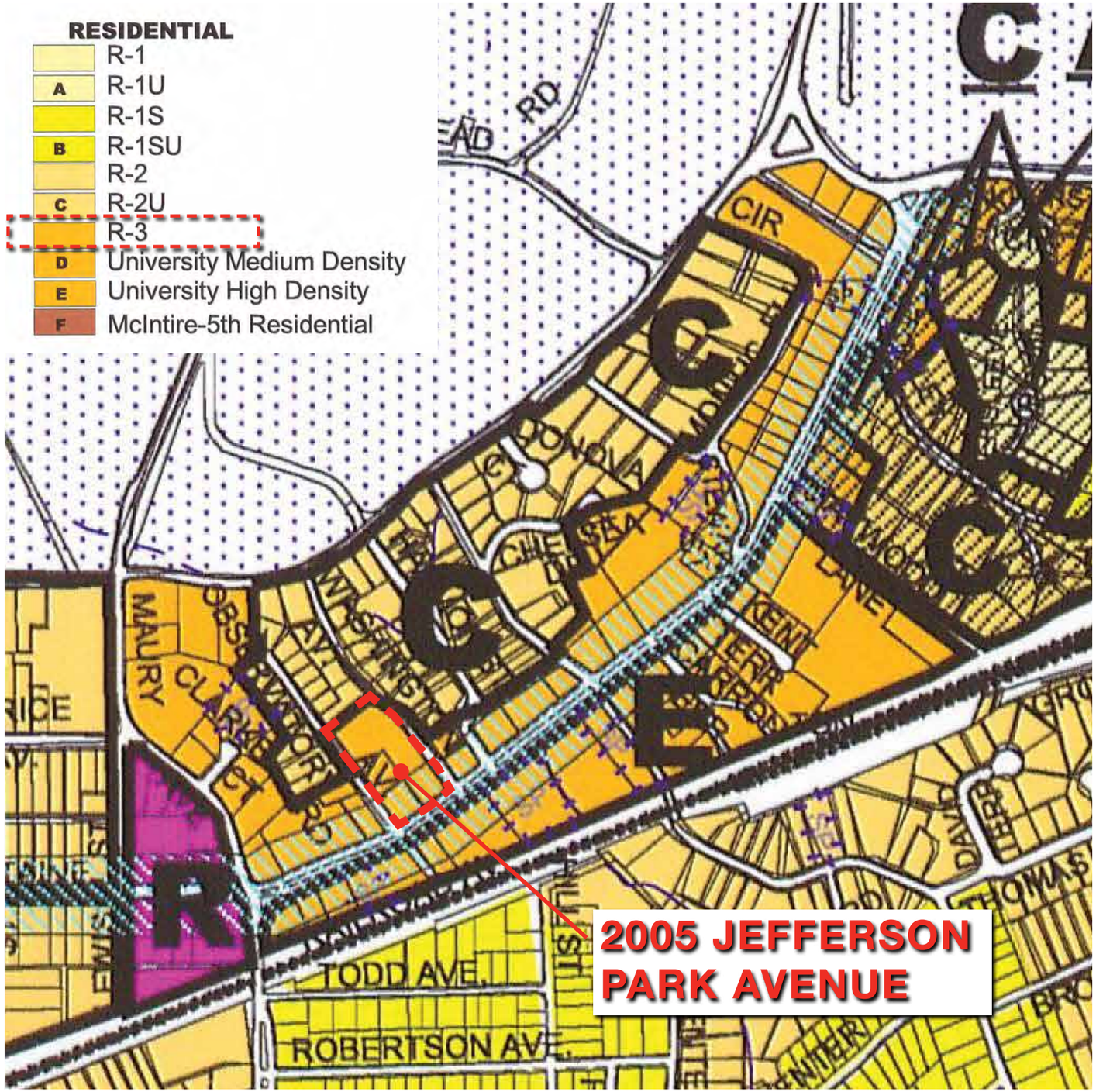
Parking near UVA: A major impact on neighborhoods surrounding the University is parking associated with the University and particularly the Health Sciences Center. The University has not provided the amount of parking that is necessary to support development on grounds or has not created the incentive to use those spaces available and as a result, students, faculty and employees are parking on streets in neighborhoods adjacent to the University and impacting the residents in a very negative way. **Source: Neighborhoods**

Transit Corridors: To increase the use of transit throughout the City and to make it a more viable transportation alternative, higher density of population will be necessary in the areas surrounding transit corridors. **Source: Planning Commission**

https://www.charlottesville.org/departments-and-services/departments-h-z/neighborhood-development-services/comprehensive-plan/comprehensive-… 1/18

