



PLANNING COMMISSION WORK SESSION
Wednesday, February 5, 2025 @ 6 PM
Town Hall – 2nd Floor, East Conference Room

AGENDA

CALL TO ORDER

ROLL CALL

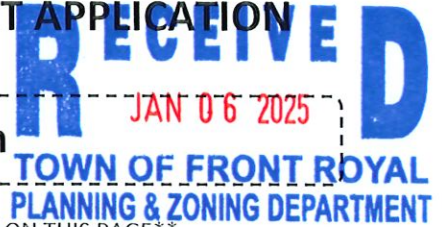
WORK SESSION BUSINESS

- **2500002** – Exterior Renovations to the structure located in the entrance corridor located at 1355 N Shenandoah Avenue, identified by tax map 20A2, section 4, block 57, parcels 23-34. The property is zoned C-1, Community Business District.
- **2500022** – A request for revisions to FRSUB1521-2019 Subdivision Plan for Happy Creek Knolls, Section 4 regarding lots 4, 5, 6, 29, and 30, submitted by Maronda Homes, Inc.
- **2500023** - A request for Final Subdivision Plat approval for a major subdivision submitted by Ali Billoo from a one (1) 3.52-acre parcel into eight (8) residential lots, one (1) stormwater management lot, and a residue lot located at 336 W. Strasburg Road, identified on tax map 20A11, section 4, parcel 23B. The property is zoned R-2, Residential District.
- **Revisions to the Schedule of Fees.**
- **Draft Zoning Ordinance Review** – Articles 3, 4, and 5.

ADJOURNMENT

**2500002 – EXTERIOR RENOVATIONS TO THE
STRUCTURE LOCATED IN THE ENTRANCE
CORRIDOR LOCATED AT 1355 N SHENANDOAH
AVENUE, IDENTIFIED BY TAX MAP 20A2, SECTION
4, BLOCK 57, PARCELS 23-34. THE PROPERTY IS
ZONED C-1, COMMUNITY BUSINESS DISTRICT.**

TOWN OF FRONT ROYAL ZONING PERMIT APPLICATION



Page 3 – Application Form

APPLICANTS ARE REQUIRED TO PROVIDE ALL INFORMATION ON THIS PAGE

1

STEP 1 – THE APPLICANT'S PART

APPLICANT STARTS HERE

WHAT IS THE STREET ADDRESS? 1355N SHENANDOAH AVE - FRONT ROYAL, VA 22630

WHAT SUBDIVISION OR DEVELOPMENT IS THE PROJECT IN? MAGESTERIAL CODE: NORTH RIVER-TOWN

PROJECT DESCRIPTION:

RENOVATION OF EXISTING UNOCCUPIED BANK (PREVIOUSLY BB&T) INTO A TWO TENANT RETAIL SPACE. INTERIOR AND EXTERIOR DEMO BEEN COMPLETED UNDER PREVIOUS DEMO PERMIT. TENANT SPACE ONE WILL BE FINISHED AT THIS TIME. TENANT SPACE TWO WILL REMAIN UNFINISHED BUT CONDITIONED AND LIT AS REQUIRED UNTIL A NEW TENANT IS FOUND AND THE SPACE IS BUILT OUT ACCORDING TO THE NEW TENANT NEEDS.

PROVIDE A DETAILED DESCRIPTION OF WHAT YOU WANT TO DO ABOVE

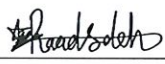
MAILING ADDRESS: 7300 BULL RUN POST OFFICE ROAD - CENTERVILLE, VA 20121

PHONE NUMBER: 540-479-7439

EMAIL: daarhelas@gmail.com

APPLICANT'S NAME: RAAD SALEH

PRINT NAME HERE

APPLICANT'S SIGNATURE: 

SIGN & DATE HERE

PROPERTY OWNER'S NAME: RAAD REAL ESTATE LLC

PRINT NAME HERE

PROPERTY OWNER'S SIGNATURE: 

SIGN & DATE HERE

COMPLETE THIS BOX ONLY IF THE PROPERTY OWNER IS DIFFERENT THAN THE APPLICANT



FOR RESIDENTIAL

CATEGORY OF PROJECT: (SELECT ONE)

☐ NEW RESIDENTIAL DWELLING

TYPE OF DWELLING UNIT: (SELECT ONE)

☐ SINGLE-FAMILY DETACHED☐ SINGLE-FAMILY ATTACHED☐ MULTI-FAMILY

FOR NONRESIDENTIAL

CATEGORY OF PROJECT: (SELECT ONE)

☐ NEW NON-RESIDENTIAL BUSINESS☐ NON-RESIDENTIAL ADDITION☐ NON-RESIDENTIAL ACCESSORY BUILDING☐ OTHER: _____

NUMBER OF EMPLOYEES: _____

HOURS OF OPERATION: _____

SITE PLAN #: _____

CONTINUE TO THE BACK OF THIS PAGE

ZONING PERMIT NUMBER:

(FOR TOWN STAFF ONLY)

TOWN OF FRONT ROYAL ZONING PERMIT APPLICATION

Page 4 – Application Form *continued*



ZONING INFORMATION

TAX IDENTIFICATION NUMBER: 20A2 457 23

PROPOSED BUILDING HEIGHT: EXISTING 26'-3"

EXISTING SQUARE FEET OF BUILDING (IF ANY): 4975 SF

PROPOSED SQUARE FEET OF BUILDING: 4975 SF

LOT SIZE: 1.101 ACRES LOT FRONTAGE: 335' @ N SHENANDOAH - 150' @ 14TH ST

ZONING DISTRICT: C-1

IS THE PROPERTY IN ANY OF THE FOLLOWING SPECIAL ZONES? CHECK ALL THAT APPLY

☒ ENTRANCE CORRIDOR; ☐ FLOODPLAIN _____; ☐ HISTORIC DISTRICT

PROVIDE THE DISTANCES OF THE PROPOSED STRUCTURE TO THE FRONT, RIGHT, LEFT & REAR PROPERTY LINES

PROPOSED SETBACKS: FRONT: EXISTING, RIGHT: EXISTING, LEFT: EXISTING, REAR: EXISTING

PROVIDE THE MINIMUM DISTANCES REQUIRED BY CODE FOR THE PROPOSED STRUCTURE TO THE FRONT, RIGHT, LEFT & REAR PROPERTY LINES

REQUIRED SETBACKS: FRONT: EXISTING, RIGHT: EXISTING, LEFT: EXISTING, REAR: EXISTING



ELECTRIC SERVICE INFORMATION

WHAT TYPE OF ELECTRIC SERVICE IS REQUESTED? ☐ SINGLE-PHASE ☒ THREE-PHASE

CHECK ONE

☐ OVERHEAD POWER LINES ☒ UNDERGROUND POWER LINES

HOW MUCH VOLTAGE AND AMPS ARE NEEDED?

VOLTAGE? EXISTING AMPS? EXISTING



WATER OR SEWER SERVICES INFORMATION

HOW MANY OF THE FOLLOWING ARE PROPOSED:

Toilets 1 NEW - 4 EXISTING; Urinals _____; Sinks 1 NEW - 2 EXISTING; Tubs/Showers NONE

ESTIMATED WATER USAGE: _____ gallons per day

SIZE OF METER (MUST MATCH WATER SERVICE SIZE): _____

IS FIRE SUPPRESSION REQUIRED? ☐ YES ☒ NO; If yes, the line size is _____

APPLICANT STOPS HERE

TOWN OF FRONT ROYAL ZONING PERMIT APPLICATION

Page 6 –PERMIT ISSUANCE WORKSHEET *continued*

(NOT FOR DISTRIBUTION TO APPLICANT)

3



STEP 3 – DEPT. OF PLANNING & ZONING (THE SECTION IS COMPLETED BY TOWN STAFF)

Have all departments issued approval pending fee payment? ☐ YES ☐ NO INITIALS: _____

Required Application Fees		
Type of Fee	Unit Price (if applicable)	Fee Amount
Application Fee (DUE AT SUBMISSION)		
Proffer		
SUBTOTAL		
Electric Connection Fee		
Underground Inspection Fee		
Services over 125'		
Poles	\$375.00 per pole	
Conductor	\$1.50 per foot	
Transformer Cost		
SUBTOTAL		
Water Connection Fee		
Water Additional Fee		
Fire Suppression Fee		
Sewer Connection Fee		
Sewer Additional Fee		
SUBTOTAL		
TOTAL		

TRANSMIT INFORMATION REGARDING REQUIRED FEES AND DEPARTMENT APPROVALS TO FINANCE FOR PERMIT ISSUANCE AFTER PAYMENT



4

\$ STEP 4 – DEPT. OF FINANCE (FOR STAFF ONLY)

Have all taxes been paid in full? ☐ YES ☐ NO INITIALS: _____

Have all application fees been paid in full? ☐ YES ☒ NO INITIALS: CJB

Emailed 1-6-25

Comments:

FINANCE CONSENT FOR ZONING PERMIT

DATE

RAAD REAL ESTATE BUILDING RENOVATIONS

1355 N SHENANDOAH AVE
FRONT ROYAL

WARREN COUNTY, VA, 22630

N. Shenandoah Ave

Battleview Parkway

N. Royal Ave

E 6th St

Happy Creek Rd

Heritage Hall Front Royal

Chimney Field Park

Arby's

Randolph-Macon Academy

VICINITY MAP

DRAWING INDEX (ARCHITECTURAL)

DWG. NO.	DESCRIPTION
G100	COVER SHEET
G101	ACCESSIBILITY DETAILS SHEET 1
G102	ACCESSIBILITY DETAILS SHEET 2
A100	FIRST FLOOR PLAN LIFE SAFETY
A101	FIRST FLOOR - DIMENSIONAL PLAN - MATCH LINE A-A
A102	FIRST FLOOR - DIMENSIONAL PLAN - MATCH LINE B-B
A300	NORTH AND SOUTH ELEVATIONS
A301	WEST AND EAST ELEVATIONS
A302	PANEL ELEVATIONS
A303	PANEL ELEVATIONS
A304	PANEL SECTIONS
A400	ENLARGED UNISEX BATHROOM AND ELEVATIONS
A600	DOOR SCHEDULE AND TYPES

DRAWING INDEX - STRUCTURAL (GATEWAY ENGINEERS)

DWG. NO.	DESCRIPTION
S000	GENERAL NOTES
S100	FOUNDATION PLAN
S200	ELEVATION
S300	SECTION AND DETAILS

ENERGY CODE COMPLIANCE:

1. THE BUILDING ENVELOPE SHALL GENERALLY REMAIN UNCHANGED EXCEPT WHERE STOREFRONT SYSTEMS ARE TO BE INSTALLED AS SHOWN ON THESE PLANS.

2. THE EXISTING FIBERGLASS INSULATION SHALL REMAIN EXCEPT WHERE WALLS HAVE BEEN REMOVED. EXISTING VAPOR BARRIER SHALL REMAIN.

3. NEW WALL OR CEILING CAVITY INSULATION SHALL BE AS FOLLOWS:
-EXTERIOR WALLS: R-19 FIBERGLASS W/VAPOR BARRIER
-DEMISING WALLS: R-21 MINERAL WOOL (UNFACED)
-CEILINGS: R-30 FIBERGLASS w/VAPOR BARRIER

NOTE: DAMAGED OR MISSING INSULATION SHALL BE REPLACED TO MATCH EXISTING.

4. GLAZING USED IN STOREFRONT WALLS SHALL BE DOUBLE PANE, LOW-E, INSULATED AND SHALL MEET THE MINIMUM REQUIREMENTS OF 2018 IECC.

5. GLAZING/STOREFRONT WALL SYSTEM INSTALLER SHALL PROVIDE SHOP DRAWINGS AND SHALL VERIFY IECC COMPLIANCE PRIOT TO INSTALLATION.

6. ENERGY CODE COMPLIANCE FOR MECHANICAL AND ELECTRICAL SYSTEMS SHALL BE SUBMITTED SEPERATELY AND WILL BE PROVIDED BY THE MEP ENGINEER.

U-FACTOR: .032 OR LESS
SHGC: 0.25 OR LESS

MATERIAL SPECS:

EXTERIOR:
AMERICLAD AC6000 FLUSH ALUMINUM PANEL SYSTEM
THICKNESS: 0.063"
FINISH: KYNAR 500/HYLAR 5000 RESIN
COLORS: MAIN SCREEN WALLS: CHARCOAL GRAY
OBELISK WALLS: AGED PENNY
EXTRUSIONS, FLASHINGS, AND BRAKE METAL TO MATCH

EXTERIOR INSULATION FINISH SYSTEM (EIFS): LA HABRA
FINISH: SMOOTH
COLOR TO BE: MOONSTONE 10446L (51) - PAREX USA

1x6 T&G CEDAR PLANKS
(ABOVE EYEBROWS & AT ENTRY CANOPY CEILINGS)
MFG: MINIWAX EXTERIOR OIL BASED (OR EQUAL)
COLOR: DRIFTWOOD
FINISH: SATIN

EXTERIOR LOUVERS: AMERICLAD AC-815 - 4" ALUMINUM VENTILATED PANEL
FINISH: KYNAR 500SATIN /MATTE
COLOR: BLACK

EXTERIOR PAINT: SHERWIN WILLIAMS - LOXON XP MASONRY PAINT
(AT ALL EXISTING BRICK)
PRIMER: PER MANUFACTURER INSTRUCTIONS
COLOR: CHARCOAL GRAY (TO MATCH SIDING)
FINISH: SATIN

SHERWIN WILLIAMS KEM-400
(EXTERIOR STEEL COLUMNS @ ENTRANCE CANOPIES)
PRIMER: PER MANUFACTURER INSTRUCTIONS
COLOR: BLACK
FINISH: SATIN

STOREFRONT: TUBELITE THERMAL-BLOCK TU14000 (4 1/2" CENTER PANE)
COLOR: BLACK
GLAZING: 1" DOUBLE PANE (TWO 1/4" PANES w/GAP)
CLEAR, LOW-E, TEMPERED, TINTED

INTERIOR WALLS:
RESTROOMS, HALL, & JANITOR CLOSET:
5/8" GYPSUM (SMOOTH, PAINTED FINISH)
COLOR: OFF-WHITE
FINISH: SEMI-GLOSS

SALES FLOOR: HORIZONTAL SLATWALL PANELS
COLOR: WALNUT

CIGAR ROOM: 1x6 T&G CEDAR PLANKS
COLOR: NATURAL
FINISH: SATIN

INTERIOR CEILINGS:
RESTROOMS, HALL, & JANITOR CLOSET:
5/8" GYPSUM (SMOOTH, PAINTED FINISH)
COLOR: OFF-WHITE
FINISH: SEMI-GLOSS

SALES FLOOR: 5/8" GYPSUM (SMOOTH, PAINTED FINISH)
COLOR: BLACK
FINISH: FLAT

CIGAR ROOM: 1x6 CEDAR T&G PLANKS
COLOR: NATURAL
FINISH: SATIN

INTERIOR FLOORING: ALL AREAS:
COLOR: VINYL LOCK-TOGETHER PLANKS
COLOR: GRAY (WOOD GRAIN)

EXTERIOR LIGHTS: ALL LIGHTS PER ELECTRICAL ENGINEER DRAWINGS AND MUST BE DARK SKY APPROVED PER FRONT ROYAL ENTRANCE CORRIDOR ORDINANCE

ENTRY CANOPIES: SHALLOW SQUARE RECESSED LED
NORA MODEL: NLCBS-45612278B

SCREENWALL CAP: CONCEALED ROPE LED

SCREENWALL SCONSE: DARK SKY LED
ARTIKA MODEL: 12OUT-DS-M8

EXISTING BLDG

PAINTED PARKING ACCESS
FULL LENGTH OF PARKING SPACE
PER ADA STANDARDS

INSTALL NEW HANDICAPPED
PARKING SIGN
(SEE G01 FOR POST MOUNTING)

5'-0" WIDE PAINTED PARKING
WALKWAY

INSTALL NEW HANDICAPPED
PARKING SIGNS
(SEE G01 FOR POST MOUNTING)

PAINTED PARKING ACCESS
FULL LENGTH OF PARKING SPACE
PER ADA STANDARDS

N. SHENANDOAH AVE

W 13TH ST.

AERIAL VIEW

EXISTING CONDITIONS:

1. THE DRAWINGS SHOW GENERAL INFORMATION ONLY. IT SHALL BE THE RESPONSIBILITY OF THE BUILDER TO EXAMINE THE SITE TO DETERMINE THE EXACT EXISTING CONDITIONS AND CHARACTER AND EXTENT OF THE WORK TO BE PERFORMED AND OPERATIONS REQUIRED.

2. THE FAILURE OR OMISSION OF THE BUILDER TO VISIT THE SITE AND ACQUAINT HIMSELF WITH THE EXISTING CONDITIONS SHALL IN NO WAY RELIEVE, HIM FROM OBLIGATIONS WITH RESPECT TO THIS CONTRACT.

3. THE INFORMATION INDICATED ON THE DRAWINGS REPRESENTS THE BEST INFORMATION AVAILABLE AS TO THE CHARACTER OR THE MATERIALS TO BE ENCOUNTERED AND THEIR LOCATIONS.

EXISTING BUILDING INFORMATION:

ADDRESS:

1355 N SHENANDOAH AVE
FRONT ROYAL,
WARREN COUNTY, VA, 22630

CONSTRUCTION TYPE: TYPE VB ALLOWABLE 9,000 SQ. FT.
ZONE:

C-1 & ENTRANCE CORRIDOR

OCCUPANCY CLASSIFICATIONS
M - MERCANTILE 4975 SF/60 = 83 OCCUPANTS
TOTAL OCCUPANCY = 83

RESTROOMS PER TENANT:
ONE UNISEX PER TENANT
NUMBER OF TOILET FIXTURES REQUIRED PER TENANT / SUPPLIED
1 REQUIRED / 1 TOILET SUPPLIED - MENS
1 REQUIRED / 1 TOILET SUPPLIED - WOMENS
1 UNISEX OK (LESS THAN 50 OCCUPANTS)
NUMBER OF LAVATORIES REQUIRED / SUPPLIED
1 REQUIRED / 1 SUPPLIED - MENS
1 REQUIRED / 1 SUPPLIED - WOMENS
1 UNISEX OK (LESS THAN 50 OCCUPANTS)
DRINKING FOUNTAINS - 1 REQUIRED / 1 SUPPLIED (PER TENANT SPACE)

BUILDING IS NOT SPRINKLED
NUMBER OF FIRE EXTINGUISHERS - LOCATIONS PER FIRE INSPECTOR

PROJECT DESCRIPTION:

INTERIOR AND EXTERIOR REMODEL OF AN EXISTING 4975 SF ONE STORY BUILDING INCLUDING EXTERIOR STOREFRONT WINDOWS, ENTRANCE DOORS, EXTERIOR WALL PANELS, GENERAL PATCH, REPAIR, AND PAINT, INCLUDING REMODEL AND RENOVATION OF APPROXIMATELY 2467 SF SHOWROOM, CIGAR ROOM, AND ADA UNISEX RESTROOM, AND A JANITOR ROOM.

CONVERSION OF A ONE-STORY WALK-IN BANK WITH DRIVE THROUGH EXTERIOR TELLER STATIONS, PAYED PARKING AREAS AND LANDSCAPED AREAS. THE PROJECT WILL BECOME A TWO-TENANT MERCANTILE BUILDING, WITH THE ENTIRE EXTERIOR OF NEW AND REPAIRED EXTERIOR BRICK IS TO BE PAINTED A SMOKEY GREY COLOR TO UNIFY THE STRUCTURE AND TO SERVE AS A CONSISTENT BACKGROUND FOR THE NEW EXTERIOR SCREENING ELEMENTS.

THE GREAT MAJORITY OF INTERIOR PARTITIONS AND CEILINGS ARE TO BE REMOVED WHILE THE EXISTING HVAC AND ELECTRICAL SYSTEMS ARE TO BE MAINTAINED AND REROUTED AS REQUIRED. THE ADDITION OF ONE UNISEX TOILET ROOM ADJACENT TO THE EXISTING PLUMBING FIXTURES IS THE ONLY MECHANICAL ADDITION.

THE EXISTING BRICK VENEER AND COMPOSITION SHINGLE ROOF WILL REMAIN BASICALLY UNCHANGED OTHER THAN PAINT AND THE REPLACEMENT OF EXISTING DOORS AND WINDOWS WITH NEW ALUMINUM STOREFRONT OF INCREASED NUMBER AND AREA.

THE ROOF AND EXISTING GUTTERS AND DOWNSPOUTS WILL REMAIN UNCHANGED IN FUNCTION AND LOCATION BUT WILL BE CONCEALED BEHIND NEW "FREESTANDING" SCREENING DEVICES PORTIONS OF WHICH MAY CONTAIN BACK-LIGHTED SIGNAGE.

THE ENTIRE DRIVE THROUGH TELLER STATIONS AND THEIR ROOF, COLUMNS, CURBS, AND TELLER SYSTEMS AND CONCRETE PAVING HAVE BEEN REMOVED UNDER PREVIOUS DEMOLITION PERMIT AND THE LOT WILL NEED TO BE RE-PAVED TO MATCH REFURBISHED PARKING LOT PAVING.

THE LANDSCAPING WILL BE UPDATED TO PROVIDE A CLEANER, MORE URBAN ENVIRONMENT THROUGHOUT THE PROJECT WHILE EMPHASIZING THE NEW ENTRY STRUCTURES.

NEW SIGNAGE IS TO BE SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION.

BUILDING CODE INFORMATION:

VIRGINIA UNIFORM STATEWIDE BUILDING CODE:

VIRGINIA CONSTRUCTION CODE (2021 IBC)
VIRGINIA EXISTING BUILDING CODE (2021 IBC)
2009 INTERNATIONAL BUILDING CODE APPENDIX H -SIGNS
2009 ICC-A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES

ENERGY CODE INFORMATION:

2021 VIRGINIA ENERGY CODE (2021 IECC)
2019 VIRGINIA COMMERCIAL ENERGY CODE (2019 ASHRAE 90.1)
BUILDING ENVELOPE: SEE NOTES THIS SHEET
ELECTRICAL: BY ENGINEER
HVAC : BY ENGINEER

PROJECT CONTACT INFORMATION:

ARCHITECT:

SCHEER HYSONG ARCHITECTURE LLC
RICK HYSONG, ASSOC. AIA
PATRICK SCHEER, RA
222 W CUNNINGHAM ST SUITE 112
BUTLER, PA 16001

OWNER & BUILDER:

RAAD SALEH
10110 BATTLEVIEW PKWY
MANASSAS, VA, 20109

TOTAL BUILDING AREA 4,975 S.F.

TENANT 'A' 2216 S.F. / 60 S.F. = 37 OCCUPANTS
TENANT 'B' 2759 S.F. / 60 S.F. = 46 OCCUPANTS
TOTAL OCCUPANTS: 4,975 S.F./ 60 S.F. = 83 OCCUPANTS

PARKING SPACES :

4,975 SF / 200 SF = 25 REQUIRED / 35 PROVIDED
(INCLUDING 3 HANDICAP SPACES)

NOTE:
ELECTRICAL, MECHANICAL AND PLUMBING
SUBMITTALS SHALL BE DEFERRED

PROJECT NUMBER:

24020.1

SHEET TITLE:

COVER SHEET

SHEET NUMBER:

G100

1/6/2025 1:09:00 PM



SCHEER
HYSONG

ARCHITECTURE

222 W CUNNINGMAN ST
SUITE 112
BUTLER, PA 16001
724-256-8881

Patrick Scheer - RA, NCARB
Rick Hysong - Assoc. AIA

www.scheerhysong.com
info@scheerhysong.com

RAAD REAL ESTATE BUILDING

1355 N. SHENANDOAH AVE
FRONT ROYAL, WARREN COUNTY, VA 22630

RAAD REAL ESTATE

101 TO BATTLEVIEW PARKWAY - MANASSA, VA 20109

REV DESCRIPTION:

ISSUED FOR CLIENT REVIEW

AGENCY SUBMITTAL

A

PROJECT NUMBER:

24020.1

SHEET TITLE:

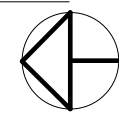
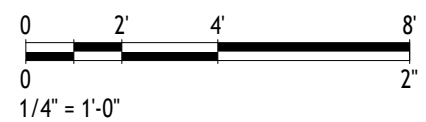
FIRST FLOOR PLAN
LIFE SAFETY

SHEET NUMBER:

A100



1 MAIN FLOOR PLAN
1/4" = 1'-0"



NOTE:
NUMBER AND LOCATION OF FIRE EXTINGUISHERS
TO BE DETERMINED BY FIRE MARSHALL

2
A303

A303
1

PANEL ELEVATION D - SEE DRAWING 2/A303

ADA UNISEX RESTROOM

104
72 SF

EXISTING STORAGE

106
87 SF

EXISTING MEN'S

107
110 SF

EXISTING LOUNGE

109
152 SF

EXISTING WOMEN'S

110
126 SF

HALL

103
36 SF

JAN. CLOSET

105
17 SF

RETAIL

101
1927 SF

EXIST. UNFINISHED
TENANT AREA

111
1972 SF

CIGAR ROOM

102
204 SF

STOREFRONT

SLATWALL

CEDAR @ WALLS & CEILING

HUMIDIFIER

EXPOSED STRUCTURAL STEEL

ILLUMINATED EXIT SIGN
(TYP)

SLAT WALL @ PERIMETER

EMERGENCY LIGHT
(TYP)

TOTAL TRAVEL DISTANCE = 62'-7"

TOTAL TRAVEL DISTANCE = 65'-6"

EXPOSED STRUCTURAL STEEL
TOTAL TRAVEL DISTANCE = 67'-0"

EXPOSED STRUCTURAL STEEL
TOTAL TRAVEL DISTANCE = 74'-4"

EXPOSED STRUCTURAL STEEL
(PAINTED)

DOUBLE 2X12 #2 GRADE HEADERS OR EQUAL
FURRED TO MATCH ADJACENT FRAMING,
4X POST EA. SIDE TO MATCH EXISTING FRAMING
EA. SIDE (SEE STRUCTURAL DRAWINGS)

ALUMINUM LOUVERS

ALUMINUM LOUVERS

ALUMINUM LOUVERS

ALUMINUM LOUVERS

NEW SCREEN WALL (TYPICAL)
(SEE STRUCTURAL ENGINEERS
DRAWINGS)

CONCRETE FOUNDATION
PER ENGINEER (TYPICAL)

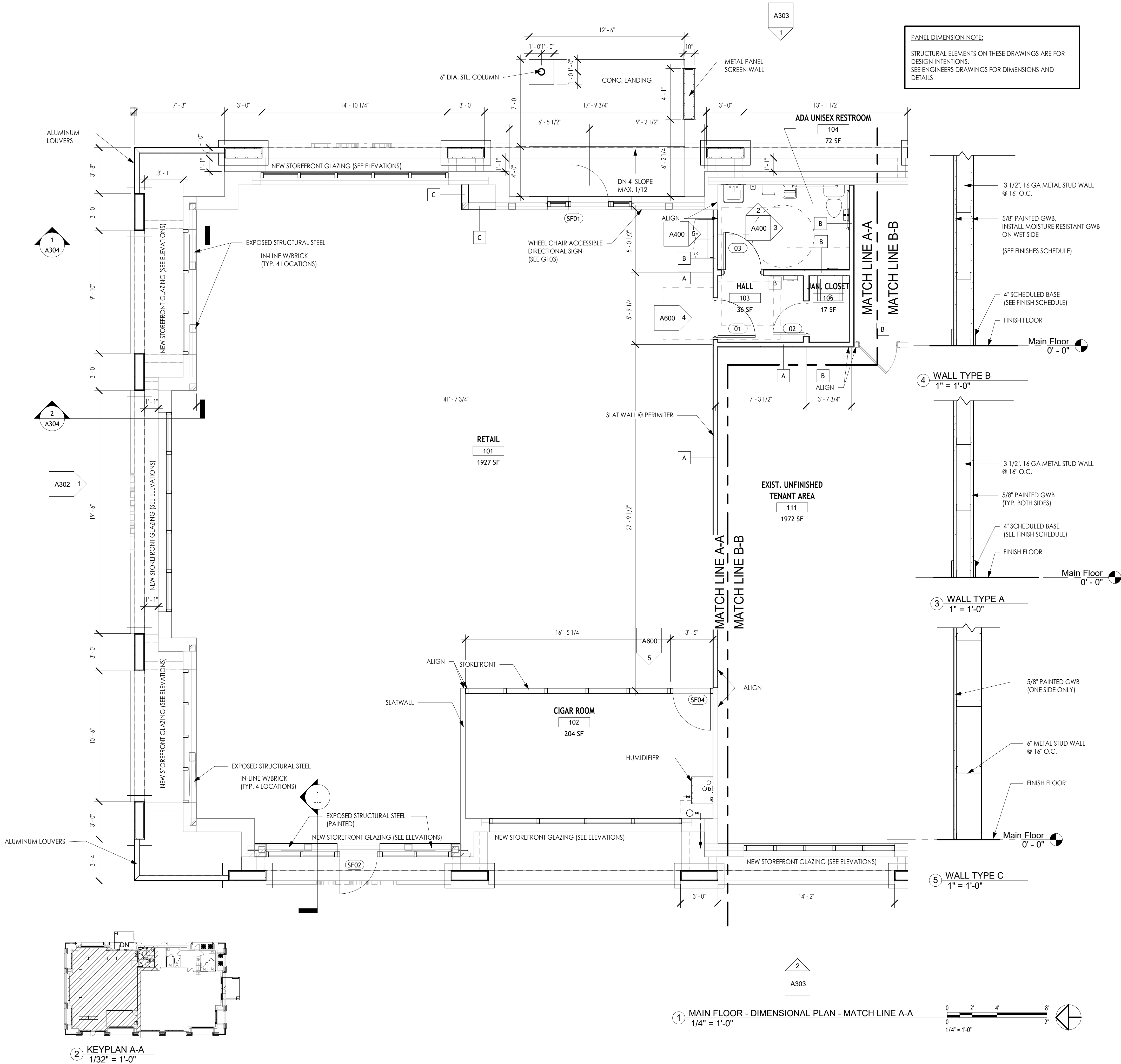
PANEL ELEVATION C - SEE DRAWING 1/A303

PANEL ELEVATION B - SEE DRAWING 2/A302

PANEL ELEVATION A - SEE DRAWING 1/A302

1/6/2025 1:08:40 PM

1/6/2025 1:08:43 PM



GENERAL NOTES:

1. CONTRACTOR TO VERIFY ALL WINDOW AND STOREFRONT OPENINGS PRIOR TO FABRICATION OF ITEMS.
2. SEE DRAWING A101 AND A102 FOR PANEL TYPES.
3. SEE DRAWING A101 FOR WALL TYPES.
4. SEE DRAWING A300 AND A301 FOR ELEVATIONS.
5. SEE DRAWINGS A302 AND A303 FOR PANEL ELEVATIONS.
6. SEE DRAWING A600 FOR DOOR AND FRAME TYPES.
7. EXISTING FINISHED AREA OF TENANT SPACE TO REMAIN AS IS. THE SPACE WILL BE DESIGNED PER FUTURE TENANT NEEDS. MINIMAL MEP TO BE PROVIDED TO KEEP THE SPACE SAFE FROM WEATHER AND OTHER ASSOCIATED ISSUES RELATED TO AN AN UNOCCUPIED SPACE. (SEE MEP DRAWINGS FOR DETAILS)
8. MEP & SIGNAGE DESIGN TO BE PROVIDED AS DEFERRED SUBMITTAL & WILL BE PERMITTED SEPARATELY.

222 W CUNNINGMAN ST
SUITE 112
BUTLER, PA 16001
724-256-8881

Patrick Scheer - RA, NCARB
Rick Hysong - Assoc. AIA

www.scheerhysong.com
info@scheerhysong.com

RAAD REAL ESTATE BUILDING

1355 N. SHENANDOAH AVE
FRONT ROYAL, WARREN COUNTY, VA 22630

RAAD REAL ESTATE

10110 BATTLEVIEW PARKWAY - MANASSA, VA 20109

DATE:
11/26/24

REV DESCRIPTION:
ISSUED FOR CLIENT REVIEW

PROJECT NUMBER:
24020.1

SHEET TITLE:

FIRST FLOOR -
DIMENSIONAL PLAN -
MATCH LINE A-A

SHEET NUMBER:

A101



Patrick Scheer - RA, NCARB
Rick Hysong - Assoc. AIA

www.scheerhysong.com
info@scheerhysong.com

RAAD REAL ESTATE BUILDING

1355 N. SHENANDOAH AVE
FRONT ROYAL, WARREN COUNTY, VA 22630

RAAD REAL ESTATE

100110 BATTLEVIEW PARKWAY - MANASSA, VA 20109

DATE: 11/26/24

REV	DESCRIPTION:
	ISSUED FOR CLIENT REVIEW

PROJECT NUMBER:
24020.1

SHEET TITLE:

FIRST FLOOR -
DIMENSIONAL PLAN -
MATCH LINE B-B

SHEET NUMBER:

A102

GENERAL NOTES:

1. CONTRACTOR TO VERIFY ALL WINDOW AND STOREFRONT OPENINGS PRIOR TO FABRICATION OF ITEMS.
2. SEE DRAWING A101 AND A102 FOR PANEL TYPES.
3. SEE DRAWING A101 FOR WALL TYPES.
4. SEE DRAWING A300 AND A301 FOR ELEVATIONS.
5. SEE DRAWINGS A302 AND A303 FOR PANEL ELEVATIONS.
6. SEE DRAWING A600 FOR DOOR AND FRAME TYPES.
7. EXISTING FINISHED AREA OF TENANT SPACE TO REMAIN AS IS.
8. NEW TENANT AREA TO REMAIN UNFINISHED & UNOCCUPIED. THE SPACE WILL BE DESIGNED PER FUTURE TENANT NEEDS. A FINAL MEP TIE IN SHALL BE PROVIDED TO THE SPACE SAFE FROM WEATHER AND OTHER ASSOCIATED ISSUES RELATED TO AN AN UNOCCUPIED SPACE. (SEE MEP DRAWINGS FOR DETAILS)
9. MEP & SIGNAGE DESIGN TO BE PROVIDED AS DEFERRED SUBMITTAL & WILL BE PERMITTED SEPARATELY.

PANEL DIMENSION NOTE:

STRUCTURAL ELEMENTS ON THESE DRAWINGS ARE FOR
DESIGN INTENTIONS.
SEE ENGINEERS DRAWINGS FOR DIMENSIONS AND
DETAILS

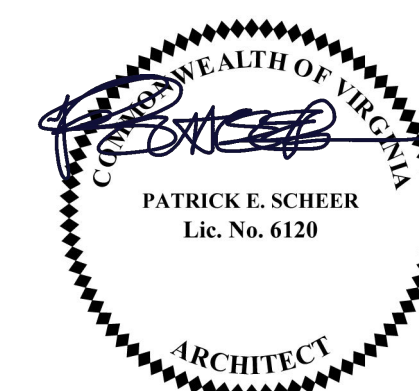
— METAL PANEL SCREEN
WALL

— 6" DIA. STL. COLUMN

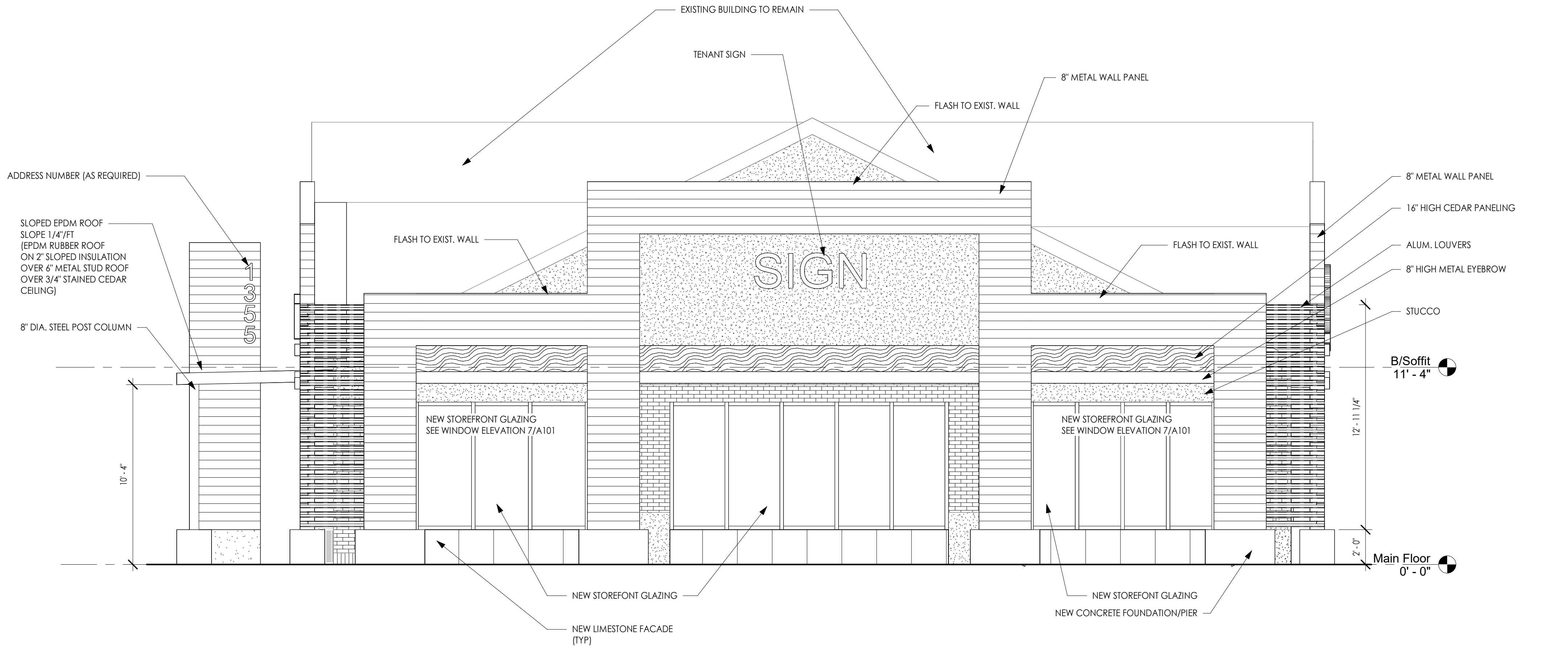
② KEYPLAN B-B
 $\frac{3}{64}'' = 1'-0''$

1 MAIN FLOOR - DIMENSIONAL PLAN - MATCH LINE B-B
1/4" = 1'-0"

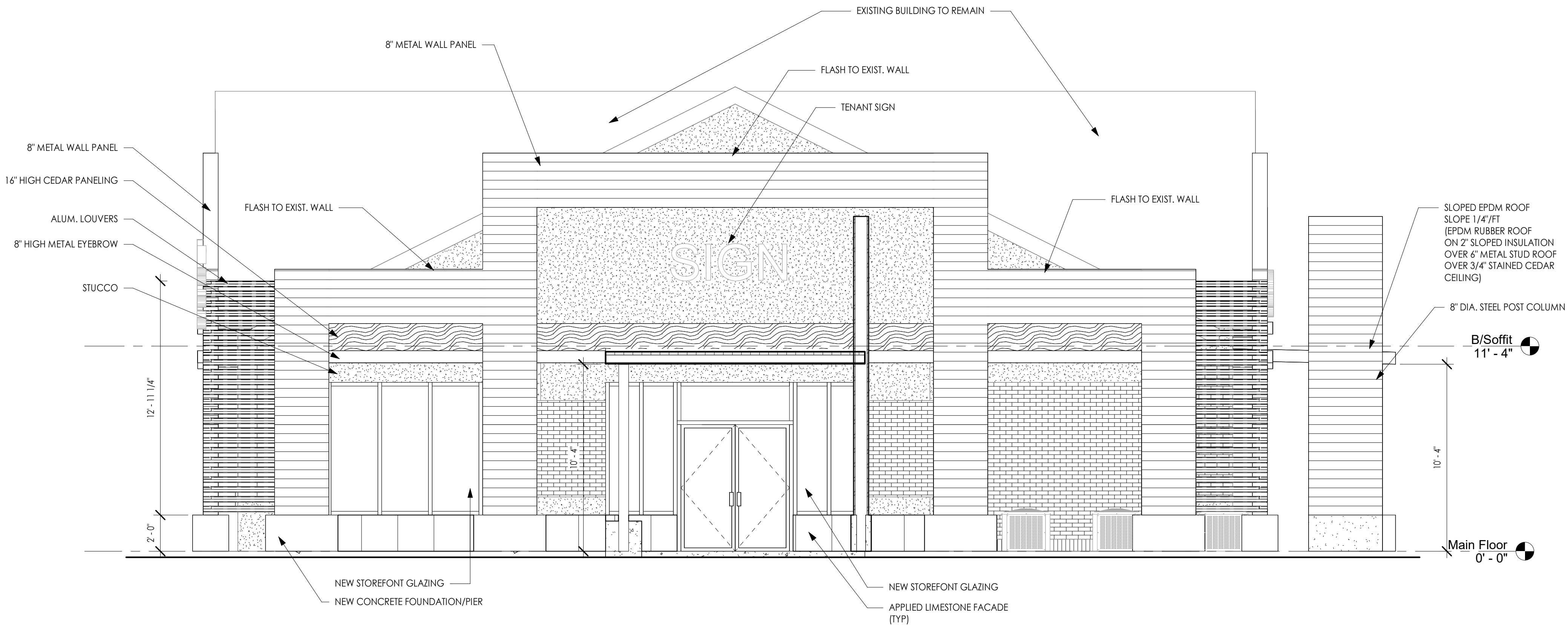
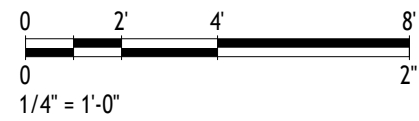
1/6/2025 1:08:46 PM



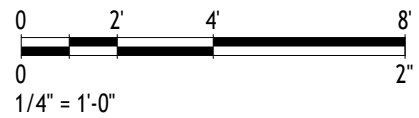
1/6/2025 1:08:50 PM



1 NORTH ELEVATION
1/4" = 1'-0"



2 SOUTH ELEVATION
1/4" = 1'-0"



GENERAL NOTES:

1. CONTRACTOR TO VERIFY ALL WINDOW AND STOREFRONT OPENINGS PRIOR TO FABRICATION OF ITEMS.
2. SEE DRAWING A101 AND A102 FOR PANEL TYPES.
3. SEE DRAWING A101 FOR WALL TYPES.
4. SEE DRAWING A300 AND A301 FOR ELEVATIONS.
5. SEE DRAWINGS A302 AND A303 FOR PANEL ELEVATIONS.
6. SEE DRAWING A600 FOR DOOR AND FRAME TYPES.
7. SEE DRAWING A700 FOR FF&E AND FINISH SCHEDULE

GLAZING NOTE:

ALL GLAZING TO MEET 2018 IECC ENERGY CODE COMPLIANCE



DATE:
11/26/24

REV DESCRIPTION:
ISSUED FOR CLIENT REVIEW

PROJECT NUMBER:
24020.1

SHEET TITLE:

NORTH AND SOUTH
ELEVATIONS

SHEET NUMBER:

A300



SCHEER
HYSONG

ARCHITECTURE

222 W CUNNINGMAN ST
SUITE 112
BUTLER, PA 16001
724-256-8881

Patrick Scheer - RA, NCARB
Rick Hysong - Assoc. AIA

www.scheerhysong.com
info@scheerhysong.com

RAAD REAL ESTATE BUILDING

1355 N. SHENANDOAH AVE
FRONT ROYAL, WARREN COUNTY, VA 22630

RAAD REAL ESTATE

10110 BATTLEVIEW PARKWAY - MANASSA, VA 20109

DATE:

11/26/24

REV DESCRIPTION:

ISSUED FOR CLIENT REVIEW

PROJECT NUMBER:

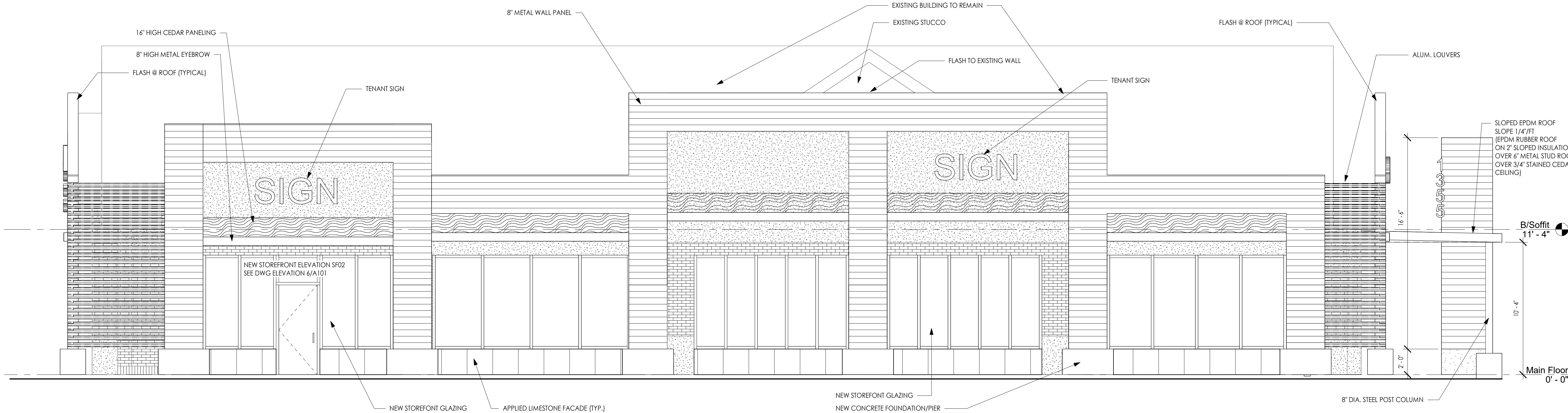
24020.1

SHEET TITLE:

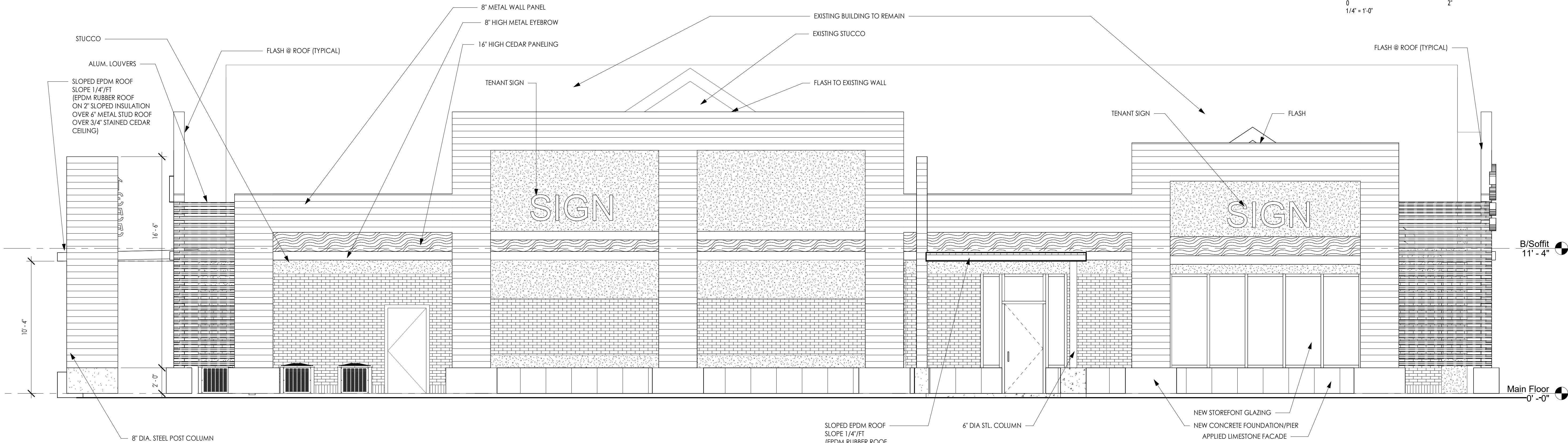
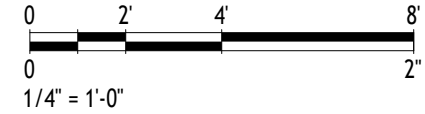
WEST AND EAST
ELEVATIONS

SHEET NUMBER:

A301



① WEST ELEVATION
1/4" = 1'-0"



② EAST ELEVATION
1/4" = 1'-0"



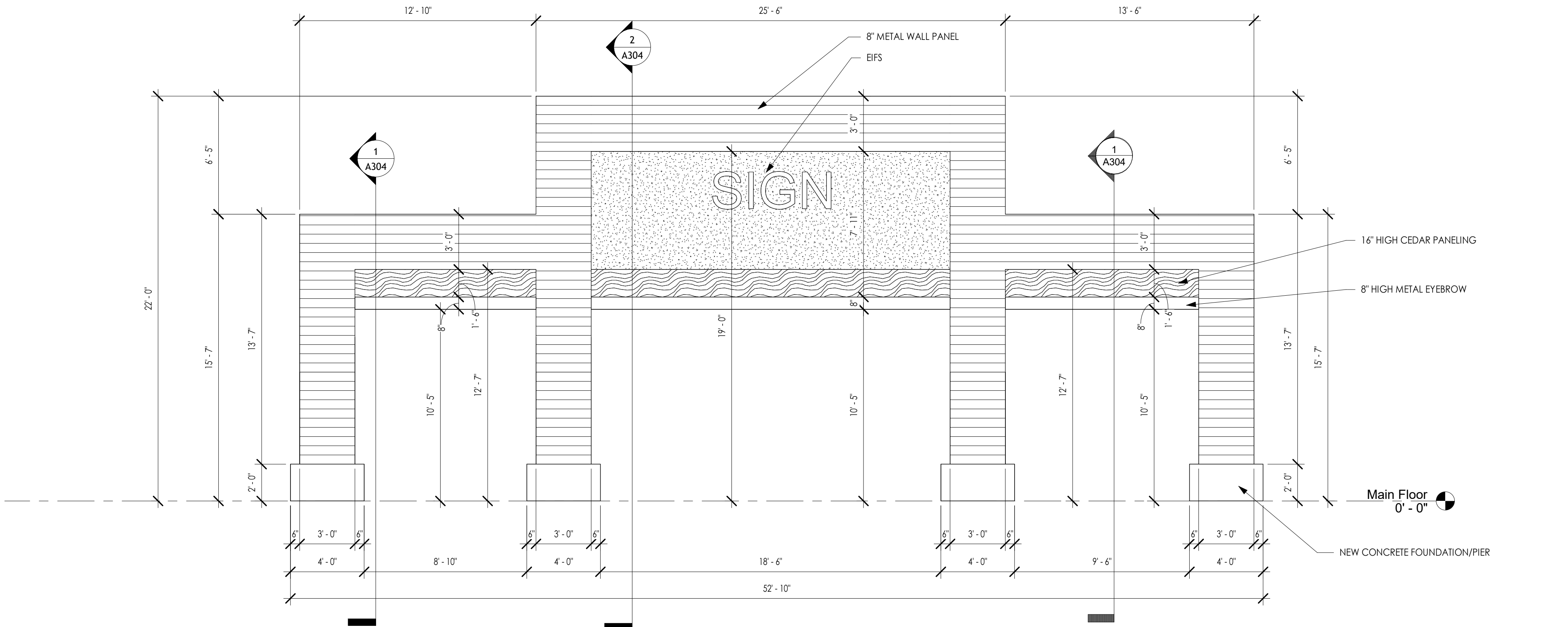
GENERAL NOTES:

1. CONTRACTOR TO VERIFY ALL WINDOW AND STOREFRONT OPENINGS PRIOR TO FABRICATION OF ITEMS. SEE DRAWING A101 AND A102 FOR PANEL TYPES.
2. SEE DRAWING A101 FOR WALL TYPES.
3. SEE DRAWING A300 AND A301 FOR ELEVATIONS.
4. SEE DRAWINGS A302 AND A303 FOR PANEL ELEVATIONS.
5. SEE DRAWING A600 FOR DOOR AND FRAME TYPES.
6. SEE DRAWING A700 FOR FF&E AND FINISH SCHEDULE
- 7.

GLAZING NOTE:

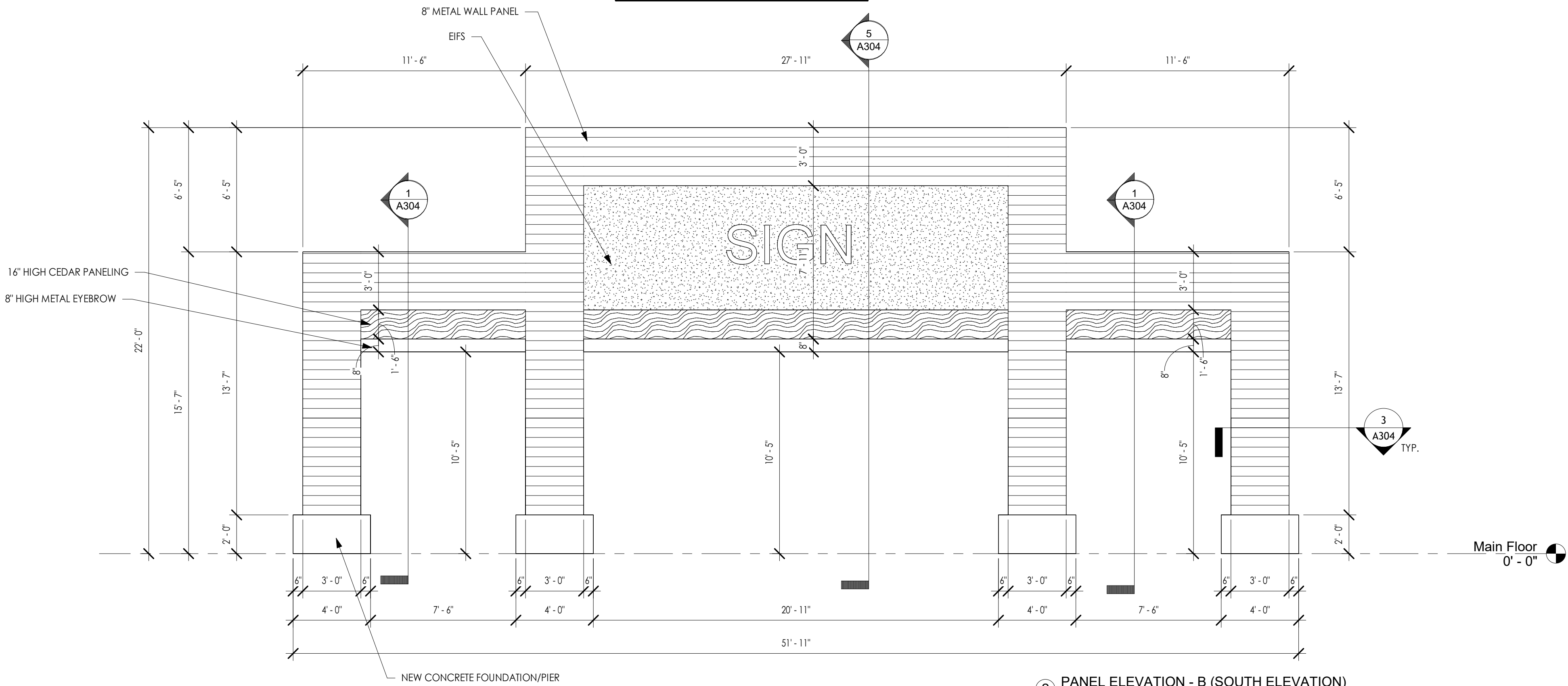
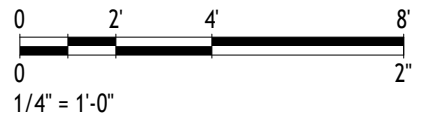
ALL GLAZING TO MEET 2018 IECC ENERGY CODE COMPLIANCE

1/6/2025 1:08:55 PM



PANEL DIMENSION NOTE:
STRUCTURAL ELEMENTS ON THESE DRAWINGS ARE FOR DESIGN INTENTIONS.
SEE ENGINEERS DRAWINGS FOR DIMENSIONS AND DETAILS

1 PANEL ELEVATION - A (NORTH ELEVATION)
1/4" = 1'-0"



2 PANEL ELEVATION - B (SOUTH ELEVATION)
1/4" = 1'-0"



GENERAL NOTES:

1. SEE DRAWINGS A101 AND A 102 FOR PANEL LOCATIONS.
2. SEE STRUCTURAL DRAWINGS FOR PANEL CONNECTIONS TO EXISTING STRUCTURE.
3. SEE DRAWING A304 FOR PANEL SECTIONS.



222 W CUNNINGMAN ST
SUITE 112
BUTLER, PA 16001
724-256-8881

Patrick Scheer - RA, NCARB
Rick Hysong - Assoc. AIA

www.scheerhysong.com
info@scheerhysong.com

RAAD REAL ESTATE BUILDING

1355 N. SHENANDOAH AVE
FRONT ROYAL, WARREN COUNTY, VA 22630

RAAD REAL ESTATE

10110 BATTLEVIEW PARKWAY - MANASSA, VA 20109

DATE:
11/26/24

REV / DESCRIPTION:
ISSUED FOR CLIENT REVIEW

PROJECT NUMBER:
24020.1

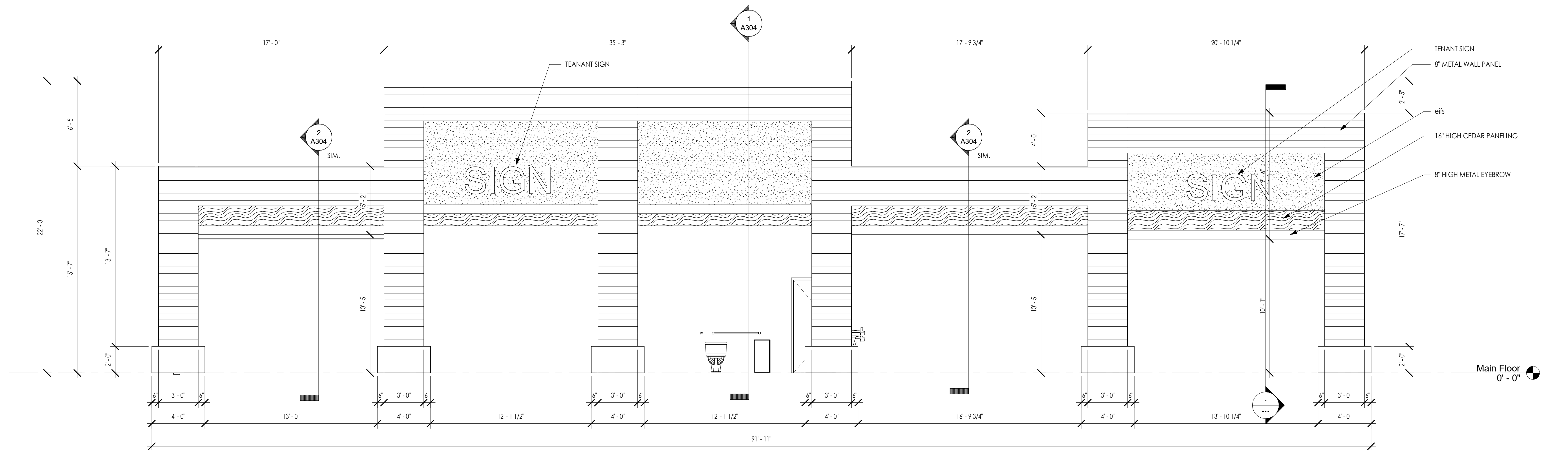
SHEET TITLE:

PANEL ELEVATIONS

SHEET NUMBER:

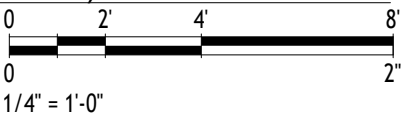
A302

1/6/2025 1:08:56 PM



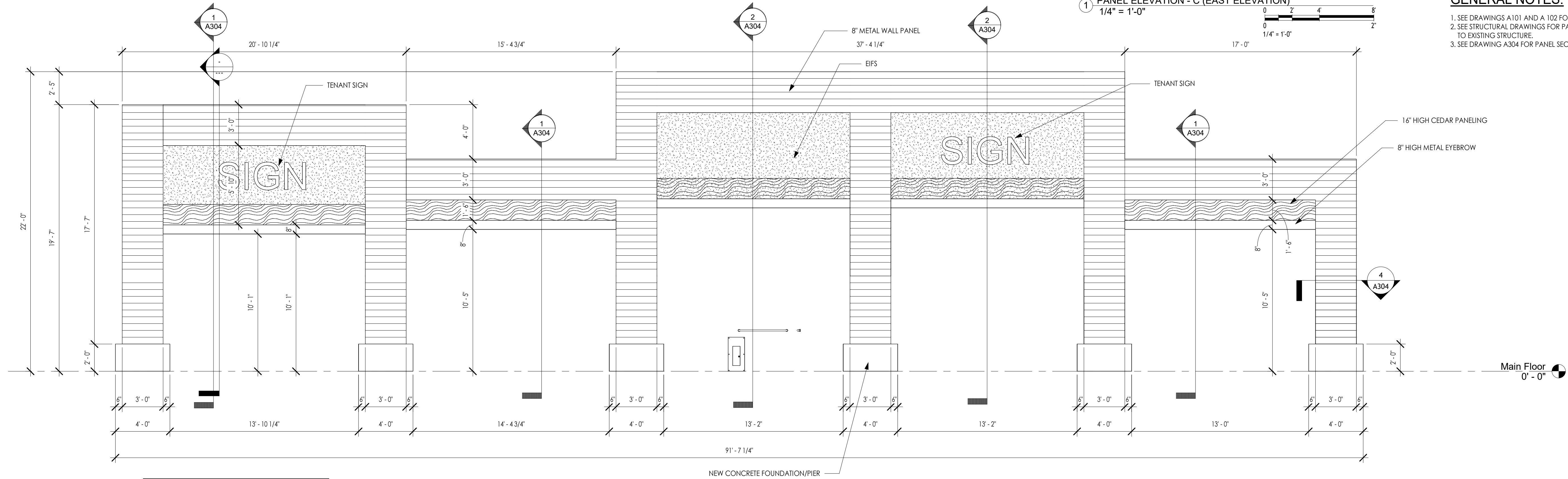
Main Floor
0' - 0"

① PANEL ELEVATION - C (EAST ELEVATION)
1/4" = 1'-0"



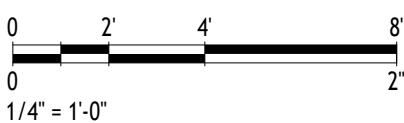
GENERAL NOTES:

1. SEE DRAWINGS A101 AND A 102 FOR PANEL LOCATIONS.
2. SEE STRUCTURAL DRAWINGS FOR PANEL CONNECTIONS TO EXISTING STRUCTURE.
3. SEE DRAWING A304 FOR PANEL SECTIONS.



Main Floor
0' - 0"

② PANEL ELEVATION - D (WEST ELEVATION)
1/4" = 1'-0"



PANEL DIMENSION NOTE:

STRUCTURAL ELEMENTS ON THESE DRAWINGS ARE FOR DESIGN INTENTIONS.
SEE ENGINEERS DRAWINGS FOR DIMENSIONS AND DETAILS



SCHEER
HYSONG

ARCHITECTURE

222 W CUNNINGMAN ST
SUITE 112
BUTLER, PA 16001
724-256-8881

Patrick Scheer - RA, NCARB
Rick Hysong - Assoc. AIA

www.scheerhysong.com
info@scheerhysong.com

RAAD REAL ESTATE BUILDING

1355 N. SHENANDOAH AVE
FRONT ROYAL, WARREN COUNTY, VA 22630

RAAD REAL ESTATE

10110 BATTLEVIEW PARKWAY - MANASSA, VA 20109

DATE:
11/26/24

REV DESCRIPTION:
ISSUED FOR CLIENT REVIEW

PROJECT NUMBER:

24020.1

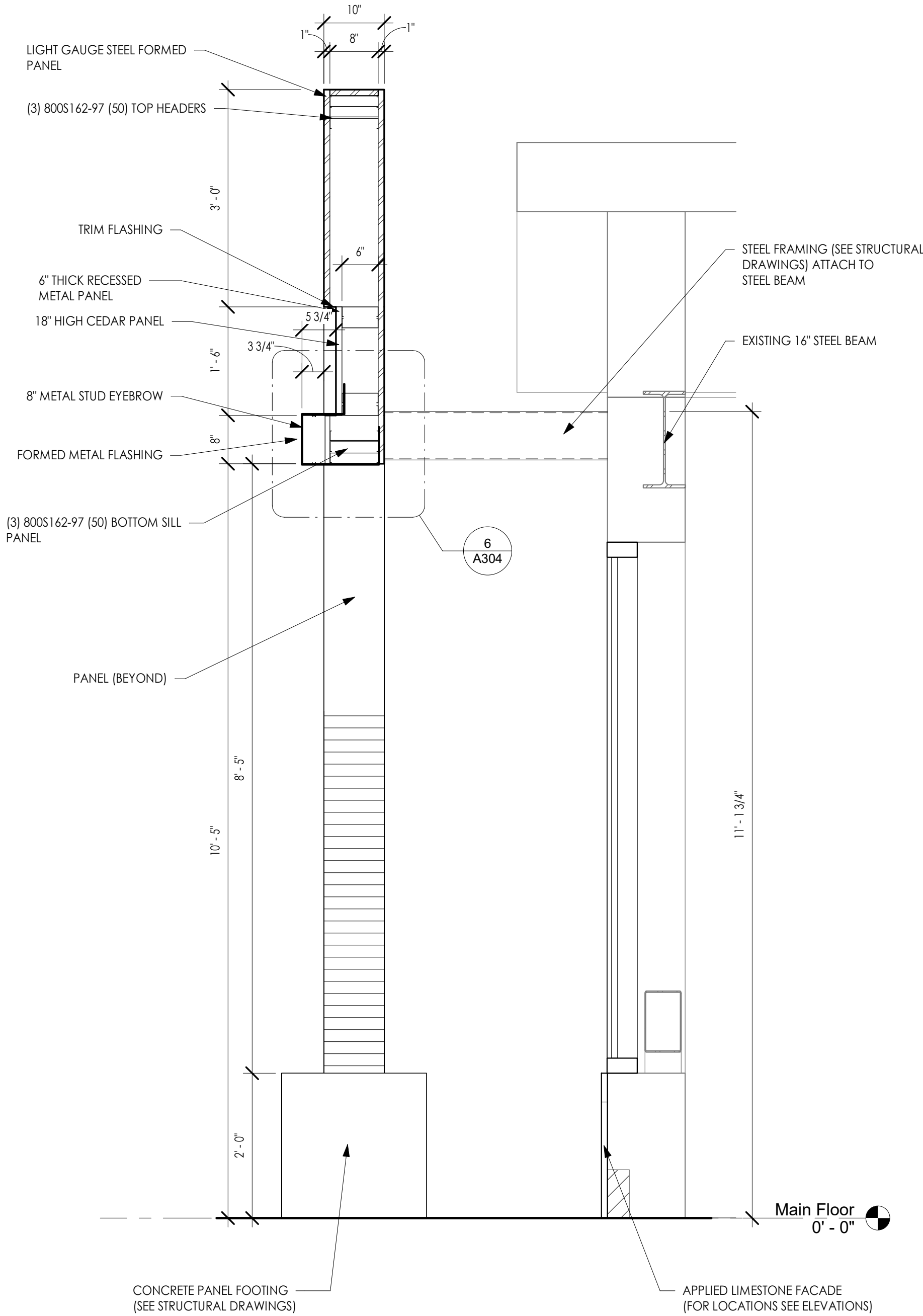
SHEET TITLE:

PANEL ELEVATIONS

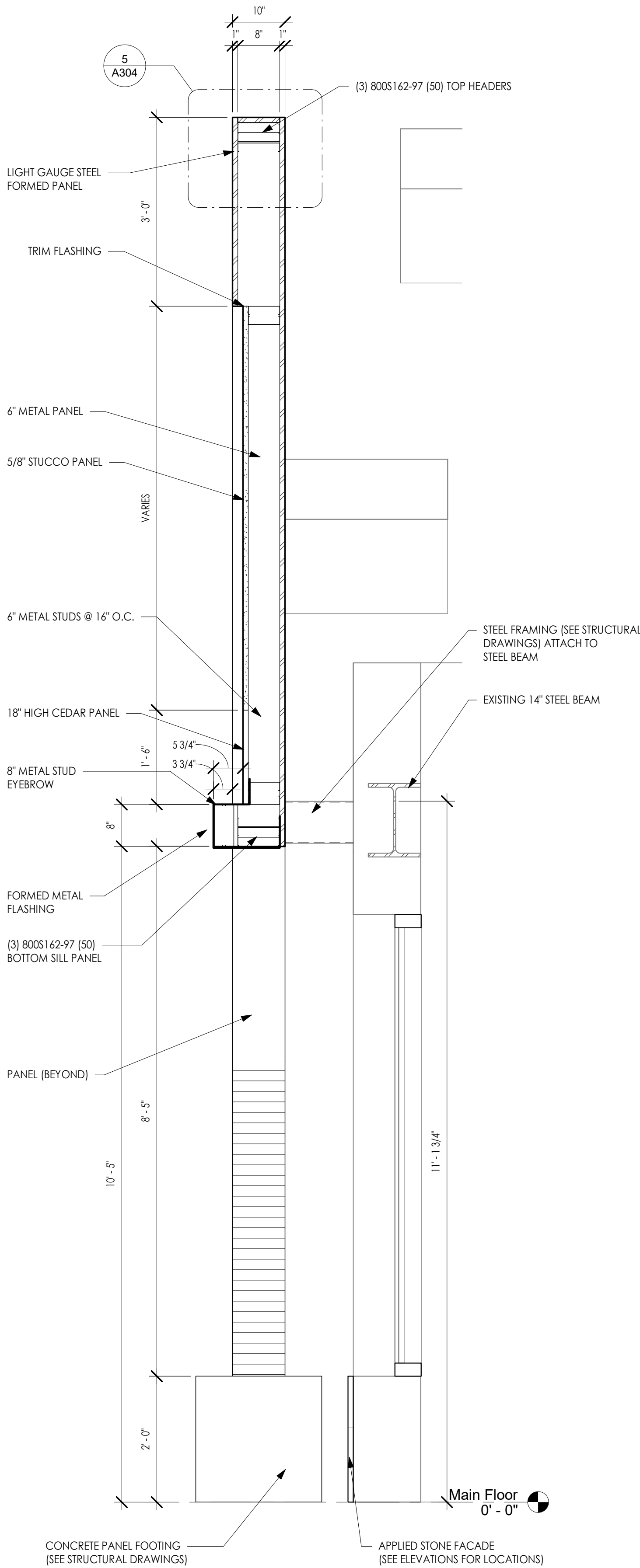
SHEET NUMBER:

A303

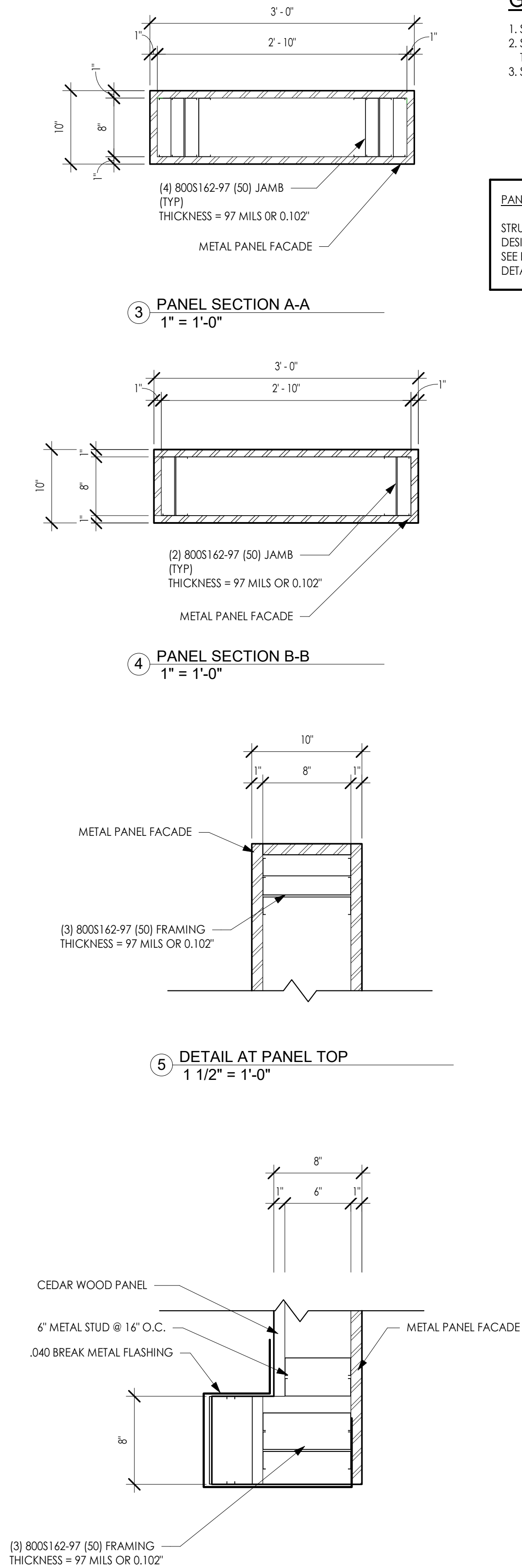




1 SECTION AT LOW PANEL (PANEL ELEVATION A & B)
3/4" = 1'-0"



2 SECTION AT HIGH PANEL (PANEL ELEVATION A & B)
3/4" = 1'-0"



3 PANEL SECTION A-A
1" = 1'-0"

4 PANEL SECTION B-B
1" = 1'-0"

5 DETAIL AT PANEL TOP
1 1/2" = 1'-0"

6 DETAIL AT PANEL EYEBROW
1 1/2" = 1'-0"

GENERAL NOTES:

1. SEE DRAWINGS A101 AND A 102 FOR PANEL LOCATIONS.
2. SEE STRUCTURAL DRAWINGS FOR PANEL CONNECTIONS TO EXISTING STRUCTURE.
3. SEE DRAWINGS A302 AND A303 FOR PANEL ELEVATIONS.

PANEL DIMENSION NOTE:

STRUCTURAL ELEMENTS ON THESE DRAWINGS ARE FOR DESIGN INTENTIONS. SEE ENGINEERS DRAWINGS FOR DIMENSIONS AND DETAILS



DATE:
11/26/24

REV DESCRIPTION:
ISSUED FOR CLIENT REVIEW

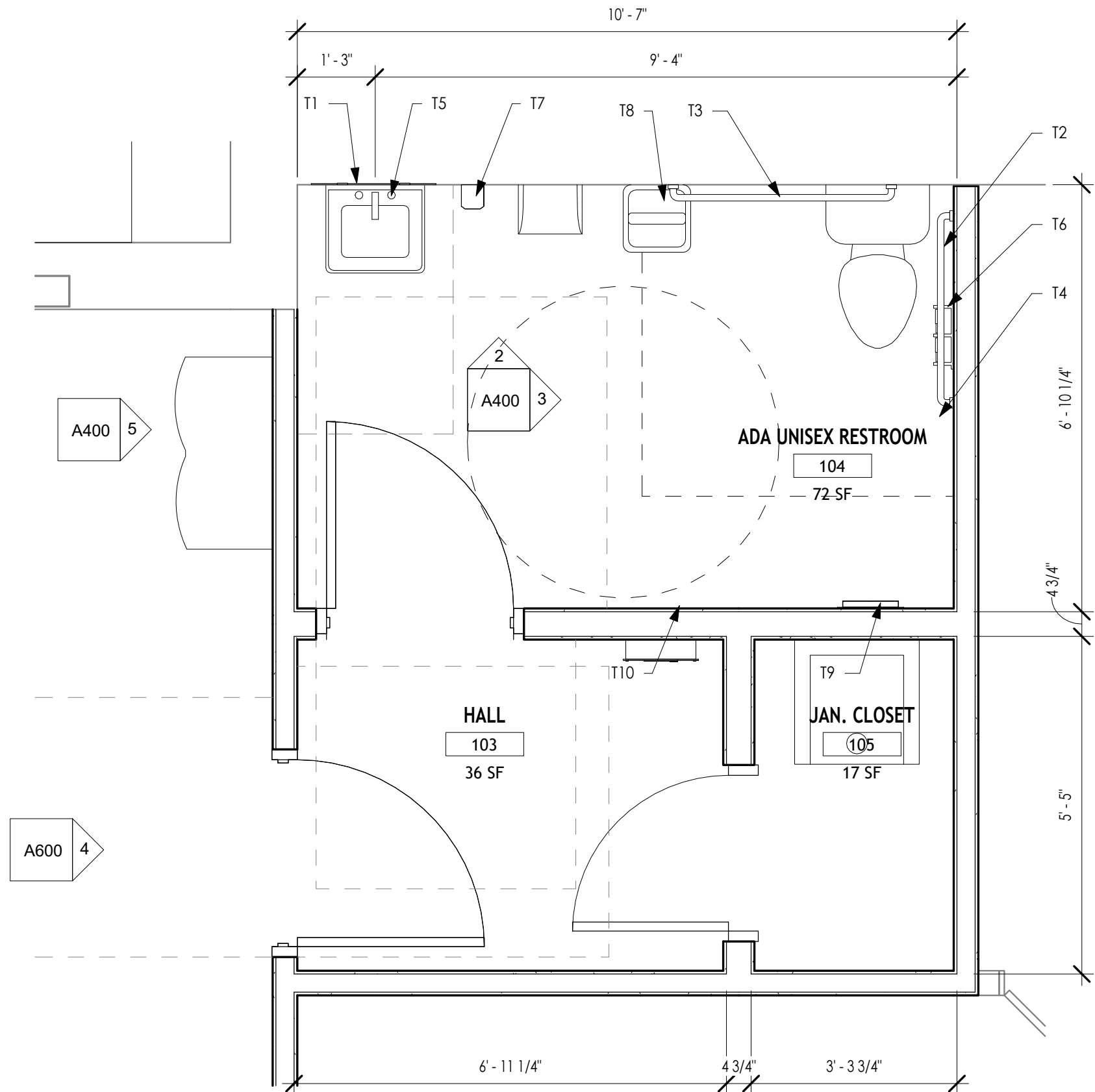
PROJECT NUMBER:
24020.1

SHEET TITLE:

PANEL SECTIONS

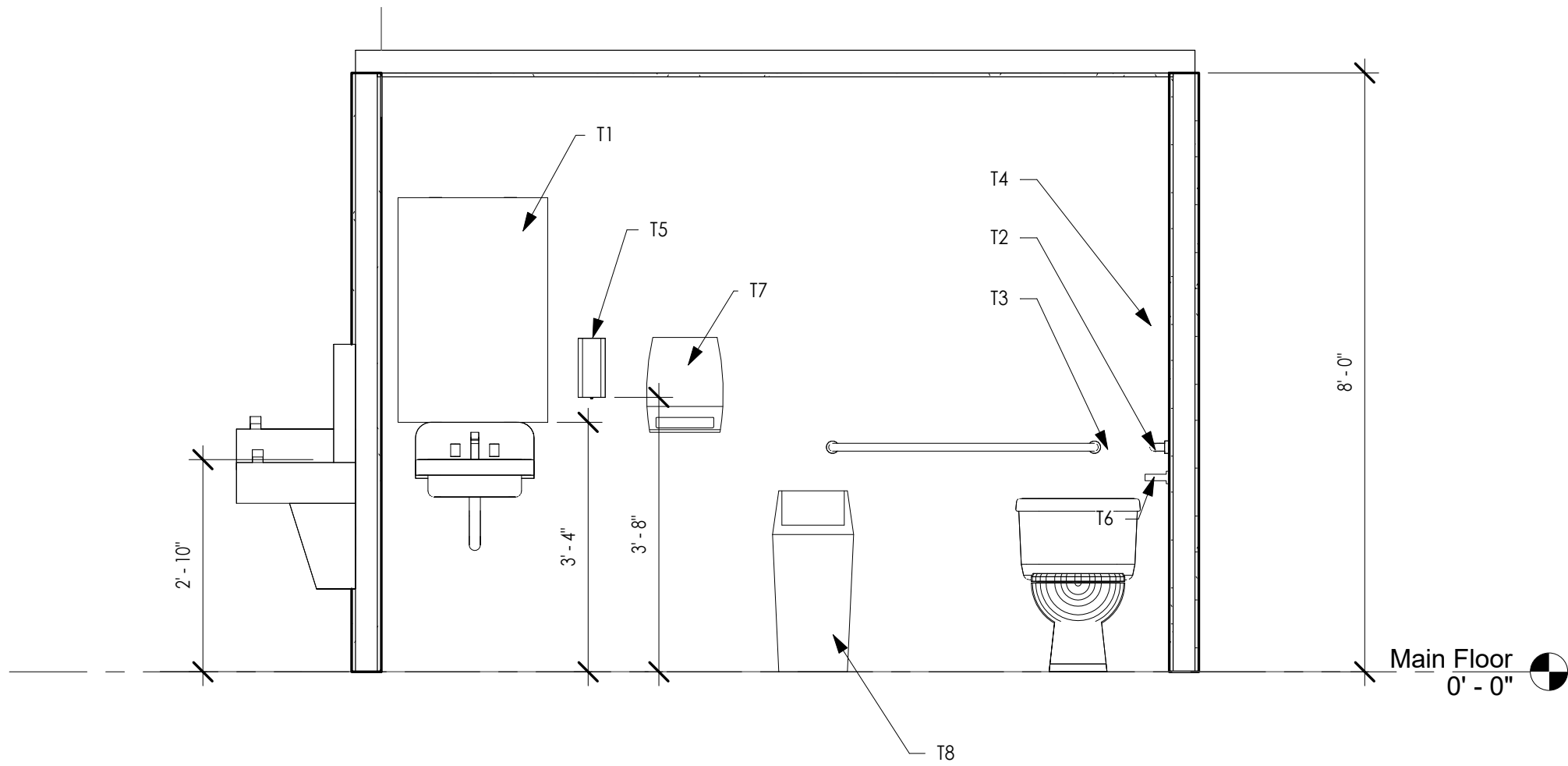
SHEET NUMBER:

A304

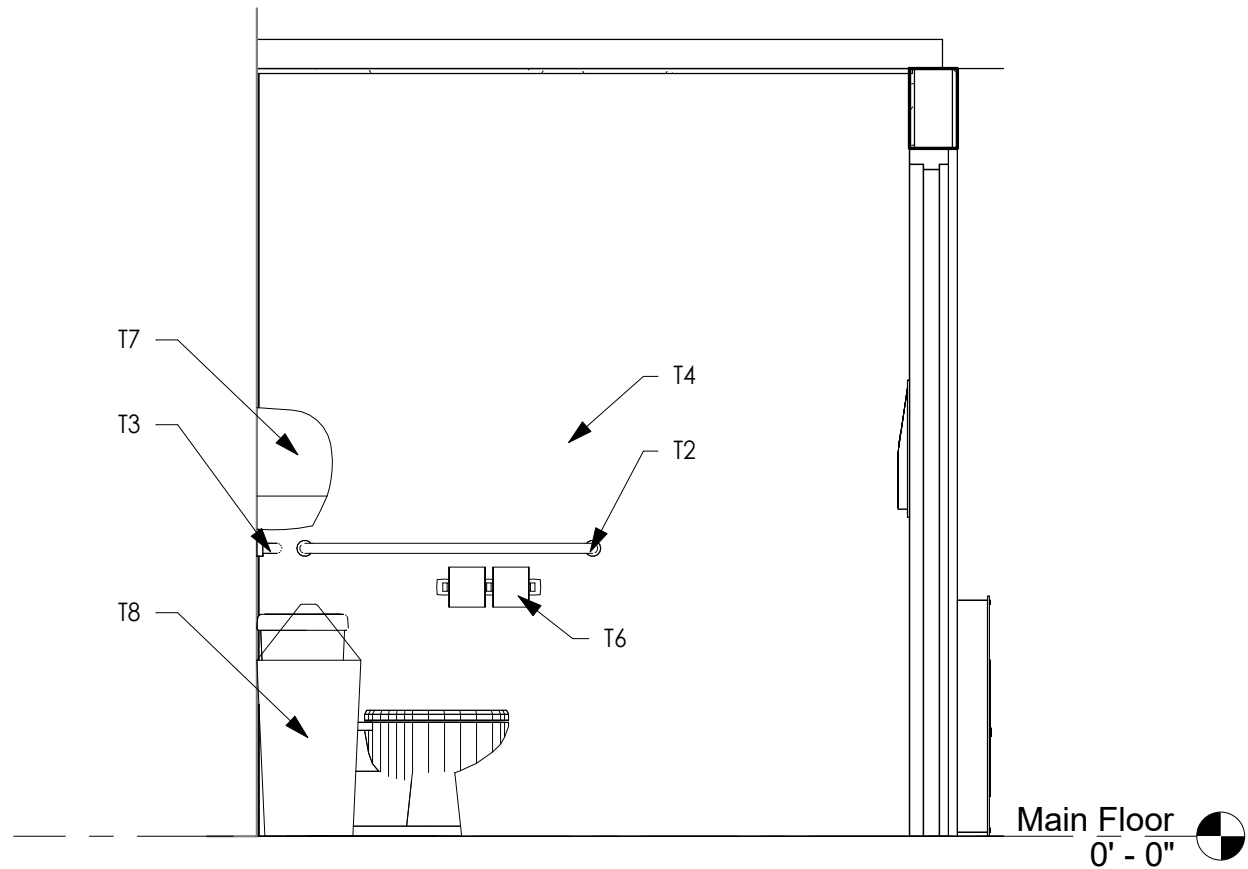


1 ENLARGED UNISEX RESTROOM
1/2" = 1'-0"

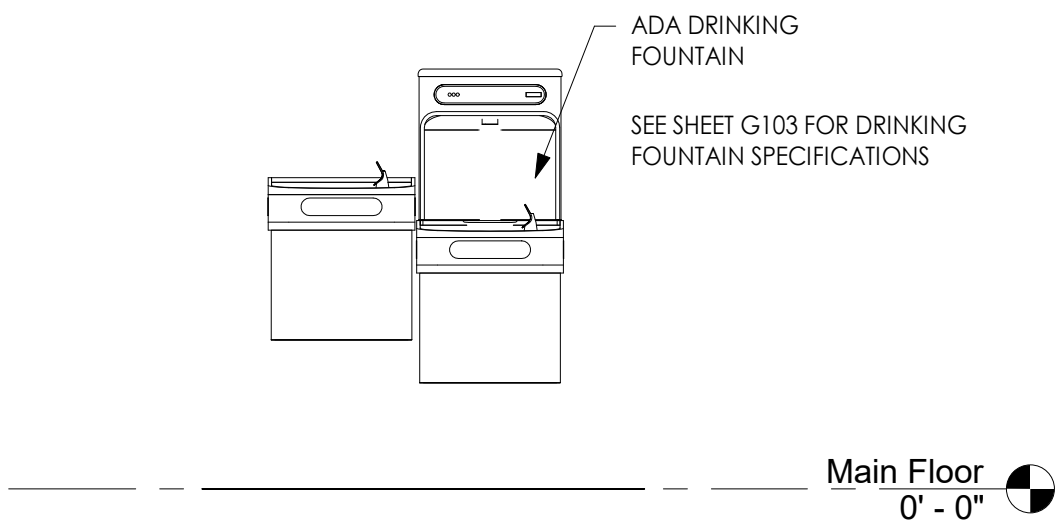
TOILET ROOM ACCESSORY SCHEDULE		
MARK	ACCESSORY	MANUFACTURER NUMBER
T1	MIRROR	BRADLEY MODEL 747 SERIES, 24" x 42" OR EQUAL WITH CLIP FASTENERS
T2	TOILET GRAB BAR	BRADLEY MODEL 001 - 42" OR EQUAL (HORIZONTAL SIDEWALL)
T3	TOILET GRAB BAR	BRADLEY MODEL 101 - 36" OR EQUAL (HORIZONTAL REAR WALL)
T4	TOILET GRAB BAR	BRADLEY MODEL 101 - 18" OR EQUAL (VERTICAL SIDE WALL)
T5	AUTOMATIC SOAP DISPENSER	BRADLEY MODEL 6531, SURFACE MOUNT
T6	TOILET PAPER DISPENSER	BRADLEY MODEL 5234, SURFACE DOUBLE ROLL
T7	AUTOMATIC TOWEL DISPENSER	BRADLEY MODEL 2494
T8	GARBAGE RECEPTACLE	BY OWNER - TYPICAL
T9	NAPKIN DISPOSAL	BRADLEY 4722 - 1015 SEMI-RECESSED
T10	BABY CHANGING TABLE	BRADLEY MODEL 962 - RECESS MOUNTED



2 ELEVATION A
1/2" = 1'-0"



3 ELEVATION B
1/2" = 1'-0"



5 DRINKING FOUNTAIN ELEVATION
1/2" = 1'-0"



SCHEER
HYSONG

ARCHITECTURE

222 W CUNNINGMAN ST
SUITE 112
BUTLER, PA 16001
724-256-8881

Patrick Scheer - RA, NCARB
Rick Hysong - Assoc. AIA

www.scheerhysong.com
info@scheerhysong.com

RAAD REAL ESTATE BUILDING

1355 N. SHENANDOAH AVE
FRONT ROYAL, WARREN COUNTY, VA 22630

RAAD REAL ESTATE

10110 BATTLEVIEW PARKWAY - MANASSA, VA 20109

DATE:

11/26/24

REV DESCRIPTION:

ISSUED FOR CLIENT REVIEW

PROJECT NUMBER:

24020.1

SHEET TITLE:

ENLARGED UNISEX
BATHROOM AMD
ELEVATIONS

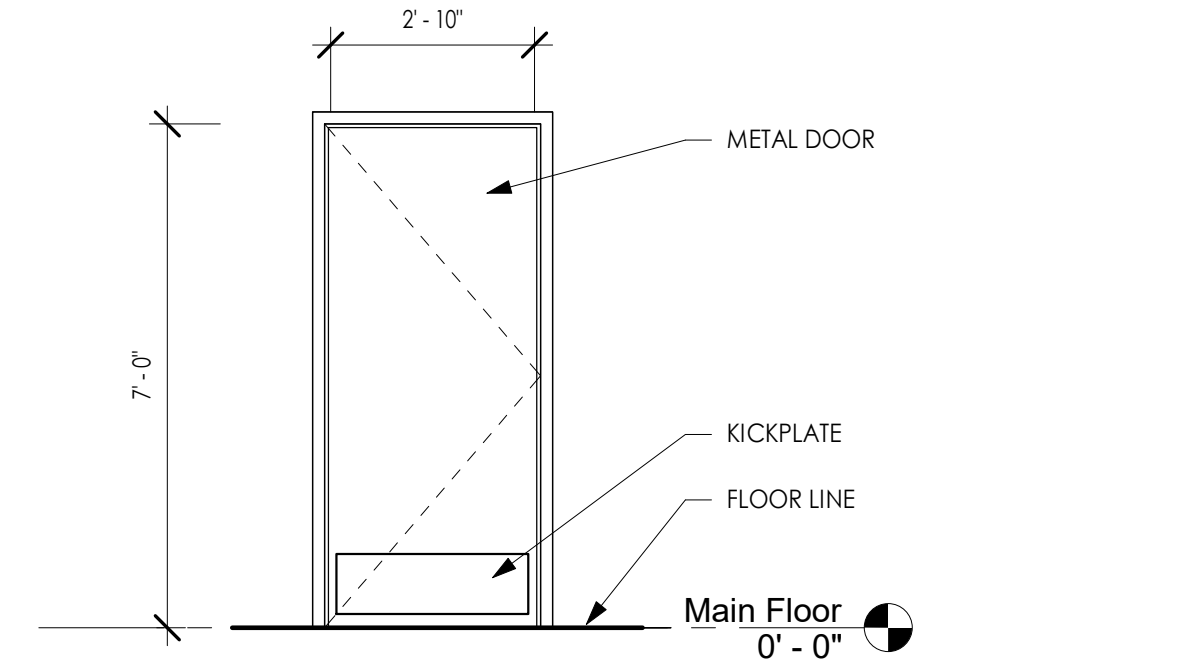
SHEET NUMBER:

A400

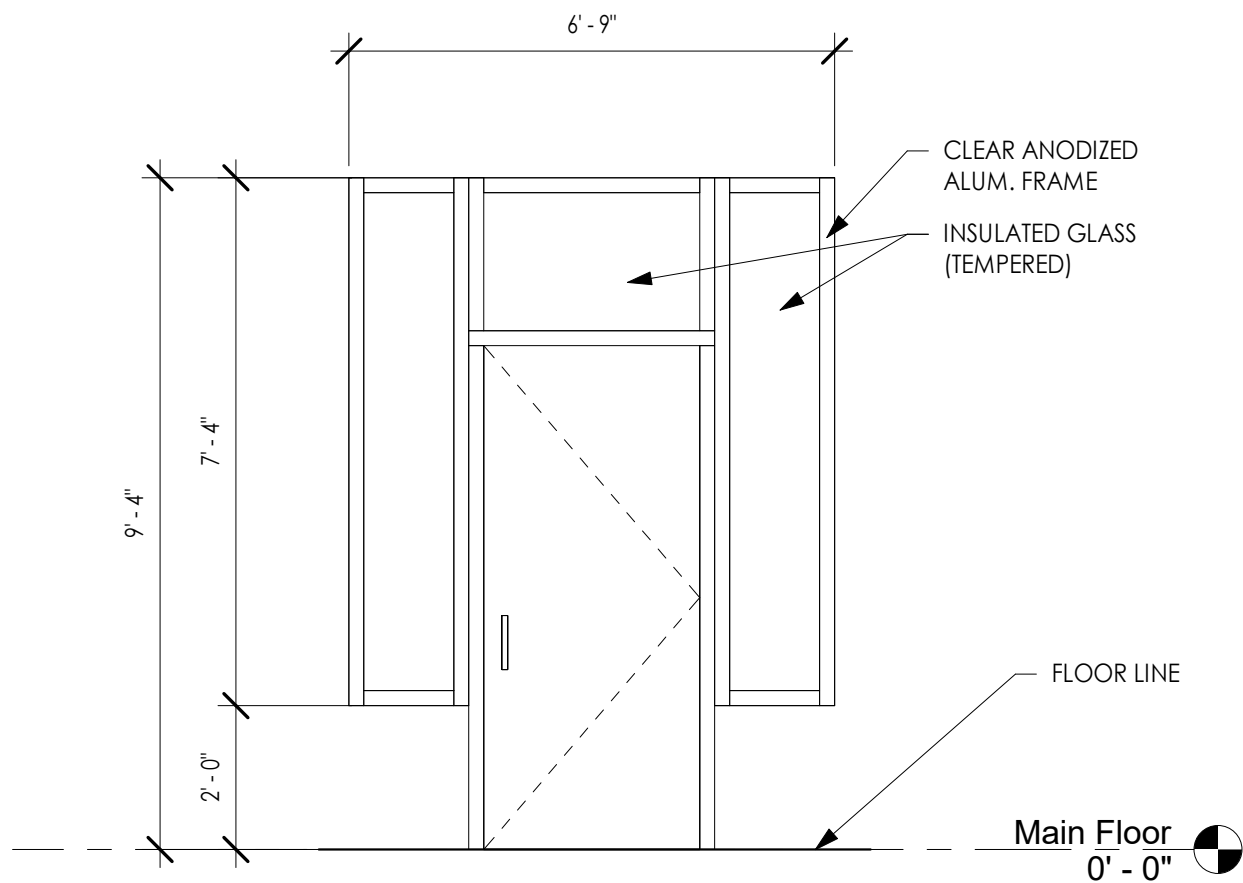
DOOR SCHEDULE									
Door Number	Type	Door					Fire Rating	Hardware	Comments
		Width	Height	Thickness	Material	Finish			
01	1	3'-0"	7'-0"	0' - 1 3/4"	HM	Primed	---	1	
02	SF02	2'-6"	6'-8"	0' - 1 3/4"	HM	Primed	---	2	
03	1	3'-0"	7'-0"	0' - 1 3/4"	HM	Primed	---	3	
SF01	SEE ELEVATION	3'-0"	7'-0"	0' - 1 3/4"	Alum	Clear Anodized	---	5	
SF02	SEE ELEVATION	3'-0"	7'-0"	0' - 1 3/4"	Alum	Clear Anodized	---	5	
SF03	SEE ELEVATION	6'-0"	7'-0"	0' - 1 3/4"	Alum	Clear Anodized	---	6	
SF04	SEE ELEVATION	3'-0"	7'-0"	0' - 1 3/4"	Alum	Clear Anodized	---	4	

DOOR HARDWARE SCHEDULE

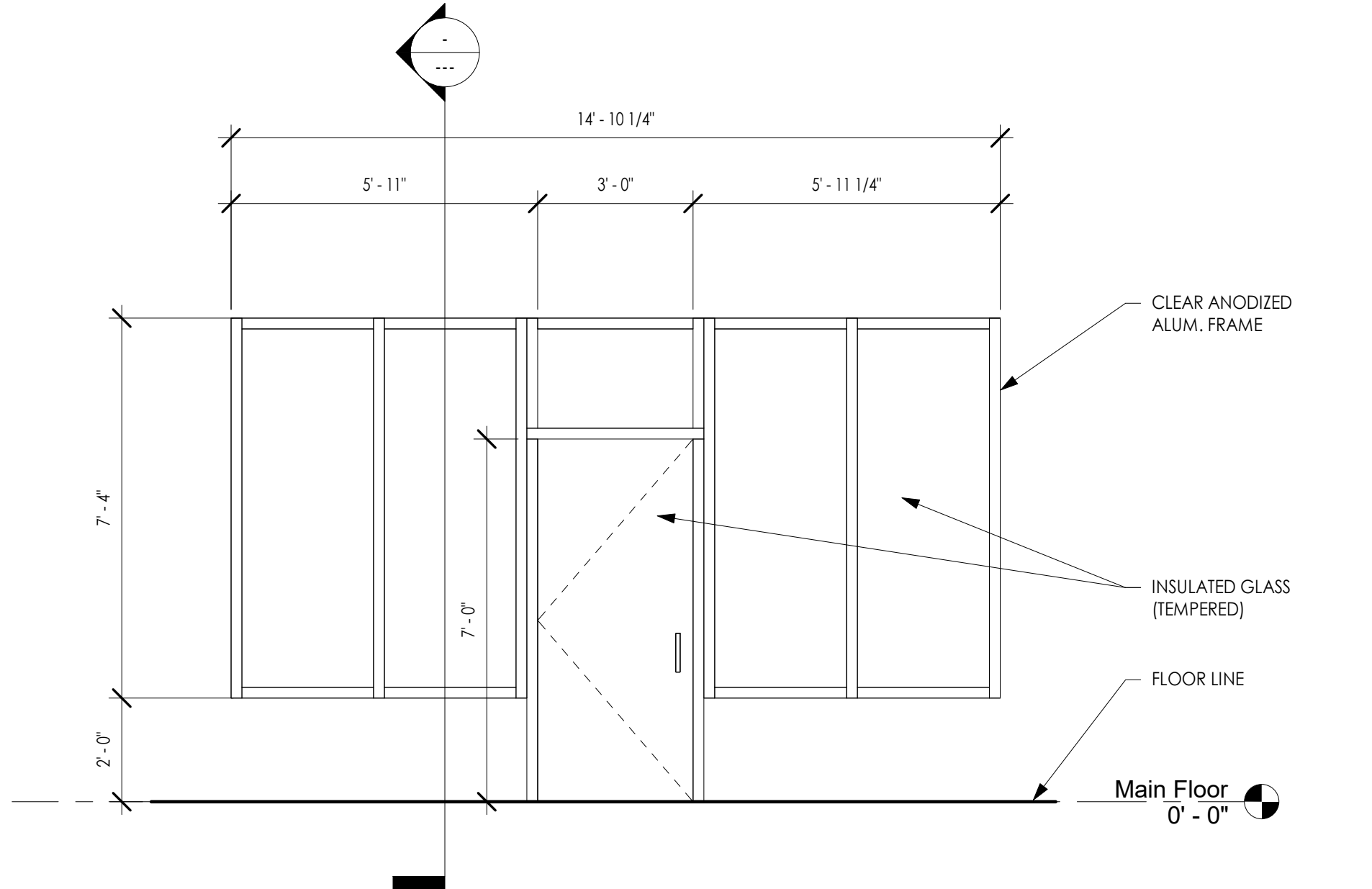
HARDWARE SET 1	HARDWARE SET 3	HARDWARE SET 5
1 1/2 PAIR BUTT HINGES 1 CLOSER 1 LEVER PASSAGE SET 2 KICKPLATES	1 1/2 PAIR BUTT HINGES 1 CLOSER 1 LEVER PRIVACY SET 2 KICKPLATES	STANDARD HINGES 1 CLOSER 1 KEYED CYLINDER 1 PUSH PULL
HARDWARE SET 2	HARDWARE SET 4	HARDWARE SET 6
1 1/2 PAIR BUTT HINGES 1 CLOSER 1 LEVER LOCKSET 1 KICKPLATE	STANDARD HINGES 1 CLOSER 1 PUSH/PULL	STANDARD HINGES 2 CLOSERS 1 KEYED CYLINDER 2 SET PUSH/PULLS



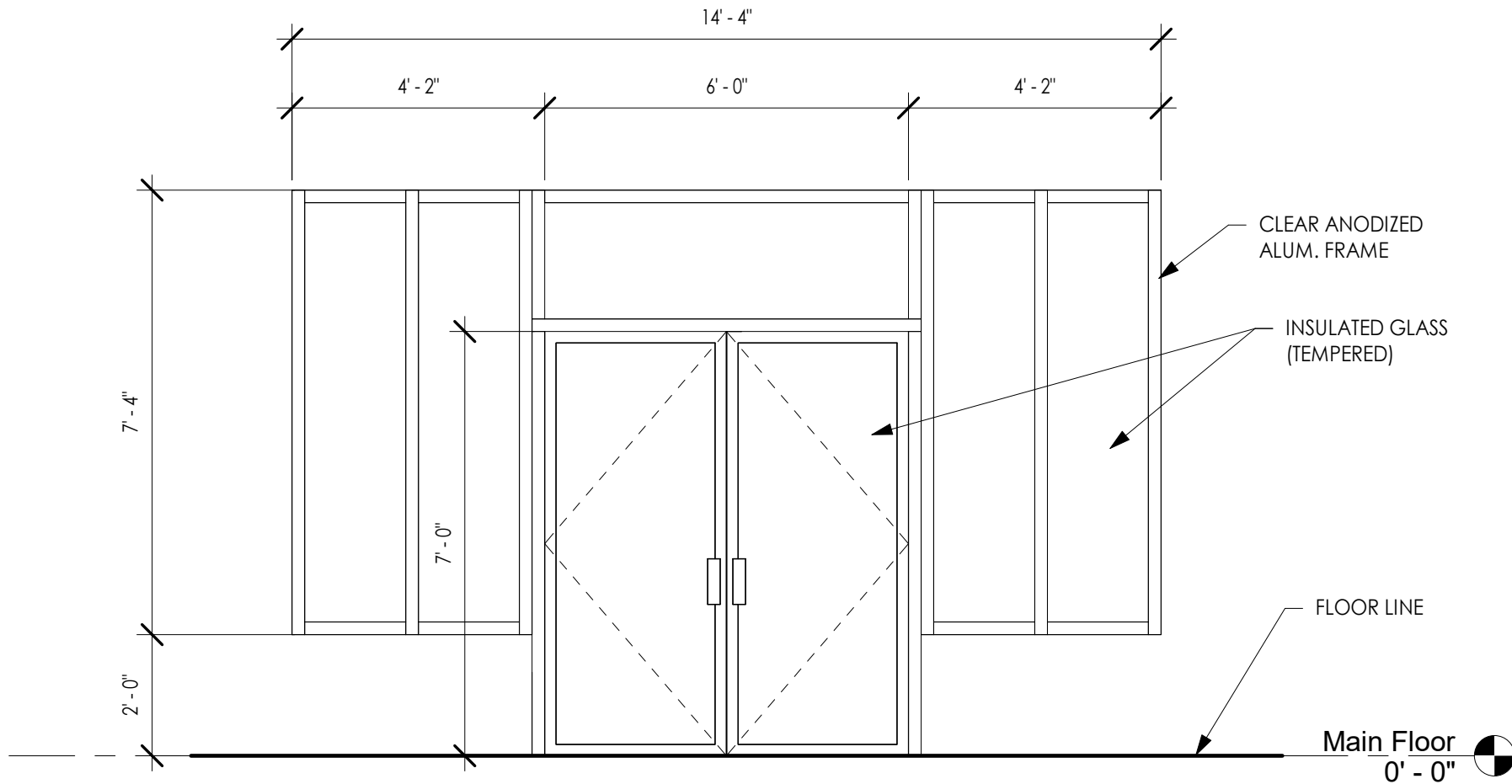
④ DOOR TYPE 1
3/8" = 1'-0"



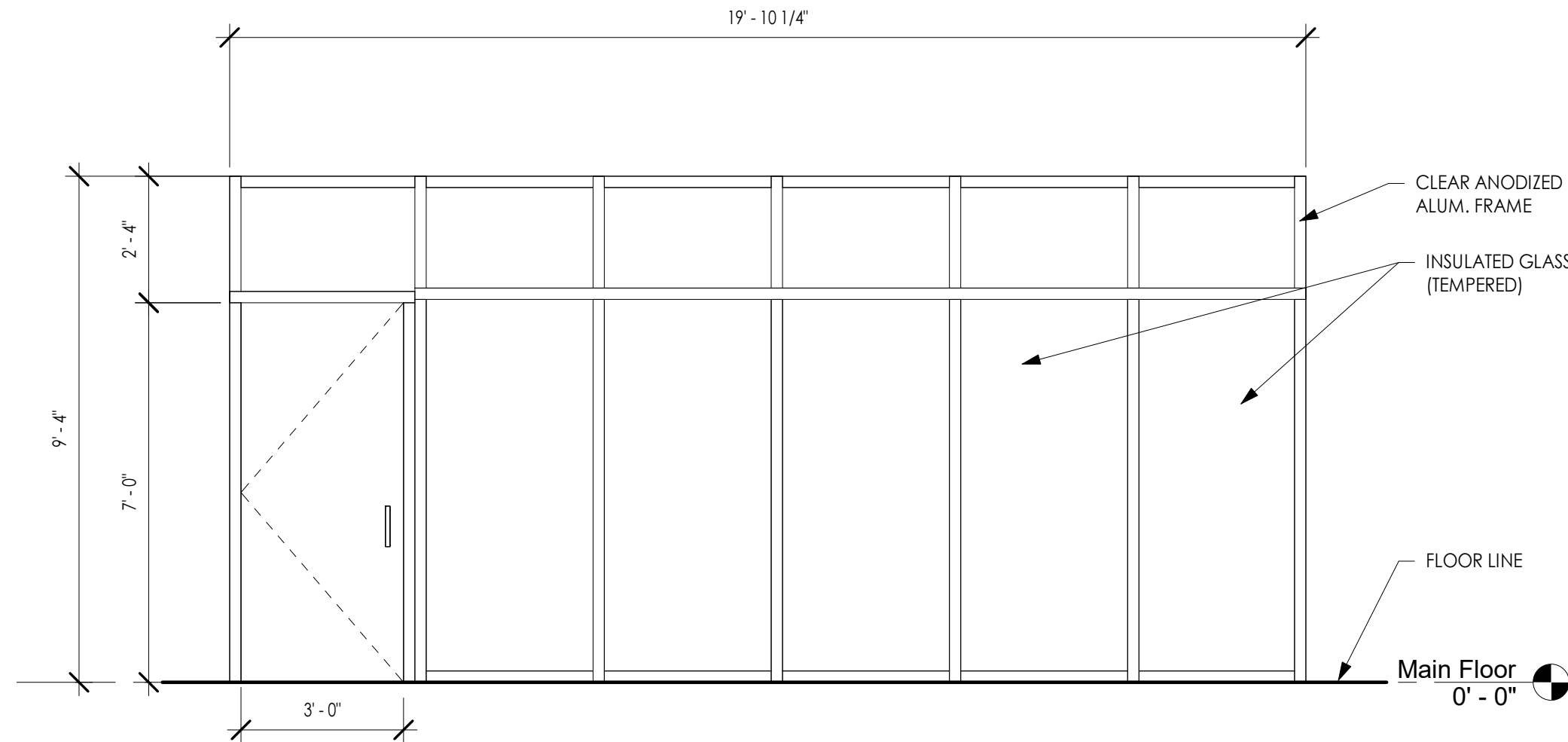
① STOREFRONT - SF01
3/8" = 1'-0"



② STOREFRONT - SF02
3/8" = 1'-0"



③ STOREFRONT - SF03
3/8" = 1'-0"



⑤ STOREFRONT - SF04
3/8" = 1'-0"

1/6/2025 1:08:59 PM



SCHEER
HYSONG

ARCHITECTURE

222 W CUNNINGMAN ST
SUITE 112
BUTLER, PA 16001
724-256-8881

Patrick Scheer - RA, NCARB
Rick Hysong - Assoc. AIA

www.scheerhysong.com
info@scheerhysong.com

RAAD REAL ESTATE BUILDING

1355 N. SHENANDOAH AVE
FRONT ROYAL, WARREN COUNTY, VA 22630

RAAD REAL ESTATE

10110 BATTLEVIEW PARKWAY - MANASSA, VA 20109

DATE:
11/26/24

REV DESCRIPTION:
ISSUED FOR CLIENT REVIEW

PROJECT NUMBER:
24020.1

SHEET TITLE:

DOOR SCHEDULE AND
TYPES

SHEET NUMBER:

A600

B:\In & File\name\1\Projects\6500046867_tobacco hut front royal va\Draw\02-Sheet\C-6867-0001_Tobacco Hut Front Royal.dwg
Plot Date: 12/13/2024 3:38 PM Benjamin T. Somerville
Save Date: 12/13/2024 3:37 PM

GENERAL NOTES

- ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THE DRAWINGS, SPECIFICATIONS, AND THE CODES, RULES AND REGULATIONS OF THE INTERNATIONAL BUILDING CODE, 2018 EDITION, AND ALL OTHER APPLICABLE BUILDING CODES.
- SPECIFICATIONS, CODES, AND STANDARDS NOTED IN THE CONTRACT DOCUMENTS SHALL BE OF THE LATEST APPROVED ISSUE, INCLUDING SUPPLEMENTS, UNLESS OTHERWISE NOTED. MATERIAL SPECIFICATIONS ARE ASTM LATEST EDITION.
- THESE DRAWINGS HAVE BEEN PRODUCED ON THE GATEWAY ENGINEERS, INC. CADD SYSTEM. ANY OTHER MARKS AFFIXED TO THE DRAWINGS, OTHER THAN PROFESSIONAL STAMPS AND SIGNATURES, HAVE BEEN MADE WITHOUT THE AUTHORIZATION OF GATEWAY ENGINEERS AND ARE THEREFORE INVALID.
- IF ANY ERRORS OR OMISSIONS APPEAR IN THESE DRAWINGS, SPECIFICATIONS, OR OTHER DOCUMENTS; THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OR ARCHITECT IN WRITING OF SUCH OMISSION OR ERROR BEFORE PROCEEDING WITH THE WORK.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION. THE OWNER AND ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES. THE STRUCTURAL DRAWINGS SHALL GOVERN THE WORK FOR ALL STRUCTURAL FEATURES. UNLESS NOTED OTHERWISE THE ARCHITECTURAL DRAWINGS SHALL GOVERN THE WORK RELATED TO DIMENSIONS. SCALING OF DRAWINGS TO OBTAIN DIMENSIONS SHALL NOT BE DONE AT ANY TIME. IF A REQUIRED DIMENSION IS NOT PROVIDED, THE CONTRACTOR SHALL SUBMIT A REQUEST FOR INFORMATION TO THE ENGINEER FOR CLARIFICATION. UNLESS NOTED OTHERWISE CONTRACTOR SHALL PROVIDE EQUAL SPACING OF STRUCTURAL COMPONENTS BETWEEN OVERALL DIMENSIONS PROVIDED ON THE DRAWINGS.
- NOTES AND DETAILS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NOTES AND DETAILS ON DRAWINGS AND THESE GENERAL NOTES AND TYPICAL DETAILS ARE IN CONFLICT WITH THE PROJECT SPECIFICATIONS, CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD. CONDITIONS NOT SPECIFICALLY SHOWN SHALL BE CONSTRUCTED AS SHOWN FOR SIMILAR WORK. SUBJECT TO REVIEW BY THE ARCHITECT AND STRUCTURAL ENGINEER.
- THE CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS, METHODS AND SAFETY OF ERECTION OF THE CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
- CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE EXISTING AND NEW STRUCTURE AND ALL STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE STRUCTURAL DOCUMENTS.
- MANUFACTURED MATERIALS SHALL BE APPROVED BY THE CHECKING AGENCY PRIOR TO THEIR USE. ALL REQUIREMENTS OF THOSE APPROVALS SHALL BE FOLLOWED.
- ALL STRUCTURAL SYSTEMS THAT ARE TO BE COMPOSED OF MANUFACTURED COMPONENTS TO BE FIELD ERECTED SHALL BE APPROVED BY THE CHECKING AGENCY PRIOR TO THEIR USE AND SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE, AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.
- STRUCTURAL WORK SHALL BE TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE PROJECT SPECIFICATIONS AND THE GENERAL NOTES. THE OWNER SHALL ENGAGE AN EXPERIENCED AND QUALIFIED TESTING AGENCY, EXPERIENCED IN THE TESTING TO BE PERFORMED, TO REVIEW AND TEST ALL NECESSARY ELEMENTS.

DESIGN LOADING

- ALL STRUCTURAL ELEMENTS WERE DESIGNED IN ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODE (2018 IBC).
- SNOW LOADS:
 - BASE GROUND SNOW LOAD 40 PSF
 - IMPORTANCE FACTOR (SNOW LOAD) 1.0
 - EXPOSURE FACTOR 1.0
 - THERMAL FACTOR 1.2
 - PITCHED ROOF SNOW LOAD 34 PSF
- WIND LOADS:
 - ULTIMATE WIND DESIGN SPEED (3 SECOND GUST) 110 MPH
 - NOMINAL WIND DESIGN SPEED (3 SECOND GUST) 89 MPH
 - RISK CATEGORY II
 - EXPOSURE CATEGORY B
 - ENCLOSURE CLASSIFICATION EXPOSED
 - INTERNAL PRESSURE COEFFICIENT +/- 0.18
- SEISMIC LOADS:
 - RISK CATEGORY II
 - IMPORTANCE FACTOR 1.0
 - MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETERS
 - SS = 0.133
 - S1 = 0.046
 - SITE CLASS D
 - DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS
 - SDS = 0.142
 - SD1 = 0.073
 - SEISMIC DESIGN CATEGORY B
 - BASIC SEISMIC FORCE-RESISTING SYSTEM LIGHT-FRAME (COLD FORMED STEEL WALLS)
 - DESIGN BASE SHEAR V = 4 KIPS
 - RESPONSE COEFFICIENT
 - CS = 0.022
 - RESPONSE MODIFICATION COEFFICIENT
 - R = 6.5
 - ANALYSIS PROCEDURE EQUIVALENT LATERAL FORCE PROCEDURE

FOUNDATION NOTES

- ALL FOUNDATIONS WERE DESIGNED USING PRESUMED BEARING VALUES ALLOWED VIA SECTION 1806 OF THE 2018 INTERNATIONAL BUILDING CODE (IBC), WITH A MINIMUM BEARING CAPACITY OF 1,500 PSF. OWNER IS TO ENGAGE A LICENSED GEOTECHNICAL ENGINEER TO REVIEW FOUNDATION BEARING MATERIAL PRIOR TO CONCRETE PLACEMENT.
- THE CONTRACTOR SHALL OBSERVE WATER CONDITIONS AT THE SITE AND SHALL PROVIDE DEWATERING AS NECESSARY TO ENSURE THAT THE FOUNDATION EXCAVATIONS REMAIN DRY DURING CONSTRUCTION.
- CONCRETE SLABS ON GRADE SHALL BE DESIGNED TO BEAR ON COMPACTED SUBGRADE SOILS OR PROPERLY COMPACTED FILL AS RECOMMENDED BY A GEOTECHNICAL ENGINEER LICENSED IN THE STATE OF VIRGINIA AND RETAINED BY THE OWNER PRIOR TO CONCRETE PLACEMENT.
- EARTH FORMING OF FOUNDATION ELEMENTS IS PROHIBITED UNLESS SPECIFICALLY AUTHORIZED BY THE AUTHORITY HAVING JURISDICTION. THE ABILITY OF THE SOILS TO MAINTAIN THE PROPER SHAPE DURING CONCRETE PLACEMENT SHALL BE VERIFIED BY THE GEOTECHNICAL ENGINEER PRIOR TO CONCRETE PLACEMENT.
- ELEVATIONS SHOWN ON THE DRAWINGS AT WHICH FOUNDATIONS ARE TO BEAR ARE APPROXIMATE. ALL EXTERIOR FOUNDATIONS SHALL BE CONSTRUCTED TO MAINTAIN A MINIMUM OF 2'-0" BELOW FINISHED GRADE.

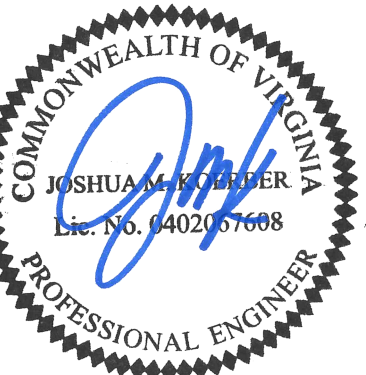
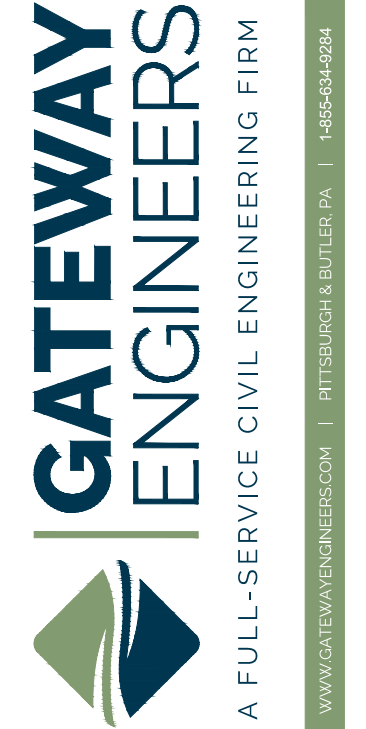
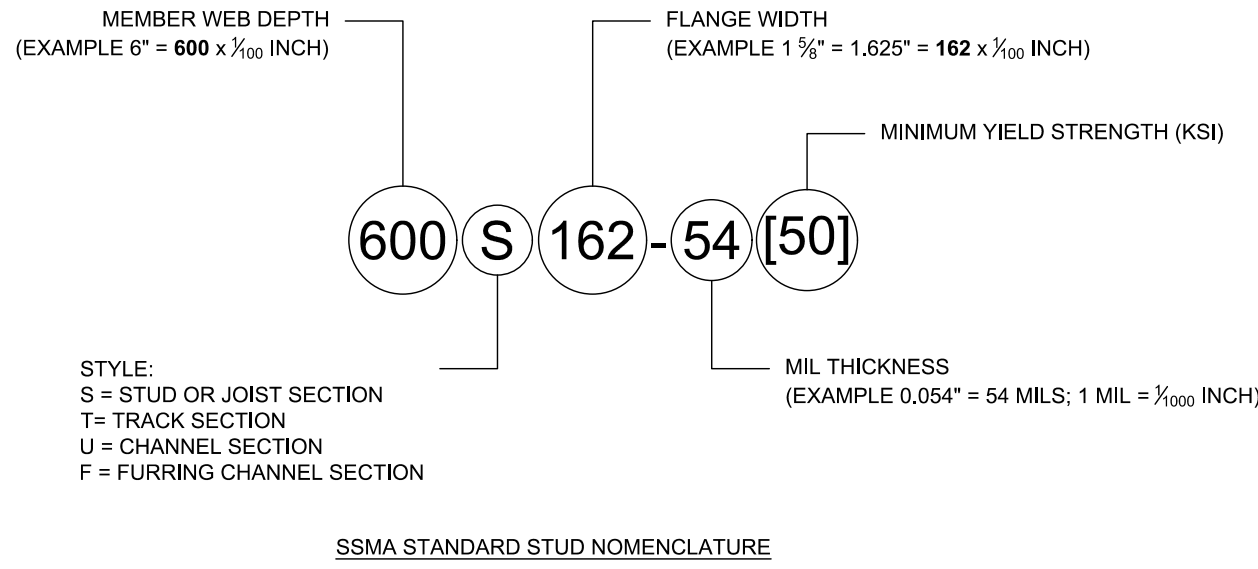
REINFORCED CONCRETE NOTES

- ALL CONCRETE CONSTRUCTION SHALL CONFORM TO THE 'BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE', ACI 318 AND ACI 301, WITH MODIFICATIONS AS NOTED IN THE CONTRACT DOCUMENTS.
- PORTLAND CEMENT SHALL CONFORM TO ASTM C-150 TYPE I, TYPE II OR TYPE III.
- COARSE AND FINE AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C-33.
- WATER SHALL BE CLEAR AND SHALL CONFORM TO ASTM C-94.
- CONCRETE MIXING OPERATION SHALL CONFORM TO ASTM C-94.
- ALL CONCRETE EXPOSED TO WEATHER SHALL BE ADMIXED WITH MICROAIR OR MBVR AIR ENTRAINING AGENT BY MASTERBUILDERS TO ATTAIN 5.5 % +/- 1 % ENTRAINED AIR, BY VOLUME, CONFORMING TO ASTM C-260. ALL REFERENCE DATA USED FOR PAST PERFORMANCE DESIGN SHALL HAVE CONTAINED THE SAME ADMIXTURE BRAND AS THAT USED IN THE MIX SUBMITTED.
- ALL CONCRETE SHALL BE REQUIRED TO OBTAIN A MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI AND HAVE A MAXIMUM WATER TO CEMENT RATIO OF 0.40. CONCRETE STRENGTHS SHALL BE VERIFIED BY 28-DAY CYLINDER TESTS, UNLESS OTHERWISE APPROVED.
- CONTRACTOR MAY USE AN ADMIXTURE SYSTEM TO PRODUCE FLOWABLE CONCRETE. MAXIMUM SLUMP SHALL NOT EXCEED 10 INCHES MEASURED AT THE PUMP. THE WATER/CEMENTIOUS MATERIAL RATIO OF THE APPROVED MIXES SHALL BE MAINTAINED OR LOWERED WHEN FLOWABLE CONCRETE IS USED. A REPRESENTATIVE OF THE ADMIXTURE SYSTEM SHALL ASSIST IN DETERMINING PROPORTIONS FOR FLOWABLE CONCRETE AND SHALL BE REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO EMPLOYING THIS PROCEDURE.
- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT PLACED IN CAST-IN-PLACE CONCRETE:

	CONCRETE COVER (MINIMUM)
A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
B. CONCRETE EXPOSED TO EARTH OR WEATHER: #6 THROUGH #18 BARS #5 BAR, W31 OR D31 WIRE, AND SMALLER	2" 1-1/2"
- PROJECTING CORNERS OF PIERS, SHALL BE FORMED WITH A 3/4 INCH CHAMFER, UNLESS OTHERWISE NOTED ON THE ARCHITECTURAL DRAWINGS.
- ALL REINFORCING BARS, ANCHOR BOLTS AND OTHER CONCRETE INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.
- CURING COMPOUNDS USED ON CONCRETE TO RECEIVE A FINISH SHALL BE APPROVED BY THE FINISH APPLICATOR BEFORE USE.
- ALL JOINTS BETWEEN SEPARATE POURS SHALL BE KEVED TOGETHER. MINIMUM KEY SIZE SHALL BE 2"DP X 4"W. UNLESS OTHERWISE NOTED.
- PRIOR TO CONCRETE PLACEMENT THE CONTRACTOR SHALL SUBMIT A CONCRETE MIX DESIGN IN ACCORDANCE WITH ACI 301 FOR REVIEW.
- THE CONTRACTOR SHALL ENGAGE A QUALIFIED INDEPENDENT TESTING AGENCY TO SAMPLE AND TEST CONCRETE AT THE POINT OF PLACEMENT PER ACI 301. A COPY OF THE TEST RESULTS SHALL BE PROVIDED TO THE OWNER AND ENGINEER FOR REVIEW. TESTING SHALL INCLUDE RECORDING OF THE TEMPERATURE AND SLUMP OF THE CONCRETE (PER ACI 301) FOR EACH 10 CUBIC YARDS OF CONCRETE PLACED AND TO CAST AND LABORATORY CURE SIX (6) CONCRETE COMPRESSIVE STRENGTH TEST CYLINDERS (PER ASTM C-31) FOR EACH 50 CUBIC YARDS OF CONCRETE PLACED PER DAY. TEST TWO (2) CYLINDERS AT 7 DAYS, TWO (2) CYLINDERS AT 28 DAYS AND RETAIN TWO (2) CYLINDERS FOR TESTING AT 56 DAYS IN THE EVENT THE 28 DAY CYLINDERS DO NOT MEET THE SPECIFIED COMPRESSIVE STRENGTH REQUIREMENTS OUTLINED ABOVE.
- ACCEPTANCE OF CONCRETE WHICH DOES NOT MEET THE SPECIFIED STRENGTH AT 28 DAYS IS AT THE SOLE DISCRETION OF THE ENGINEER.
- REINFORCING STEEL SHALL BE DETAILED, INCLUDING HOOKS AND BENDS, AND PLACED IN ACCORDANCE WITH ACI 315 AND ACI 318.
- REINFORCING STEEL SHALL CONFORM TO ASTM A-615 OR A-706, GRADE 60.
- ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
- REINFORCING SPLICES SHALL BE MADE IN ACCORDANCE WITH CRSI LATEST EDITION (TENSION SPLICE CLASS "B").
- DOWELS BETWEEN FOOTINGS AND WALLS OR COLUMNS SHALL BE THE SAME GRADE, SIZE AND SPACING AS THE VERTICAL REINFORCING, RESPECTIVELY, UNLESS NOTED OTHERWISE.
- NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED AND REVIEWED BY THE STRUCTURAL ENGINEER.
- WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED.

COLD-FORMED STEEL FRAMING NOTES

- UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED, ALL COLD-FORMED STEEL FRAMING WORK SHALL BE IN ACCORDANCE WITH THE MOST CURRENT ADOPTED EDITIONS OF THE AMERICAN IRON AND STEEL INSTITUTE (AISI) PROVISIONS FOR COLD-FORMED STEEL STRUCTURAL FRAMING, AISI S100 AND AISI S200, AND THE FOLLOWING:
 - FLOOR AND ROOF SYSTEMS: AISI S210
 - WALL STUDS: AISI S211
 - HEADERS: AISI S212
 - LATERAL DESIGN: AISI S213
- ALL COLD-FORMED STEEL FRAMING SHALL MEET OR EXCEED THE STRUCTURAL PERFORMANCE REQUIREMENTS, INCLUDING HANDLING AND ERECTION STABILITY REQUIREMENTS AND BUILDING MOVEMENTS (INCLUDING MOVEMENTS IMPARTED DUE TO THERMAL MOVEMENTS), PROVIDE COLD-FORMED STEEL FRAMING CAPABLE OF WITHSTANDING HE DESIGN LOADS WITHIN LIMITS UNDER THE CONDITIONS INDICATED.
 - DESIGN LOADS: AS INDICATED IN THIS CONSTRUCTION SET AND PROJECT SPECIFICATIONS
 - DEFLECTION LIMITS: DESIGN FRAMING SYSTEMS TO WITHSTAND DESIGN LOADS WITHOUT DEFLECTIONS GREATER THAN THE FOLLOWING (UNLESS MORE STRINGENT CRITERIA IS SPECIFIED BY PRODUCT MANUFACTURER):
 - EXTERIOR LOAD-BEARING AND NON-LOAD-BEARING WALL FRAMING WITH FLEXIBLE SHEATHING AND FINISHED WALL MATERIALS:
 - HORIZONTAL DEFLECTION OF 1/240 OF THE WALL HEIGHT
 - EXTERIOR LOAD-BEARING WALL FRAMING WITH NON-FLEXIBLE SHEATHING AND FINISHED WALL MATERIALS:
 - HORIZONTAL DEFLECTION OF 1/360 OF THE WALL HEIGHT
 - EXTERIOR LOAD-BEARING WALL FRAMING WITH RIGID SHEATHING AND FINISHED WALL MATERIALS (BRICK OR MASONRY):
 - HORIZONTAL DEFLECTION OF 1/600 OF THE WALL HEIGHT OR 0.3-INCHES MAXIMUM (WHICHEVER IS MORE STRINGENT).
- STEEL USED IN THE MANUFACTURE OF COLD-FORMED STEEL FRAMING SHALL BE HOT-DIPPED GALVANIZED WITH A MINIMUM COATING WEIGHT OF G-90.
- ALL WELDING OF COLD-FORMED STEEL FRAMING SHALL BE IN COMPLIANCE WITH AWS D1.1 "STRUCTURAL WELDING CODE - STEEL" AND AWS D1.3 "STRUCTURAL WELDING CODE - SHEET STEEL". REPAIR UNCOATED AND DAMAGED AREAS OF ALL GALVANIZED COATINGS DUE TO WELDING PROCESSES, CONSTRUCTION, OR OTHER CAUSES BY APPLYING A ZINC-RICH PAINT MEETING ASTM A780. ALL SURFACES TO RECEIVE COLD GALVANIZED COATING SHALL BE APPROPRIATELY PREPARED PER ASTM D6386.
- ALL COLD-FORMED STRUCTURAL STEEL FRAMING SHALL BE MANUFACTURER'S STANDARD AND DESIGNATED PER THE STEEL STUD MANUFACTURER'S ASSOCIATION (SSMA) STANDARD NOMENCLATURE AS INDICATED BELOW.
 - MINIMUM BASE-METAL THICKNESS: 43 MILS
 - STANDARD FLANGE WIDTH = 1-5/8-INCHES (STUD C-SHAPES); 1-1/4-INCHES (TRACK U-SHAPES)
 - MINIMUM YIELD STRENGTH = 33 KSI
- ALL CLIPS, ATTACHMENTS, FRAMING ANGLES, TRACK SECTIONS, AND OTHER COMPONENTS SHALL MEET OR EXCEED THE STRENGTH AND THICKNESS OF THE PART THEY ARE ATTACHING TO.
- SELF-DRILLING SCREWS MUST BE INSTALLED WITH THE THINNER MEMBER IN CONTACT WITH THE SCREW HEAD. DO NOT DRIVE SELF-DRILLING SCREWS FROM THE THICKER PART TO THE THINNER PART. IF UNAVOIDABLE, ALL THICKER MEMBERS IN CONTACT WITH THE SCREW HEAD MUST BE PRE-DRILLED.
- FIELD CUTTING OF STUDS MUST BE DONE BY SAWING OR SHEARING. TORCH CUTTING OF COLD-FORMED STEEL FRAMING IS NOT PERMITTED.
- ANY SPLICES IN STUDS OR JOISTS SHALL BE SPECIFICALLY DETAILED ON THE SHOP DRAWINGS AND SHALL NOT BE MADE WITHOUT THE STRUCTURAL ENGINEERS REVIEW OF APPLICABLE SPLICE DETAILS AND CALCULATIONS.
- DO NOT BRIDGE EXPANSION JOINTS WITH WALL FRAMING. PROVIDE FRAMING ON BOTH SIDES OF THE BUILDING EXPANSION JOINTS.
- PROVIDE TEMPORARY AND PERMANENT WALL STUD BRIDGING PER THE MANUFACTURER RECOMMENDATIONS.