Attachment A



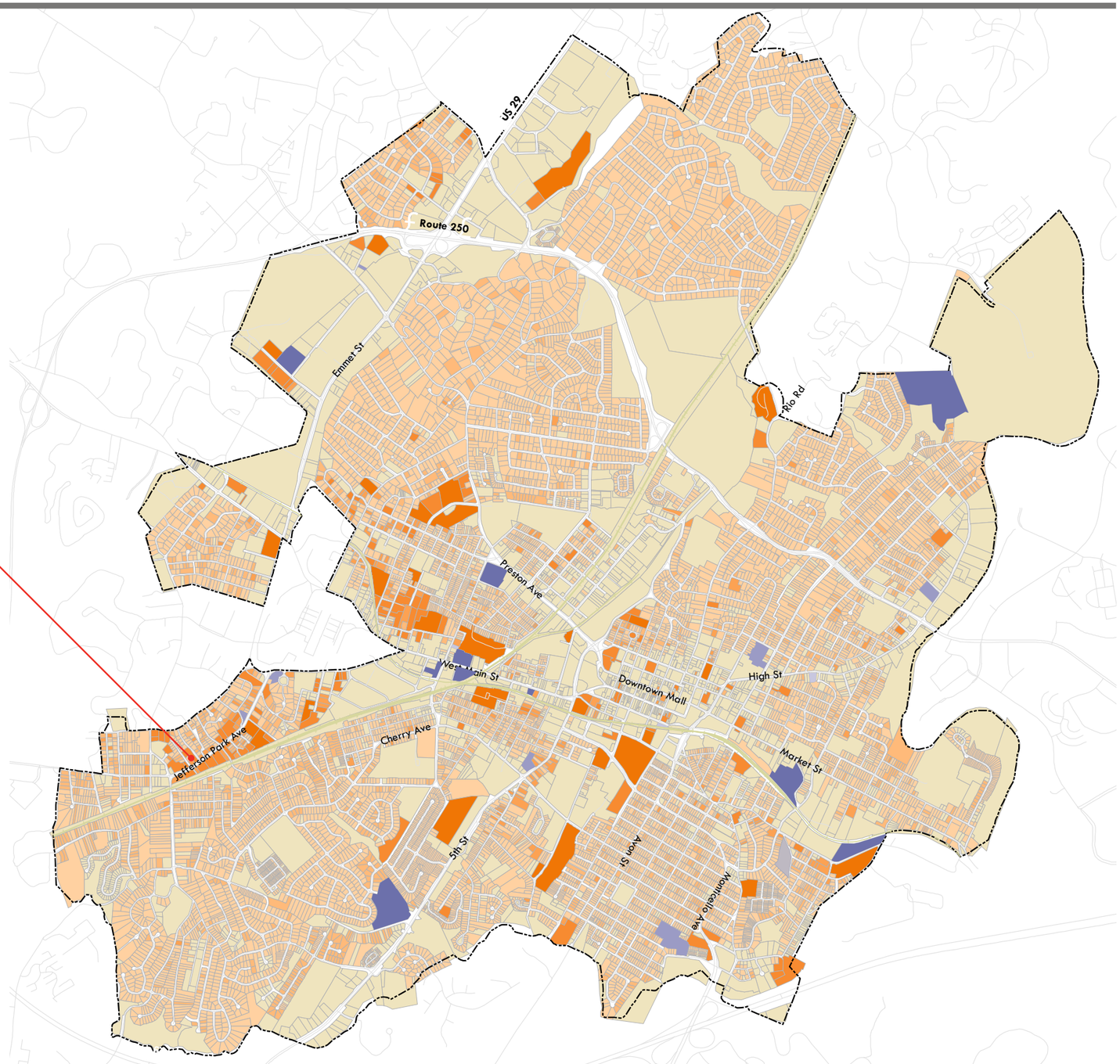


Housing Units

Number of Units on Parcel

- No Units
- 1 Unit
- 2 Units
- 3 - 10 Units
- 11 - 50 Units
- 51 - 240 Units

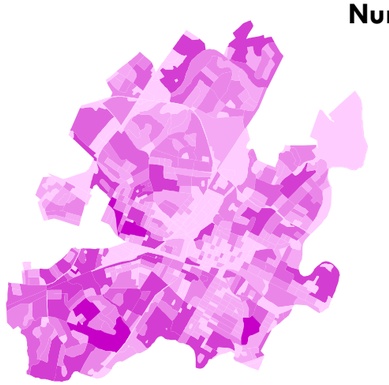
KNOWN ADDITIONAL PROJECTS SINCE 2011



2005 JEFFERSON PARK AVENUE

2011 Land Use and Housing Survey and the 2010 US Census

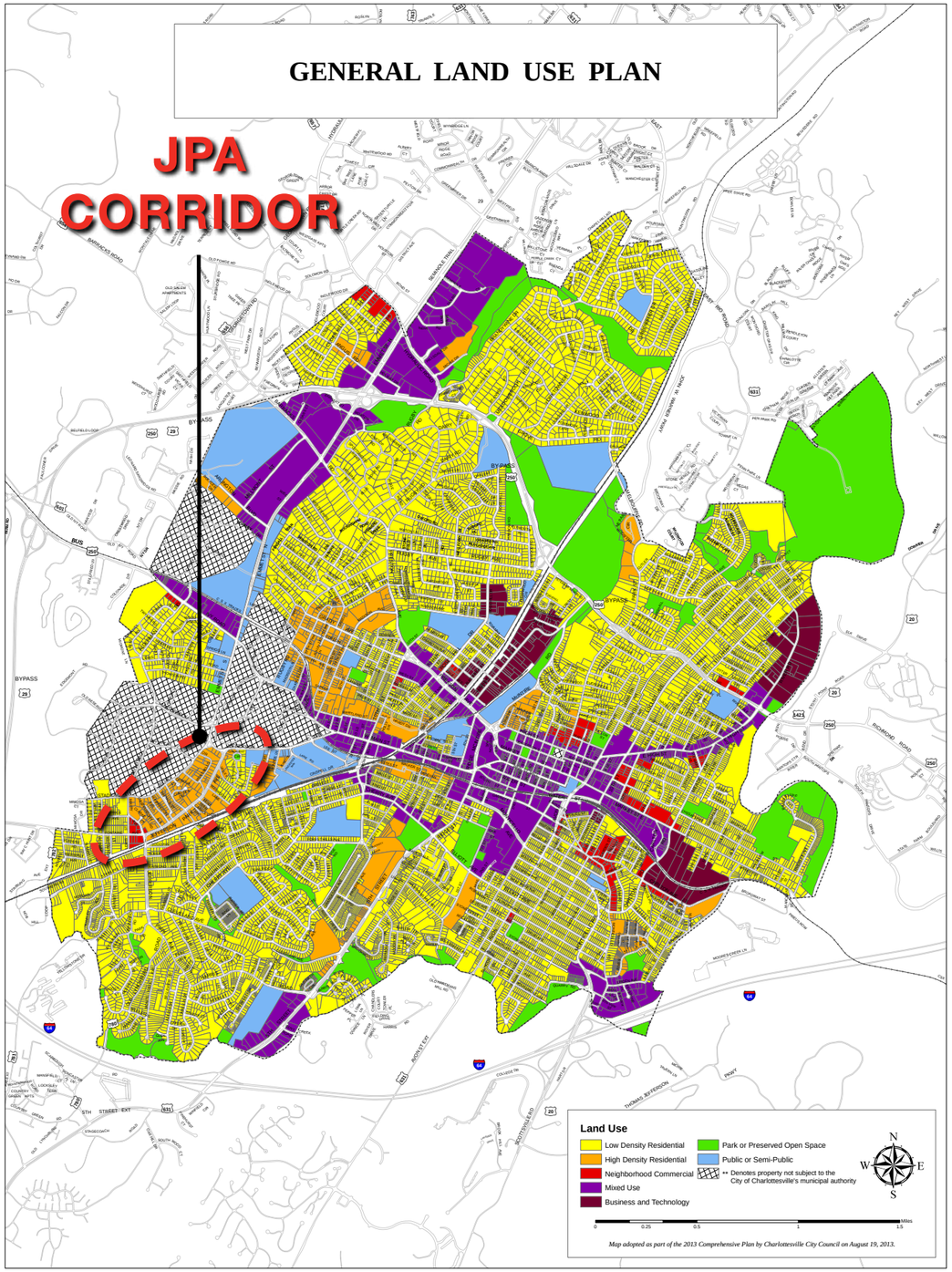
The housing unit count from the survey and the same count from the Decennial census were within 0.66% of each other, despite the very different methodologies used. The 2011 survey counted 19,062 units and the 2010 Census counted 19,189 units. Most of the variation is accounted for in neighborhoods around the University of Virginia.