REVISION RECORD											
No	Date										
01											
02											
03											
04											
05											
06											
07											
08											

RAAD REAL ESTATE BUILDING

1355 SHENADOAH AVE
FRONT ROYAL, VA 22630

PREPARED FOR:
SCHEER HYSONG ARCHITECTURE
222 W CUNNINGHAM ST, SUITE 112
BUTLER, PA 16001

GENERAL NOTES

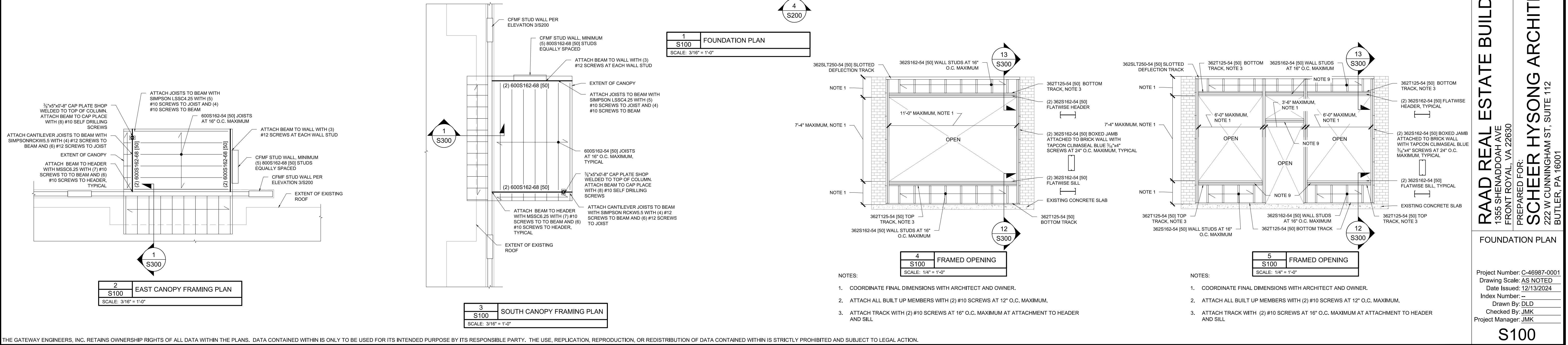
Project Number: C-46867-0001
Drawing Scale: NO SCALE
Date Issued: 12/13/2024
Index Number: _____
Drawn By: DLD
Checked By: JMK
Project Manager: JMK

S000

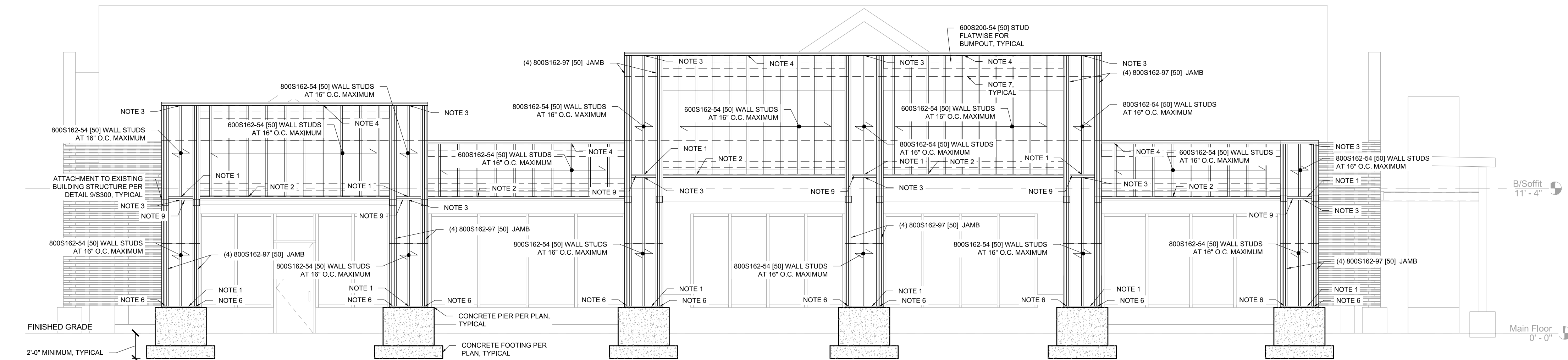
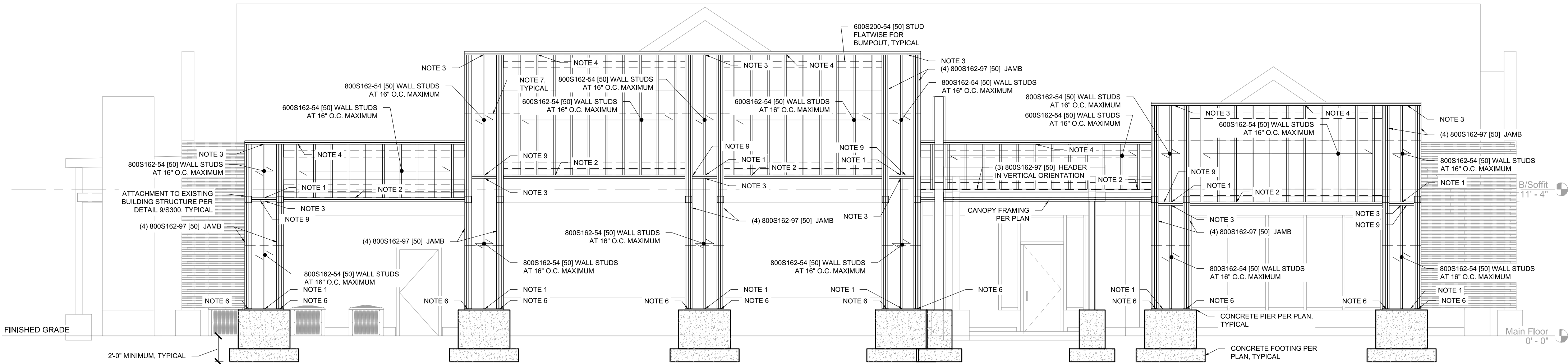
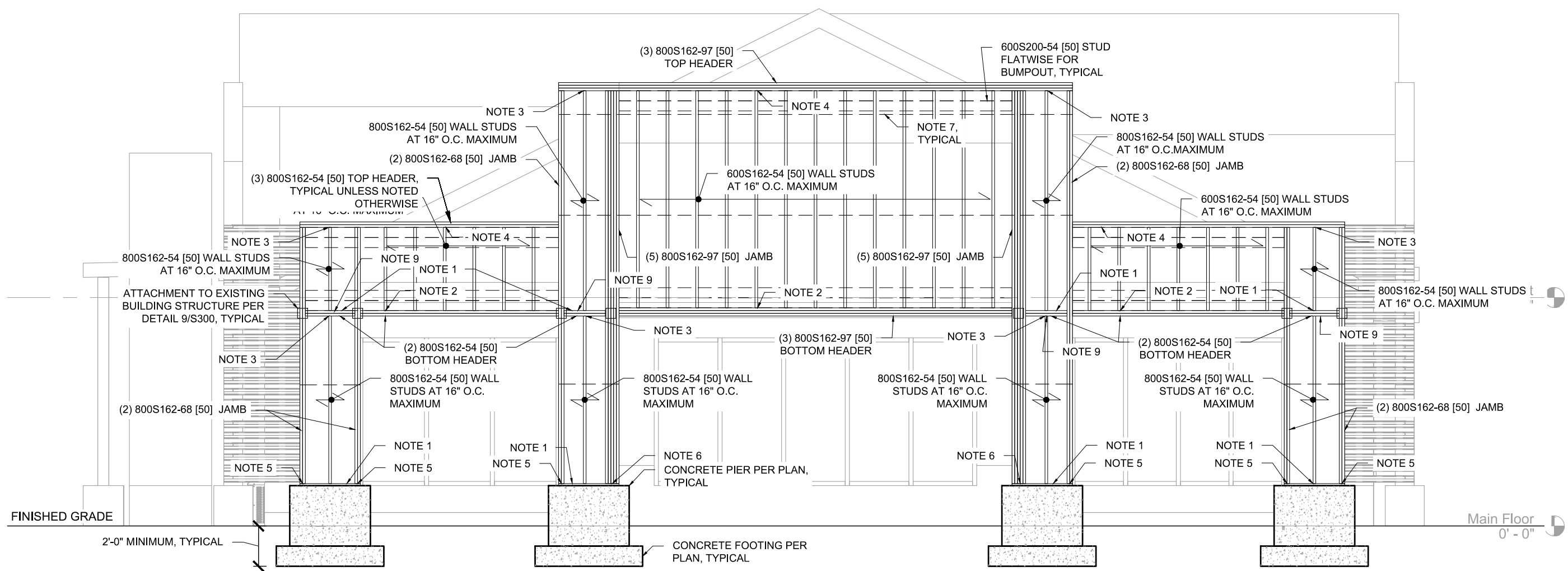
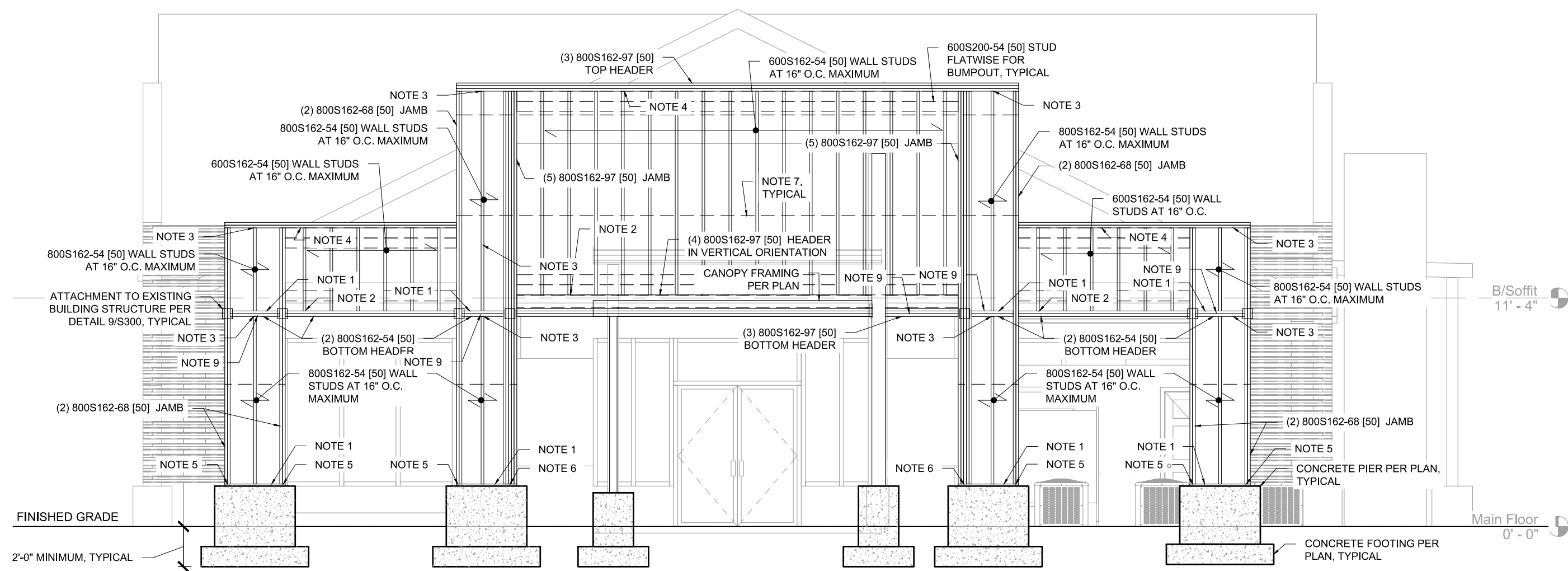
Path & File Name: Projects\6500046867_Tobacco Hut Front Royal\02_Sheet\C-46867-2001_Tobacco Hut Front Royal.dwg
Plot Date: 12/13/2024 3:37 PM
User: JMK

Project Number: C-46867-0001
Drawing Scale: AS NOTED
Date Issued: 12/13/2024
Index Number: 112
Drawn By: DLD
Checked By: JMK
Project Manager: JMK

THE GATEWAY ENGINEERS, INC. RETAINS OWNERSHIP RIGHTS OF ALL DATA WITHIN THE PLANS. DATA CONTAINED WITHIN IS ONLY TO BE USED FOR ITS INTENDED PURPOSE BY ITS RESPONSIBLE PARTY. THE USE, REPLICATION, REPRODUCTION, OR REDISTRIBUTION OF DATA CONTAINED WITHIN IS STRICTLY PROHIBITED AND SUBJECT TO LEGAL ACTION.



Path & File Name: \\projects\050046867_tobacco hut front royal\050046867-0001 Tobacco Hut Front Royal.dwg
Plot Date: 12/13/2024 3:38 PM
User: JMK
Scale: 3/16" = 1'-0"



- NOTES:
- 800T125-97 [50] BOTTOM TRACK WITH (2) SIMPSON 0.157 POPA/PDPAT OR HILTI X-U P8 x 1" LONG AT 16" O.C. MAXIMUM AT ATTACHMENT TO CONCRETE AND (2) #10 SCREWS AT 16" O.C. MAXIMUM AT ATTACHMENT TO BOTTOM HEADER.
 - 600T125-54 [50] BOTTOM TRACK WITH (2) #10 SCREWS AT 16" O.C. MAXIMUM AT ATTACHMENT TO BOTTOM HEADER.
 - 800T125-97 [50] TOP TRACK WITH (3) #10 SCREWS TO HEADER AT 16" O.C. MAXIMUM.
 - 600T125-54 [50] TOP TRACK WITH (3) #10 SCREWS TO HEADER AT 16" O.C. MAXIMUM.
 - (2) ADDITIONAL SIMPSON 0.157 POPA/PDPAT OR HILTI X-U P8 x 1" MINIMUM EMBEDMENT AT JAMB
 - 1/2"x6"x0'-6" PLATE WITH (1) 3/8" DIAMETER THREADED RODS AND HILTI HIT-HY 200 ADHESIVE x 9" MINIMUM EMBEDMENT AT JAMB
 - PROVIDE BRIDGING FOR ALL WALL STUDS AT 5'-0" O.C. MAXIMUM. SEE DETAIL 3/S300
 - ATTACH ALL BUILT UP MEMBERS BACK-TO-BACK WITH (2) #10 SCREWS AT 12" O.C. MAXIMUM UNLESS MORE STRINGENT FASTENING IS NOTED OTHERWISE ON THIS SHEET. SEE TABLE BELOW FOR BUILT UP MEMBER ORIENTATION.
 - ATTACH BUILT UP MEMBERS BACK-TO-BACK WITH (2) #10 SCREWS AT 4" O.C. MAXIMUM

BUILT UP MEMBER ORIENTATION					
JAMBS		HEADERS		VERTICAL HEADERS	
(2) 800S162-68 [50]	(4) 800S162-97 [50]	(5) 800S162-97 [50]	(2) 800S162-54 [50]	(3) 800S162-97 [50]	(4) 800S162-97 [50]

REVISION RECORD

No	Date
01	
02	
03	
04	
05	
06	
07	
08	

RAAD REAL ESTATE BUILDING

1355 SHENADOAH AVE
FRONT ROYAL, VA 22630

PREPARED FOR:

SCHEER HYSONG ARCHITECTURE

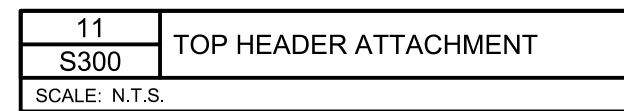
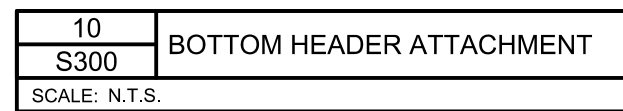
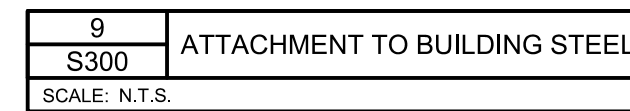
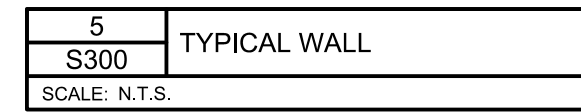
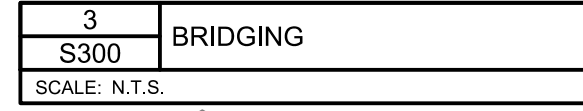
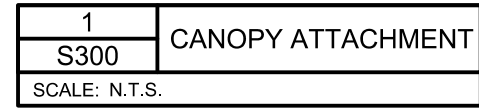
222 W CUNNINGHAM ST, SUITE 112

BUTLER, PA 16001

ELEVATIONS

Project Number: C-46897-0001
Drawing Scale: AS NOTED
Date Issued: 12/13/2024
Index Number: _____
Drawn By: DLD
Checked By: JMK
Project Manager: JMK

S200



S300



Model / Modèle / Modelo: 12OUT-DS-MB

Wall-mounted LED light fixture - Dark Sky™

INSTRUCTION MANUAL

IMPORTANT: READ CAREFULLY
AND KEEP.

Luminaire mural à DEL - Dark Sky™

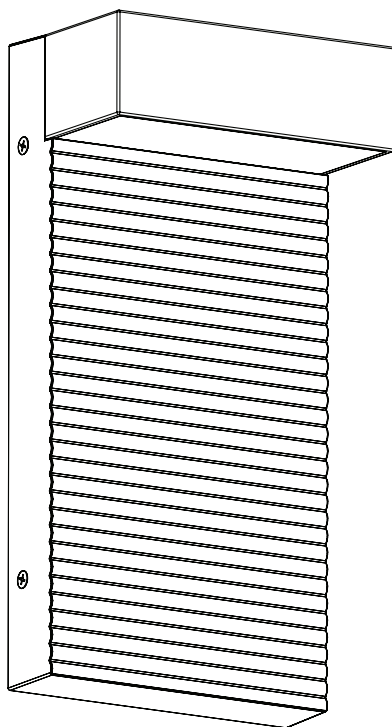
MANUEL D'INSTRUCTIONS

IMPORTANT :
À LIRE ATTENTIVEMENT
ET À CONSERVER.

Lámpara de pared LED - Dark Sky™

MANUAL DE INSTRUCCIONES

IMPORTANTE:
LEER DETENIDAMENTE
Y CONSERVAR.



Intertek

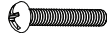
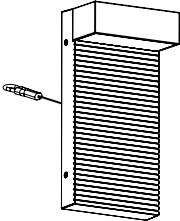
Rev. 14-12-2020

Made in China
Residential use only
Indoor or outdoor use

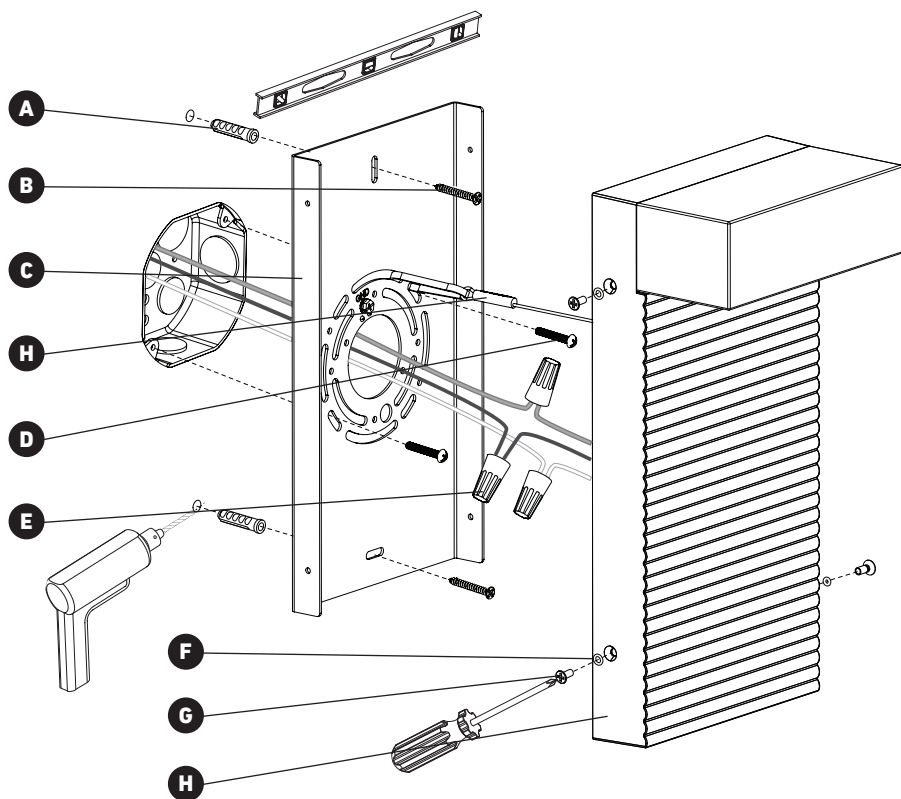
Fabriqué en Chine
Usage résidentiel seulement
Usage intérieur ou extérieur

Hecho en China
Uso residencial solamente
Uso interior o exterior

INCLUDED HARDWARE
MATÉRIEL INCLUS
HERRAMIENTAS INCLUIDO

Item Pièce Pieza	Description Description Descripción	Quantity Quantité Cantidad
A 	Wall anchor Ancrage mural Ancla de pared	× 2
B 	Junction box screw Vis de boîtier de raccordement Tornillo de caja de conexiones	× 2
C 	Mounting bracket Support de montage Soporte de montaje	× 1
D 	Junction box screw Vis de boîtier de raccordement Tornillo de caja de conexiones	× 2
E 	Wire connector Capuchon de connexion Conector de cable	× 3
F 	Rubber Washer Rondelle en caoutchouc Arandela de gomas	× 4
G 	Mounting screw Vis de montage Tornillo de montaje	× 4
H 	Light fixture Luminaire Luminario	× 1

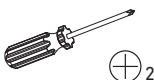
STEP-BY-STEP INSTALLATION
INSTALLATION DÉTAILLÉE
INSTALACIÓN ETAPA POR ETAPA



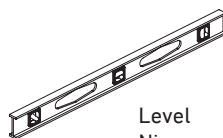
WHAT YOU WILL NEED
VOUS AUREZ BESOIN
LO QUE NECESITARÁ



Pencil
Crayon
Lápiz



Screwdriver
Tournevis
Destornillador



Level
Niveau
Nivel

CAUTION
ATTENTION
ATENCIÓN

CAUTION:

If using a dimmer,
it must be LED
compatible.

ATTENTION

Si vous utilisez un
gradateur, celui-ci doit
être compatible avec les
lumières à DEL.

ATENCIÓN

Si utiliza un regulador,
debe asegurarse de que
es compatible con las
luces LED.

IMPORTANT

The installer and/or user must read, understand and follow these instructions before installing the product. This product must be properly installed before it is used. If instructions are not followed, the manufacturer will not be held responsible for any problems or product malfunction. Failure to follow installation and/or operating instructions voids the warranty.

We recommend that this product be installed by a certified electrician. In some states or provinces, it is a legal requirement for this type of product to be installed by a certified electrician, according to the electrical and building codes effective in the region where the unit is used.

IMPORTANT

Avant l'installation de ce produit, l'utilisateur et/ou l'installateur doit avoir lu et compris ces instructions. Cet appareil doit être installé convenablement avant usage. Si ces instructions ne sont pas respectées, le fabricant ne pourra être tenu responsable d'aucun problème ou de dysfonctionnement du produit. Le non-respect des instructions d'installation et/ou d'utilisation annulera la garantie en vigueur.

Nous recommandons que ce produit soit installé par un électricien certifié. Dans certains États ou provinces, il est légalement requis que ce type de produit soit installé par un électricien certifié conformément aux codes de l'électricité et du bâtiment en vigueur.

IMPORTANTE

El instalador o usuario debe leer detenidamente las instrucciones antes de instalar el producto y seguirlas fielmente. El producto debe estar correctamente instalado antes de su utilización. Si no siguen las instrucciones, el fabricante no se hará responsable de problemas o de un funcionamiento incorrecto del producto. Si no sigue las instrucciones de instalación o de uso, se anulará la garantía.

Le recomendamos que el producto sea instalado por un electricista certificado. En algunos estados o provincias, se requiere por ley que este tipo de producto sea conectado por un electricista certificado siguiendo los códigos eléctricos y arquitectónicos de la región.

WARNING:



Risk of electrical shock.
Turn off breaker
at the panel.

AVERTISSEMENT:



Risque de décharge
électrique. Éteindre
le disjoncteur sur le
panneau électrique.

ADVERTENCIA:



Riesgo de descarga
eléctrica. Desconectar
la corriente eléctrica del
panel (disyuntor).

Switch off the main electrical supply from the fuse box/ circuit breaker before installing the unit or doing any maintenance.

indoor/outdoor light.

Il est important de couper l'alimentation électrique du disjoncteur avant de procéder à l'installation ou à l'entretien.

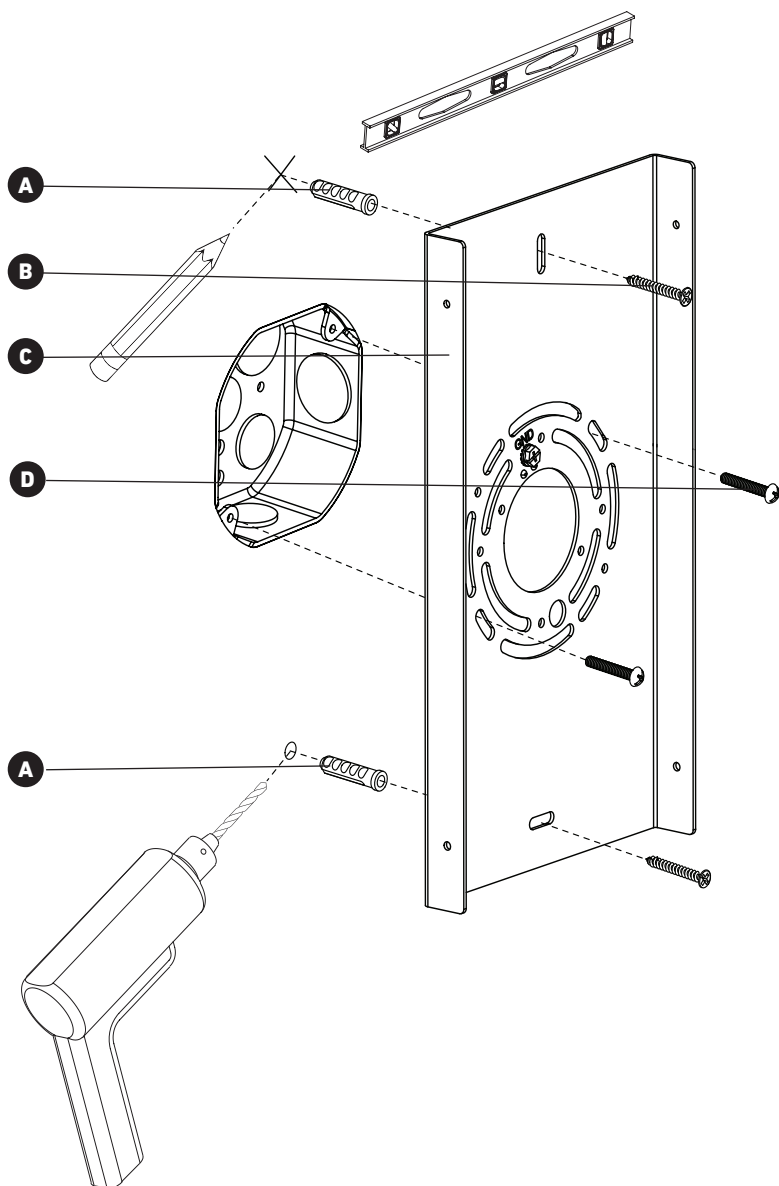
éclairage intérieur / extérieur.

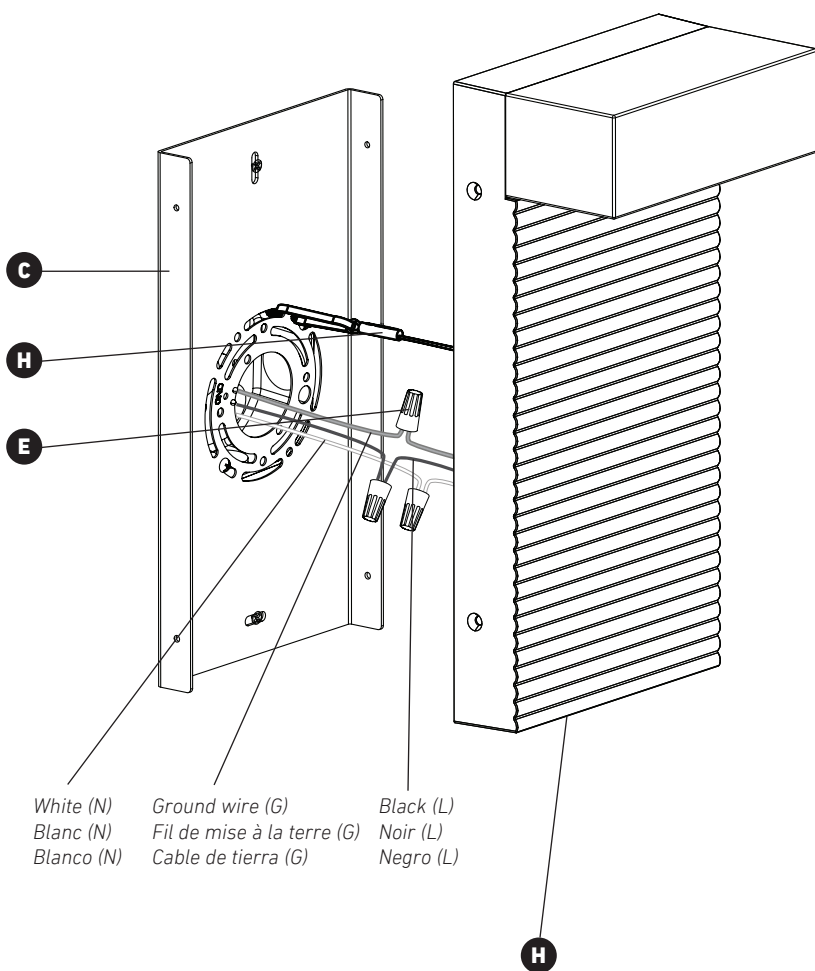
Desconecte la instalación eléctrica en la caja de circuitos/ disyuntor antes de instalar esta unidad o realizar tareas de mantenimiento en ella.

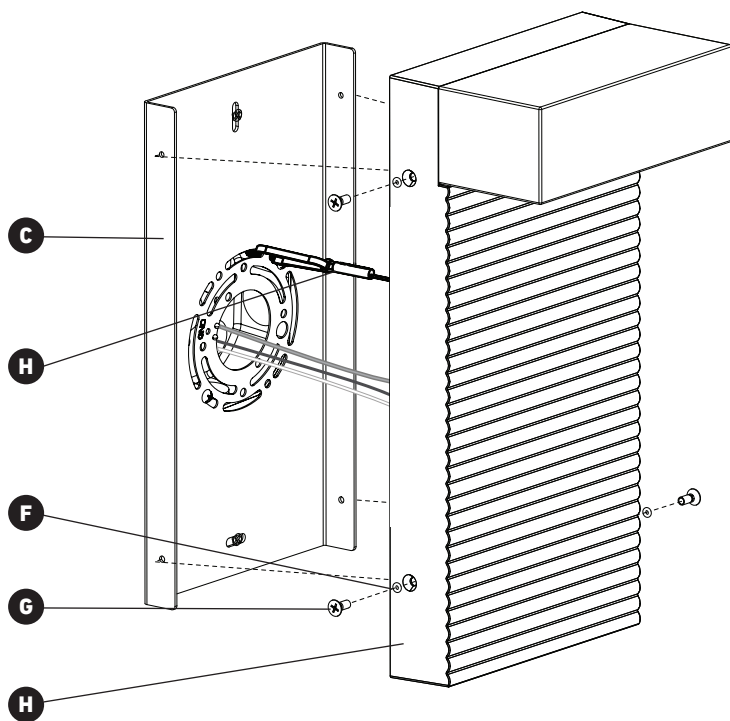
Luz interior / exterior.

1

MOUNTING BRACKET INSTALLATION
INSTALLATION DU SUPPORT DE MONTAGE
INSTALACIÓN DEL SOPORTE DE MONTAJE







CANADA (IC)

Operation is subject to the following two conditions:	L'exploitation est autorisée aux deux conditions suivantes :	La operación está sujeta a las dos condiciones siguientes:
1. this device may not cause interference, and	1. l'appareil ne doit pas produire de brouillage; et	1. este dispositivo no puede causar interferencias perjudiciales, y
2. this device must accept any inteference, including inteference that may cause undesired operation of the device.	2. l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.	2. este dispositivo debe aceptar cualquier interferencia recibida, incluidas las interferencias que puedan provocar un funcionamiento no deseado.

USA (FCC)

WARNING:

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference,
- and
2. this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception. However, there is no guarantee that interference will not occur in a particular installation. If this equipment causes harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

AVERTISSEMENT :

Tout changement ou modification, non expressément approuvé par la partie responsable de la conformité, peut annuler l'autorisation de l'utilisateur à utiliser cet appareil.

Ce dispositif est conforme à la partie 15 des règles de la FCC. Son fonctionnement est soumis aux deux conditions suivantes :

1. ce dispositif ne peut pas causer d'interférences nuisibles;
- et
2. cet appareil doit accepter toute interférence reçue, y compris les interférences qui peuvent causer un fonctionnement indésirable.

REMARQUE : Cet équipement a été testé et déclaré comme respectant les limites d'un dispositif numérique de classe B, conformément à la partie 15 des règles de la FCC. Ces limites sont destinées à fournir une protection raisonnable contre les interférences nuisibles dans une installation résidentielle. Cet équipement génère, utilise et peut émettre de l'énergie radiofréquence et, s'il n'est pas installé et utilisé conformément aux instructions, peut provoquer des interférences nuisibles aux communications radio. Cependant, il n'est pas garanti que des interférences ne se produiront pas dans une installation particulière. Si cet équipement cause des interférences nuisibles à la réception radio ou de télévision, ce qui peut être déterminé en mettant l'équipement hors puis sous tension, l'utilisateur est encouragé à essayer de corriger l'interférence par une ou de plusieurs mesures suivantes :

- Réorienter ou déplacer l'antenne de réception.
- Augmenter la distance entre l'équipement et le récepteur.
- Brancher l'appareil à une autre prise pour que l'équipement et le récepteur soient sur des circuits différents.
- Consulter le revendeur ou un technicien radio / TV expérimenté.

ADVERTENCIA:

Cambios o modificaciones en esta unidad sin la expresa aprobación de la parte responsable por el cumplimiento podría anular la autoridad del usuario para operar este equipo.

Este dispositivo cumple con la sección 15 de las normas de la FCC. La operación está sujeta a las dos condiciones siguientes:

1. Este dispositivo no puede causar interferencias perjudiciales,
- y
2. este dispositivo debe aceptar cualquier interferencia recibida, incluidas las interferencias que puedan provocar un funcionamiento no deseado.

NOTA: Este equipo ha sido probado y se comprobó que cumple con los límites para un dispositivo digital de Clase B, de acuerdo con la Parte 15 de las Reglas de la FCC. Estos límites están diseñados para proporcionar una protección razonable frente a la interferencia perjudicial en una instalación residencial. Este equipo genera, usa y puede irradiar energía de radiofrecuencia, y si no se instala y utiliza de acuerdo con las instrucciones, podría causar una interferencia perjudicial en las radiocomunicaciones. Sin embargo, no se puede garantizar que dicha interferencia no ocurra en una instalación determinada. Si este equipo causa una interferencia perjudicial para la recepción de radio o televisión, lo cual se puede determinar apagando y encendiendo el equipo, se insta al usuario a intentar corregir la interferencia aplicando una o más de las siguientes medidas:

- Reorientar o reubicar la antena de recepción.
- Aumentar la separación entre el equipo y el receptor.
- Conectar el equipo a una toma en un circuito diferente al que está conectado el receptor.
- Consultar al vendedor o a un técnico de radio/TV con experiencia para obtener ayuda.

WARRANTY GARANTIE GARANTÍA

Artika For Living Inc. is proud to offer you a five (5) years limited warranty on manufacturing defects from the date of purchase for residential use only. The warranty is extended to the original owner in USA, Canada, Mexico, UK, Iceland, France and Spain and is non-transferable. It does not apply to retailers, commercial applications or establishments. The original sales receipt is required for all warranty claims. The remedy under this limited warranty shall be product or part replacement at Artika's discretion as provided herein and cannot exceed the original purchase price.

This warranty is valid only on products installed in accordance with the building code and laws effective in the region where the unit is used as well as in accordance with the provided instruction manual. It does not cover products installed incorrectly or subjected to abnormal use. Product(s) or component part(s) may be required to be returned for inspection and verification.

Normal wear and tear, misuse, negligence, vandalism, improper maintenance (surface damage due to chemical interaction or cleaning agents including, but not limited to, scouring pads, use of cleaners containing abrasives, alcohol or other organic solvents) improper handling, accident, abuse, fire, flood, theft, acts of God, neglect, or alteration of the product will not be covered under this limited warranty. It excludes any accessories that accompany the product including but not limited to bulbs or batteries.

The warranty does not cover handling, labor, transportation, or any other cost associated with the installation or replacement of the product. This limited warranty is valid in the country of purchase and by Artika authorized retailers only.

Artika for Living Inc. will not be held responsible for any direct or consequential damages or injuries related to the use of this product arising from improper use or installation of this product.

Please visit www.artika.com to discover more about **Artika for Living Inc.**

Artika For Living Inc. est fière de vous offrir une garantie limitée de cinq (5) ans contre tout défaut de fabrication, à compter de la date d'achat, pour un usage domestique uniquement. Cette garantie n'est valide que pour le propriétaire d'origine aux États-Unis, au Canada, au Mexique, au Royaume-Uni, en Islande, en France et en Espagne et est intransférable. Elle ne s'applique pas aux détaillants, ni aux applications ou établissements commerciaux. Le reçu de vente original est exigé pour toute demande de garantie. Le recours prévu par cette garantie limitée est le remplacement du produit ou d'une pièce du produit, à la discrétion d'Artika conformément au présent document, et ne peut pas excéder le prix d'achat original.

Cette garantie couvre uniquement les produits installés conformément au code du bâtiment et aux lois en vigueur dans la région où le produit est utilisé, et les produits utilisés conformément au mode d'emploi fourni. Elle ne couvre pas les produits mal installés ou soumis à un usage anormal. Le ou les produits ou pièces peuvent vous être demandés aux fins d'inspection et de vérification.

L'usure normale, une mauvaise utilisation, la négligence, le vandalisme, un mauvais entretien (surface endommagée à cause d'une interaction chimique ou de produits nettoyants, incluant sans s'y limiter les éponges métalliques, l'utilisation de produits nettoyants contenant des agents abrasifs, de l'alcool ou d'autres solvants organiques), une manipulation inadéquate, un accident, un abus, un incendie, une inondation, un vol, une catastrophe naturelle ou la modification du produit ne sont pas des motifs couverts par cette garantie limitée. Elle exclut tout accessoire fourni avec le produit, incluant sans s'y limiter les ampoules et les piles.

Cette garantie ne couvre pas la maintenance, la main-d'œuvre, le transport, ou tout autre coût lié à l'installation ou au remplacement du produit. Cette garantie limitée est valide uniquement dans le pays où l'achat a été effectué auprès de détaillants autorisés Artika.

Artika for Living Inc. ne pourra être tenue responsable en cas de blessure ou de dommage direct ou indirect causé par l'utilisation du produit si le produit a été mal installé ou mal utilisé.

Visiter le www.artika.com pour en savoir plus sur **Artika for Living Inc.**

Artika For Living Inc. se enorgullece de ofrecerle una garantía limitada de cinco (5) años en defecto de manufactura desde la fecha de compra del producto para uso residencial únicamente. Esta garantía cubre al dueño original en EE. UU., Canadá, México, Reino Unido, Islandia, Francia y España, y no es transferible. No se aplica a minoristas, aplicaciones comerciales ni a establecimientos. Se deberá presentar el recibo de venta original para todas las reclamaciones de garantía. La compensación ofrecida por esta garantía limitada será el reemplazo del producto o de la pieza a entera discreción de Artika como aquí se indica, y no puede exceder el precio de adquisición original.

Esta garantía solo es válida en productos instalados de acuerdo con el código de construcción y la legislación en vigor en la región donde se use esta unidad, así como el manual de instrucciones provisto. Nuestra garantía no incluye productos instalados incorrectamente o que hayan tenido un uso anormal. Es posible que se pida la devolución de los productos o componentes para su inspección o verificación.

El desgaste normal, uso incorrecto, negligencia, vandalismo, mantenimiento incorrecto (daños en la superficie por interacción química o agentes de limpieza incluyendo, entre otros, paños abrasivos, sustancias de limpieza abrasivas, alcohol o solventes orgánicos), manejo incorrecto, accidente, abuso, incendio, inundación, robo, causas de fuerza mayor, negligencia o alteración del producto no serán cubiertos bajo esta garantía limitada. No cubre ningún accesorio que acompañe al producto, incluyendo entre otros bombillas o baterías.

La garantía no cubre gastos de manejo, gastos laborales, de transporte ni cualquier otro coste asociado con la instalación o reemplazo del producto. Esta garantía limitada es válida en el país de adquisición, siempre que se haya adquirido en un minorista autorizado por Artika.

Artika For Living Inc. no se hará responsable de ningún daño directo, consecuente o resultante, ni de lesiones que puedan resultar de un mal uso o instalación de este producto.

Visite www.artika.com para saber más sobre **Artika For Living Inc.**

Artika For Living Inc.

1756, 50th Avenue
Montréal (Lachine), Québec
Canada H8T 2V5

1-866-661-9606
support@artika.com
www.artika.com

**Customer Service**

Monday to Friday
9 am - 5 pm EST

Service à la clientèle

Lundi au vendredi
9 h à 17 h H.N.E.

Atención al cliente

Lunes a viernes
9 a.m. - 5 p.m. hora del Este

NLCBS-4

4" Cobalt Dedicated Shallow Reflectors

Source: 13.5W to 16.5W LED
850lm to 1250lm

PRODUCT DESCRIPTION

4" Cobalt shallow reflectors are dedicated for Cobalt shallow housing. Available in multiple finishes and lumens outputs, also in round and square apertures. Cobalt family utilize Cree LED technology throughout, for a consistent and uniform appearance.

FEATURES

- 850lm or 1250lm LED packages
- 2700K, 3000K 3500K or 4000K @ 90+ CRI
- Cree® COB LED Technology
- 5-Year limited warranty
- ENERGY STAR certified
- cULus listed for wet locations

ELECTRICAL

Delivered Lumens / Wattage:

85 = 1098lm / 13.5W @ 4000K

12 = 1330lm / 16.5W @ 4000K

(Delivered lumens will vary depending on reflector, CCT and finish)

Color Temperature: 2700K, 3000K, 3500K, 4000K

CRI: 90+ CRI

Operating Temperature: 0°C to 25°C ambient temperature

Dimming: Determined by housing

COMPATIBLE HOUSING

Shallow reflectors are compatible with Cobalt Shallow housing manufactured by Nora Lighting.

CATALOG NO.	DESCRIPTION	LUMENS / WATTAGE
NHSIC-485LE3LT	Shallow IC Air-Tight New Construction	850lm / 13.5W
NHSIC-412LE4LT	Shallow IC Air-Tight New Construction	1250lm / 16.5W

LABELS AND LISTINGS

- cULus Listed for Wet Location
- ENERGY STAR certified
- Patent #D797,977S; D871,644S; D824,568S; D877,390S
- Certified to the high efficacy requirements of California Title 24 JA8-2019
- [5-Year Limited Warranty](#)
- RoHS Compliant



4" Cobalt Shallow Reflectors - Requires Cobalt Shallow Housing

Reflector Type	Lumens / Wattage	Color Temp.	Finishes (See chart below)
NLCBS-453 = Square w/Round Aperture	85 = 850lm / 13.5W	27 = 2700K	BB = Black / Black
NLCBS-456 = Square w/Square Aperture	12 = 1250lm / 16.5W	30 = 3000K	BW = Black / White
NLCBS-4W51 = Round Reflector		35 = 3500K	BZ = Bronze / Bronze
NLCBS-4W52 = Round Baffle		40 = 4000K	DW = Diffused / White
			DMPW = Diffused / Matte Powder White
			HMPW = Haze / Matte Powder White
			HZW = Haze / White
			MPW = Matte Powder White
			NN = Natural Metal / Natural Metal
			PW = Pewter / White
			WW = White / White

Available Trim Finishes

	BB	BW	BZ	DW	DMPW	HMPW	HZW	MPW	NN	PW	WW
453	.	.	.	.	.	.	.	.	.	.	.
456	.	.	.	.	.	.	.	.	.	.	.
4W51	.	.	.	.	.	.	.	.	.	.	.
4W52	.	.	.	.	.	.	.	.	.	.	.

Type

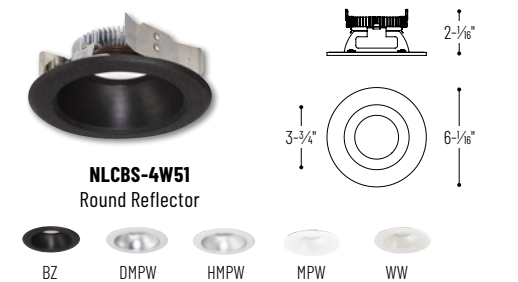
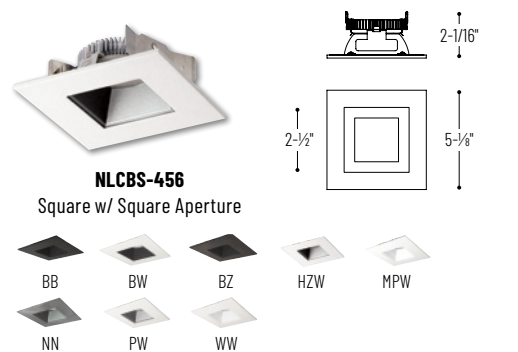
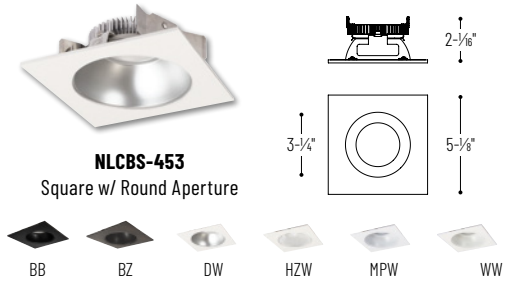
Project

Catalog No.

Notes

PRODUCT IMAGES & DIMENSIONS

PATENT No.:
D797,977S
D871,644S
D824,568S
D877,390S



Example: **NLCBS-4538530WW** = 4" Cobalt Shallow Square Reflector w/Round Aperture, 850lm / 13.5W LED, 3000K, White Reflector / White Flange

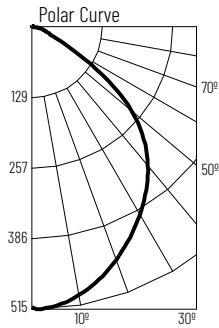
PHOTOMETRICS

4" Cobalt Dedicated Shallow Reflectors

Type	
Project	
Catalog No.	
Notes	

Test Information

Test Number: NTR1182
 Part Number: NLCBS-4W518540WW
 Lumens: 1098lm
 Wattage: 13.3W
 Efficacy: 83lpw
 CCT / CRI: 4000K / 90 CRI
 Spacing Criteria (0°-180): 1.16
 Spacing Criteria (90°-270): 1.18



Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
4'	32.2fc	9'-2"
6'	14.3fc	13'-11"
8'	8fc	18'-6"
10'	5.1fc	23'-1"
12'	3.6fc	27'-8"

Zonal Lumen Summary

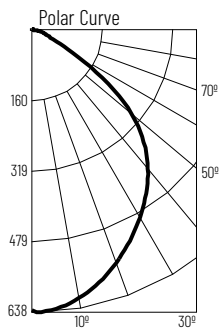
Zone	Lumens	% Luminaire
0-30	381	34.7
0-40	611	55.6
0-60	998	90.9
0-90	1090	99.3
90-180	8	0.7
0-180	1098	100

Candela Table

Vertical Angles	Candela
0	514
5	511
15	479
25	427
35	369
45	298

Test Information

Test Number: NTR1177
 Part Number: NLCBS-4W511240WW
 Lumens: 1330lm
 Wattage: 15.4W
 Efficacy: 86lpw
 CCT / CRI: 4000K / 90 CRI
 Spacing Criteria (0°-180): 1.16
 Spacing Criteria (90°-270): 1.18



Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
4'	39.7fc	9'
6'	17.6fc	13'-7"
8'	9.9fc	18'-1"
10'	6.3fc	22'-7"
12'	4.4fc	27'-1"

Zonal Lumen Summary

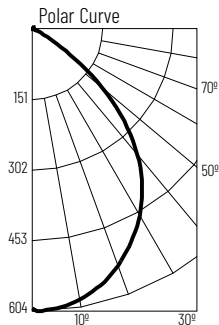
Zone	Lumens	% Luminaire
0-30	468	35.2
0-40	749	56.3
0-60	1212	91.2
0-90	1320	99.3
90-180	10	0.7
0-180	1330	100

Candela Table

Vertical Angles	Candela
0	634
5	630
15	591
25	525
35	449
45	360

Test Information

Test Number: NTR11275
 Part Number: NLCBS-4561230HZW
 Lumens: 1035lm
 Wattage: 15.4W
 Efficacy: 67lpw
 CCT / CRI: 3000K / 90 CRI
 Spacing Criteria (0°-180): 1.16
 Spacing Criteria (90°-270): 1.08



Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
4'	37.4fc	6'-11"
6'	16.6fc	10'-4"
8'	9.3fc	13'-10"
10'	6fc	17'-2"
12'	4.2fc	20'-7"

Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	442	42.7
0-40	687	66.4
0-60	974	94.1
0-90	1009	97.4
90-180	27	2.6
0-180	1035	100

Candela Table

Vertical Angles	Candela
0	598
5	599
15	567
25	501
35	393
45	223

MANUFACTURER:

Americlad, LLC
21925 Industrial Blvd.
Rogers, MN 55374
Telephone: (866) 260-4047
Fax: (763) 255-3399
Email: info@americlad.com

**AMERICLAD
AC-6000 Concealed Fastener
Flush Panel System**

SECTION 07 42 13 CONCEALED FASTENER FLUSH WALL PANEL SYSTEM

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. The drawings and provisions of the General Conditions, and the sections included under Division 1 specification sections, apply to this section

1.2 SUMMARY

- A. This section includes flat-lock panels that are used as the exterior and interior cladding

1.3 PERFORMANCE REQUIREMENTS

- A. Structural Performance: provide flat-lock panel assemblies capable of withstanding the effects of load and stresses from wind loads, dead loads, snow loads and normal and expected thermal movement without evidence of permanent defects of the assemblies. System design for a mechanically fastened assembly to substructure
1. Dead Load as required by applicable building code
 2. Live Load as required by applicable building code
 3. Wind Load: uniform pressure (define velocity pressure) of (insert design criteria) pound/square foot, acting inward and outward.
 4. Thermal Movements: provide panel assemblies that allow for thermal movements to prevent buckling, opening of joints and other thermal effects
- B. Design the panel for a mechanically fastened assembly to substructure
- C. Design panel tolerances to manufacturer's standard tolerances
- D. Metal panels to have a maximum allowable deflection of L/60

1.4 SUBMITTALS

- A. Product Data: Manufacturer's product literature
- B. Finish Samples: submit color samples for final approval
- C. Shop Drawings: submit shop drawings showing plans, sections and details

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum of five years' experience in manufacturing of metal panel products
- B. Installer Qualifications: Acceptable to manufacturer
- C. Engineering Qualifications: Provide engineering calculations for the metal panel assembly to be prepared by an engineer registered in the state the project is located

1.6 DELIVERY, STORAGE AND HANDLING

- A. Delivery: deliver metal panels in manufacturer's crates packed for long haul transit
- B. Storage: store materials in a dry and safe area
- C. Handling: handle materials to avoid any damage to materials and finishes

1.7 WARRANTY

- A. The contractor must warrant the materials to be free of defects in accordance with the general conditions. Finish warranty shall be extended by paint manufacturer's standard warranty

PART 2 – PRODUCTS

2.1 MANUFACTURER

- A. Americlad, LLC, 21925 Industrial Boulevard, Rogers, Minnesota 55374, Telephone: (866) 260-4047, www.americlad.com
 - 1. AC-6000 Concealed Fastener Flush Panel System
- E. Approved equal submitted for approval 10 days prior to bid

2.2 MATERIAL OPTIONS

1. Aluminum: (.040"), (.063"), (.080")
2. Zinc: (1.0 mm), (1.5 mm)
3. Copper: (16 oz.), (20 oz.), (24 oz.)
4. Stainless Steel: (24ga.), (22ga.), (20gau.), (18ga.), (16ga.)

2.3 FABRICATION**A. Tolerances**

1. Breaks, bend lines, and angles shall be true and surfaces
2. Panel surfaces shall be free of blemishes, scratches or marks caused during fabrication process

B. Standard Panel Depth: 1"**C. Standard Panel Width: (8"), (12"), (16"), (20")**

1. *Check with manufacturer for other available options*

2.4 ACCESSORIES

- A. All fasteners shall be non-corrosive type, as recommended by the panel manufacturer. Provide self-tapping screws at mounting flange and side lap joints designed to withstand building design loads.
- B. Weather Resistant Membrane: As recommended by the panel manufacturer.
- C. Flashing: Shall remain the same material and gauge as panels where exposed.
- D. Panel Sealants:
 1. Perimeter Joint Sealant are required to seal joints in metal wall panels and remain weathertight; and as recommended in writing by manufacturer.
- E. Sub-grits: Spacing and structural requirements are recommended by the panel manufacturer and in accordance with approved shop drawings; to avoid galvanic reaction and separate dissimilar metals.

2.5 FINISHES**A. Painted Aluminum**

1. Coating shall be a Fluorocarbon Resin Utilizing a 70% Kynar 500/Hylar 5000 resin
2. Color as selected by owner from paint manufacturer's standard colors or custom colors as specified
3. Material to be painted in accordance with either AAMA specification 2605 or 2604

B. Anodized Aluminum

1. Clear Anodic Finish: AA-M12C22A41, mechanical finish, non-specular as fabricated. Coating to have an anodic coating of 0.7 mil (0.018 mm) thickness
2. Color Anodic Finish: AA-M12C22A42/A44, mechanical finish, nonspecular as fabricated. Color to be determined by Owner. Coating to have an anodic coating of 0.7 mil (0.018) thickness

C. Stainless Steel:

1. To be mill finished in a brushed finish: (#4 brushed), (#6 brushed), (#8 brushed)

D. Copper:

1. Mill finish
2. Pre-patinated

E. Zinc:

1. Mill Finish [shiny]
2. Pre-Weathered [Dark Gray], [Charcoal Gray]

PART 3 – EXECUTION

3.1 PREPARATION

- A. Coordinate drawings, diagrams, and instructions for installation

3.2 INSTALLATION

- A. Install panels plumb and level per shop drawing detailing
- B. Isolation tape or shim shall be installed where dissimilar materials come in contact

3.3 CLEANING AND PROTECTION

- A. Clean exposed surfaces after installation per manufacturer's recommendation
- B. Touch up minor abrasions in finish with touch up paint supplied by finish applicator
- C. Protect panels from damage during construction. Use temporary protective coverings where needed as approved by the panel manufacturer.
- D. Panels that are damaged beyond repair must be replaced with new panels to match adjacent undamaged panels

END OF SECTION

MANUFACTURER:

Americlad, LLC
21925 Industrial Blvd.
Rogers, MN 55374
Telephone: (866) 260-4047
Fax: (763) 255-3399
Email: info@americlad.com

**AMERICLAD
AC-815
Equipment
Screen**

SECTION 10 82 00 ALUMINUM MECHANICAL EQUIPMENT SCREEN

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. The drawings and provisions of the General Conditions, and the sections included under Division 1 specification sections, apply to this section

1.2 SUMMARY

- A. This section includes aluminum mechanical equipment screen

1.3 SUBMITTALS

- A. Product Data: Manufacturer's product literature
- B. Finish Samples: submit color samples for final approval
- C. Shop Drawings: submit shop drawings showing plans, sections and details

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum of five years experience in manufacturing of architectural products
- B. Installer Qualifications: Acceptable to manufacturer
- C. Structural performance: provide exterior sun control device assemblies capable of withstanding the effects of load and stresses from wind loads, dead loads, snow loads and normal and expected thermal movement without evidence of permanent defects of the assemblies. System design for a mechanically fastened assembly to substructure.
 - a. Wind Load as required by applicable building code
 - b. Dead Load as required by applicable building code

- c. Snow Load as required by applicable building code
- d. Snow Drift Load as required by applicable building code
- D. Design equipment screen device to eliminate vibration harmonics; wind whistles; and noises cause by thermal movement.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Delivery: deliver equipment screen in manufacturer's crates packed for long haul transit
- B. Storage: store materials in a dry and safe area
- C. Handling: handle materials to avoid any damage to materials and finishes

1.6 WARRANTY

- A. The contractor must warrant the materials to be free of defects in accordance with the general conditions. Finish warranty shall be extended by paint manufacturer's standard warranty
- B. Manufacturer shall provide a standard limited warranty for louver system for a period of one year from date of installation and no more than eighteen months after shipment from manufacturing plant

PART 2 – PRODUCTS

2.1 MANUFACTURER

- A. Americlad, LLC, 21925 Industrial Boulevard, Rogers, Minnesota 55374, Telephone: (866) 260-4047, www.americlad.com
- A. Approved equal submitted for approval 10 days prior to bid

2.2 FABRICATION

- A. Model: AC-815 Aluminum mechanical equipment screen "Louver Blade System" 4" fixed blade, non-drainable with channel frame
- B. Frame:
 - a. Depth: 4" (101.6 mm)
 - b. Material: Extruded aluminum 6063-T5
 - c. Wall Thickness: 0.081 inch (2.06 mm), nominal
- C. Blades:
 - a. Style: Stationary Non-drainable
 - b. Material: Extruded aluminum 6063-T5
 - c. Wall Thickness: 0.081 inch (2.06 mm), nominal
 - d. Angle: 37.5 degrees
 - e. Centers 4 inches (101.6 mm), nominal

2.3 FINISHES

A. Paint:

1. Coating shall be a Spray Applied Fluorocarbon Resin utilizing a 70% Kynar 500/Hylar 5000 resin
2. Color as selected by owner from paint manufacturer's standard colors or custom colors as specified
3. Material to be painted in accordance with either AAMA specification 2605 or 2604

B. Anodized:

1. Class I, Clear Anodic Finish: AA-M12C22A41, mechanical finish, non-specular as fabricated. Coating to have an anodic coating of 0.7 mil (0.018 mm) thickness
2. Class I, Color Anodic Finish: AA-M12C22A42/A44, mechanical finish, non-specular as fabricated. Color to be determined by Owner. Coating to have an anodic coating of 0.7 mil (0.018) thickness

PART 3 – EXECUTION**3.1 PREPARATION**

- A. Coordinate drawings, diagrams, and instructions for installation

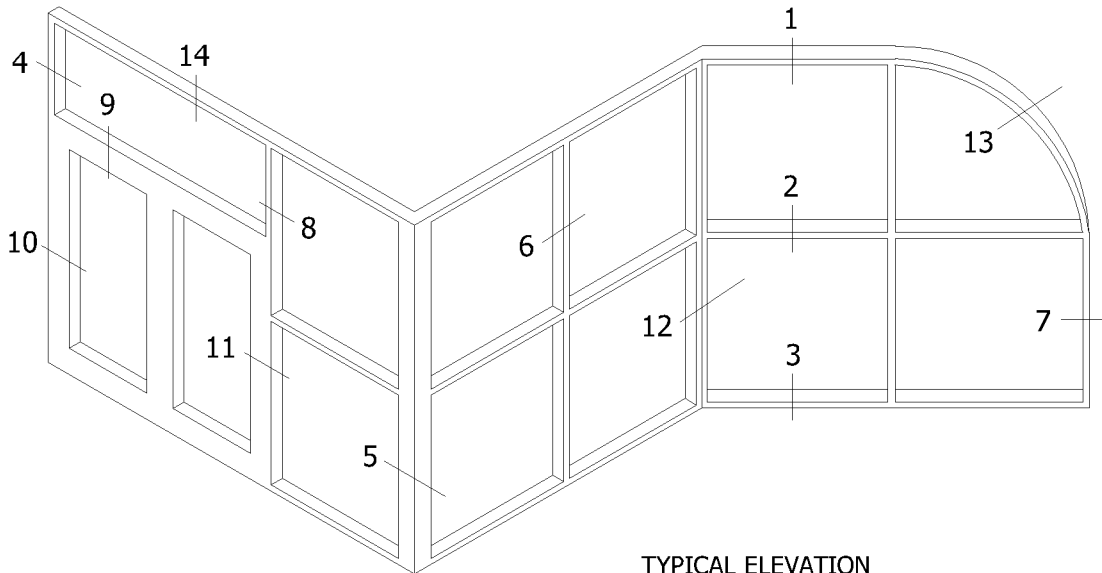
3.2 INSTALLATION

- A. Install equipment screen at locations as indicated on the drawings and in accordance with the manufacturer's instructions
- B. Install equipment screen plumb, level, in plane of wall, and in alignment with adjacent work
- C. Install joint sealants as specified in section 07 90 00

3.3 CLEANING AND PROTECTION

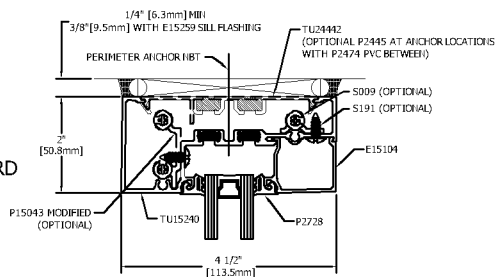
- A. Clean exposed surfaces after installation per manufacturer's recommendation
- B. Touch up minor abrasions in finish with touch up paint supplied by finish applicator

END OF SECTION

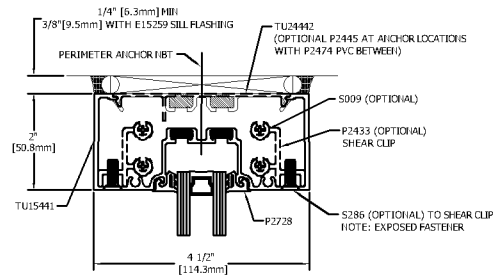


TYPICAL ELEVATION

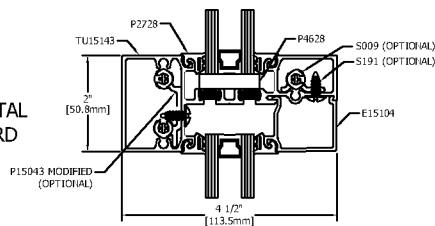
1
HEAD
STANDARD



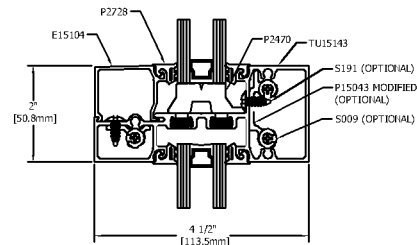
1
HEAD
STANDARD



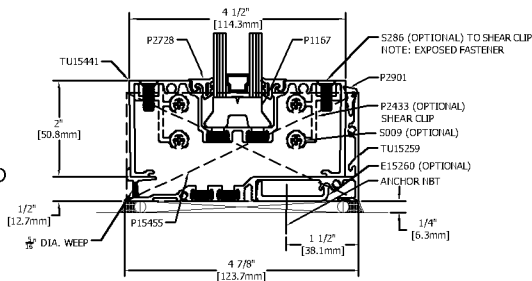
2
HORIZONTAL
STANDARD



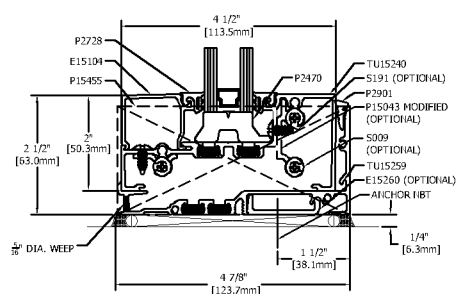
2
HORIZONTAL
STANDARD



3
SILL
STANDARD



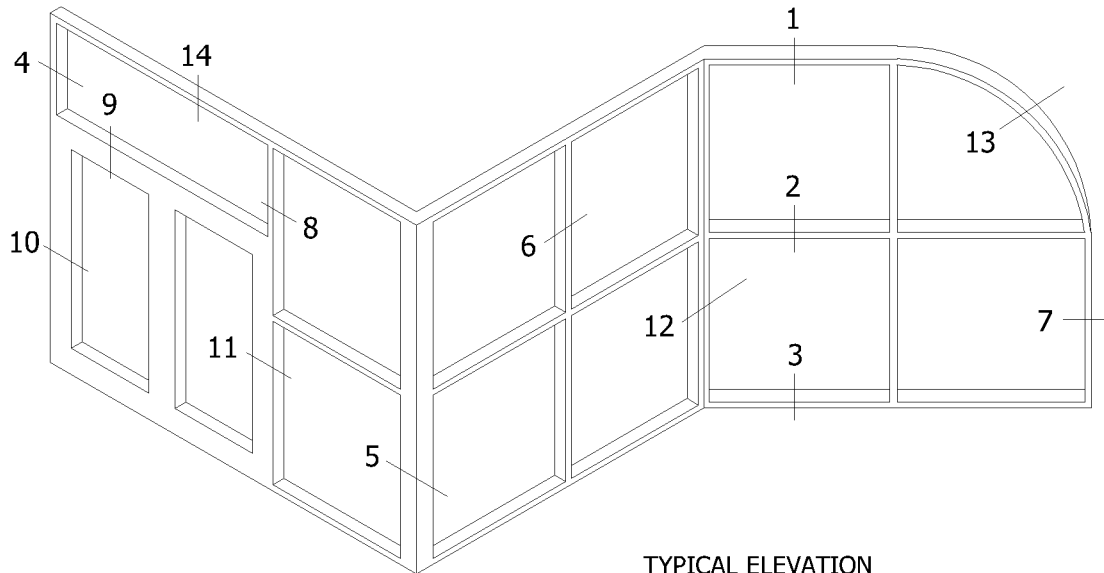
3
SILL
STANDARD



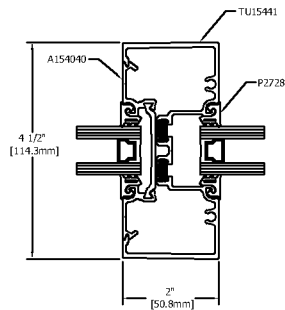
INSIDE GLAZED

OUTSIDE GLAZED

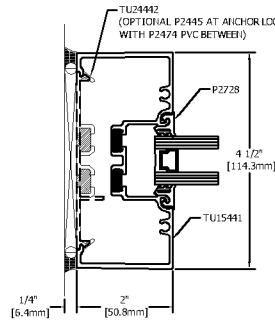
Standard Details
1/4 scale



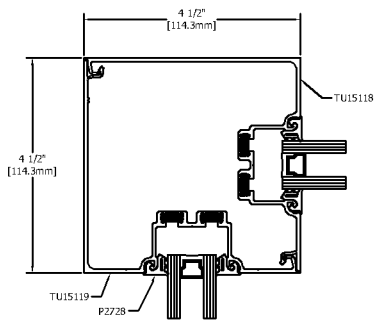
TYPICAL ELEVATION



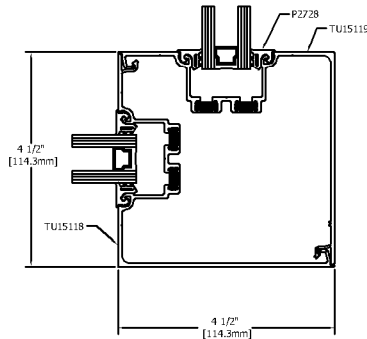
6
VERTICAL
STANDARD



7
JAMB
STANDARD



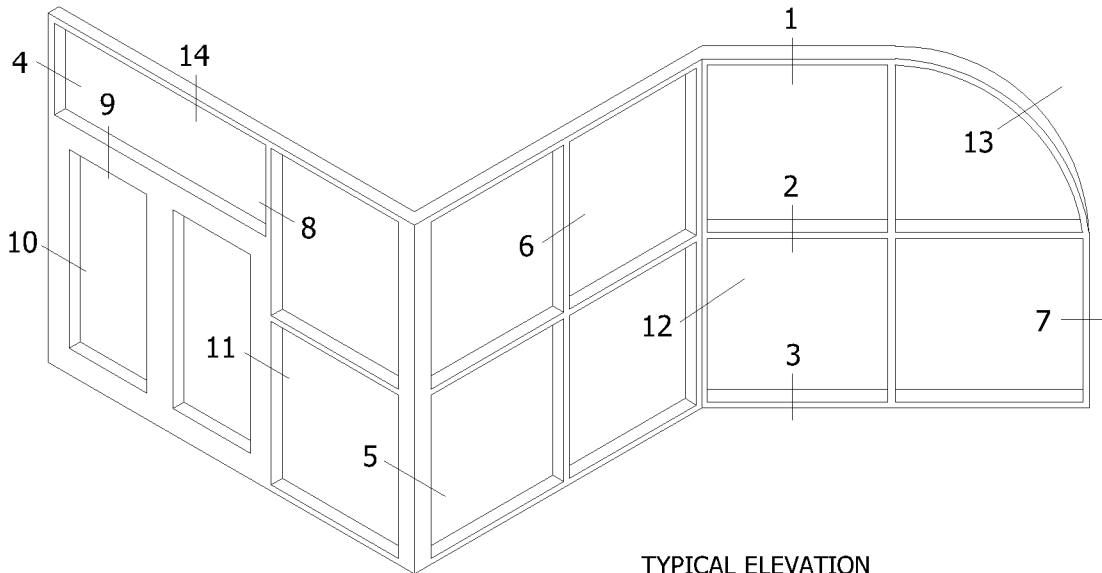
12
I.S. 90° CORNER
STANDARD



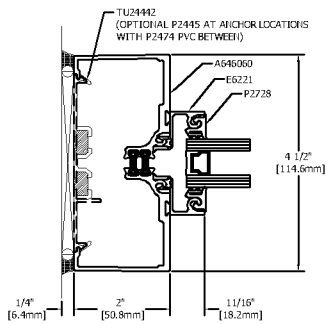
5
O.S. 90° CORNER
STANDARD

INSIDE & OUTSIDE GLAZED

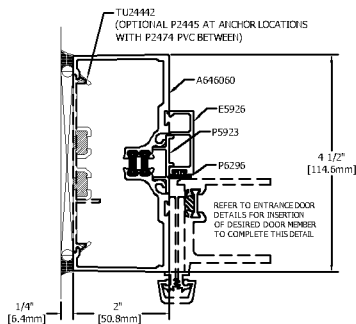
Standard Details
1/4 scale



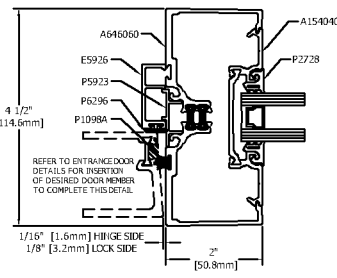
TYPICAL ELEVATION



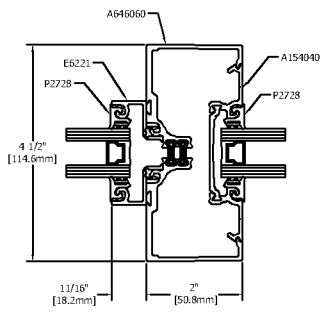
4
DOOR JAMB
TRANSOM
STANDARD



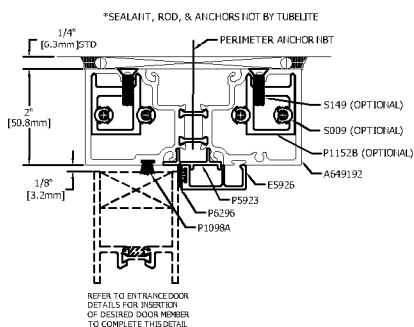
10
DOOR JAMB
STANDARD



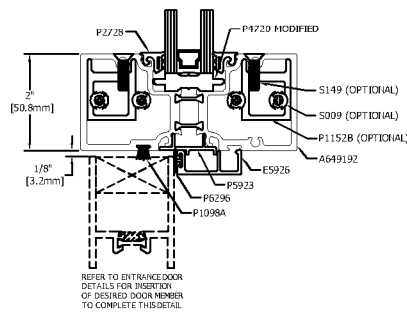
11
DOOR JAMB
STANDARD



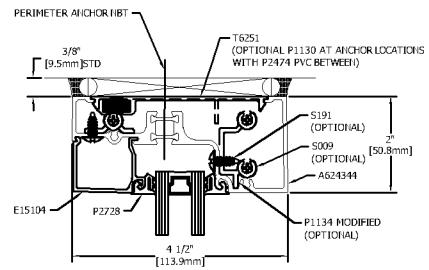
8
VERTICAL
TRANSOM
STANDARD



9
DOOR HEADER
(NON-TRANSOM)
STANDARD



9A
DOOR HEADER
STANDARD



14
DOOR TRANSOM
STANDARD

DOOR DETAILS

Standard Details
1/4 scale

**2500022 – A REQUEST FOR REVISIONS TO FRSUB1521-2019
SUBDIVISION PLAN FOR HAPPY CREEK KNOLLS, SECTION 4
REGARDING LOTS 4, 5, 6, 29, AND 30, SUBMITTED BY MARONDA
HOMES, INC.**



TOWN OF FRONT ROYAL

DEPARTMENT OF PLANNING & ZONING
102 EAST MAIN STREET
P.O. BOX 1560
FRONT ROYAL, VA 22630

Main: 540.635.4236

Fax: 540.631.2727

Internet: www.frontroyalva.com

FRSITE 2500022 Revision to
FRSUB 1521-2019

RECEIVED
JAN 29 2025

**TOWN OF FRONT ROYAL
PLANNING & ZONING DEPARTMENT**

DEVELOPMENT APPLICATION REQUEST FOR SITE PLAN APPROVAL

APPLICANT

NAME Amber Johnson - Maronda Homes of Virginia LLC PHONE 703-753-7020

ADDRESS 7051 Heathcote Village Way Suite 255 Gainesville VA 20155

Designated Contact for Applicant permittingva@maronda.com

PROPERTY DESCRIPTION

PROPERTY ADDRESS 1193, 1191, 1189, 1194 & 1196 Happy Ridge Dr

TAX MAP 20A21 SECTION 3 BLOCK 4 LOT 4-6, 29 & 30

SUBDIVISION NAME Happy Creek Knolls ACREAGE .25

REQUEST

ZONING DISTRICT _____

PROPOSED USE OF PROPERTY Single Family Residential Home - Remove retaining wall

PROPOSED BUILDING SIZE _____

BUILDING COVERAGE _____

NUMBER OF PARKING SPACES PROVIDED _____

AMOUNT OF OPEN SPACE AREA _____

ATTACHMENTS ----The following **must** be submitted with this application. Additional information may be required depending on the nature of the request.

1. Four (4) copies of the site plan, prepared in accordance with the requirements of Town Code Section 148-1020. Fewer paper copies may be allowed for Minor Site Plan Applications as determined by the Planning and Zoning Director.
2. One (1) digital copy of the site plan.
3. Application Fee.

(The required number of copies of the Erosion and Sediment Plan should be to the Warren County Bldg. Inspection office, as their approval is required before the development plan can be approved by the Town.)

CERTIFICATION

I certify that the information provided with this application is correct to the best of my knowledge, and the project will be implemented as presented and approved by the Town of Front Royal, in accordance with the Town's Land Development Regulations (Chapter 148) and Zoning Ordinance (Chapter 175).

Signature _____

Date 1/29/25

Fee: Site Development Plan, Minor \$100 Site Development Plan, Major \$750

See Town Code Section 148-900 for definition of Major and Minor Site Development Plan

Amount Received: 750.00

Date 1-29-25

By submitting this application, the applicant grants permission to Town officials and employees to enter upon the property, which is the subject of this application, during reasonable hours and for purposes related to the application process.

Revised 8-23-19

2500022

Connie Potter

From: Lauren Kopishke
Sent: Friday, January 31, 2025 10:33 AM
To: Connie Potter
Subject: FW: [--EXTERNAL--]: FW: Geotechnical Report



Lauren E. Kopishke

Director of Planning & Zoning
Zoning Administrator
Town of Front Royal
Dept. of Planning and Zoning
102 E Main St | PO Box 1560
Front Royal, VA 22630
T./540-635-4236

From: Steele, Stephen <SSteele@chasolutions.com>
Sent: Thursday, January 30, 2025 10:56 AM
To: John Ware <jware@frontroyalva.com>
Cc: Lauren Kopishke <lkopishke@frontroyalva.com>
Subject: RE: [--EXTERNAL--]: FW: Geotechnical Report

John,

My Geotech looked at the report and has the following concerns:

- It is concerning that the report is based on modeling all failure surfaces as passing beneath the house, with the house providing a stabilizing surcharge force of 200 psf over its entire footprint. The cut slopes typically fail are generally relatively shallow slides that happen when soils get saturated from rain, which push out from the toe of the cut.
- The Town should recommend evaluation of potential failures that send slide debris into the back yard (or the back door). It doesn't appear that the report evaluated those scenarios.
- The report says that they have some direct shear lab tests in progress. The Town should request that information.

Let me know if this helps.

Stephen Steele, PE*

Vice President
Key Account Manager
CHA
Office: (540) 212-4368
sssteel@chasolutions.com
www.chasolutions.com

*VA, NC





CONSULTING ENGINEERS • BUILDING OFFICIALS
CONSTRUCTION PROFESSIONALS • SOIL SCIENTISTS & GEOLOGISTS

December 9, 2024

Mr. Marty Rhodes
Moranda Homes
7051 Heathcote Village Way, Suite 255
Gainesville, VA 20155

Re: Slope Stability Analysis for Happy Creek Lots 4-6 TM: 20A213-4-4 to -6, Warren County, 22630.

Dear Mr. Rhodes:

In accordance with your authorization, Soil Consultants Engineering Inc. (SCE) has completed a Slope Stability Analysis for the existing slope along the lots at TM: 20A213-4-4 to -6, Warren County, and we are pleased to provide you this Slope Stability Analysis for the above referenced project. The following paragraphs present the results from subsurface exploration performed by Soil Consultants Engineering, LLC (SCE) and Slope Stability Analysis of the encountered soil conditions. SCE personnel explored the subsurface conditions of the site on November 15, 2024 by advancing four (4) soil test borings (B-9 through B-12) with an ATV-Mounted CME45 Drill Rig equipped with a manual drop hammer and rotary hollow stem augers (HSA 3 1/4-inch).

In the soil test borings, the soil was tested using continuous penetration through fill material and sampled using split-spoon samplers in accordance with ASTM D-1586 sampling procedures. A geologist from SCE logged the soil cuttings and samples in the field as the drilling proceeded.

The cuttings and samples were visually classified in accordance with the Unified Soil Classification System (USCS). Samples of the soils were obtained at selected depths and were taken to our geotechnical laboratory for further visual examination and testing.

The approximate test boring locations are shown on a copy of the site plan entitled "Boring Location Plan", which is in the appendix in this report.

Soil Consultants selected the number and location of the test borings to provide general coverage subject for stability review at the required slope locations onsite. The crew estimated the location of the borings in the field by using existing site features.

While performing the subsurface exploration, our staff engineer logged the recovered soil samples and observed ground water conditions during the drilling. The samples were transported to our office where representative samples were logged into our laboratory for soil classification.

The Soil Consultants laboratory performed two (2) classification tests, per ASTM D-2487, on representative soil samples and four (4) natural moisture samples in accordance with ASTM D-2216.

The logs of the soil test borings, along with our laboratory classification of the recovered soil samples, are presented in the appendices. The strata boundaries indicated on our logs are an interpretation of the soil profile. Soil types often grade into one another, and the strata changes are usually gradual rather than distinct.

OBSERVED SUBSURFACE CONDITIONS

The subsurface conditions at the site generally consist of two (2) distinct soil strata, as summarized within the table below. Detailed boring logs can be found in the appendix; the boring logs included in the appendix should be reviewed for specific information at the boring locations, in the attached “**Boring Logs**”. The strata boundaries indicated on our logs are an interpretation of the subsurface profile. Soil types often grade into one another, and the strata changes are usually gradual rather than distinct.

Summary of Subsurface Boring Profiles

Approximate Depth Range (feet)	Approximate Elevation Range (feet)	Stratum	Description	SPT N-Values (bpf)
0.0 – 5.5	702.0 – 690.0	I	FILL consisting of very stiff to hard SILT (ML) and very dense Silty SAND (SM).	23 – 57
1.8 – 30.0	700.2 – 664.0	II	Native, interbedded stiff to very stiff SILT (ML), stiff to very stiff ELASTIC SILT (MH), stiff SILT with sand (ML), stiff to hard Sandy SILT (ML), stiff to very stiff Lean CLAY (CL), and very stiff Sandy Lean CLAY (CL)	13 – 42

*The approximate elevation ranges and depth ranges represent the highest and lowest elevations that the associated stratum were found at. The ranges overlap while presented as a summary within this report, but this overlap is due to the different elevations of the borings onsite.

Groundwater was not encountered during time of drilling. Observed water level elevations serve as an indication of the water level at the specified elevations at a specific time of year and may be higher or lower depending on the season. Mottling, an indication of high seasonal water table, was also not encountered.

The Soil Consultants laboratory performed two (2) classification tests in accordance with ASTM D-2487 and four (4) natural moisture content tests in accordance with ASTM D-2216 on representative soil samples. The results of the laboratory classification tests are summarized in the following table:

Summary of Laboratory Testing Results

Boring No.	Depth (feet)	Liquid Limit	Plastic Limit	Plasticity Index	Gravel (%)	Sand (%)	% <200 Sieve	Classification USCS	Water Content (%)
B-9	19.5	77	47	30	0.0	6.5	93.5	MH	48.2
B-10	24.5	--	--	--	--	--	--	--	60.5
B-11	9.5	47	23	24	1.4	40.6	58.0	CL	21.4
B-12	24.5	--	--	--	--	--	--	--	62.1

“NP” is abbreviated for “non-plastic”, a term used when soils exhibit non-plastic behavior. Typically, these soils contain limited amounts of cohesive soils, i.e., silt and clay, and mainly consist of “clean” coarse-grained soils. Non-plastic soils do not have a transitional phase between the solid phase and liquid phases, and immediately exhibit liquid properties when water is added to the sample.

SLOPE STABILITY ANALYSIS

To investigate the stability of the existing steep slope, Soil Consultants Engineering performed global stability analysis at two cross sections, E-E’ and F-F’.

The geometry of the slope at the selected cross section locations was modeled for the stability analysis after reviewing the provided Warren County global stability analyses request and Site Plan. Global stability analysis of the slope cross section was performed using the simplified Bishop method.

SCE test borings indicate a soil profile of stiff to very stiff SILT (ML), stiff to very stiff ELASTIC SILT (MH), stiff SILT with sand (ML), stiff to hard Sandy SILT (ML), stiff to very stiff Lean CLAY (CL), and very stiff Sandy Lean CLAY (CL). The table below summarizes the soil parameters used in the slope stability analysis.

Summary of Material Parameters used in the Global Stability Analyses

Soil Description	Soil Type No	Total Unit Weight (pcf)	Saturated Unit Weight (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)
FILL	1	120	125		28
CL ML	2	115	120		26
ML CL	3	120	125		30
CL ML	4	120	125		32
MH	5	120	125		30
GM	6	130	135		35
Concrete	7	140	145	8000	

Slope stability analysis of the slope cross-section was performed and the minimum factors of safety were calculated for globally stable condition in E-E’ and F-F’, shown in the table below:

Factors of Safety from Global Stability Analyses

Cross Section	Minimum Factor of Safety Required	Modelled Factor of Safety
E-E’	1.5	1.94
F-F’	1.5	1.74

The failure planes with the factors of safety are shown in the slope stability results for the cross sections of the slope included in Appendix of this report.

SCE global stability analysis results indicated that the slope does have sufficient factor of safety against global stability. The failure surface presented in our analyses is an indication of potential future deep global instability.

At the time of this report, we are still awaiting the results of simple direct shear testing on soil samples taken in Shelby Tubes during drilling. If these results differ from our assumed values, we will conduct the slope stability analysis again and re-issue the report with the updated results.

CONCLUSIONS

In summary, it is our professional opinion based on the results of our evaluation that the slopes will be stable. Since there is no planned development on the top of the slope, man-caused factors will only affect the surface of the slope. We recommend surface protection measures such as vegetative matting to protect the surface of the slope from erosion and weathering that could lead to minor slope failures. We thank you for the opportunity to be of service. If you should have any questions regarding this letter, please do not hesitate to contact us.

Sincerely,

For: SOIL CONSULTANTS ENGINEERING, LLC.

12/10/2024



Warner Neal
Geotechnical Assistant



Lubomir Peytchev, P.E.
Principal Engineer

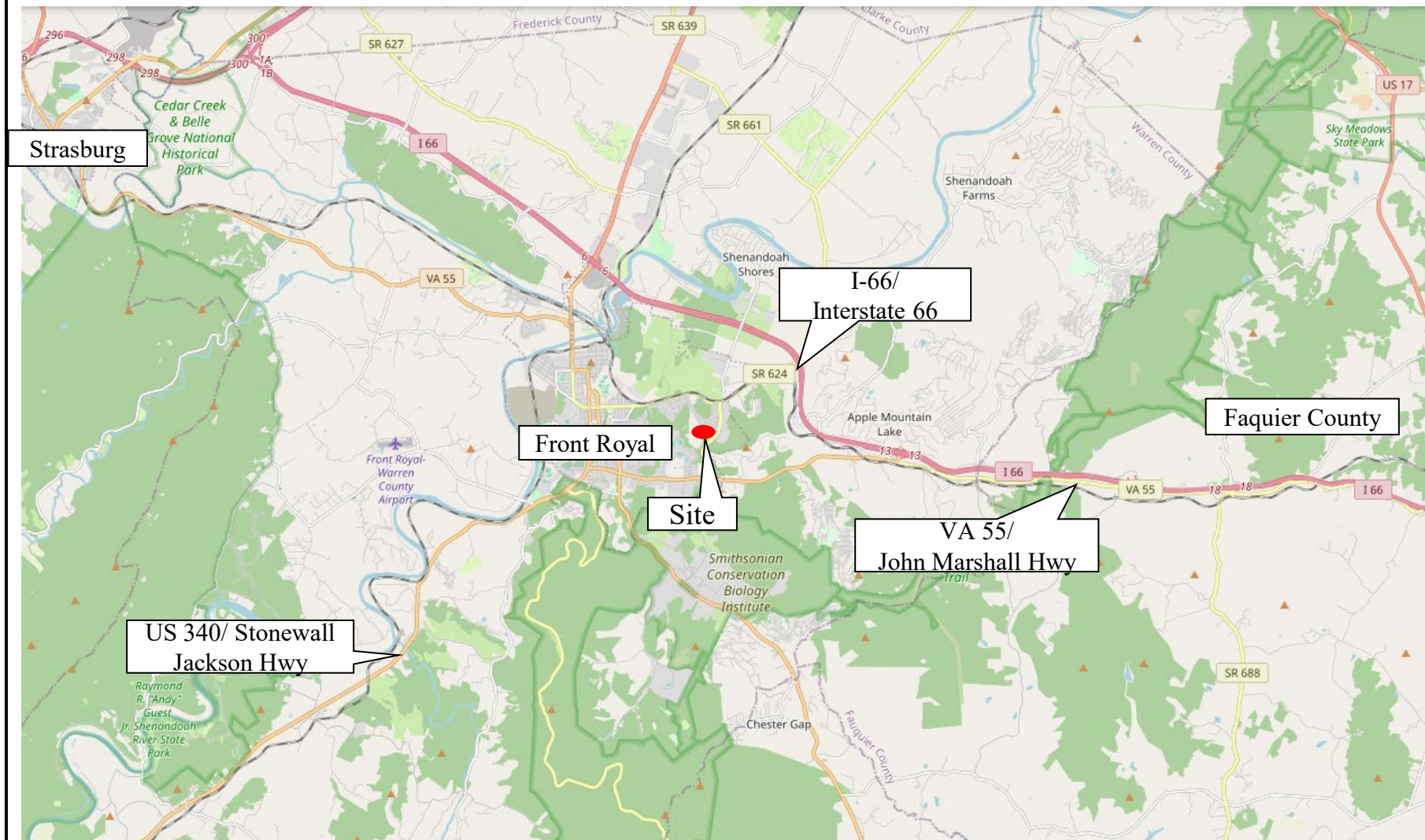
SCE #: 24-0367V

Enclosed:

- Site Vicinity Map
- Boring Locations Plan
- Log of Test Borings with Key to Terms and Symbols
- Laboratory Test Results
- Slope Stability Analysis

APPENDIX

Map Source: USGS 2024– Not to Scale



SITE VICINITY MAP
Happy Creek Knolls



CONSULTING ENGINEERS • BUILDING OFFICIALS
CONSTRUCTION PROFESSIONALS • SOIL SCIENTISTS & GEOLOGISTS

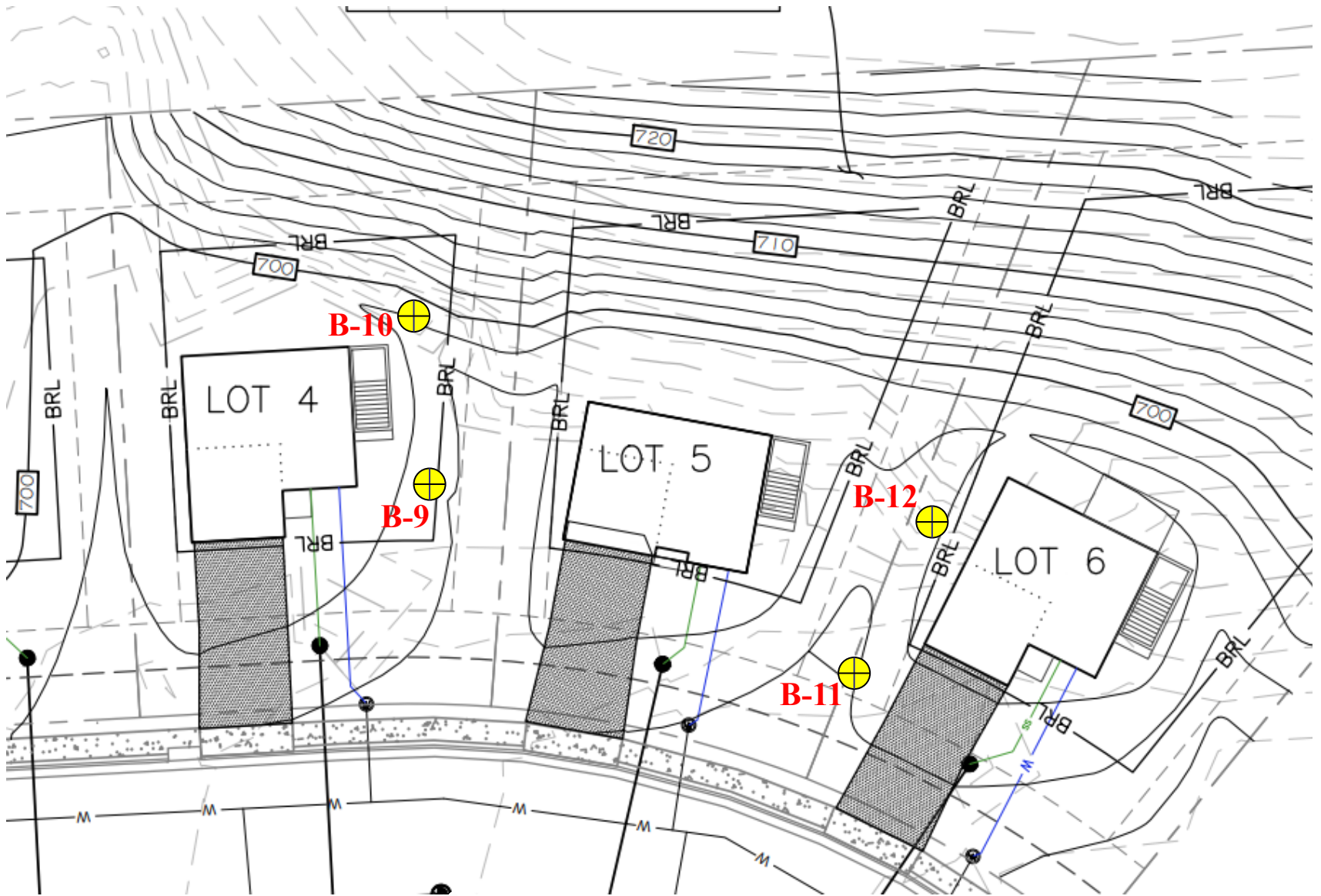
TM: 20A213-4-4 to -6, Warren County, 22630

12/09/2024

WN

Not Drawn To Scale

24-0367V



LEGEND

Approx. Boring Location



B-1



BORING LOCATION PLAN Happy Creek Knolls



CONSULTING ENGINEERS • BUILDING OFFICIALS
CONSTRUCTION PROFESSIONALS • SOIL SCIENTISTS & GEOLOGISTS

TM: 20A213-4-4 to -6, Warren County, 22630

12/09/2024

WN

Not Drawn To Scale

24-0367V



Soil Consultants Engineering, LLC
9303 Center Street
Manassas, VA 20110
Telephone: (703) 366-3000
Fax: (703) 366-3400

BOREHOLE NUMBER B-09

Sheet 1 of 1

CLIENT Mr. Marty Rhodes
PROJECT NUMBER 24-0367V
DATE STARTED 11-15-2024 **COMPLETED** 11-15-2024
DRILLING CONTRACTOR RECON Drilling
DRILLING METHOD Hollow Stem Auger, 3 1/4 inches
EQUIPMENT ATV-Mounted CME45 with Manual Drop Hammer
HOLE SIZE 6.0 in.
LOGGED BY Warner Neal **CHECKED BY** Lubo Peytchev

PROJECT NAME Happy Creek Knolls
PROJECT LOCATION TM: 20A213-4-4 to -6, Warren County, 22630
POSITION
GROUND ELEVATION 698.00 ft **FINAL DEPTH** 20.00 ft
GROUNDWATER LEVELS:
▽ **AT TIME OF DRILLING** Dry
▼ **AT END OF DRILLING** Dry; Cave-in at 13.5 ft
▼ **AFTER DRILLING** N/A

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
								LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
		0.50	SILT (ML): very stiff; yellow; wet; little sand; FILL.	697.50							
			SILT (ML): very stiff; yellowish-red; moist; FILL.		83	6-10-19-19 (29)					
		2.50		695.50							
			SILT (ML): very stiff; red and yellow; moist; Natural.		100	7-11-12-12 (23)					
		4.00		694.00							
5	693		Lean CLAY (CL): very stiff; reddish-yellow; moist; Natural								
			Pockets of siltier material.		100	8-10-10-14 (20)					
10	688				100	6-7-9 (16)					
		14.00		684.00							
15	683		Sandy SILT (ML): stiff to very stiff; yellow; moist; Natural.		78	5-5-8 (13)					
		19.00		679.00							
			Elastic SILT (MH): very stiff; grayish-purple; moist; Natural.		56	9-9-10 (19)	48	77	47	30	94
20	678	20.00	Terminated at 20.00 ft.	678.00							

NOTES



Soil Consultants Engineering, LLC
9303 Center Street
Manassas, VA 20110
Telephone: (703) 366-3000
Fax: (703) 366-3400

BOREHOLE NUMBER B-10

Sheet 1 of 1

CLIENT Mr. Marty Rhodes
PROJECT NUMBER 24-0367V
DATE STARTED 11-15-2024 **COMPLETED** 11-15-2024
DRILLING CONTRACTOR RECON Drilling
DRILLING METHOD Hollow Stem Auger, 3 1/4 inches
EQUIPMENT ATV-Mounted CME45 with Manual Drop Hammer
HOLE SIZE 6.0 in.
LOGGED BY Warner Neal **CHECKED BY** Lubo Peytchev

PROJECT NAME Happy Creek Knolls
PROJECT LOCATION TM: 20A213-4-4 to -6, Warren County, 22630
POSITION
GROUND ELEVATION 702.00 ft **FINAL DEPTH** 30.00 ft
GROUNDWATER LEVELS:
▽ **AT TIME OF DRILLING** Dry
▼ **AT END OF DRILLING** Dry; Cave-in at 20.0 ft
▼ **AFTER DRILLING** N/A

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	MOISTURE CONTENT (%)
			SILT (ML): hard; strong red; moist; little sand, little gravel; FILL.		58	5-19-16-10 (35)	
			1.80	700.20			
			SILT (ML): very stiff; red and yellow; moist; Natural.				
			4.00	698.00			
5	697		SILT with sand (ML): stiff; red and yellow; moist; Natural Pockets of clayey material.		100	7-10-9 (19)	
			9.50	692.50			
10	692		Lean CLAY (CL): stiff; purplish-gray; moist; Natural.		100	4-4-7 (11)	
			13.50	688.50			
15	687		Sandy SILT (ML): very stiff; yellow and red; moist; Natural.		83	5-8-9 (17)	
			19.50	682.50			
20	682		SILT (ML): very stiff; yellow; moist; Natural.		83	4-9-13 (22)	
			23.50	678.50			
25	677		Sandy SILT (ML): very stiff; yellow; moist; Natural.		89	8-11-13 (24)	60
			28.50	673.50			
			29.50	672.50			
30	672		Lean CLAY (CL): very stiff; gray; moist; Natural.		89	8-9-10 (19)	
			30.00 Lean CLAY with sand (CL): very stiff; yellow; moist; Natural.	672.00			
			Terminated at 30.00 ft.				