Number of Units per Block

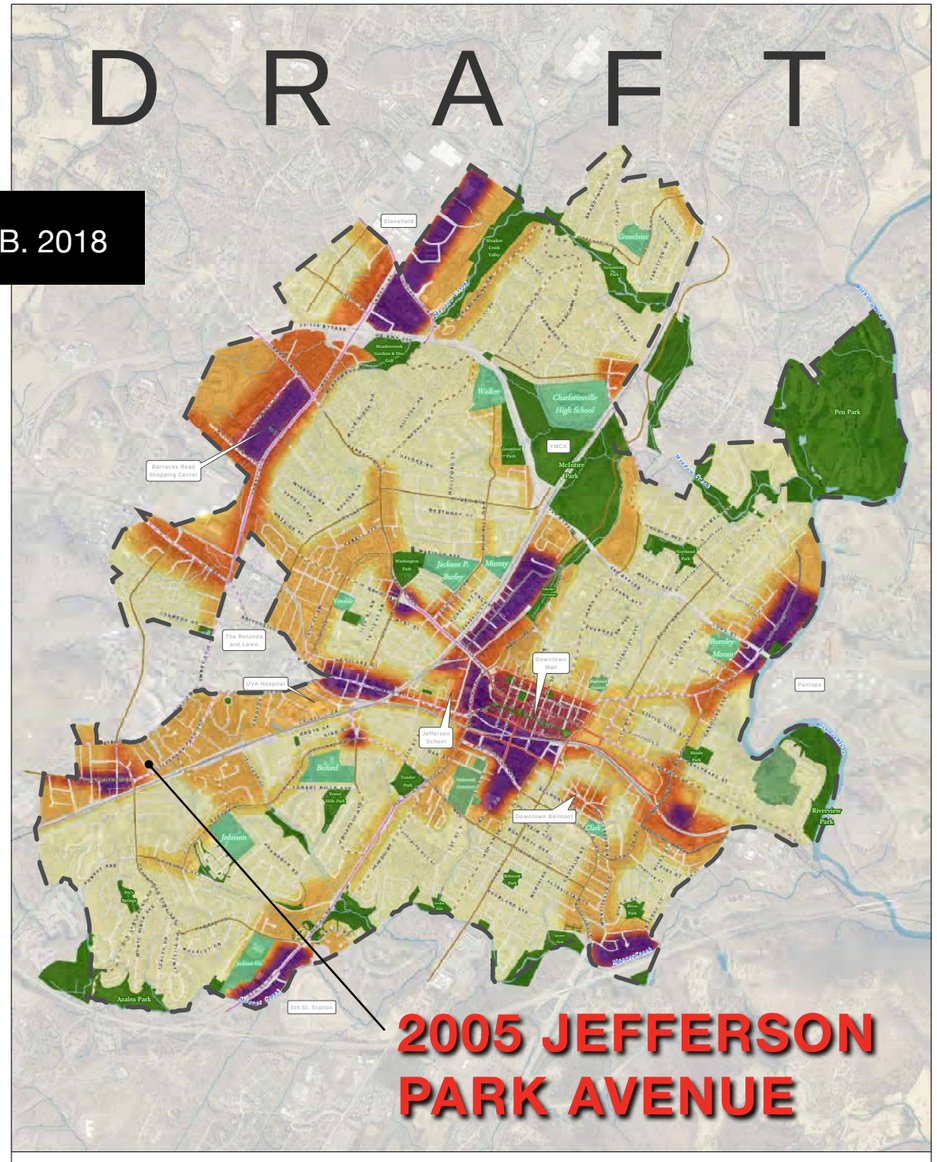
- 0 - 10 Units
- 11 - 30 Units
- 31 - 60 Units
- 61 - 100 Units
- 100 - 220 Units
- 221 - 447 Units

Attachment A



Attachment A

FEB. 2018



City of Charlottesville
Comprehensive Plan 2018
General Land Use Plan

1 inch = 1,000 feet
1:12,000 on 24"x36"

0 0.5 1
Mile

Map By: NDS, City of Charlottesville 12/06/2017
Data Source: City of Charlottesville Planning Commission and City of Charlottesville SDE 12/06/2017
Projection Information: Lambert Conformal Conic, NAD83, Virginia State Plane South

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There is no guarantee of completeness or accuracy.
The City assumes no liability arising from use of this product.

Land Use

Downtown | High Intensity | Low Intensity

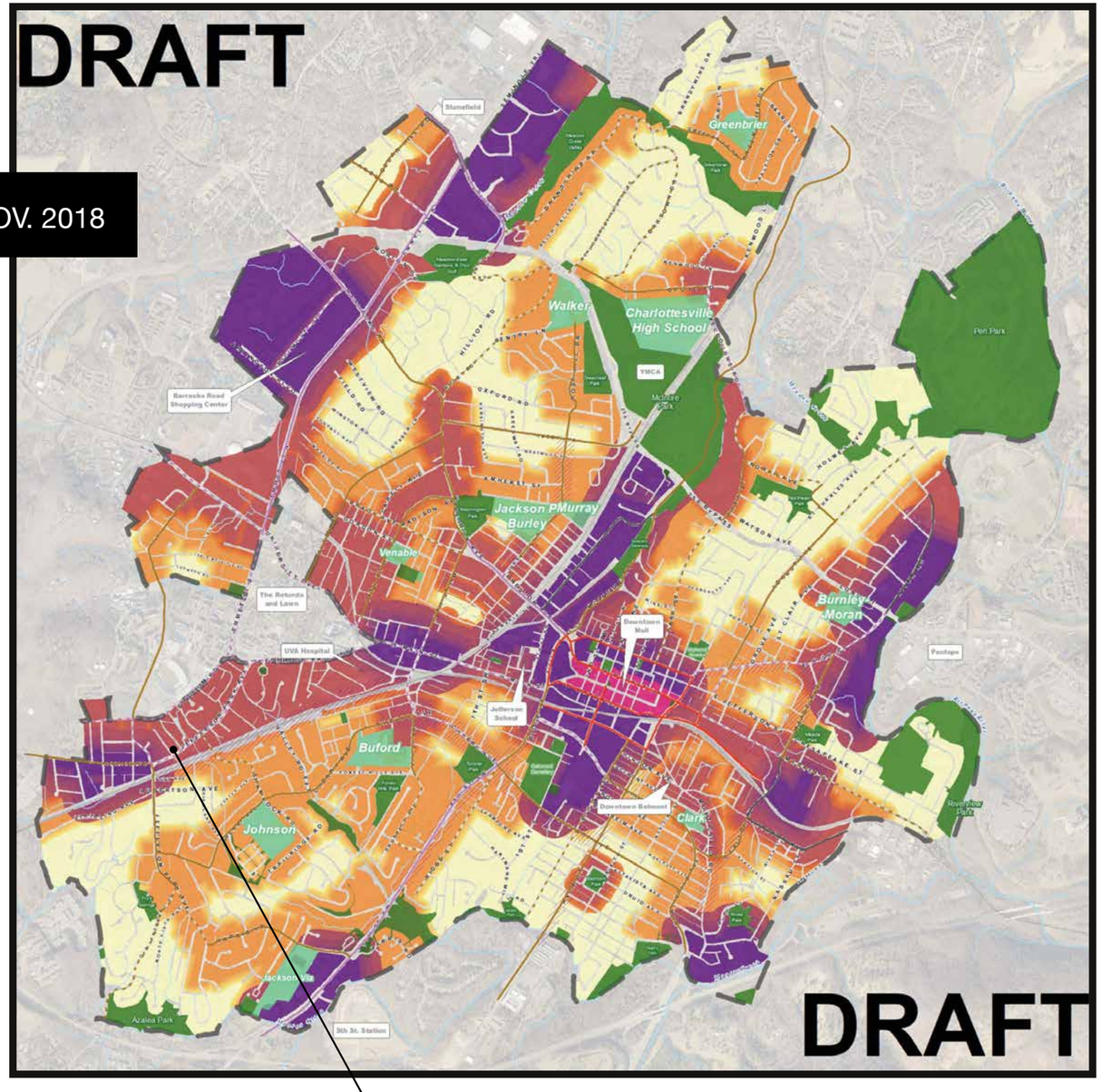
Park and Preserved Open Space
School Cemetery

STW Typology

Downtown
Industrial
Mixed Use A
Mixed Use B
Neighborhood A
Neighborhood B

N W E S

NOV. 2018



Attachment A

Draft Future Land Use Map

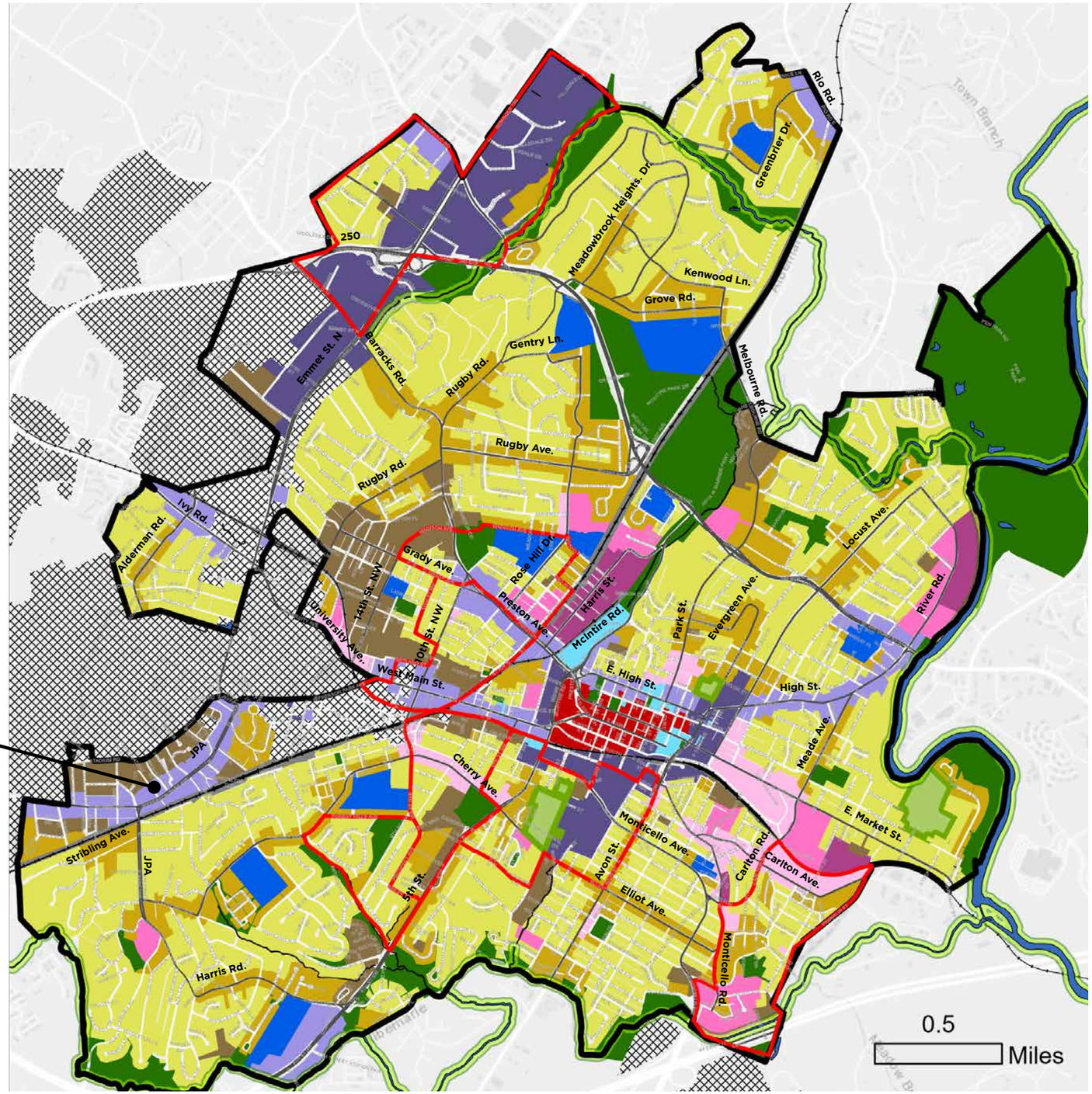
8/31/21

LAND USE CATEGORY

- Downtown Core
- Urban Mixed Use Node
- Urban Mixed Use Corridor
- Business And Technology Mixed Use
- Neighborhood Mixed Use Node
- Neighborhood Mixed Use Corridor
- Higher-Intensity Residential
- Medium-Intensity Residential
- General Residential
- Open Spaces and Parks
- Cemetery
- Civic
- Education
- UVA
- Stream Buffer
- Sensitive Community Areas

2005 JEFFERSON PARK AVENUE

For more information about the land use categories and the Sensitive Community Areas, please see the 8/31/2021 Planning Commission Work Session Presentation, available at the QR code or tinyurl.com/Cville0831.



Mixed Use Corridors

NEIGHBORHOOD MIXED USE CORRIDOR

Neighborhood mixed use areas arranged along corridors that support existing residential districts.