NOTES



Soil Consultants Engineering, LLC
9303 Center Street
Manassas, VA 20110
Telephone: (703) 366-3000
Fax: (703) 366-3400

BOREHOLE NUMBER B-11

Sheet 1 of 1

CLIENT Mr. Marty Rhodes
PROJECT NUMBER 24-0367V
DATE STARTED 11-15-2024 **COMPLETED** 11-15-2024
DRILLING CONTRACTOR RECON Drilling
DRILLING METHOD Hollow Stem Auger, 3 1/4 inches
EQUIPMENT ATV-Mounted CME45 with Manual Drop Hammer
HOLE SIZE 6.0 in.
LOGGED BY Warner Neal **CHECKED BY** Lubo Peytchev

PROJECT NAME Happy Creek Knolls
PROJECT LOCATION TM: 20A213-4-4 to -6, Warren County, 22630
POSITION
GROUND ELEVATION 694.00 ft **FINAL DEPTH** 20.00 ft
GROUNDWATER LEVELS:
▽ **AT TIME OF DRILLING** Dry
▼ **AT END OF DRILLING** Dry; Cave-in at 12.0 ft
▽ **AFTER DRILLING** N/A

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
								LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
			Silty SAND (SM): very dense; grayish-brown; moist; little gravel; FILL.		79	11-23-34-33 (57)					
					79	23-23-27-38 (50)					
		3.80		690.20							
			SILT (ML): hard; brownish-red; moist; few gravel; FILL.								
5	689	5.50		688.50	88	14-23-25-26 (48)					
			Sandy Lean CLAY (CL): very stiff; strong red; moist; trace gravel; Natural.								
10	684				100	8-13-14 (27)	21	47	23	24	58
		14.00		680.00							
			Sandy SILT (ML): hard; strong red; moist; few gravel; Natural.		100	14-21-21 (42)					
15	679										
		18.50		675.50							
			SILT (ML): very stiff; strong red; moist; little sand; Natural.		100	10-12-14 (26)					
20	674	20.00		674.00							
			Terminated at 20.00 ft.								

NOTES



Soil Consultants Engineering, LLC
9303 Center Street
Manassas, VA 20110
Telephone: (703) 366-3000
Fax: (703) 366-3400

BOREHOLE NUMBER B-12

Sheet 1 of 1

CLIENT Mr. Marty Rhodes
PROJECT NUMBER 24-0367V
DATE STARTED 11-15-2024 **COMPLETED** 11-15-2024
DRILLING CONTRACTOR RECON Drilling
DRILLING METHOD Hollow Stem Auger, 3 1/4 inches
EQUIPMENT ATV-Mounted CME45 with Manual Drop Hammer
HOLE SIZE 6.0 in.
LOGGED BY Warner Neal **CHECKED BY** Lubo Peytchev

PROJECT NAME Happy Creek Knolls
PROJECT LOCATION TM: 20A213-4-4 to -6, Warren County, 22630
POSITION
GROUND ELEVATION 694.00 ft **FINAL DEPTH** 30.00 ft
GROUNDWATER LEVELS:
▽ **AT TIME OF DRILLING** Dry
▼ **AT END OF DRILLING** Dry; Cave-in at 20.5 ft
▽ **AFTER DRILLING** N/A

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	MOISTURE CONTENT (%)
			SILT (ML): hard; strong red; moist; little fine gravel; FILL.		71	14-17-19-20 (36)	
					71	9-13-17-18 (30)	
5	689		SILT (ML): very stiff; red with yellow; moist; trace fine gravel; Natural.		71	8-9-14-14 (23)	
10	684				72	7-10-16 (26)	
15	679		SILT (ML): stiff; red and yellow; moist; Natural.		67	6-7-8 (15)	
20	674		Lean CLAY (CL): stiff; bluish-gray; moist; little sand; Natural.		78	5-8-6 (14)	
25	669		Sandy SILT (ML): stiff; yellow; moist; Natural. Elastic SILT (MH): stiff; red and yellow; moist; trace sand; Natural.		67	5-7-6 (13)	62
30	664		Sandy SILT (ML): very stiff; light yellow; moist; Natural. Terminated at 30.00 ft.		61	9-11-11 (22)	

NOTES



SCE
SOIL CONSULTANTS ENGINEERING

KEY TO TERMS AND SYMBOLS

USCS SYMBOLS

	FILL – MAN-PLACED SOILS
	ASPHALT
	CONCRETE
	BEDROCK
	PEAT
	(OL) LOW PLASTICITY ORGANIC CLAY OR SILT
	(OH) ORGANIC SILT OR CLAY
	(ML) SILT
	(MH) ELASTIC SILT
	(CL) LEAN CLAY
	(CH) FAT CLAY
	(GP) POORLY-GRADED GRAVEL
	(GW) WELL-GRADED GRAVEL
	(GM) SILTY GRAVEL
	(GC) CLAYEY GRAVEL
	(SP) POORLY-GRADED SAND
	(SW) WELL-GRADED SAND
	(SC) CLAYEY SAND
	(SM) SILTY SAND

PENETRATION (SPT) RESISTANCE

DENSITY (SANDS, GRAVELS)		CONSISTENCY (SILTS, CLAYS)	
N-VALUE	TERM	N-VALUE	TERM
0 – 4	VERY LOOSE	0 – 2	VERY SOFT
5 – 10	LOOSE	3 – 4	SOFT
11 – 30	MED. DENSE	5 – 8	FIRM
31 – 50	DENSE	9 – 15	STIFF
50+	VERY DENSE	16 – 30	VERY STIFF
		31 – 50	HARD
		50+	VERY HARD

PARTICLE SIZE IDENTIFICATION

BOULDERS	GREATER THAN 12 INCHES
COBBLES	3 TO 12 INCHES
GRAVEL	COARSE - 3/4 INCH - 3 INCHES FINE - 4.75 MM - 3/4 INCH
SAND	COARSE - 2 MM – 4.75 MM MEDIUM - 0.425 MM – 2 MM FINE - 0.075 MM – 0.42 MM
SILT	0.005 MM – 0.075 MM
CLAY	LESS THAN 0.005 MM

WATER LEVEL DESIGNATION

	LEVEL AT TIME OF DRILLING
	LEVEL AT END OF DRILLING
	LEVEL AFTER DRILLING (24H+)

RELATIVE COMPOSITION OF SOILS

MAJOR CONSTITUENT

CONSTITUENT 50% OR MORE OF THE SAMPLE AND IS WRITTEN IN CAPITAL LETTERS. IF NO COMPONENT IS GREATER THAN 50%, THE PREDOMINANT COMPONENT IS CAPITALIZED.

MINOR CONSTITUENT

CONSTITUENT 25% - 40% OF SOIL TYPE AND WILL BE WRITTEN WITH THE FIRST LETTER OF THE SOIL TYPE CAPITALIZED.

ACCESSORY CONSTITUENTS

TRACE = <5%, FEW = 5 TO 10%, LITTLE = 11 TO 20%, WITH = 15 TO 25%, SOME = 21 TO 35%, AND = 36 TO 50%



SCE
SOIL CONSULTANTS ENGINEERING

ROCK KEY TO TERMS AND SYMBOLS

DEGREE OF WEATHERING

UNWEATHERED

ROCK GENERALLY FRESH, JOINTS LIGHTLY STAINED AND DISCOLORATION EXTENDS INTO ROCK NO MORE THAN ½ IN, OPEN JOINTS MAY CONTAIN CLAY, CORE RINGS UNDER HAMMER IMPACT.

WEATHERED

ROCK MASS DECOMPOSED 50% OR LESS, SIGNIFICANT DISCOLORATION, CORE CANNOT BE BROKEN BY HAND OR SCRAPED BY KNIFE

HIGHLY WEATHERED

ROCK MASS IS MORE THAN 50% DECOMPOSED, COMPLETE DISCOLORATION OF ROCK FABRIC, CORE MAY BE EXTREMELY BROKEN AND GIVES CLUNK SOUND WHEN STRUCK BY HAMMER, MAY BE SHAVED WITH A KNIFE.

SCALE OF RELATIVE ROCK HARDNESS

CONSISTENCY

TSF

EXTREMELY SOFT

2.5 - 10

VERY SOFT

10 - 50

SOFT

50 - 250

MEDIUM HARD

250 - 525

MODERATELY HARD

525-1,050

HARD

1,050 - 2,600

VERY HARD

> 2,600

ROCK QUALITY DESCRIPTION

ROCK MASS DESCRIPTION

RQD VALUE (%)

EXCELLENT

90-100

GOOD

75-90

FAIR

50-75

POOR

25-50

VERY POOR

LESS THAN 25

ROCK BEDDING THICKNESS

DESCRIPTION

CRITERIA

VERY THICK BEDDED

GREATER THAN 3 FT

THICK BEDDED

1 FT - 3 FT

MEDIUM BEDDED

4 IN - 1 FT

THIN BEDDED

1 ¼ IN - 4 IN

VERY THIN BEDDED

½ IN - 1 ¼ IN

THICKLY LAMINATED

1/8 IN - ½ IN

THINLY LAMINATED

1/8 IN OR LESS

ROCK VOIDS

VOIDS

VOID DIAMETER

PIT

< ½ IN

VUG

½ IN - 2 IN

CAVITY

2 IN - 24 IN

CAVE

>24 IN

GRAIN SIZE TERMINOLOGY

COMPONENT

SIZE RANGE

VERY COARSE GRAINED

>4.76 MM

COARSE GRAINED

2.0 MM - 4.76 MM

MEDIUM GRAINED

0.42 MM - 2.0 MM

FINE GRAINED

0.075 MM - 0.42 MM

VERY FINE GRAINED

<0.075 MM

STRUCTURE DESCRIPTION

DESCRIPTION

CRITERIA

STRATIFIED

ALTERNATING LAYERS OF VARYING MATERIAL OR COLOR WITH LAYERS AT LEAST ¼ -IN THICK

LAMINATED

ALTERNATING LAYERS OF VARYING MATERIAL OR COLOR WITH LAYERS LESS THAN ¼ -IN THICK

FISSURED

BREAKS ALONG DEFINITE PLANES OF FRACTURE WITH LITTLE RESISTANCE TO FRACTURING

SLICKENED

FRACTURE PLANES APPEAR POLISHED OR GLOSSY, SOMETIMES STRIATED

BLOCKY

COHESIVE SOIL THAT CAN BE BROKEN DOWN INTO SMALL ANGULAR LUMPS WHICH RESIST FURTHER BREAKDOWN

DESCRIPTION

CRITERIA

LENSED

INCLUSION OF SMALL POCKETS OF DIFFERENT SOILS

LAYER

INCLUSION GREATER THAN 3-IN THICK

SEAM

INCLUSION 1/8 IN - 3 IN THICK EXTENDING THROUGH THE SAMPLE

PARTING

INCLUSION LESS THAN 1/8 IN THICK

Soil Consultants Engineering, LLC
9303 Center Street
Manassas, VA 20110
Telephone: (703) 366-3000
Fax: (703) 366-3400

SUMMARY OF LABORATORY RESULTS

CLIENT Mr. Marty Rhodes

PROJECT NAME Happy Creek Knolls

PROJECT NUMBER 24-0367V

PROJECT LOCATION Lot 4-6, Happy Ridge Dr, Front Royal, VA 22630

[illegible]



Soil Consultants Engineering, LLC
9303 Center Street
Manassas, VA 20110
Telephone: (703) 366-3000
Fax: (703) 366-3400

GRAIN SIZE DISTRIBUTION

CLIENT Mr. Marty Rhodes

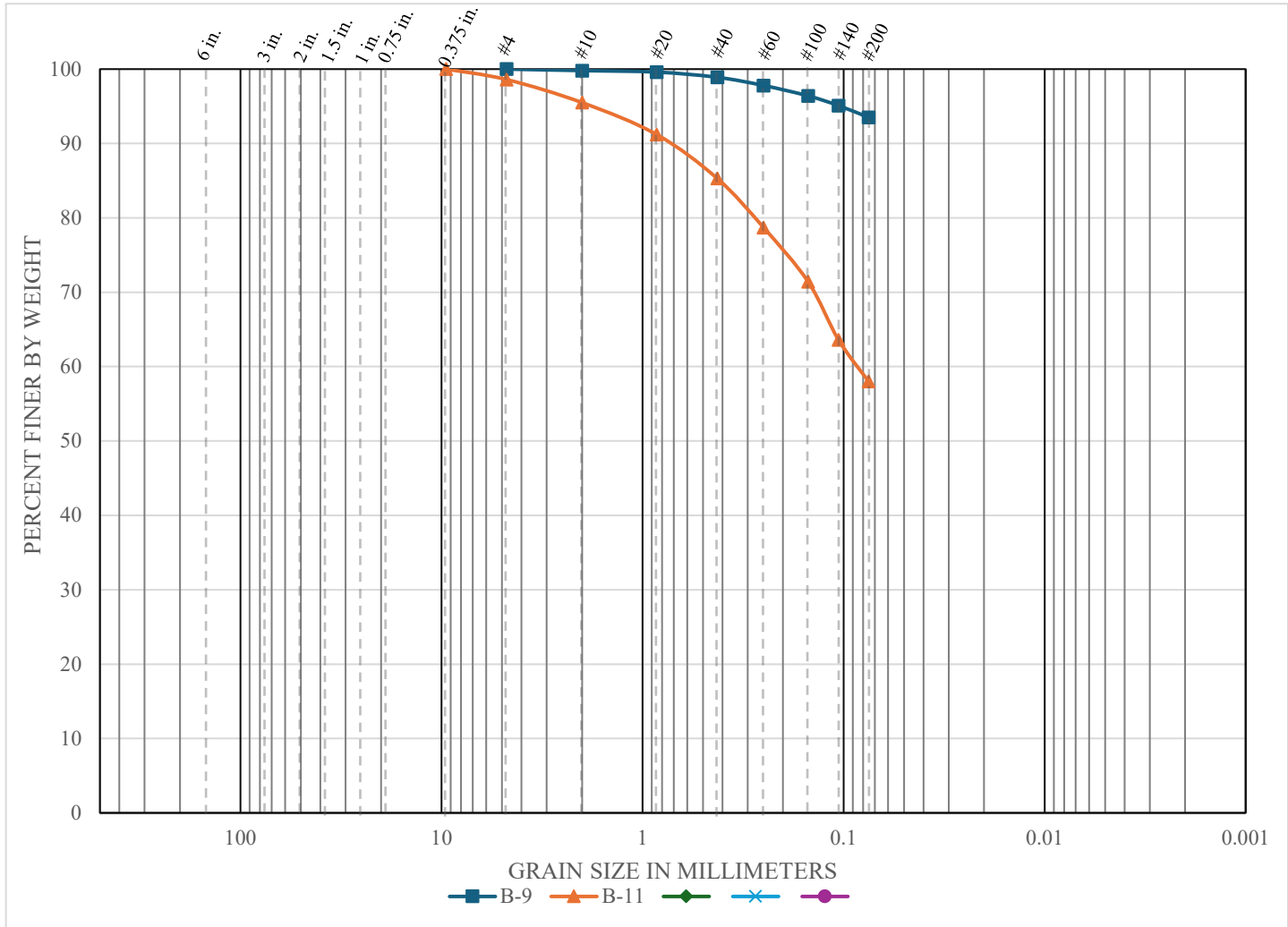
PROJECT NAME

Happy Creek Knolls

PROJECT NUMBER 24-0367V

PROJECT LOCATION

Lot 4-6, Happy Ridge Dr, Front Royal, VA 22630



BOREHOLE	DEPTH	CLASSIFICATION			LL	PL	PI	Cc	Cu
B-9	19.5	ELASTIC SILT			77	47	30		
B-11	9.5	Sandy Lean CLAY			47	23	24		
BOREHOLE	DEPTH	D100	D60	D30	D10	%Gravel	%Sand	%Fines	
B-9	19.5	4.75				0.0	6.5	93.5	
B-11	9.5	9.5	0.086			1.4	40.6	58.0	

ATTERBERG LIMITS' RESULTS

CLIENT Mr. Marty Rhodes

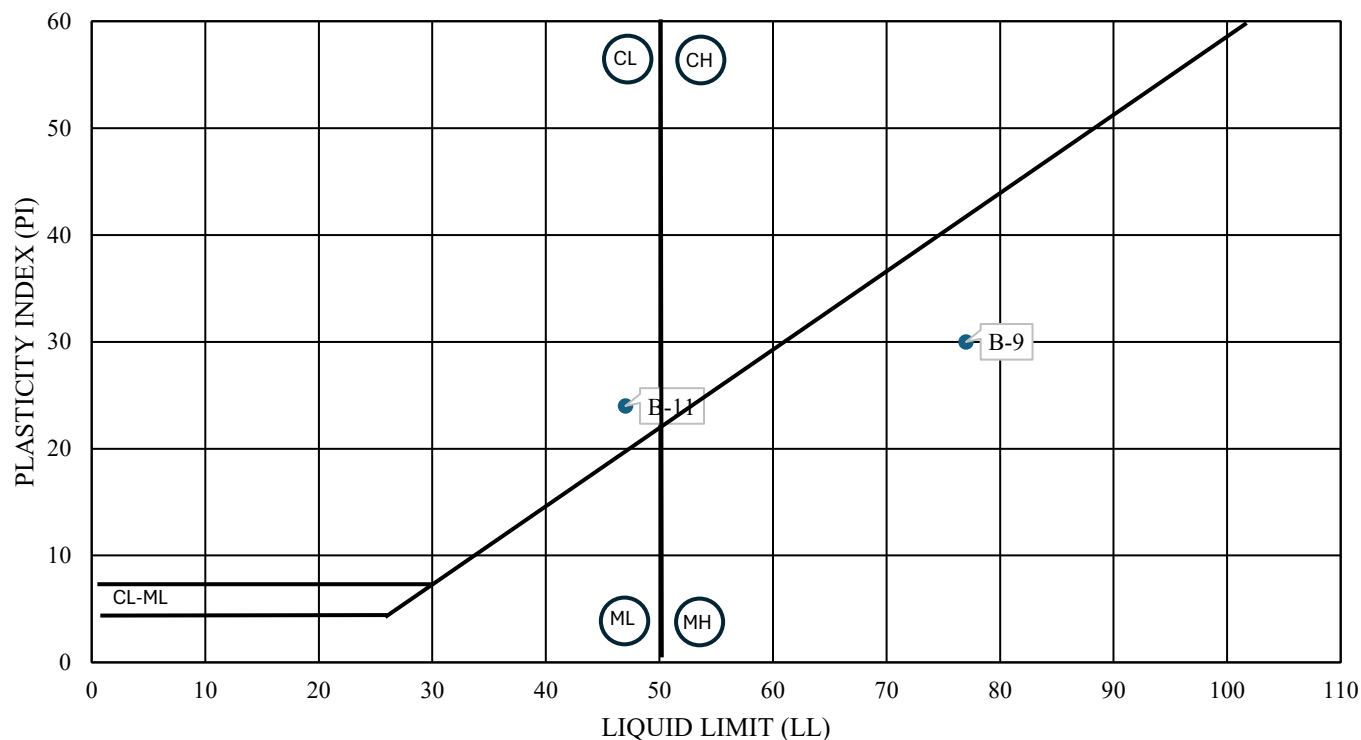
PROJECT NAME

Happy Creek Knolls

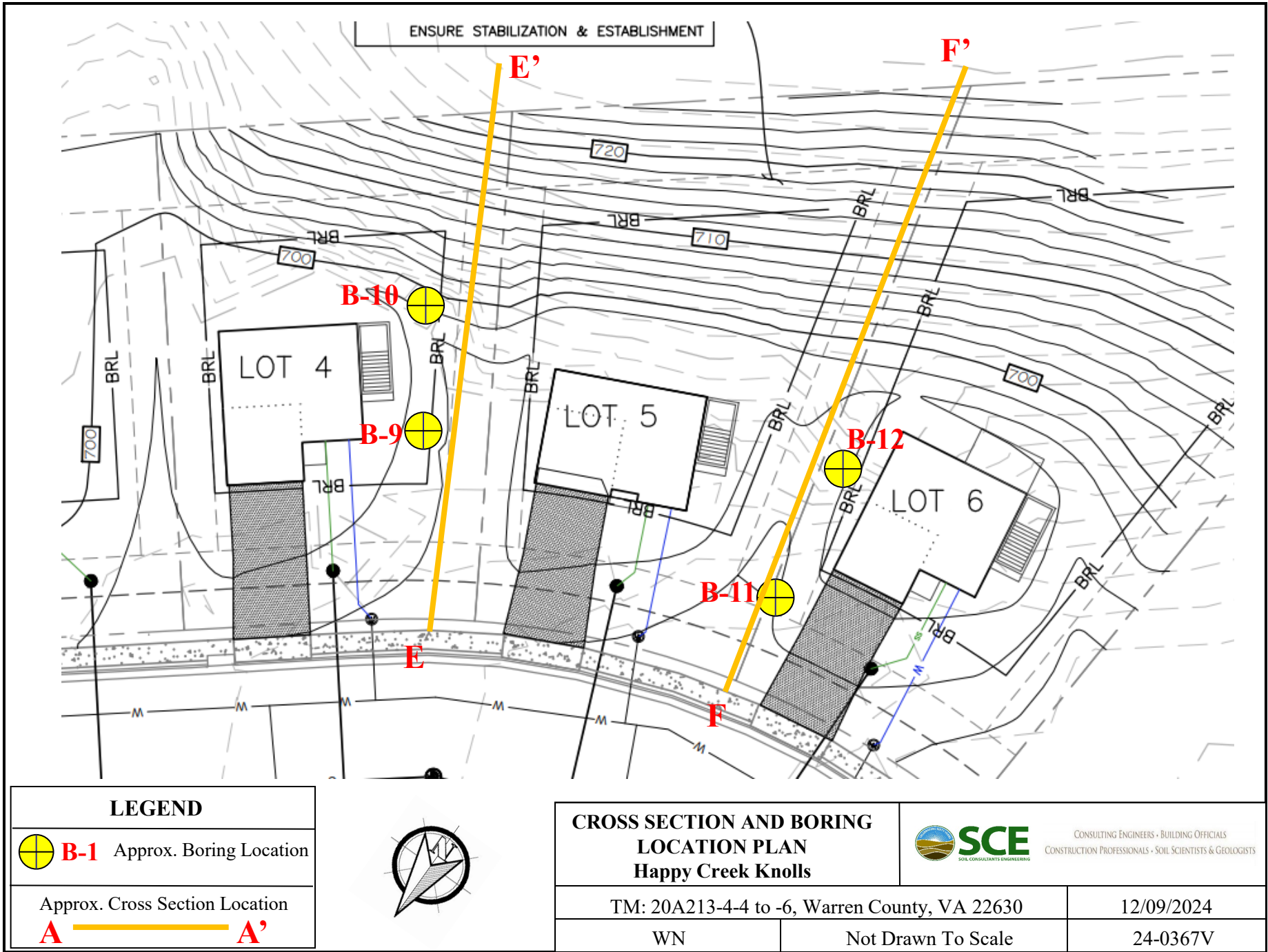
PROJECT NUMBER 24-0367V

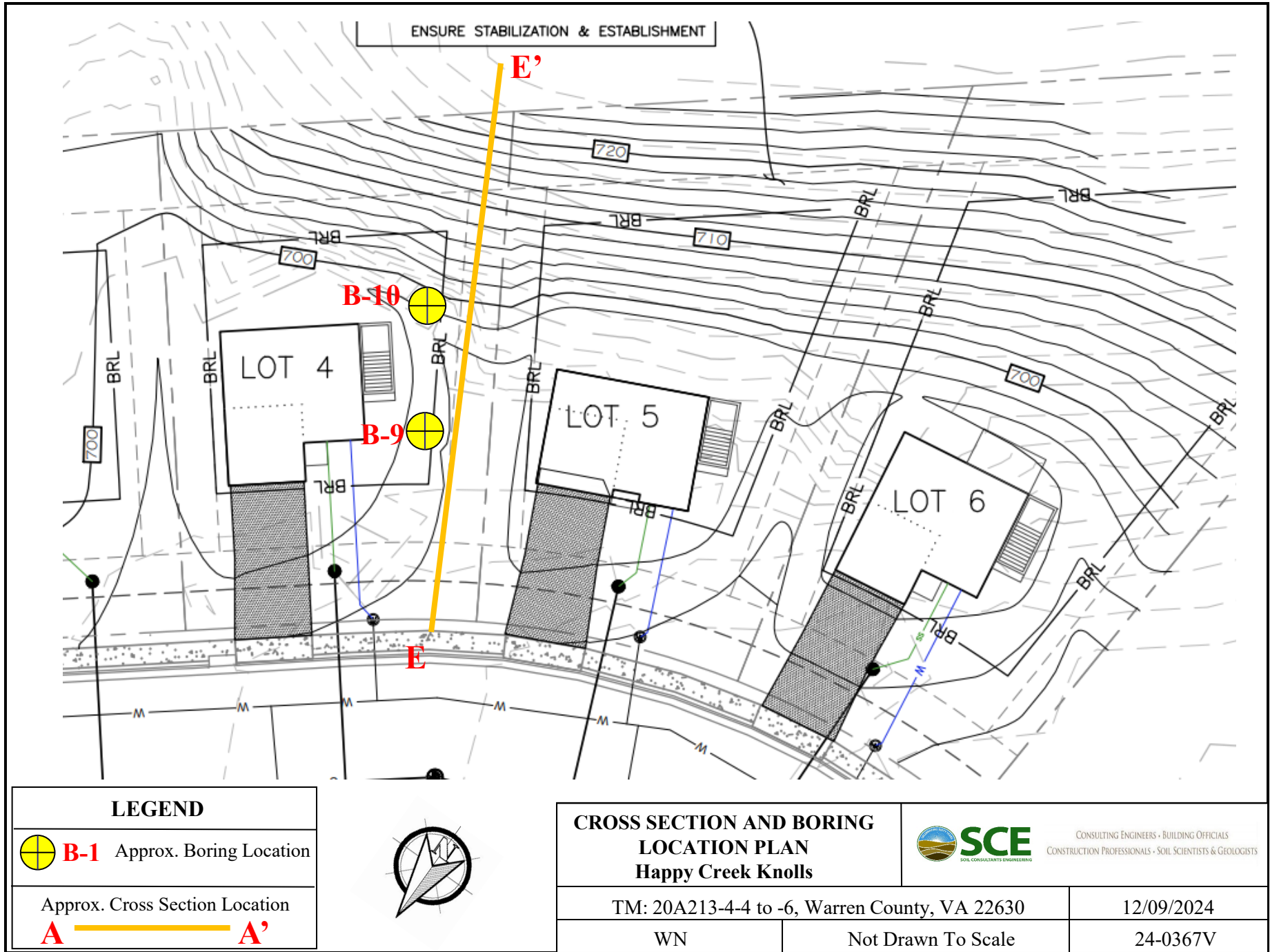
PROJECT LOCATION

Lot 4-6, Happy Ridge Dr, Front Royal, VA 22630

[illegible]

SLOPE STABILITY ANALYSIS

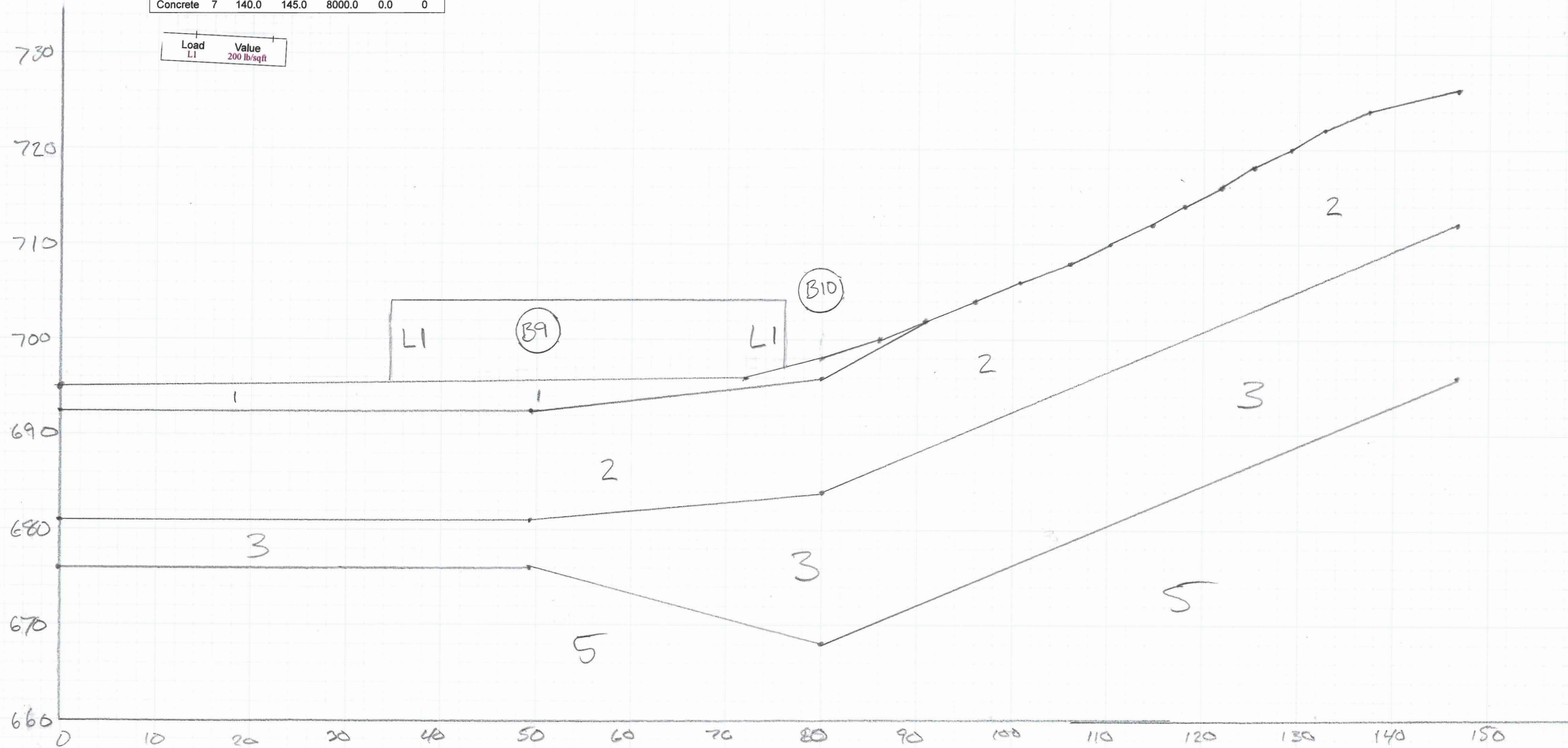




24-0367V_Happy_Creek_Lot_4_E-E'

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
FILL ML	1	120.0	125.0	0.0	28.0	0
CL ML	2	115.0	120.0	0.0	26.0	0
ML CL	3	120.0	125.0	0.0	30.0	0
CL ML	4	120.0	125.0	0.0	32.0	0
MH	5	120.0	125.0	0.0	30.0	0
GM	6	130.0	135.0	0.0	35.0	0
Concrete	7	140.0	145.0	8000.0	0.0	0

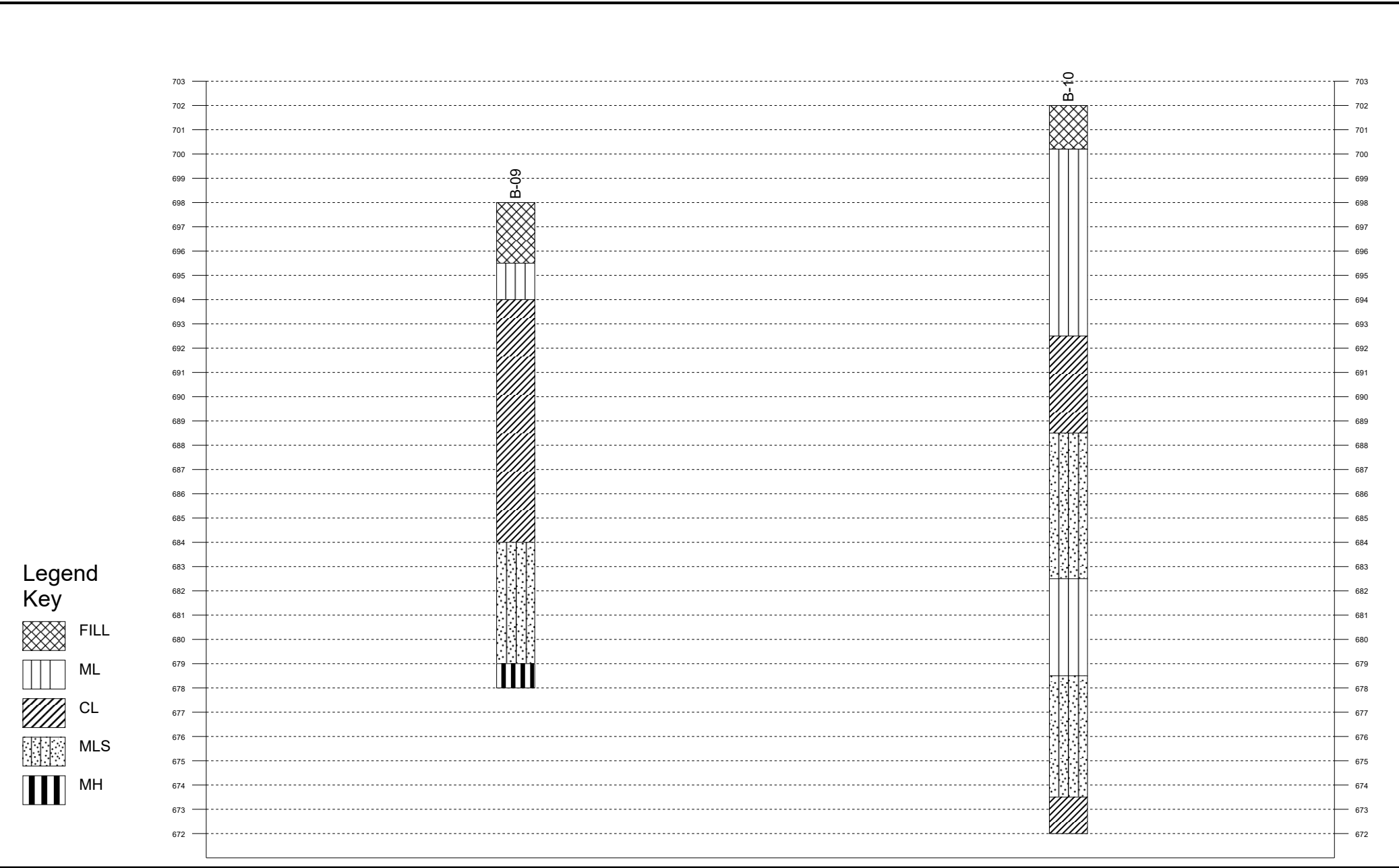
Load
LI Value
200 lb/sqft



CLIENT Mr. Marty Rhodes
PROJECT NUMBER 24-0367V

PROJECT NAME Happy Creek Knolls
PROJECT LOCATION TM: 20A213-4-4 to -6, Warren County, 22630

VERTICAL SCALE 1:64
HORIZONTAL SCALE 1:191



Legend Key

FILL

ML

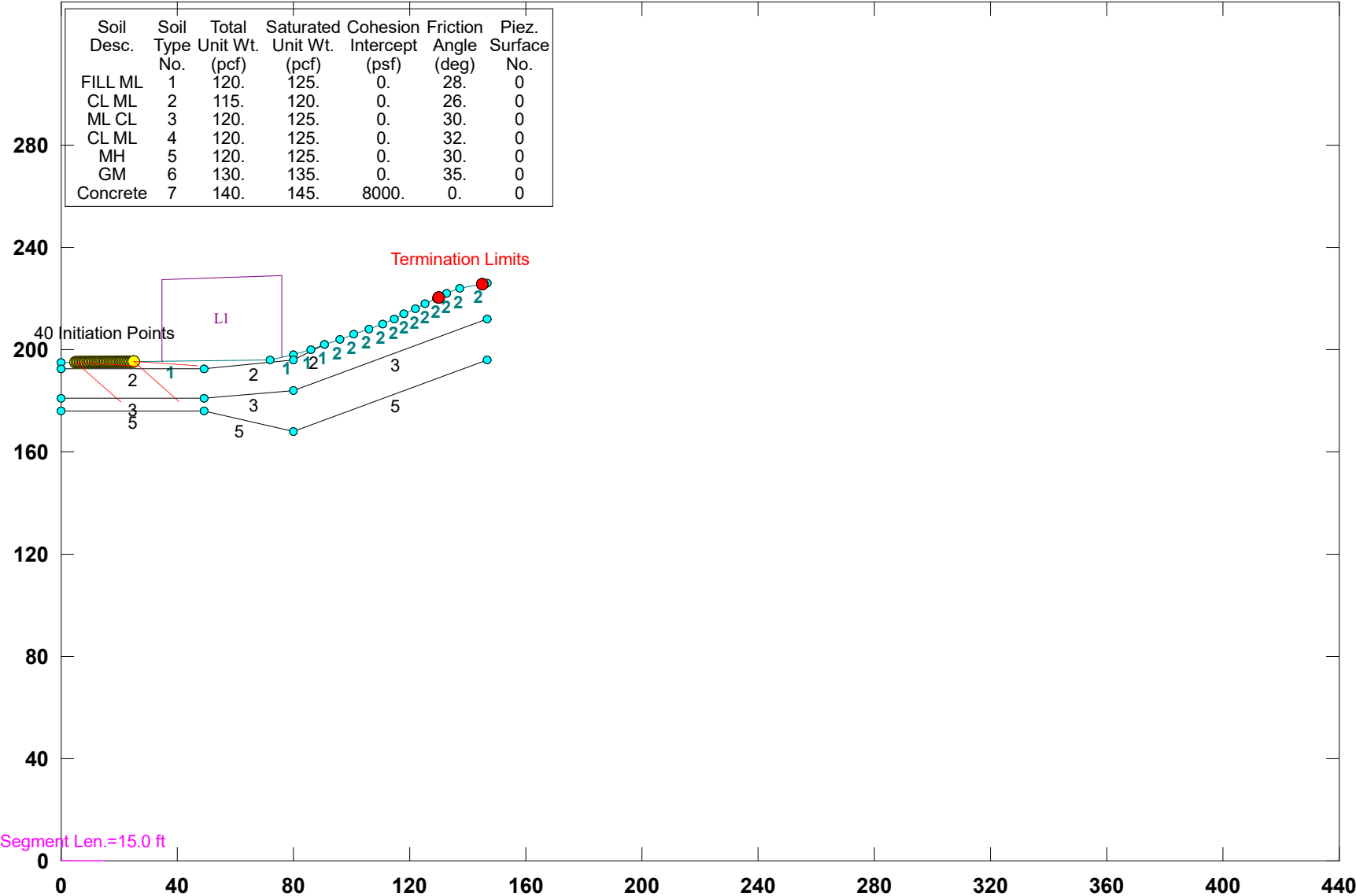
CL

MLS

MH

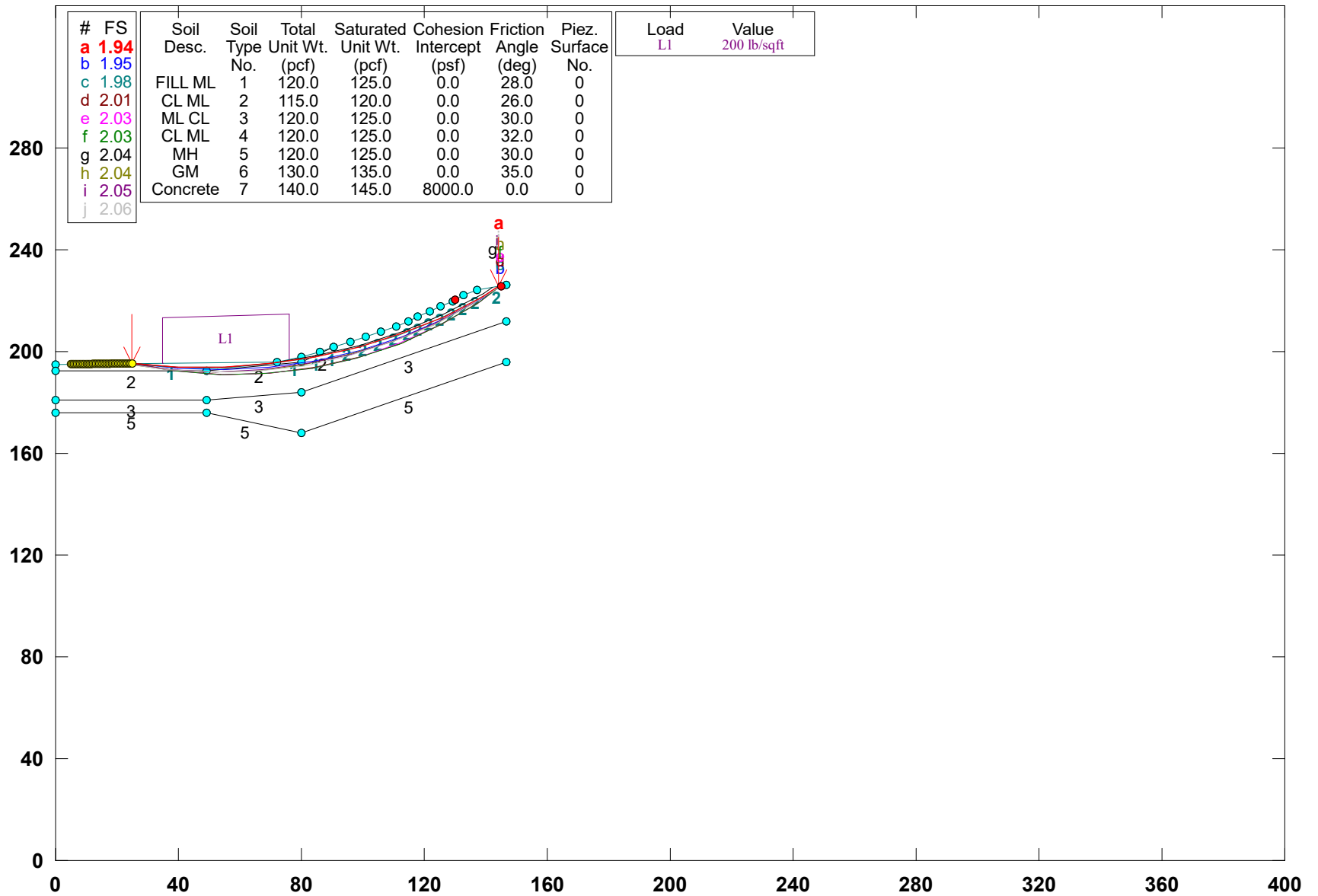
24-0367V_Happy_Creek_Lot_4_E-E'

c:\users\lpeytchev\onedrive - soils consultants engineering\desktop\stedwin and stabl\24-0367v_happy_creek_lot_4_12-9-24.pl0 Geometry Preview 12/9/2024 11:47 AM



24-0367V_Happy_Creek_Lot_4_E-E'

c:\users\lpeytchev\onedrive - soils consultants engineering\desktop\stedwin and stabl\24-0367v_happy_creek_lot_4_12-9-24.pl2 Run By: Username 12/9/2024 11:46AM



**** STABL6H ****

by

Purdue University

--Slope Stability Analysis--

Simplified Janbu, Simplified Bishop

or Spencer's Method of Slices

Run Date: 12/9/2024

Time of Run: 11:46AM

Run By: Username

Input Data Filename: C:24-0367v_happy_creek_lot_4_12-9-24.