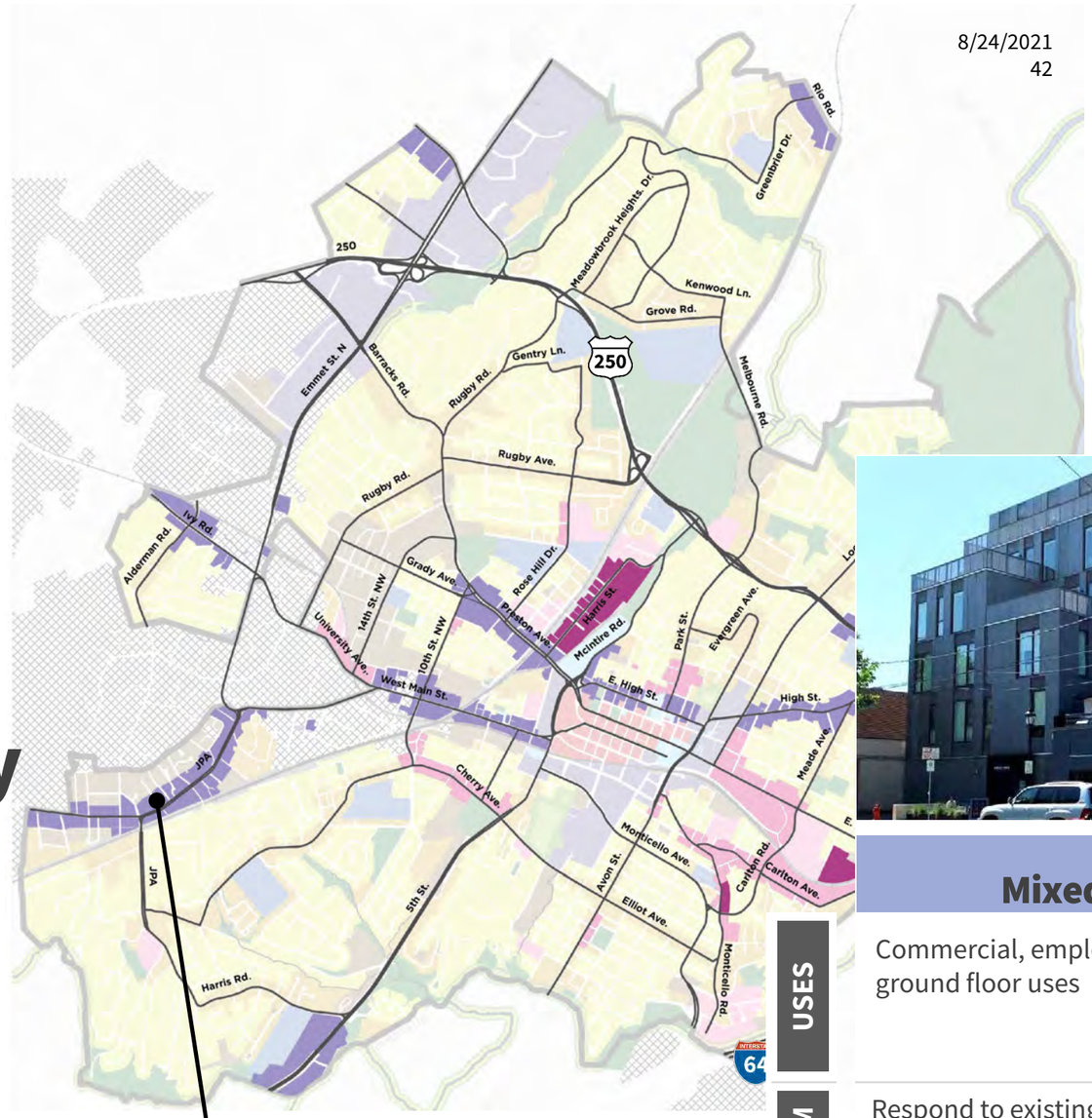
URBAN MIXED USE CORRIDOR

Higher intensity mixed use development arranged along corridors that link the employment, commercial, and civic hubs of the city.

Business & Technology

BUSINESS AND TECHNOLOGY MIXED USE

Light industrial and production uses as well as additional commercial and residential uses (where appropriate).



2005 JEFFERSON PARK AVENUE

Urban Mixed Use Corridor

USES	Commercial, employment, residential. Active ground floor uses
FORM	Respond to existing residential, environmental and historic context
HEIGHT	5 stories, up to 8 at key intersections (such as intersections of Downtown, Industrial, Mixed Use, or Neighborhood corridors in the Streets That Work plan)

Attachment A

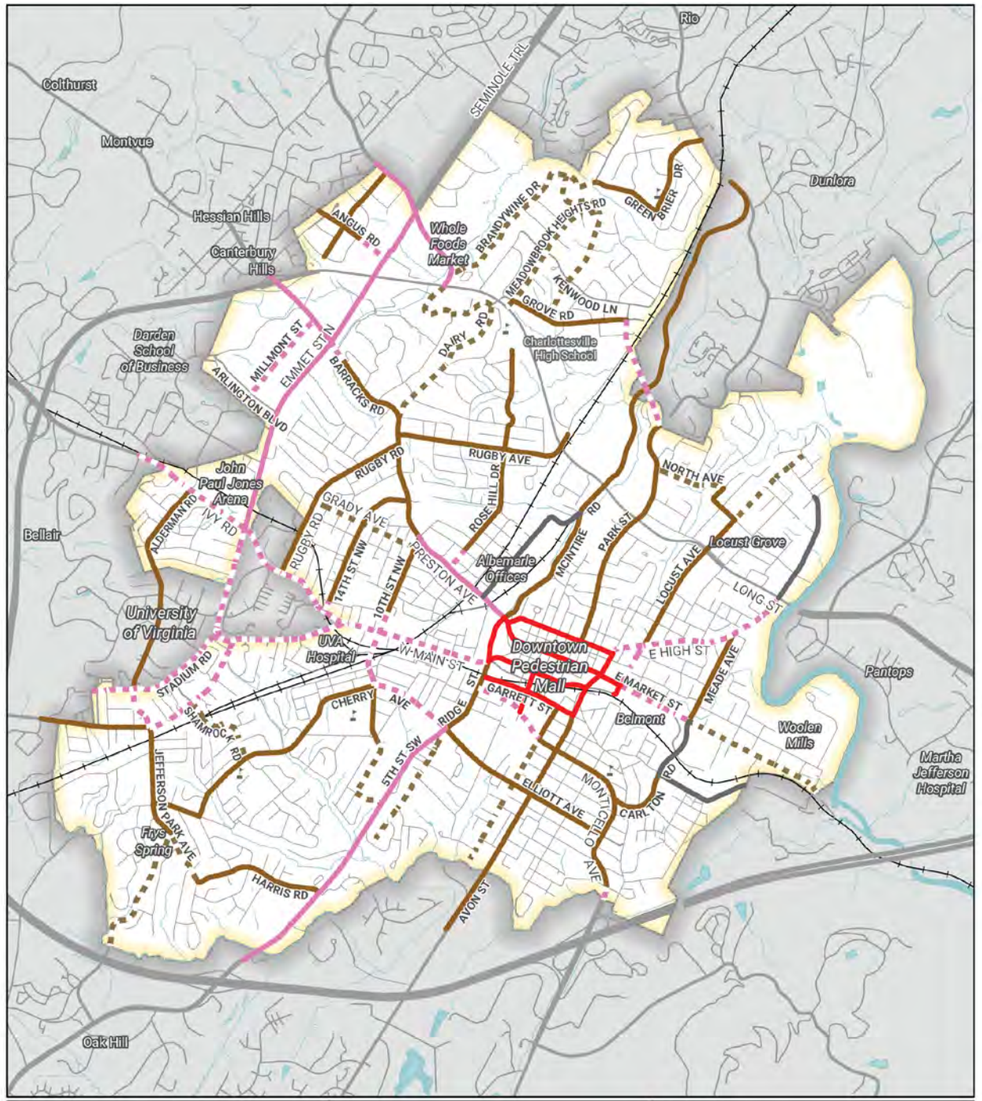


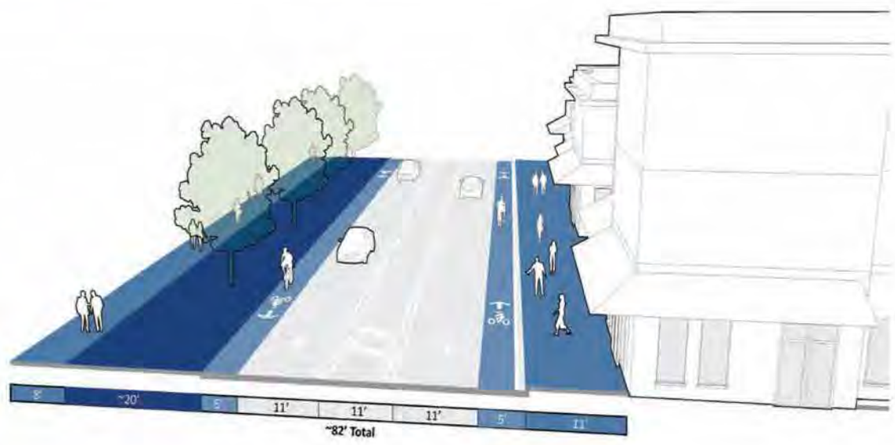
Figure 7: Charlottesville Street Typology Map

JEFFERSON PARK AVENUE IS IDENTIFIED AS A *MIXED USE B* STREET

Mixed Use B

University Avenue and segments of Jefferson Park Avenue are two examples of existing Mixed Use B streets. They are characterized by one vehicular travel lane in each direction, intermittent center turn lanes, sidewalks and bicycle facilities. These streets also may have on-street parking. The adjacent land uses may be commercial, higher density residential or institutional. These streets should support high levels of walking, bicycling, and transit as they connect important destinations within the City and surrounding county. Future development that occurs along these streets will likely include a dense mix of uses.

Existing



Attachment A

Residential

HIGHER-INTENSITY RESIDENTIAL

Neighborhoods and sites for multi-unit housing. Incentivize affordability and increased intensity to meet Affordable Housing Plan goals.

USES

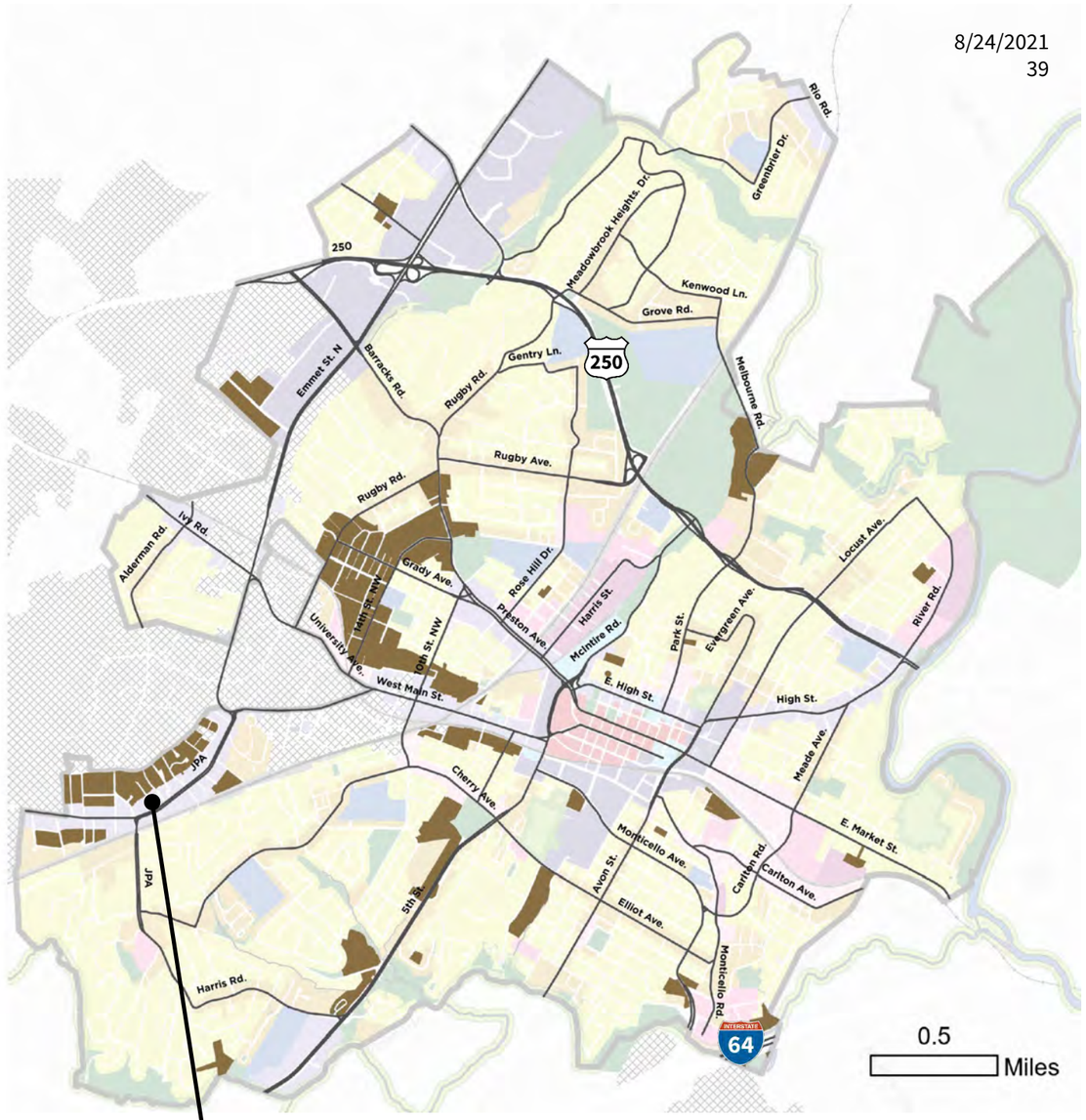
Multi-unit housing (13+). May include large and/or smaller-scaled buildings. Limited ground floor commercial uses encouraged.

FORM

All residential categories: compatible with existing residential and historic neighborhood context. Highest building heights according to context. Zoning tools will define building form and neighborhood compatibility criteria for development (e.g., lot coverage, topography, parking, etc.)

HEIGHT

Up to 5 stories.



2005 JEFFERSON PARK AVENUE

ADJACENT DESIGNATION

Attachment A

UNITS	119 units
SITE AREA	1.711 Acres
DUA	70 DUA **(SUP REQUEST)**
STORIES	7 stories at JPA, 5 stories adjacent to R-2U zoning
BUILDING HEIGHT	75', from average grade plane **(SUP REQUEST)**
PARKING	175 spaces provided

Justification for rear yard setback reduction (SUP REQUEST):

We are seeking a reduction in the rear yard setback from 75 feet to 36 feet. This request is based on the following argument that contends a setback of 75' is grossly excessive, disproportionate, and obsolete under today's view of (and vision for) this evolving neighborhood. Strict adherence to the Ordinance in this instance seems contrary to the intent originally envisioned - to protect single-family homes, and is in conflict with the long-held belief by City planners and others that reasonable increased density adjacent to the University is preferable and beneficial. The intent of the Ordinance was to separate single-family, owner-occupied homes from multi-family residential buildings. This is no longer the case in this neighborhood where only the smallest vestiges of single-family, owner-occupied residences remain. This is overwhelmingly a neighborhood of student rentals that continues its slow transition to increased density, more pedestrians, and more efficient land use where a 75-foot setback is not necessary.

For this project, the zoning ordinance requires a rear yard setback of 75' due to the property's adjacency to a low-density residential district and based upon the project's proposed density (Sec. 34-353 (b)(4)). The adjacent property has been a student rental for decades. Given, the compatible uses, we propose height as the governing metric of the setback requirement.