Output Filename: C:24-0367v_happy_creek_lot_4_12-9-24.OUT

Plotted Output Filename: C:24-0367v_happy_creek_lot_4_12-9-24.PLT

PROBLEM DESCRIPTION 24-0367V_Happy_Creek_Lot_4_E-E'

BOUNDARY COORDINATES

16 Top Boundaries

25 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	195.00	72.00	196.00	1
2	72.00	196.00	80.00	198.00	1
3	80.00	198.00	86.00	200.00	1
4	86.00	200.00	90.70	202.00	1
5	90.70	202.00	96.00	204.00	2
6	96.00	204.00	100.70	206.00	2
7	100.70	206.00	106.00	208.00	2
8	106.00	208.00	110.70	210.00	2
9	110.70	210.00	114.70	212.00	2
10	114.70	212.00	118.00	214.00	2
11	118.00	214.00	122.00	216.00	2
12	122.00	216.00	125.30	218.00	2
13	125.30	218.00	129.30	220.00	2
14	129.30	220.00	132.70	222.00	2
15	132.70	222.00	137.30	224.00	2
16	137.30	224.00	146.70	226.00	2
17	0.00	192.50	49.30	192.50	2
18	49.30	192.50	80.00	196.00	2
19	80.00	196.00	90.70	202.00	2
20	0.00	181.00	49.30	181.00	3
21	49.30	181.00	80.00	184.00	3
22	80.00	184.00	146.70	212.00	3
23	0.00	176.00	49.30	176.00	5
24	49.30	176.00	80.00	168.00	5
25	80.00	168.00	146.70	196.00	5

ISOTROPIC SOIL PARAMETERS

7 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param. (psf)	Pressure Constant (psf)	Piez. Surface No.
1	120.0	125.0	0.0	28.0	0.00	0.0	0
2	115.0	120.0	0.0	26.0	0.00	0.0	0
3	120.0	125.0	0.0	30.0	0.00	0.0	0
4	120.0	125.0	0.0	32.0	0.00	0.0	0
5	120.0	125.0	0.0	30.0	0.00	0.0	0
6	130.0	135.0	0.0	35.0	0.00	0.0	0
7	140.0	145.0	8000.0	0.0	0.00	0.0	0

BOUNDARY LOAD(S)

1 Load(s) Specified

Load No.	X-Left (ft)	X-Right (ft)	Intensity (lb/sqft)	Deflection (deg)
1	34.70	76.00	200.0	0.0

NOTE - Intensity Is Specified As A Uniformly Distributed

Force Acting On A Horizontally Projected Surface.

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.

1600 Trial Surfaces Have Been Generated.

40 Surfaces Initiate From Each Of 40 Points Equally Spaced Along The Ground Surface Between X = 5.00 ft.

and X = 25.00 ft.

Each Surface Terminates Between X = 130.00 ft.

and X = 145.00 ft.

Unless Further Limitations Were Imposed, The Minimum Elevation
 At Which A Surface Extends Is Y = 0.00 ft.
 15.00 ft. Line Segments Define Each Trial Failure Surface.
 Following Are Displayed The Ten Most Critical Of The Trial
 Failure Surfaces Examined. They Are Ordered - Most Critical
 First.

* * Safety Factors Are Calculated By The Modified Bishop Method * *

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	25.00	195.35
2	39.94	193.98
3	54.94	193.97
4	69.88	195.33
5	84.63	198.04
6	99.07	202.09
7	113.09	207.43
8	126.56	214.03
9	139.38	221.82
10	144.34	225.50

Circle Center At X = 47.5 ; Y = 358.5 and Radius, 164.7
 *** 1.935 ***

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	25.00	195.35
2	39.86	193.28
3	54.85	192.75
4	69.81	193.76
5	84.60	196.29
6	99.05	200.32
7	113.01	205.81
8	126.33	212.70
9	138.88	220.92
10	144.59	225.55

Circle Center At X = 52.5 ; Y = 339.1 and Radius, 146.4
 *** 1.953 ***

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	22.95	195.32
2	37.87	193.79
3	52.87	193.62
4	67.82	194.81
5	82.60	197.36
6	97.09	201.25
7	111.17	206.43
8	124.71	212.87
9	137.62	220.52
10	144.56	225.54

Circle Center At X = 47.2 ; Y = 358.3 and Radius, 164.8
 *** 1.981 ***

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	25.00	195.35
2	39.70	192.36
3	54.65	191.11
4	69.64	191.64
5	84.46	193.91
6	98.92	197.92
7	112.81	203.59
8	125.93	210.86
9	138.11	219.62
10	144.59	225.55

Circle Center At X = 57.7 ; Y = 318.6 and Radius, 127.5
 *** 2.005 ***

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
--------------	----------------	----------------

1	23.97	195.33
2	38.66	192.28
3	53.60	190.97
4	68.60	191.42
5	83.44	193.61
6	97.92	197.53
7	111.84	203.11
8	125.01	210.29
9	137.25	218.95
10	144.58	225.55

Circle Center At X = 57.3 ; Y = 318.9 and Radius, 128.0
 *** 2.027 ***

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	23.97	195.33
2	38.65	192.22
3	53.59	190.86
4	68.58	191.27
5	83.42	193.44
6	97.90	197.35
7	111.82	202.94
8	124.98	210.14
9	137.21	218.83
10	144.62	225.56

Circle Center At X = 57.6 ; Y = 317.7 and Radius, 126.9
 *** 2.031 ***

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	25.00	195.35
2	39.94	194.05
3	54.94	194.13
4	69.87	195.58
5	84.61	198.40
6	99.02	202.55
7	112.99	208.01
8	126.40	214.73
9	139.14	222.65
10	142.35	225.08

Circle Center At X = 46.6 ; Y = 357.3 and Radius, 163.4
 *** 2.035 ***

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	21.41	195.30
2	36.21	192.86
3	51.19	191.98
4	66.17	192.66
5	81.00	194.88
6	95.53	198.64
7	109.58	203.88
8	123.02	210.55
9	135.69	218.58
10	144.49	225.53

Circle Center At X = 52.2 ; Y = 336.3 and Radius, 144.4
 *** 2.039 ***

Failure Surface Specified By 10 Coordinate Points

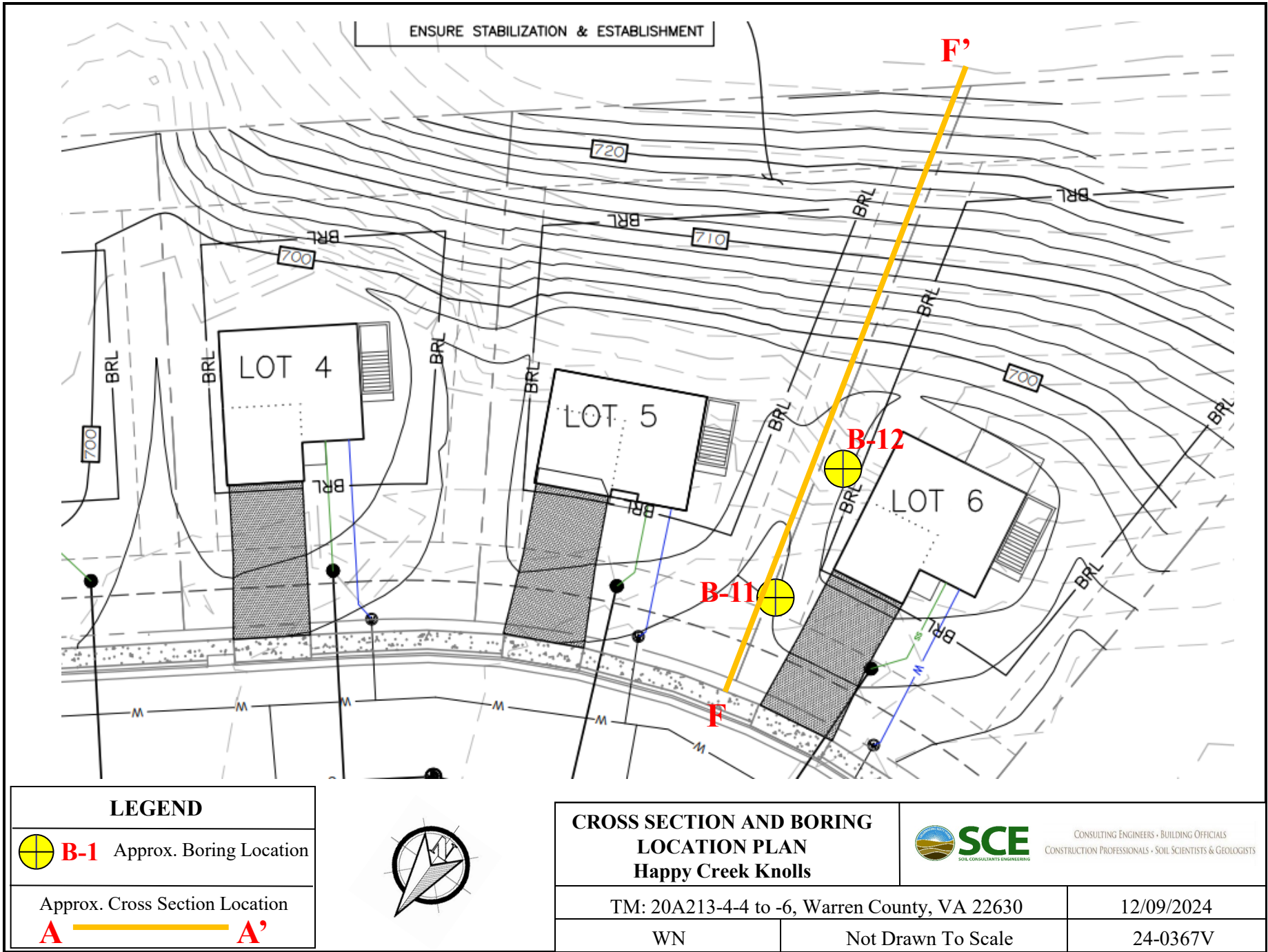
Point No.	X-Surf (ft)	Y-Surf (ft)
1	22.44	195.31
2	37.24	192.92
3	52.22	192.09
4	67.20	192.85
5	82.02	195.19
6	96.51	199.07
7	110.51	204.45
8	123.87	211.28
9	136.43	219.47
10	143.64	225.35

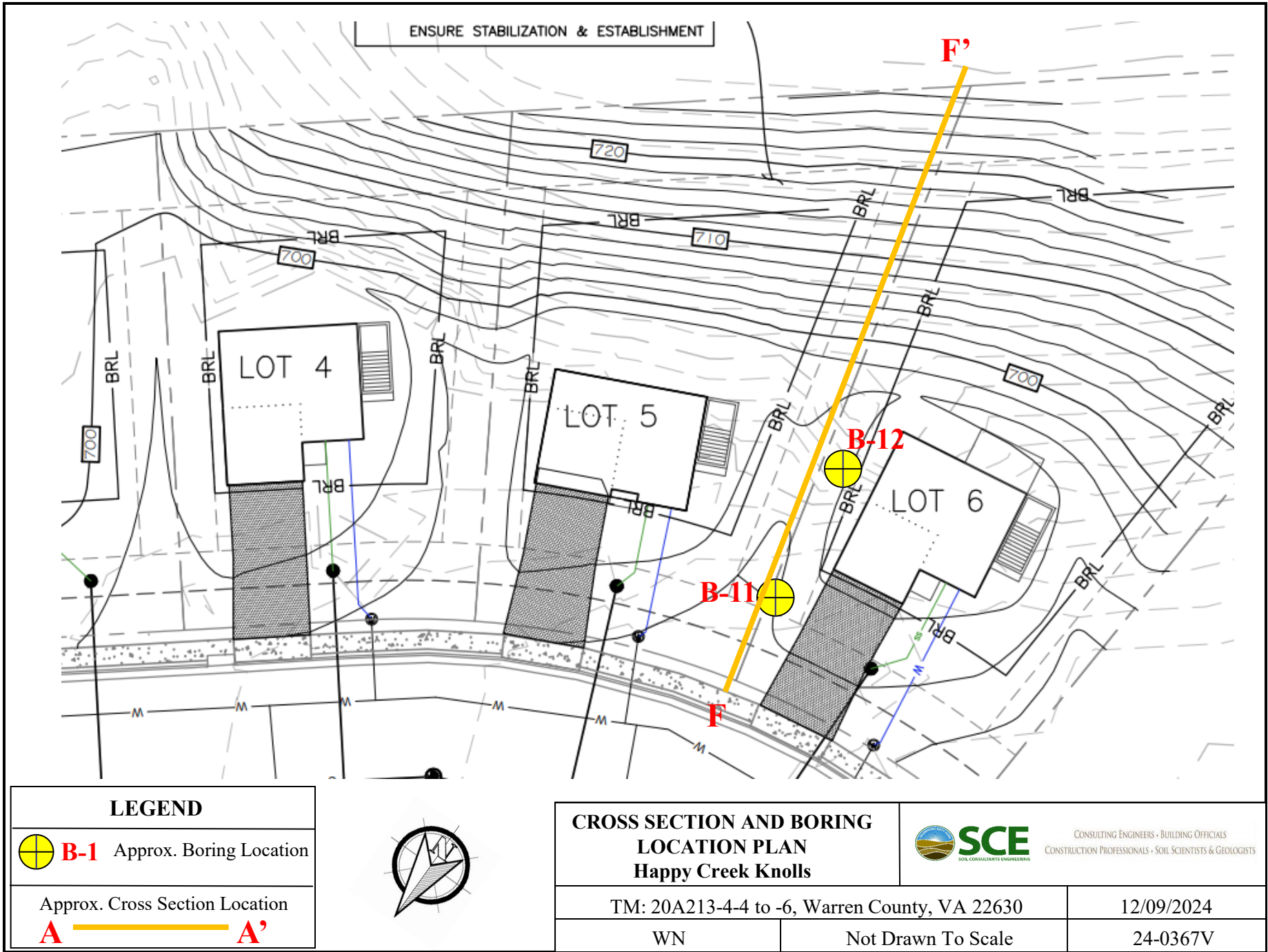
Circle Center At X = 52.5 ; Y = 334.4 and Radius, 142.3
 *** 2.049 ***

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	21.41	195.30
2	36.19	192.74
3	51.16	191.77
4	66.15	192.39
5	80.98	194.60
6	95.50	198.37
7	109.54	203.66
8	122.93	210.41
9	135.53	218.54
10	144.07	225.44

Circle Center At X = 52.8 ; Y = 332.9 and Radius, 141.1
 *** 2.059 ***







Soil Consultants Engineering, LLC
9303 Center Street
Manassas, VA 20110
Telephone: (703) 366-3000
Fax: (703) 366-3400

Lot 6 F-F' Subsurface

CLIENT Mr. Marty Rhodes

PROJECT NAME Happy Creek Knolls

VERTICAL SCALE 1:64

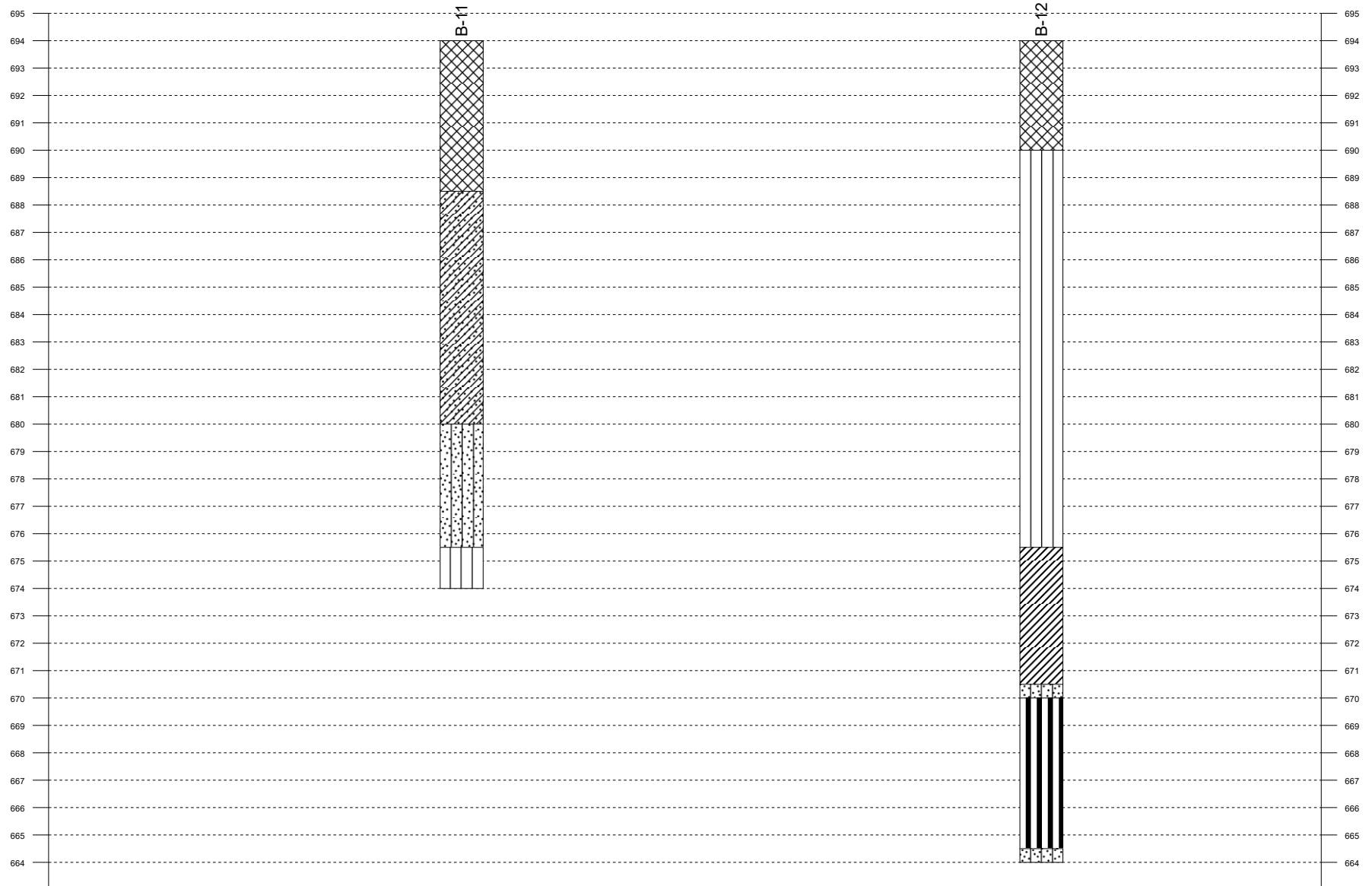
PROJECT NUMBER 24-0367V

PROJECT LOCATION TM: 20A213-4-4 to -6, Warren County, 22630

HORIZONTAL SCALE 1:173

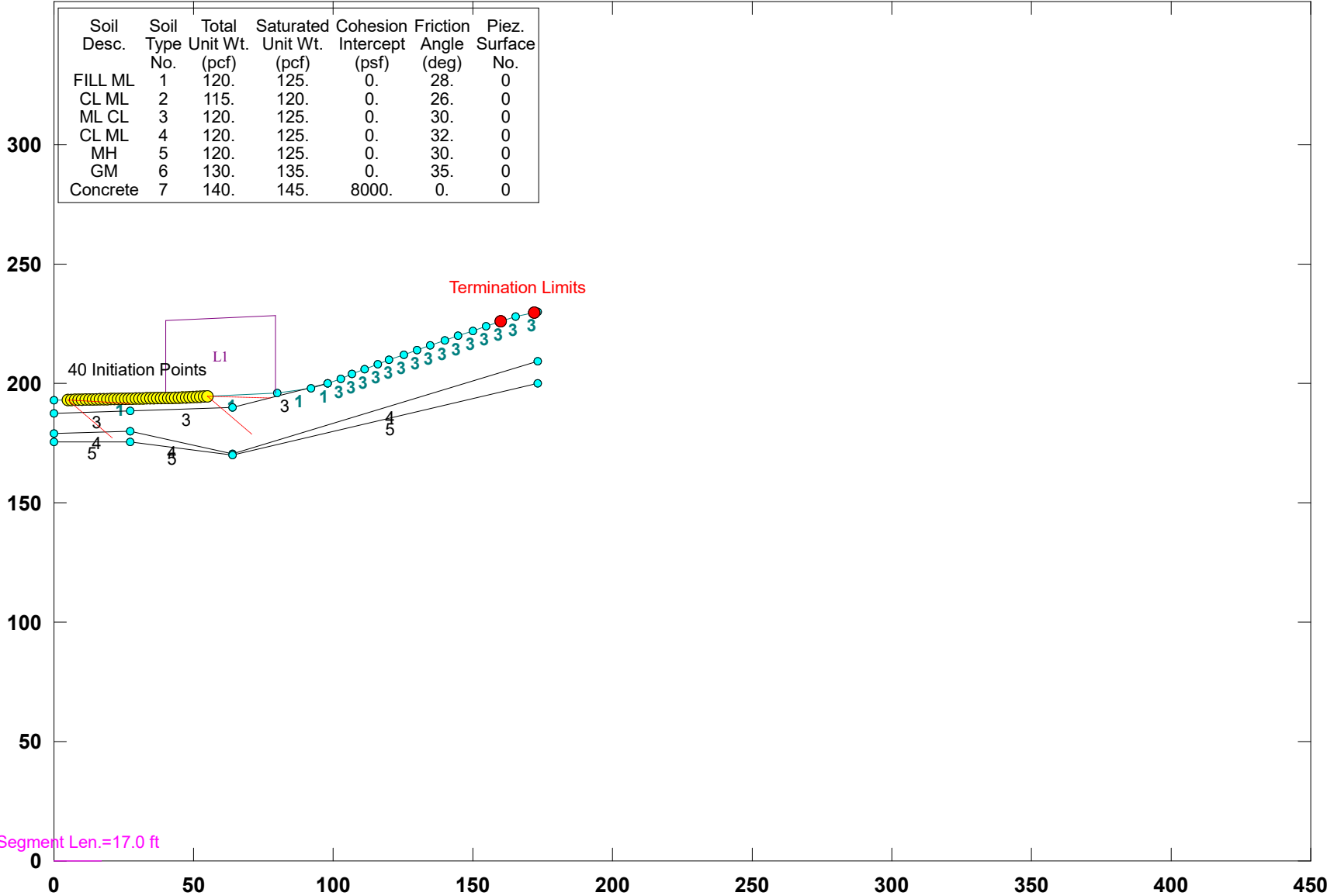
Legend Key

-  FILL
-  ML
-  CLS
-  MLS
-  CL
-  MH



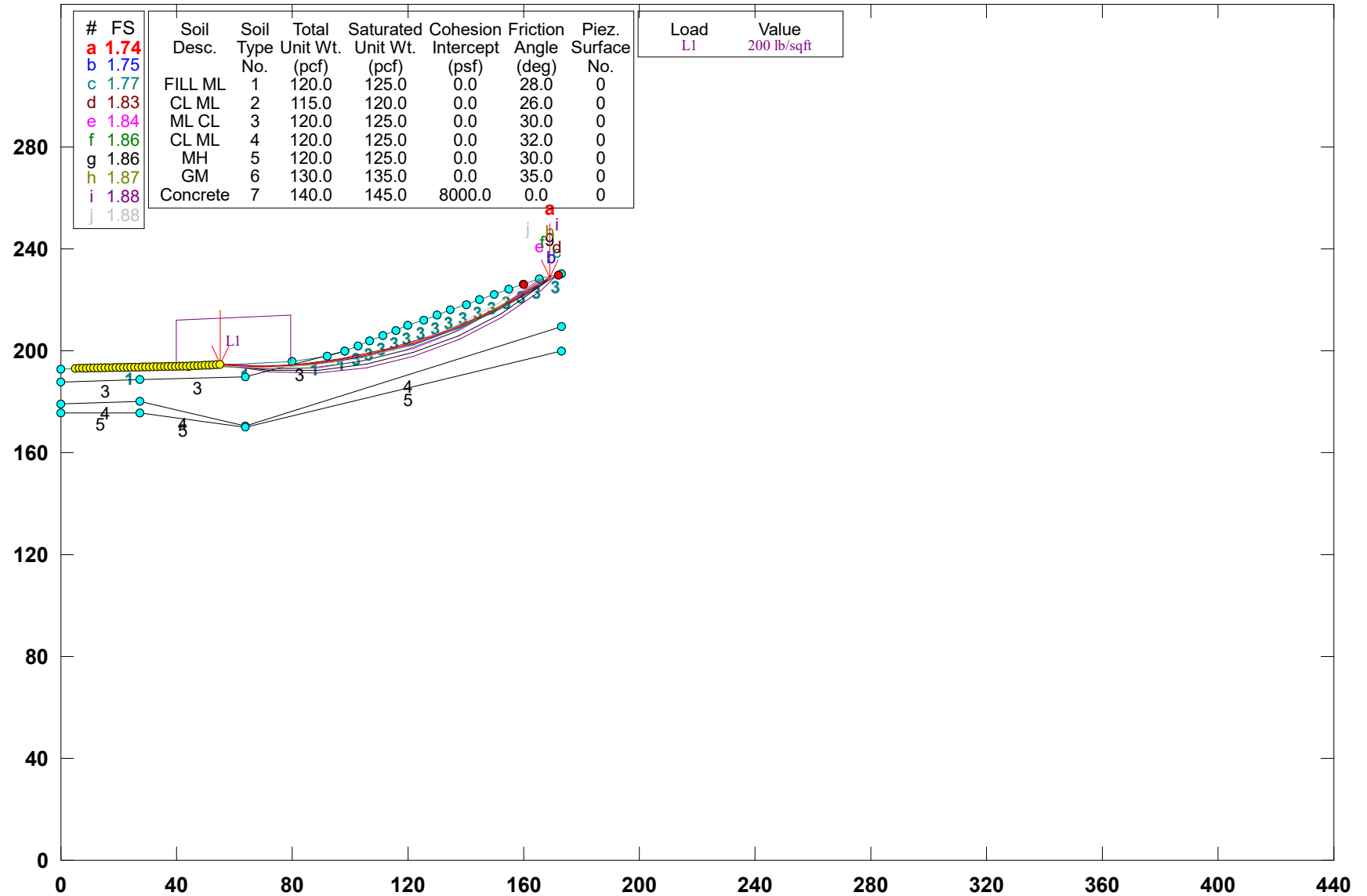
24-0367V_Happy_Creek_Lot_6_F-F'

c:\users\lpeytchev\onedrive - soils consultants engineering\desktop\stedwin and stabl\24-0367v_happy_creek_lot_6_12-9-24.pl0 Geometry Preview 12/9/2024 11:58 AM



24-0367V_Happy_Creek_Lot_6_F-F'

c:\users\lpeytchev\onedrive - soils consultants engineering\desktop\stedwin and stabl\24-0367v_happy_creek_lot_6_12-9-24.pl2 Run By: Username 12/9/2024 11:57AM



**** STABL6H ****

by

Purdue University

--Slope Stability Analysis--

Simplified Janbu, Simplified Bishop

or Spencer's Method of Slices

Run Date: 12/9/2024

Time of Run: 11:57AM

Run By: Username

Input Data Filename: C:24-0367v_happy_creek_lot_6_12-9-24.

Output Filename: C:24-0367v_happy_creek_lot_6_12-9-24.OUT

Plotted Output Filename: C:24-0367v_happy_creek_lot_6_12-9-24.PLT

PROBLEM DESCRIPTION 24-0367V_Happy_Creek_Lot_6_F-F'

BOUNDARY COORDINATES

19 Top Boundaries

28 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	193.00	44.00	194.00	1
2	44.00	194.00	80.00	196.00	1
3	80.00	196.00	92.00	198.00	1
4	92.00	198.00	98.00	200.00	1
5	98.00	200.00	102.70	202.00	3
6	102.70	202.00	106.70	204.00	3
7	106.70	204.00	111.30	206.00	3
8	111.30	206.00	116.00	208.00	3
9	116.00	208.00	120.00	210.00	3
10	120.00	210.00	125.30	212.00	3
11	125.30	212.00	130.00	214.00	3
12	130.00	214.00	134.70	216.00	3
13	134.70	216.00	140.00	218.00	3
14	140.00	218.00	144.70	220.00	3
15	144.70	220.00	150.00	222.00	3
16	150.00	222.00	154.70	224.00	3
17	154.70	224.00	160.00	226.00	3
18	160.00	226.00	165.30	228.00	3
19	165.30	228.00	173.30	230.00	3
20	0.00	187.50	27.30	188.50	3
21	27.30	188.50	64.00	190.00	3
22	64.00	190.00	98.00	200.00	3
23	0.00	179.00	27.30	180.00	4
24	27.30	180.00	64.00	170.50	4
25	64.00	170.50	173.30	209.30	4
26	0.00	175.50	27.30	175.50	5
27	27.30	175.50	64.00	170.00	5
28	64.00	170.00	173.30	200.00	5

ISOTROPIC SOIL PARAMETERS

7 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param. (psf)	Pressure Constant (psf)	Piez. Surface No.
1	120.0	125.0	0.0	28.0	0.00	0.0	0
2	115.0	120.0	0.0	26.0	0.00	0.0	0
3	120.0	125.0	0.0	30.0	0.00	0.0	0
4	120.0	125.0	0.0	32.0	0.00	0.0	0
5	120.0	125.0	0.0	30.0	0.00	0.0	0
6	130.0	135.0	0.0	35.0	0.00	0.0	0
7	140.0	145.0	8000.0	0.0	0.00	0.0	0

BOUNDARY LOAD(S)

1 Load(s) Specified

Load No.	X-Left (ft)	X-Right (ft)	Intensity (lb/sqft)	Deflection (deg)
1	40.00	79.30	200.0	0.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.
 A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.
 1600 Trial Surfaces Have Been Generated.

40 Surfaces Initiate From Each Of 40 Points Equally Spaced Along The Ground Surface Between X = 5.00 ft.

and X = 55.00 ft.
 Each Surface Terminates Between X = 160.00 ft.
 and X = 172.00 ft.
 Unless Further Limitations Were Imposed, The Minimum Elevation
 At Which A Surface Extends Is Y = 0.00 ft.
 17.00 ft. Line Segments Define Each Trial Failure Surface.
 Following Are Displayed The Ten Most Critical Of The Trial
 Failure Surfaces Examined. They Are Ordered - Most Critical
 First.

* * Safety Factors Are Calculated By The Modified Bishop Method * *
 Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	55.00	194.61
2	71.99	194.01
3	88.95	195.21
4	105.68	198.20
5	122.01	202.95
6	137.74	209.40
7	152.69	217.47
8	166.71	227.09
9	168.80	228.88

Circle Center At X = 69.2 ; Y = 354.3 and Radius, 160.3
 *** 1.740 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	55.00	194.61
2	71.98	193.84
3	88.95	194.92
4	105.70	197.82
5	122.04	202.51
6	137.77	208.95
7	152.72	217.05
8	166.70	226.72
9	169.36	229.01

Circle Center At X = 70.6 ; Y = 350.8 and Radius, 157.0
 *** 1.749 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	51.15	194.40
2	68.14	193.76
3	85.11	194.78
4	101.90	197.46
5	118.35	201.77
6	134.29	207.66
7	149.59	215.08
8	164.08	223.96
9	171.46	229.54

Circle Center At X = 66.2 ; Y = 367.5 and Radius, 173.8
 *** 1.770 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	46.03	194.11
2	63.02	193.56
3	79.99	194.53
4	96.81	197.02
5	113.33	201.01
6	129.43	206.46
7	144.98	213.34
8	159.85	221.58
9	171.65	229.59

Circle Center At X = 60.7 ; Y = 382.9 and Radius, 189.4
 *** 1.826 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	55.00	194.61

2	71.92	192.94
3	88.91	193.48
4	105.69	196.23
5	121.96	201.13
6	137.47	208.10
7	151.94	217.03
8	165.12	227.76
9	165.36	228.01

Circle Center At X = 76.3 ; Y = 323.5 and Radius, 130.6
 *** 1.843 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	52.44	194.47
2	69.37	192.91
3	86.36	193.42
4	103.16	195.99
5	119.53	200.58
6	135.22	207.12
7	150.01	215.51
8	163.66	225.64
9	166.45	228.29

Circle Center At X = 73.7 ; Y = 332.7 and Radius, 139.9
 *** 1.857 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	55.00	194.61
2	71.85	192.33
3	88.85	192.34
4	105.69	194.65
5	122.07	199.20
6	137.69	205.92
7	152.26	214.68
8	165.51	225.32
9	168.91	228.90

Circle Center At X = 80.3 ; Y = 317.9 and Radius, 125.9
 *** 1.858 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	46.03	194.11
2	63.00	193.25
3	79.99	194.05
4	96.81	196.49
5	113.32	200.55
6	129.35	206.19
7	144.77	213.37
8	159.41	222.00
9	168.85	228.89

Circle Center At X = 63.3 ; Y = 368.2 and Radius, 174.9
 *** 1.874 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	55.00	194.61
2	71.77	191.85
3	88.77	191.44
4	105.66	193.41
5	122.11	197.69
6	137.80	204.23
7	152.43	212.88
8	165.73	223.48
9	171.46	229.54

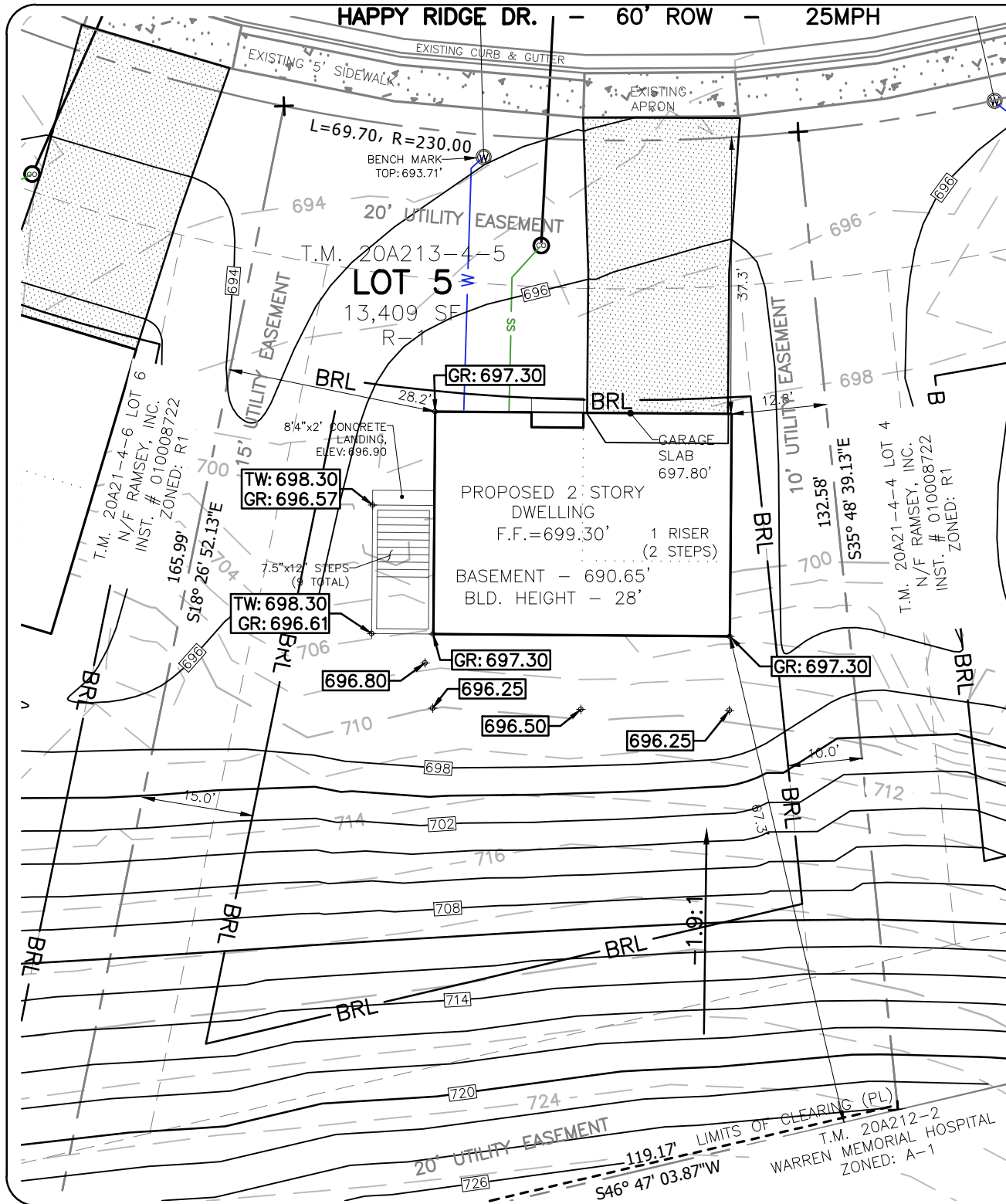
Circle Center At X = 83.2 ; Y = 313.3 and Radius, 122.0
 *** 1.880 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	52.44	194.47

2	69.39	193.25
3	86.37	194.10
4	103.12	196.99
5	119.40	201.90
6	134.96	208.73
7	149.59	217.41
8	161.43	226.54

Circle Center At X = 70.9 ; Y = 333.3 and Radius, 140.1
*** 1.881 ***



LOT 5

HAPPY CREEK MAGISTERIAL DISTRICT
TOWN OF FRONT ROYAL
WARREN COUNTY, VA

EX. CONTOUR --- 706 ---
PR. CONTOUR --- 706 ---
SETBACK LINE --- BRL ---
EX. WATER --- W ---
EX. SANITARY --- S ---
PR. WATER --- W ---
PR. SANITARY --- SS ---
EX. WATER METER --- W ---
EX. SANITARY CLEANOUT --- ● ---

*THIS PLAT DOES NOT
GUARANTEE THE EXISTANCE
OR NON-EXISTANCE OF
UTILITIES WITHIN THE WORK
LIMITS. CALL MISS UTILITY AT
811 OR 1-800-552-7001
BEFORE DIGGING

*THE LOT GRADING SHOWN
HEREON IS INTENDED FOR THE
CONSTRUCTION AND DRAINAGE
FOR THE SPECIFIC LOT ONLY.
ADJACENT LOT GRADING AND
HOUSE LOCATION IS
ILLUSTRATIVE AND SUBJECT TO
CHANGE WITHOUT NOTICE.

ELEVATION DATUM: NAVD 88

BOUNDARIES SHOWN HEREON ARE BASED ON FINAL PLAT PER
INST. # 190006202 BY BOWMAN CONSULTING GROUP, LTD.

RESTRICTIVE COVENANTS PER INST. #210007168 REFERS TO UTILITY
EASEMENTS AS SHOWN ON THESE PLANS.

NO TITLE REPORT FURNISHED - PROJECT SUBJECT TO ANY AND ALL
EASEMENTS OF RECORD.

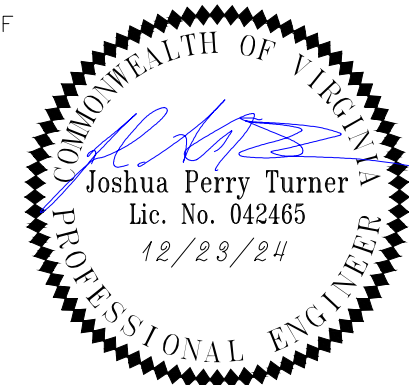
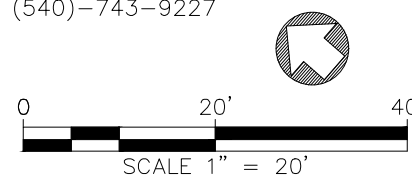
DERIVATION OF TITLE TO: RAMSEY, INC. PER INST. #010008722

SUBJECT PROPERTY IS OUTSIDE THE LIMITS OF THE FEMA FLOOD ZONE.

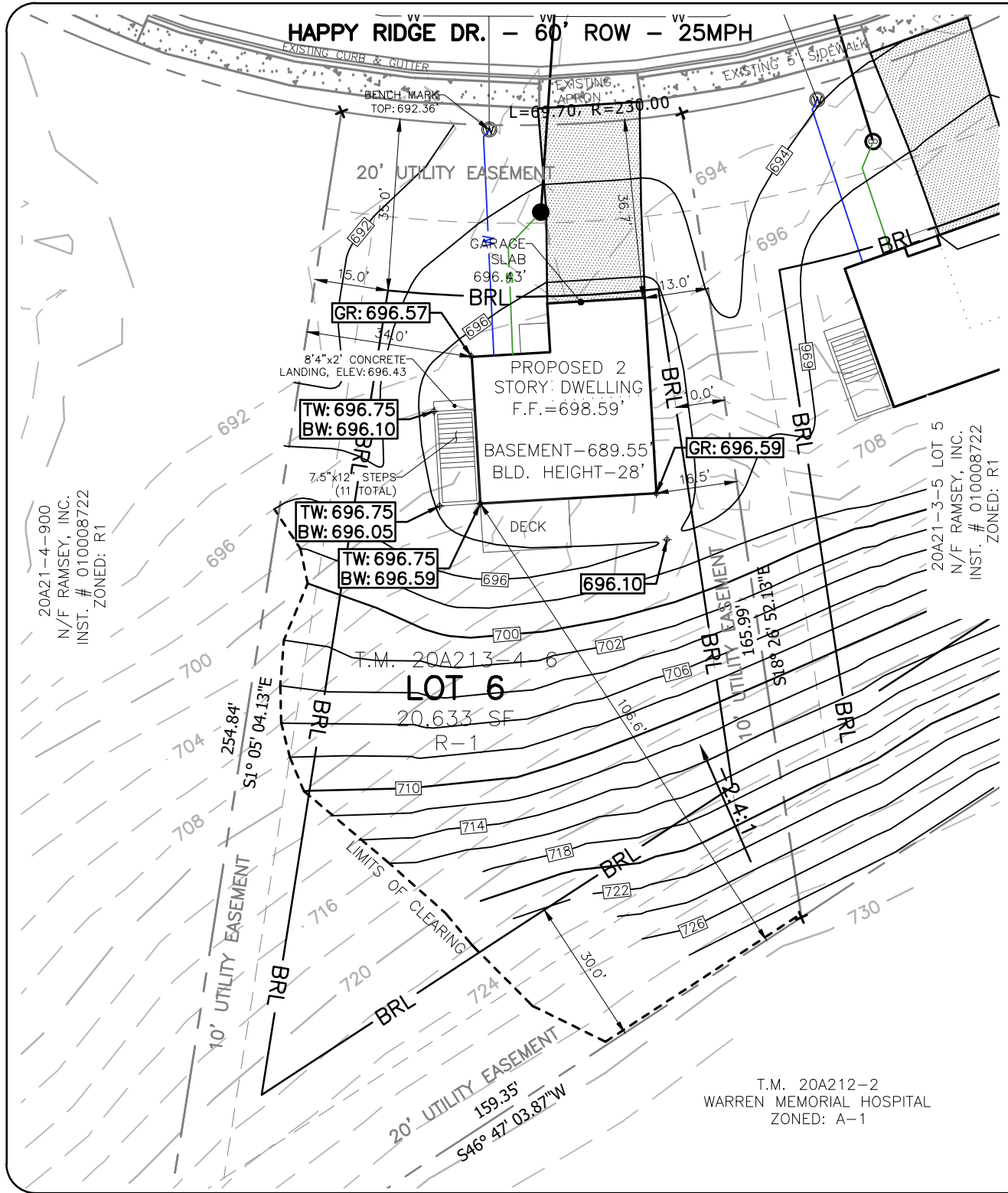
DRIVEWAY APRON AND DRIVEWAY SURFACE TO BE PAVED OR CONCRETE
AND IN CONFORMANCE WITH TOWN STANDARD (RC-5).

BUILDING FOOTPRINT AREA: 1,186 SF
AREA OF DISTURBANCE: 13,409 SF

PREPARED BY:
RACEY ENGINEERING, PLLC
312 WEST MAIN STREET
LURAY, VA 22835
(540)-743-9227



DATE:	DESCRIPTION:		DRAWN	CHECK
	1ST SUB GRADING PLAN	2ND SUB GRADING PLAN		
9/25/24	HV	ZEW	JPT	JPT
12/23/24				
MARONDA HOMES 7051 HEATCOTE VILLAGE WAY SUITE 255 GAINESVILLE, VA 20155				
HAPPY CREEK KNOLLS LOT GRADING SURVEY - LOT 5				
TOWN OF FRONT ROYAL, VIRGINIA				
SCALE: 1"=20'				
PRO. 10089				



LOT 6

HAPPY CREEK MAGISTERIAL DISTRICT
TOWN OF FRONT ROYAL
WARREN COUNTY, VA

- EX. CONTOUR — 706 —
- PR. CONTOUR — 706 —
- SETBACK LINE — BRL —
- EX. WATER — W —
- EX. SANITARY — S —
- PR. WATER — W —
- PR. SANITARY — SS —
- EX. WATER METER — (W in circle) —
- EX. SANITARY CLEANOUT — (dot) —

*THIS PLAT DOES NOT GUARANTEE THE EXISTANCE OR NON-EXISTANCE OF UTILITIES WITHIN THE WORK LIMITS. CALL MISS UTILITY AT 811 OR 1-800-552-7001 BEFORE DIGGING

*THE LOT GRADING SHOWN HEREON IS INTENDED FOR THE CONSTRUCTION AND DRAINAGE FOR THE SPECIFIC LOT ONLY. ADJACENT LOT GRADING AND HOUSE LOCATION IS ILLUSTRATIVE AND SUBJECT TO CHANGE WITHOUT NOTICE.