As suggested by planning staff, the project investigated the application of the West Main East zoning regulations on the proposed building site with regard to the rear yard setback adjacent to a low-density residential district. The WME regulations require a 20' minimum rear yard setback along with a bulk plane requirement and a 10' Type S-1 buffer. Height is limited to 52'. In comparison, the proposed design would have a 36' setback, and be approximately 56' tall adjacent to the R-2U zoning. The project would be under this hypothetical bulk plane – utilizing the WME zoning requirements of a 20' setback, and using the adjacent R-2U height of 35'. Refer to the conceptual section provided in this section.

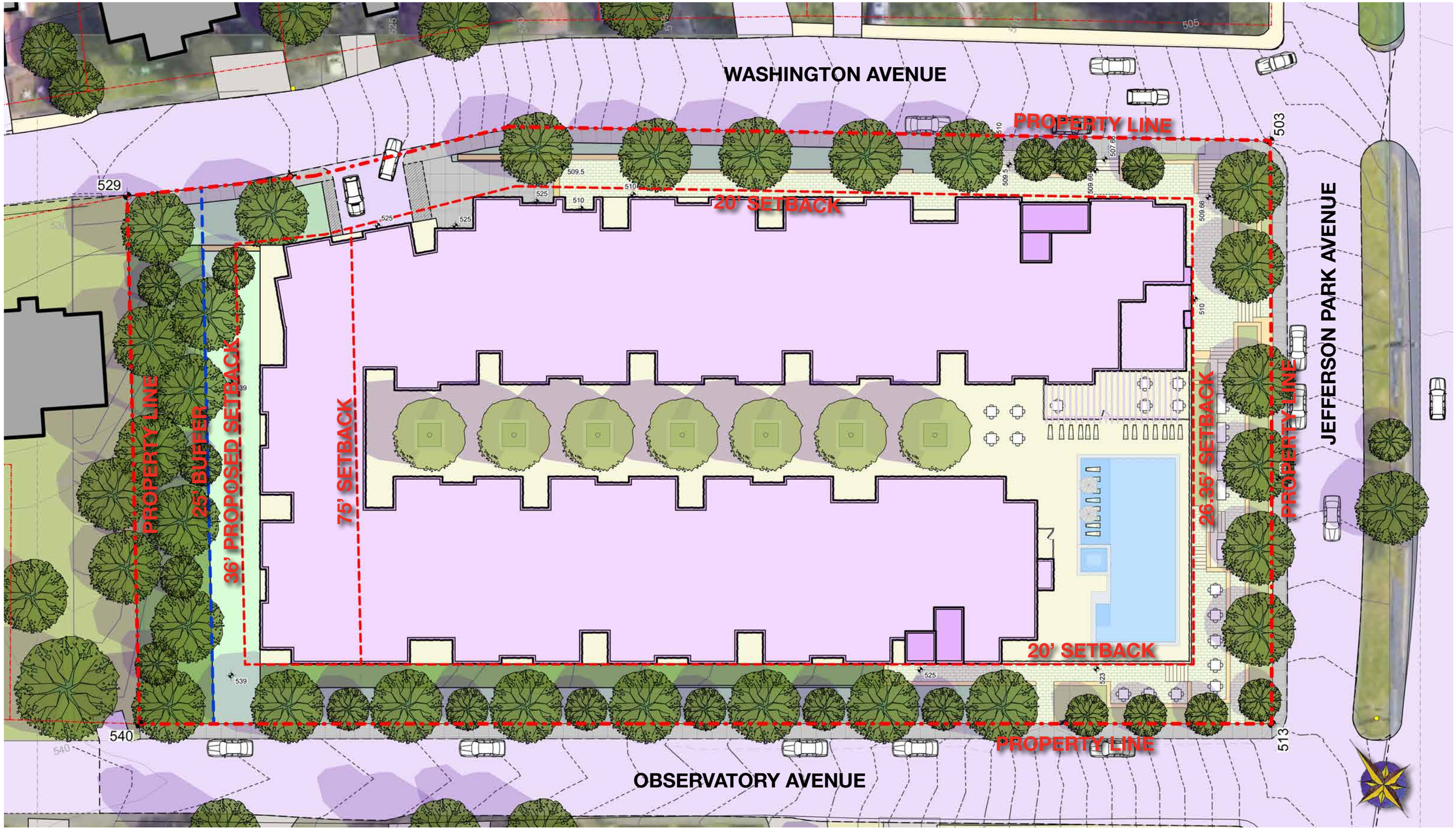
Finally, if the city's comprehensive plan work continues to follow its current path, and the zoning re-write implements the same, the adjacent zoning district will no longer be low-density. The adjacency created will be 5 stories maximum on the adjacent site to 5-8 stories on this site – with both anticipating higher-intensity residential.

In conclusion, the 75-foot setback requirement is an anachronism no longer appropriate for this evolving neighborhood.

SECTION 3
PROPOSED DESIGN

SECTION 2:

Attachment A



2005 JPA
Charlottesville VA
09.23.2021

SITE PLAN

All grades, counts and quantities are approximate and will change as design proceeds.

MITCHELL / MATTHEWS
ARCHITECTS & PLANNERS
434.979.7550

Attachment A

2005 JPA
Charlottesville VA

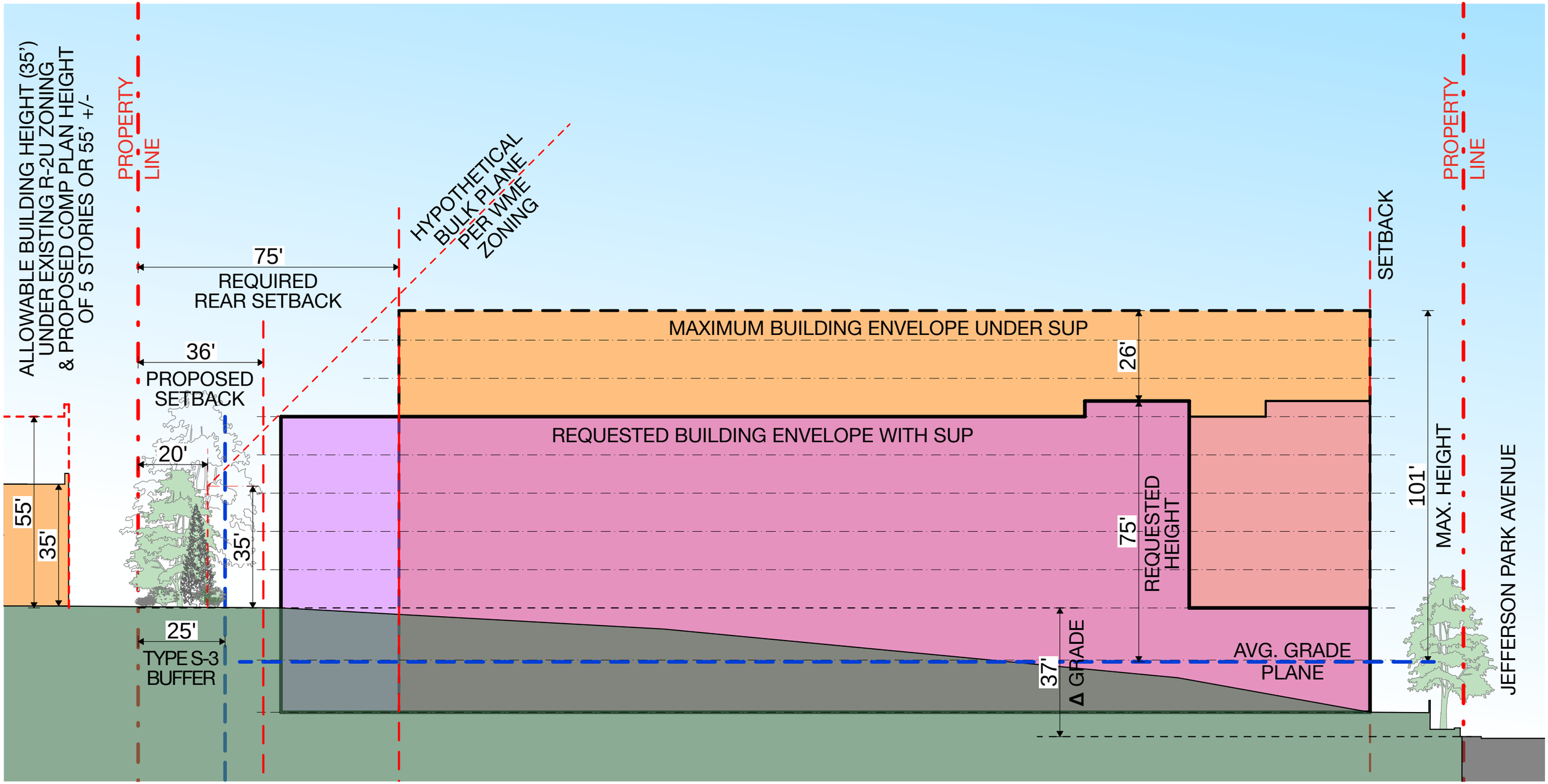
09.23.2021

PERSPECTIVE JPA & OBSERVATORY AVENUE CORNER

All grades, counts and quantities are approximate and will change as design proceeds.

MITCHELL / MATTHEWS
ARCHITECTS & PLANNERS
434.979.7550

Attachment A



COMPARISON TO BUILDABLE ENVELOPE UNDER A SPECIAL USE PERMIT

All grades, counts and quantities are approximate and will change as design proceeds.

MITCHELL / MATTHEWS
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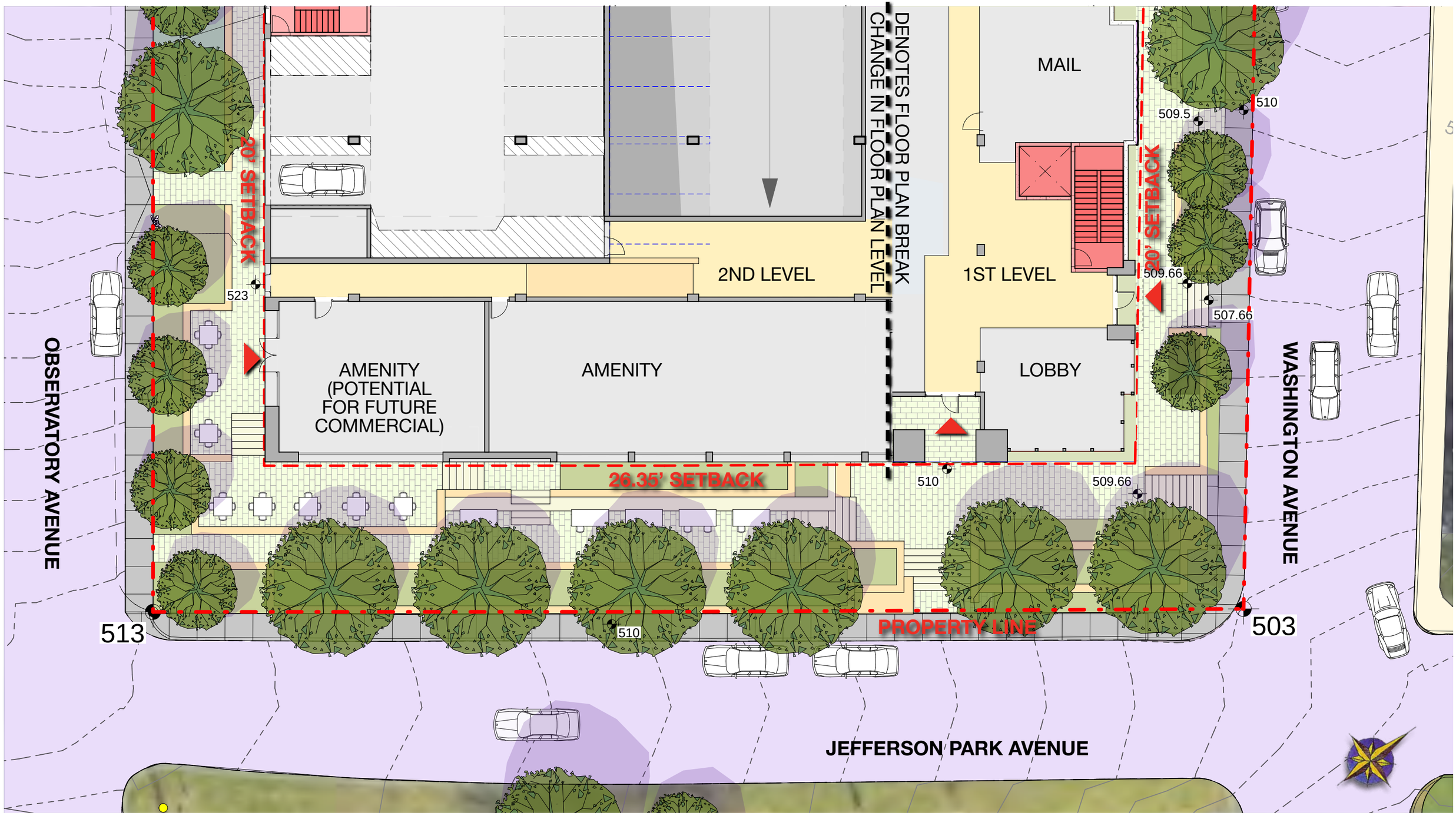
434.979.7550

Attachment A



2005 JPA
Charlottesville VA
09.23.2021

ENLARGED STREETSCAPE PLAN

All grades, counts and quantities are approximate and will change as design proceeds.

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ARCHITECTS & PLANNERS
434.979.7550

Attachment A

2005 JPA
Charlottesville VA

09.23.2021

PERSPECTIVE JPA & WASHINGTON AVENUE CORNER

All grades, counts and quantities are approximate and will change as design proceeds.

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ARCHITECTS & PLANNERS
434.979.7550

Attachment A

2005 JPA
Charlottesville VA

09.23.2021

PERSPECTIVE JPA STREETSCAPE

All grades, counts and quantities are approximate and will change as design proceeds.

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Attachment A

2005 JPA
Charlottesville VA

09.23.2021

PERSPECTIVE JPA STREETSCAPE

All grades, counts and quantities are approximate and will change as design proceeds.

MITCHELL / MATTHEWS
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434.979.7550