ELEVATION DATUM: NAVD 88

BOUNDARIES SHOWN HEREON ARE BASED ON FINAL PLAT PER INST. # 190006202 BY BOWMAN CONSULTING GROUP, LTD.

RESTRICTIVE COVENANTS PER INST. #210007168 REFERS TO UTILITY EASEMENTS AS SHOWN ON THESE PLANS.

NO TITLE REPORT FURNISHED — PROJECT SUBJECT TO ANY AND ALL EASEMENTS OF RECORD.

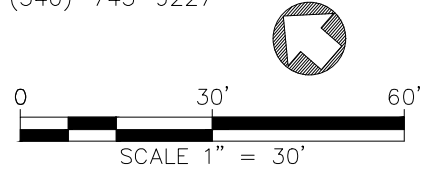
DERIVATION OF TITLE TO: RAMSEY, INC. PER INST. #010008722

SUBJECT PROPERTY IS OUTSIDE THE LIMITS OF THE FEMA FLOOD ZONE.

DRIVEWAY APRON AND DRIVEWAY SURFACE TO BE PAVED OR CONCRETE AND IN CONFORMANCE WITH TOWN STANDARD (RC-5).

BUILDING FOOTPRINT AREA: 1,316 SF
AREA OF DISTURBANCE: 15,085 SF

PREPARED BY:
RACEY ENGINEERING, PLLC
312 WEST MAIN STREET
LURAY, VA 22835
(540)-743-9227



RACEY ENGINEERING, PLLC
312 WEST MAIN ST.
LURAY VIRGINIA 22835
PH.540-743-9227-FAX: 540-743-6118

DATE:	DESCRIPTION:	DRAWN:	CHECK:
08/07/24	1ST SUB GRADING PLAN	HV	JPT
09/04/24	2ND SUB GRADING PLAN	HV	JPT
12/23/24	3RD SUB GRADING PLAN	ZEW	JPT

MARONDA HOMES
7051 HEATCOTE VILLAGE WAY SUITE 255
GAINESVILLE, VA 20155

HAPPY CREEK KNOLLS
LOT GRADING SURVEY — LOT 6

TOWN OF FRONT ROYAL, VIRGINIA

SCALE: 1"=30'

PRO. 10089



CONSULTING ENGINEERS • BUILDING OFFICIALS
CONSTRUCTION PROFESSIONALS • SOIL SCIENTISTS & GEOLOGISTS

December 9, 2024

Mr. Marty Rhodes
Moranda Homes
7051 Heathcote Village Way, Suite 255
Gainesville, VA 20155

Re: Slope Stability Analysis for Happy Creek Lots 29-30 TM: 20A213-4-29 to -30, Warren County, 22630.

Dear Mr. Rhodes:

In accordance with your authorization, Soil Consultants Engineering Inc. (SCE) has completed a Slope Stability Analysis for the existing slope along the lots at TM: 20A213-4-29 to -30, Warren County, and we are pleased to provide you this Slope Stability Analysis for the above referenced project. The following paragraphs present the results from subsurface exploration performed by Soil Consultants Engineering, LLC (SCE) and Slope Stability Analysis of the encountered soil conditions. SCE personnel explored the subsurface conditions of the site on November 16, 2024 using an ATV-Mounted CME45 Drill Rig equipped with a manual drop hammer and rotary hollow stem augers (HSA 3 ¼-inch). Soil Consultants personnel were also on-site November 21, 2024 advancing one (1) 3.0-inch hand auger boring on the slope where the drill rig could not access.

In the soil test borings, the soil was tested using continuous penetration through fill material and sampled using split-spoon samplers in accordance with ASTM D-1586 sampling procedures. A geologist from SCE logged the soil cuttings and samples in the field as the drilling proceeded.

The cuttings and samples were visually classified in accordance with the Unified Soil Classification System (USCS). Samples of the soils were obtained at selected depths and were taken to our geotechnical laboratory for further visual examination and testing.

The approximate test boring locations are shown on a copy of the site plan entitled “Boring Location Plan”, which is in the appendix in this report.

Soil Consultants selected the number and location of the test borings to provide general coverage subject for stability review at the required slope locations onsite. The crew estimated the location of the borings in the field by using existing site features.

While performing the subsurface exploration, our staff engineer logged the recovered soil samples and observed ground water conditions during the drilling. The samples were transported to our office where representative samples were logged into our laboratory for soil classification.

The Soil Consultants laboratory performed one (1) classification test, per ASTM D-2487, on representative soil samples and two (2) natural moisture samples in accordance with ASTM D-2216.

The logs of the soil test borings, along with our laboratory classification of the recovered soil samples, are presented in the appendices. The strata boundaries indicated on our logs are an interpretation of the soil profile. Soil types often grade into one another, and the strata changes are usually gradual rather than distinct.

OBSERVED SUBSURFACE CONDITIONS

The subsurface conditions at the site generally consist of two (2) distinct soil strata, as summarized within the table below. Detailed boring logs can be found in the appendix; the boring logs included in the appendix should be reviewed for specific information at the boring locations, in the attached “**Boring Logs**”. The strata boundaries indicated on our logs are an interpretation of the subsurface profile. Soil types often grade into one another, and the strata changes are usually gradual rather than distinct.

Summary of Subsurface Boring Profiles

Approximate Depth Range (feet)	Approximate Elevation Range (feet)	Stratum	Description	SPT N-Values (bpf)
0.0 – 0.2	708.0 – 707.8	N/A	Approximately 2.0-inch Organic Surface Layer in HA-5	N/A
0.0 – 3.7	705.0 – 697.0	I	FILL consisting of firm to stiff SILT (ML) and soft to firm SILT with sand (ML)	4 – 12
0.0 – 30.0	721.0 – 666.0	II	Native, interbedded stiff to hard SILT with sand (ML), very stiff to hard ELASTIC SILT (MH), and stiff to hard Sandy SILT (ML)	12 – >100

*The approximate elevation ranges and depth ranges represent the highest and lowest elevations that the associated stratum were found at. The ranges overlap while presented as a summary within this report, but this overlap is due to the different elevations of the borings onsite.

Groundwater was not encountered at the time of drilling. Observed water level elevations serve as an indication of the water level at the specified elevations at a specific time of year and may be higher or lower depending on the season. Mottling, an indication of high seasonal water table, was also not encountered.

The Soil Consultants laboratory performed two (2) classification tests in accordance with ASTM D-2487 and two (2) natural moisture content tests in accordance with ASTM D-2216 on representative soil samples. The results of the laboratory classification tests are summarized in the following table:

Summary of Laboratory Testing Results

Boring No.	Depth (feet)	Liquid Limit	Plastic Limit	Plasticity Index	Gravel (%)	Sand (%)	% <200 Sieve	Classification USCS	Water Content (%)
B-7	14.5	58	38	20	0.0	6.2	93.8	MH	39.1
B-8	24.5	43	NP	NP	0.0	20.3	79.7	ML	24.0

“NP” is abbreviated for “non-plastic”, a term used when soils exhibit non-plastic behavior. Typically, these soils contain limited amounts of cohesive soils, i.e., silt and clay, and mainly consist of “clean” coarse-grained soils. Non-plastic soils do not have a transitional phase between the solid phase and liquid phases, and immediately exhibit liquid properties when water is added to the sample.

SLOPE STABILITY ANALYSIS

To investigate the stability of the existing steep slope, Soil Consultants Engineering performed global stability analysis at the cross-section D-D'.

The geometry of the slope at the selected cross section locations was modeled for the stability analysis after reviewing the provided Warren County global stability analyses request and Site Plan. Global stability analysis of the slope cross section was performed using the simplified Bishop method.

SCE test borings indicate a soil profile of stiff to hard SILT with sand (ML), very stiff to hard ELASTIC SILT (MH), and stiff to hard Sandy SILT (ML). The table below summarizes the soil parameters used in the slope stability analysis.

Summary of Material Parameters used in the Global Stability Analyses

Soil Description	Soil Type No	Total Unit Weight (pcf)	Saturated Unit Weight (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)
FILL	1	120	125		28
CL ML	2	115	120		26
ML CL	3	120	125		30
CL ML	4	120	125		32
MH	5	120	125		30
GM	6	130	135		35
Concrete	7	140	145	8000	

Slope stability analysis of the proposed slope cross-section was performed and the minimum factor of safety was calculated for globally stable conditions.

Factors of Safety from Global Stability Analyses

Cross Section	Minimum Factor of Safety Required	Modelled Factor of Safety
D-D'	1.5	1.94

The failure plane with the factor of safety is shown in the slope stability results for the cross section of the slope included in Appendix of this report.

SCE global stability analysis results indicated that the proposed west retaining wall does have sufficient factor of safety against global stability. The failure surface presented in our analyses is an indication of potential future deep global instability.

At the time of this report, we are still awaiting the results of simple direct shear testing on soil samples taken in Shelby Tubes during drilling. If these results differ from our assumed values, we will conduct the slope stability analysis again and re-issue the report with the updated results.

CONCLUSIONS

In summary, it is our professional opinion based on the results of our evaluation that the slopes will be stable. Since there is no planned development on the top of the slope, man-caused factors will only affect the surface of the slope. We recommend surface protection measures such as vegetative matting to protect the surface of the slope from erosion and weathering that could lead to minor slope failures. We thank you for the opportunity to be of service. If you should have any questions regarding this letter, please do not hesitate to contact us.

Sincerely,

For: SOIL CONSULTANTS ENGINEERING, LLC.

12/10/2024



Warner Neal
Geotechnical Assistant



Lubomir Peytchev, P.E.
Principal Engineer

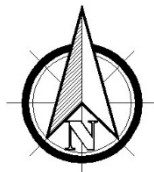
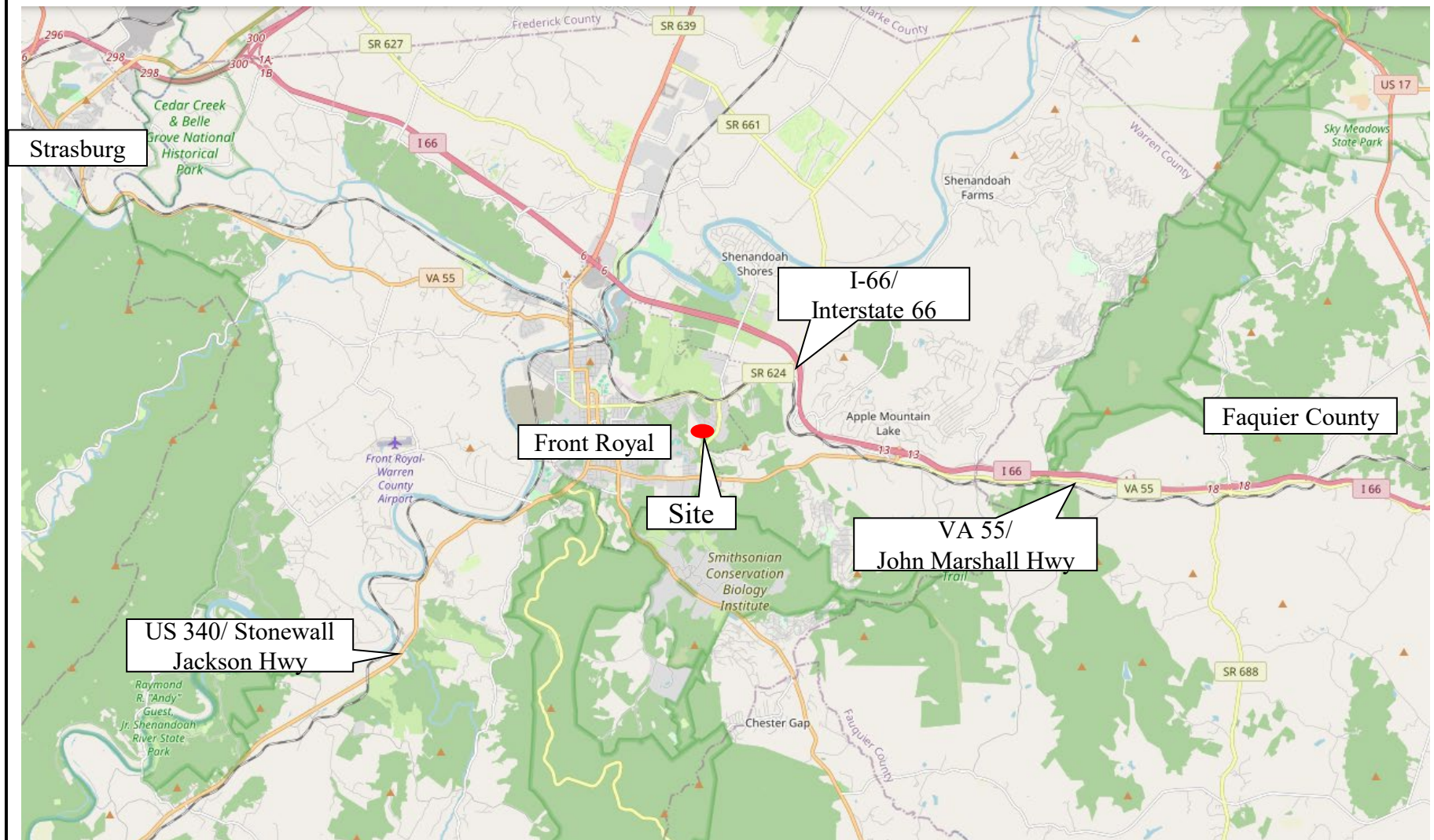
SCE #: 24-0367V

Enclosed:

- Site Vicinity Map
- Boring Locations Plan
- Log of Test Borings with Key to Terms and Symbols
- Laboratory Test Results
- Slope Stability Analysis

APPENDIX

Map Source: USGS 2024– Not to Scale



SITE VICINITY MAP
Happy Creek Knolls



CONSULTING ENGINEERS • BUILDING OFFICIALS
CONSTRUCTION PROFESSIONALS • SOIL SCIENTISTS & GEOLOGISTS

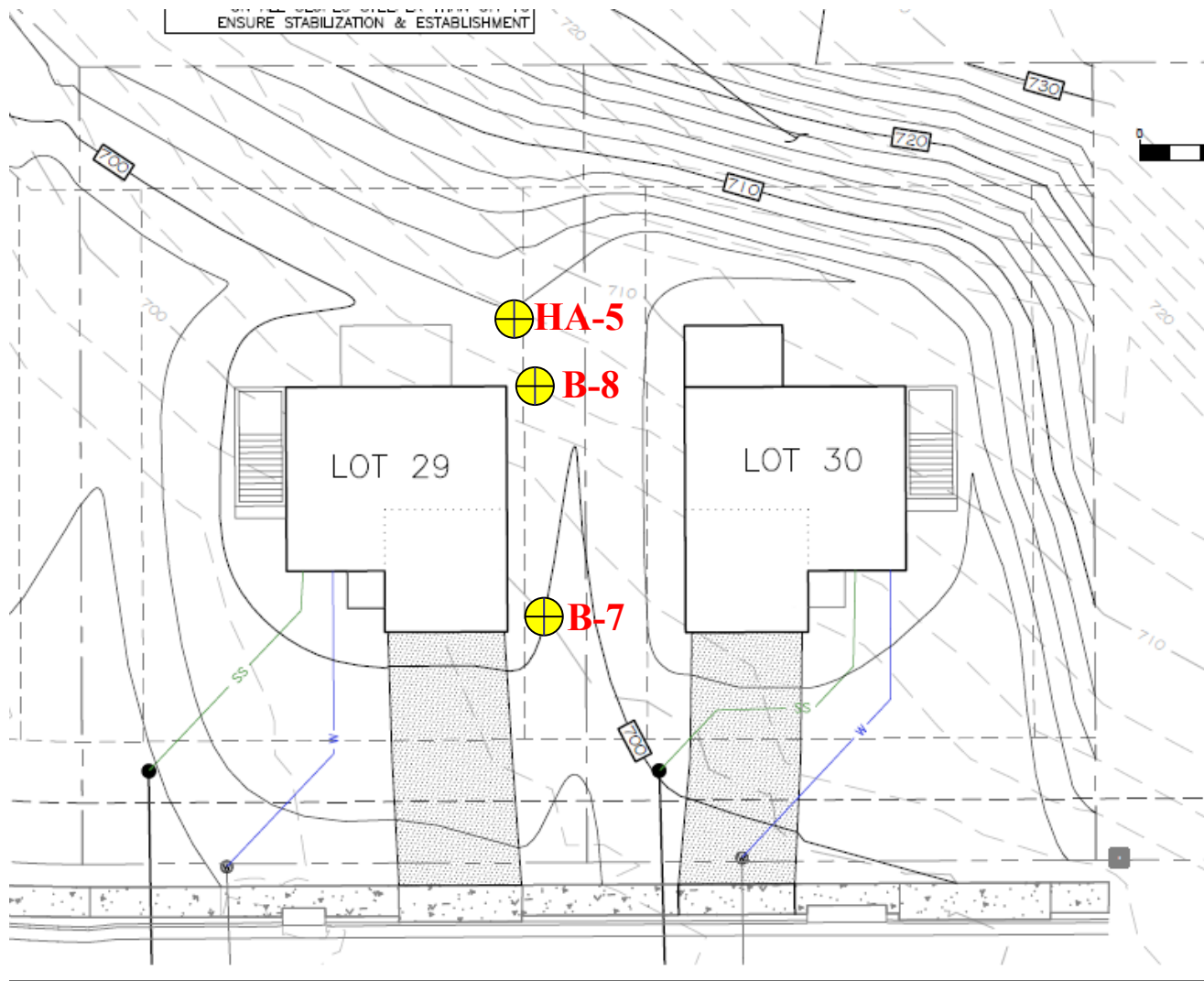
TM: 20A213-4-29 to -30, Warren County, 22630

12/09/2024

WN

Not Drawn To Scale

24-0367V



LEGEND	
Approx. Boring Location	
	B-1



BORING LOCATION PLAN Happy Creek Knolls		 SOIL CONSULTANTS ENGINEERS CONSULTING ENGINEERS • BUILDING OFFICIALS CONSTRUCTION PROFESSIONALS • SOIL SCIENTISTS & GEOLOGISTS
TM: 20A213-4-29 to -30, Warren County, 22630		12/09/2024
LH	Not Drawn To Scale	24-0367V

Sheet 1 of 1

PROJECT NAME	Happy Creek Knolls		
PROJECT LOCATION	TM: 20A213-4-29 to -30, Warren County, 22630		
POSITION			
GROUND ELEVATION	700.00 ft	FINAL DEPTH	20.00 ft
GROUNDWATER LEVELS:			
 AT TIME OF DRILLING	Dry		
 AT END OF DRILLING	Dry; Cave-in at 14.0 ft		
 AFTER DRILLING	N/A		

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
								LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
			SILT (ML): firm to stiff; yellow; moist; few sand; FILL.		42	2-3-4-3 (7)					
			3.00 697.00		100	5-6-6-8 (12)					
			3.40 Sandy SILT (ML): stiff; red and yellow; moist; Natural.								
			SILT with sand (ML): stiff; yellow; moist; Natural.								
5	695		5.10 694.90		83	3-4-8-9 (12)					
			Sandy SILT (ML): stiff; yellow; moist; Natural.								
			8.50 691.50		83	5-10-18 (28)					
			Elastic SILT (MH): very stiff to hard; moist; with sand, Natural.								
			- 6.0-inch layer of Sandy SILT at 13.5 ft		83	7-8-13 (21)	39	58	38	20	94
			- 3.0 inches of layered rock/gravel with silt at 18.9 ft		94	27-35-49 (84)					
20	680		20.00 680.00								
			Terminated at 20.00 ft.								

Template: Master Template - Default Letter - US v2 / Strip Set: Geotech BH Columns (3) / Produced on : December 05 2024 by OpenGround

CLIENT Mr. Marty Rhodes

PROJECT NUMBER 24-0367V

DATE STARTED 11-16-2024 COMPLETED 11-16-2024

DRILLING CONTRACTOR RECON Drilling

DRILLING METHOD Hollow Stem Auger, 3 1/4 inches

EQUIPMENT ATV-Mounted CME45 with Manual Drop Hammer

HOLE SIZE 6.0 in.

LOGGED BY Warner Neal CHECKED BY Lubo Peytchev

PROJECT NAME Happy Creek Knolls

PROJECT LOCATION TM: 20A213-4-29 to -30, Warren County, 22630

POSITION _____

GROUND ELEVATION 705.00 ft FINAL DEPTH 30.00 ft

GROUNDWATER LEVELS:

▽ AT TIME OF DRILLING Dry

▼ AT END OF DRILLING Dry; Cave-in at 22.0 ft

▽ AFTER DRILLING N/A

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
								LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
			SILT with sand (ML): soft to firm; yellow; moist; FILL.		29	1-2-2-1 (4)					
					67	2-3-4-7 (7)					
5	700	3.70	SILT with sand (ML): firm to very stiff; red and yellow; moist; Natural.	701.30	71	3-6-8-11 (14)					
10	695				72	5-8-12 (20)					
15	690	13.50	Sandy SILT (ML): hard; red and yellow; moist; Natural.	691.50	100	9-24-38 (62)					
20	685	18.50	SILT with sand (ML): very stiff; yellow and white; moist; Natural.	686.50	94	9-15-14 (29)					
25	680	23.80	SILT with sand (ML): hard; grayish-brown; moist; Natural.	681.20	94	12-21-35 (56)	24	43	NP	NP	80
30	675	30.00	Terminated at 30.00 ft.	675.00	94	22-33-29 (62)					

NOTES

Sheet 1 of 1

PROJECT NAME		Happy Creek Knolls	
PROJECT LOCATION		TM: 20A213-4-29 to -30, Warren County, 22630	
POSITION			
GROUND ELEVATION	708.00 ft	FINAL DEPTH	6.00 ft
GROUNDWATER LEVELS:			
 AT TIME OF DRILLING	Dry		
 AT END OF DRILLING	Dry		
 AFTER DRILLING	N/A		

NOTES

Template: Master Template - Default Letter - US v2 / Strip Set: Geotech BH Columns (3) / Produced on : December 05 2024 by OpenGround



SCE
SOIL CONSULTANTS ENGINEERING

KEY TO TERMS AND SYMBOLS

USCS SYMBOLS

	FILL – MAN-PLACED SOILS
	ASPHALT
	CONCRETE
	BEDROCK
	PEAT
	(OL) LOW PLASTICITY ORGANIC CLAY OR SILT
	(OH) ORGANIC SILT OR CLAY
	(ML) SILT
	(MH) ELASTIC SILT
	(CL) LEAN CLAY
	(CH) FAT CLAY
	(GP) POORLY-GRADED GRAVEL
	(GW) WELL-GRADED GRAVEL
	(GM) SILTY GRAVEL
	(GC) CLAYEY GRAVEL
	(SP) POORLY-GRADED SAND
	(SW) WELL-GRADED SAND
	(SC) CLAYEY SAND
	(SM) SILTY SAND

PENETRATION (SPT) RESISTANCE

DENSITY (SANDS, GRAVELS)		CONSISTENCY (SILTS, CLAYS)	
N-VALUE	TERM	N-VALUE	TERM
0 – 4	VERY LOOSE	0 – 2	VERY SOFT
5 – 10	LOOSE	3 – 4	SOFT
11 – 30	MED. DENSE	5 – 8	FIRM
31 – 50	DENSE	9 – 15	STIFF
50+	VERY DENSE	16 – 30	VERY STIFF
		31 – 50	HARD
		50+	VERY HARD

PARTICLE SIZE IDENTIFICATION

BOULDERS	GREATER THAN 12 INCHES
COBBLES	3 TO 12 INCHES
GRAVEL	COARSE - 3/4 INCH - 3 INCHES FINE - 4.75 MM - 3/4 INCH
SAND	COARSE - 2 MM – 4.75 MM MEDIUM - 0.425 MM – 2 MM FINE - 0.075 MM – 0.42 MM
SILT	0.005 MM – 0.075 MM
CLAY	LESS THAN 0.005 MM

WATER LEVEL DESIGNATION

	LEVEL AT TIME OF DRILLING
	LEVEL AT END OF DRILLING
	LEVEL AFTER DRILLING (24H+)

RELATIVE COMPOSITION OF SOILS

MAJOR CONSTITUENT

CONSTITUENT 50% OR MORE OF THE SAMPLE AND IS WRITTEN IN CAPITAL LETTERS. IF NO COMPONENT IS GREATER THAN 50%, THE PREDOMINANT COMPONENT IS CAPITALIZED.

MINOR CONSTITUENT

CONSTITUENT 25% - 40% OF SOIL TYPE AND WILL BE WRITTEN WITH THE FIRST LETTER OF THE SOIL TYPE CAPITALIZED.

ACCESSORY CONSTITUENTS

TRACE = <5%, FEW = 5 TO 10%, LITTLE = 11 TO 20%, WITH = 15 TO 25%, SOME = 21 TO 35%, AND = 36 TO 50%



SCE
SOIL CONSULTANTS ENGINEERING

ROCK KEY TO TERMS AND SYMBOLS

DEGREE OF WEATHERING

UNWEATHERED

ROCK GENERALLY FRESH, JOINTS LIGHTLY STAINED AND DISCOLORATION EXTENDS INTO ROCK NO MORE THAN ½ IN, OPEN JOINTS MAY CONTAIN CLAY, CORE RINGS UNDER HAMMER IMPACT.

WEATHERED

ROCK MASS DECOMPOSED 50% OR LESS, SIGNIFICANT DISCOLORATION, CORE CANNOT BE BROKEN BY HAND OR SCRAPED BY KNIFE

HIGHLY WEATHERED

ROCK MASS IS MORE THAN 50% DECOMPOSED, COMPLETE DISCOLORATION OF ROCK FABRIC, CORE MAY BE EXTREMELY BROKEN AND GIVES CLUNK SOUND WHEN STRUCK BY HAMMER, MAY BE SHAVED WITH A KNIFE.

SCALE OF RELATIVE ROCK HARDNESS

CONSISTENCY

TSF

EXTREMELY SOFT

2.5 - 10

VERY SOFT

10 - 50

SOFT

50 - 250

MEDIUM HARD

250 - 525

MODERATELY HARD

525-1,050

HARD

1,050 - 2,600

VERY HARD

> 2,600

ROCK QUALITY DESCRIPTION

ROCK MASS DESCRIPTION

RQD VALUE (%)

EXCELLENT

90-100

GOOD

75-90

FAIR

50-75

POOR

25-50

VERY POOR

LESS THAN 25

ROCK BEDDING THICKNESS

DESCRIPTION

CRITERIA

VERY THICK BEDDED

GREATER THAN 3 FT

THICK BEDDED

1 FT - 3 FT

MEDIUM BEDDED

4 IN - 1 FT

THIN BEDDED

1 ¼ IN - 4 IN

VERY THIN BEDDED

½ IN - 1 ¼ IN

THICKLY LAMINATED

1/8 IN - ½ IN

THINLY LAMINATED

1/8 IN OR LESS

ROCK VOIDS

VOIDS

VOID DIAMETER

PIT

< ½ IN

VUG

½ IN - 2 IN

CAVITY

2 IN - 24 IN

CAVE

>24 IN

GRAIN SIZE TERMINOLOGY

COMPONENT

SIZE RANGE

VERY COARSE GRAINED

>4.76 MM

COARSE GRAINED

2.0 MM - 4.76 MM

MEDIUM GRAINED

0.42 MM - 2.0 MM

FINE GRAINED

0.075 MM - 0.42 MM

VERY FINE GRAINED

<0.075 MM

STRUCTURE DESCRIPTION

DESCRIPTION

CRITERIA

STRATIFIED

ALTERNATING LAYERS OF VARYING MATERIAL OR COLOR WITH LAYERS AT LEAST ¼ -IN THICK

LAMINATED

ALTERNATING LAYERS OF VARYING MATERIAL OR COLOR WITH LAYERS LESS THAN ¼ -IN THICK

FISSURED

BREAKS ALONG DEFINITE PLANES OF FRACTURE WITH LITTLE RESISTANCE TO FRACTURING

SLICKENED

FRACTURE PLANES APPEAR POLISHED OR GLOSSY, SOMETIMES STRIATED

BLOCKY

COHESIVE SOIL THAT CAN BE BROKEN DOWN INTO SMALL ANGULAR LUMPS WHICH RESIST FURTHER BREAKDOWN

DESCRIPTION

CRITERIA

LENSED

INCLUSION OF SMALL POCKETS OF DIFFERENT SOILS

LAYER

INCLUSION GREATER THAN 3-IN THICK

SEAM

INCLUSION 1/8 IN - 3 IN THICK EXTENDING THROUGH THE SAMPLE

PARTING

INCLUSION LESS THAN 1/8 IN THICK

Soil Consultants Engineering, LLC
9303 Center Street
Manassas, VA 20110
Telephone: (703) 366-3000
Fax: (703) 366-3400

SUMMARY OF LABORATORY RESULTS

CLIENT Mr. Marty Rhodes

PROJECT NAME Happy Creek Knolls

PROJECT NUMBER 24-0367V

PROJECT LOCATION TM: 20A213-4-29 to -30, Warren County, 22630

[illegible]



Soil Consultants Engineering, LLC
9303 Center Street
Manassas, VA 20110
Telephone: (703) 366-3000
Fax: (703) 366-3400

GRAIN SIZE DISTRIBUTION

CLIENT Mr. Marty Rhodes

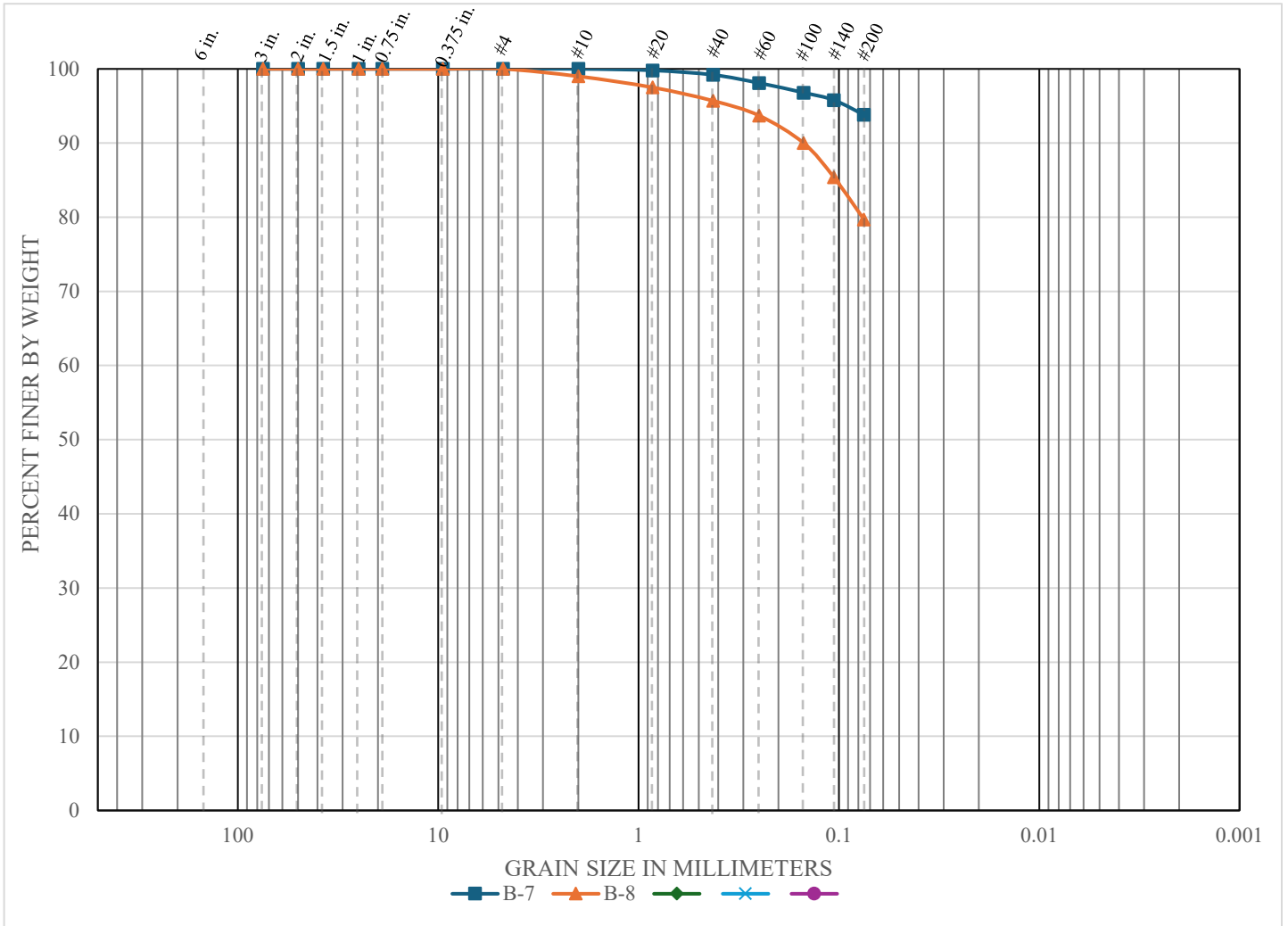
PROJECT NAME

Happy Creek Knolls

PROJECT NUMBER 24-0367V

PROJECT LOCATION

TM: 20A213-4-29 to -30, Warren County, 22630



BOREHOLE	DEPTH	CLASSIFICATION			LL	PL	PI	Cc	Cu
B-7	14.5	ELASTIC SILT (ML)			58	38	20		
B-8	24.5	SILT WITH SAND (ML)			43	NP	NP		
BOREHOLE	DEPTH	D100	D60	D30	D10	%Gravel	%Sand	%Fines	
B-7	14.5	75				0.0	6.2	93.8	
B-8	24.5	75				0.0	20.3	79.7	

ATTERBERG LIMITS' RESULTS

CLIENT Mr. Marty Rhodes

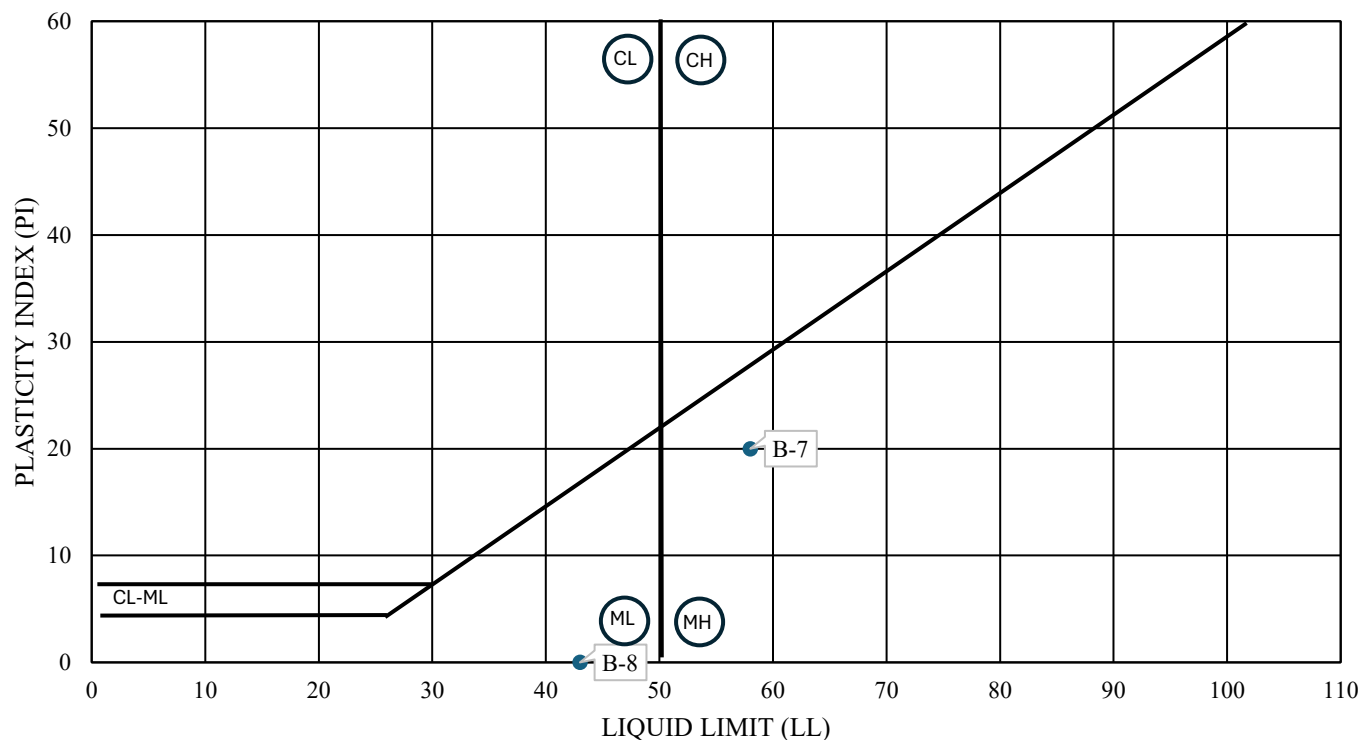
PROJECT NAME

Happy Creek Knolls

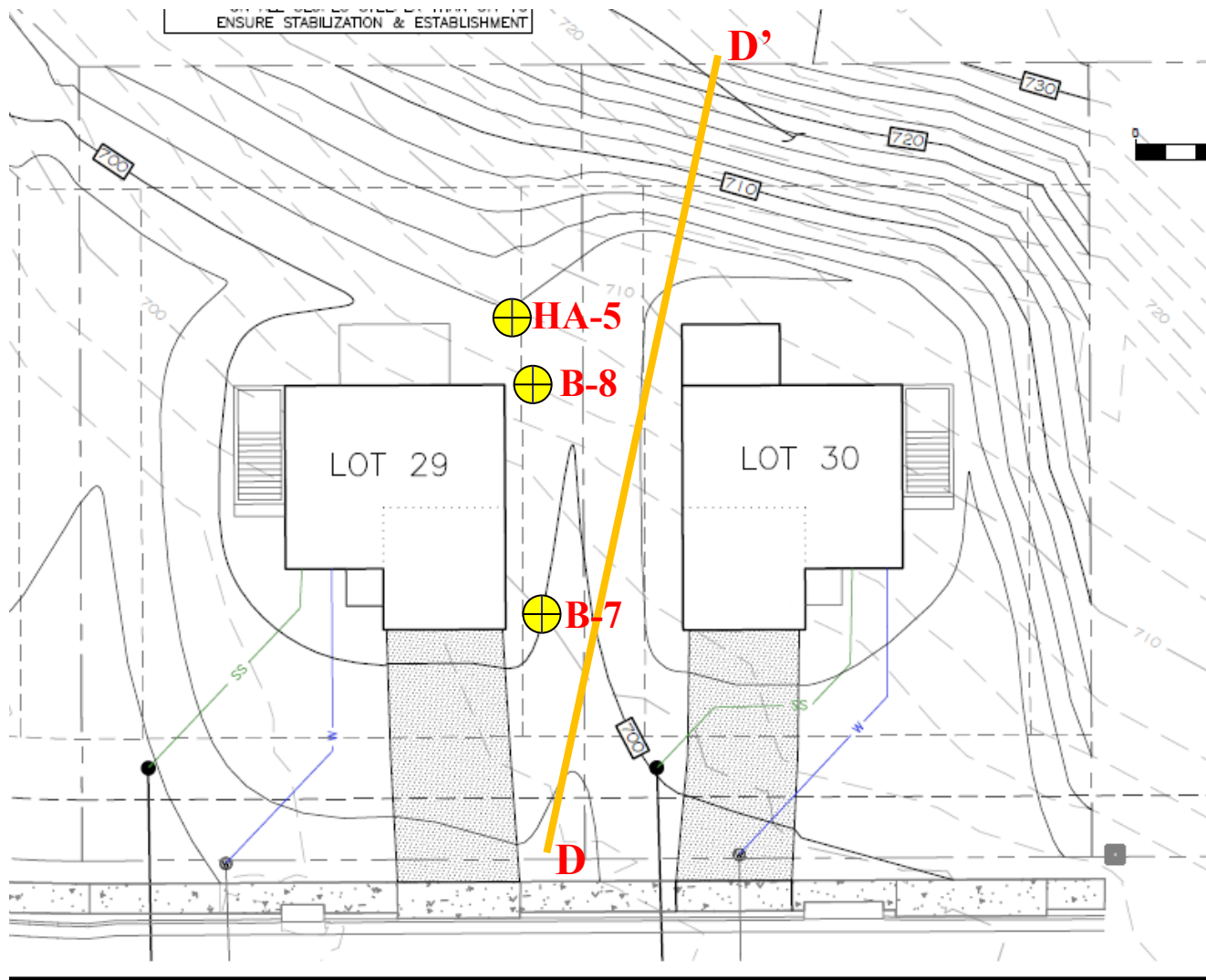
PROJECT NUMBER 24-0367V

PROJECT LOCATION

TM: 20A213-4-29 to -30, Warren County, 22630

[illegible]

SLOPE STABILITY ANALYSIS



LEGEND

 **B-1** Approx. Boring Location

Approx. Cross Section Location

A  **A'**



CROSS SECTION AND BORING LOCATION PLAN Happy Creek Knolls Lots 29-30



CONSULTING ENGINEERS • BUILDING OFFICIALS
CONSTRUCTION PROFESSIONALS • SOIL SCIENTISTS & GEOLOGISTS

TM: 20A213-4-29 to -30, Warren County, VA 22630

12/09/2024

LH

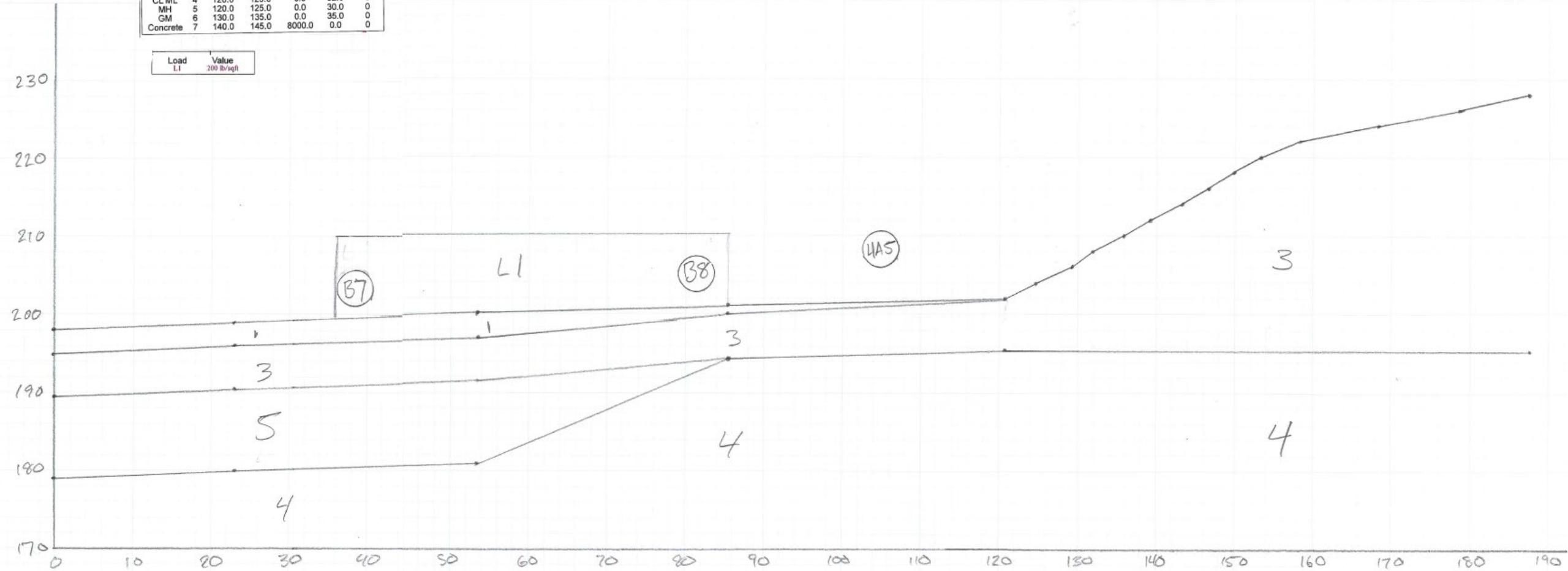
Not Drawn To Scale

24-0367V

24-0367V_Happy_Creek_Lot_29_D-D'

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
FILL ML	1	120.0	125.0	0.0	28.0	0
CL ML	2	115.0	120.0	0.0	28.0	0
ML CL	3	120.0	125.0	0.0	30.0	0
CL ML	4	120.0	125.0	0.0	32.0	0
MH	5	120.0	125.0	0.0	30.0	0
GM	6	130.0	135.0	0.0	35.0	0
Concrete	7	140.0	145.0	8000.0	0.0	0

Load	Value
L1	300 lb/sq ft





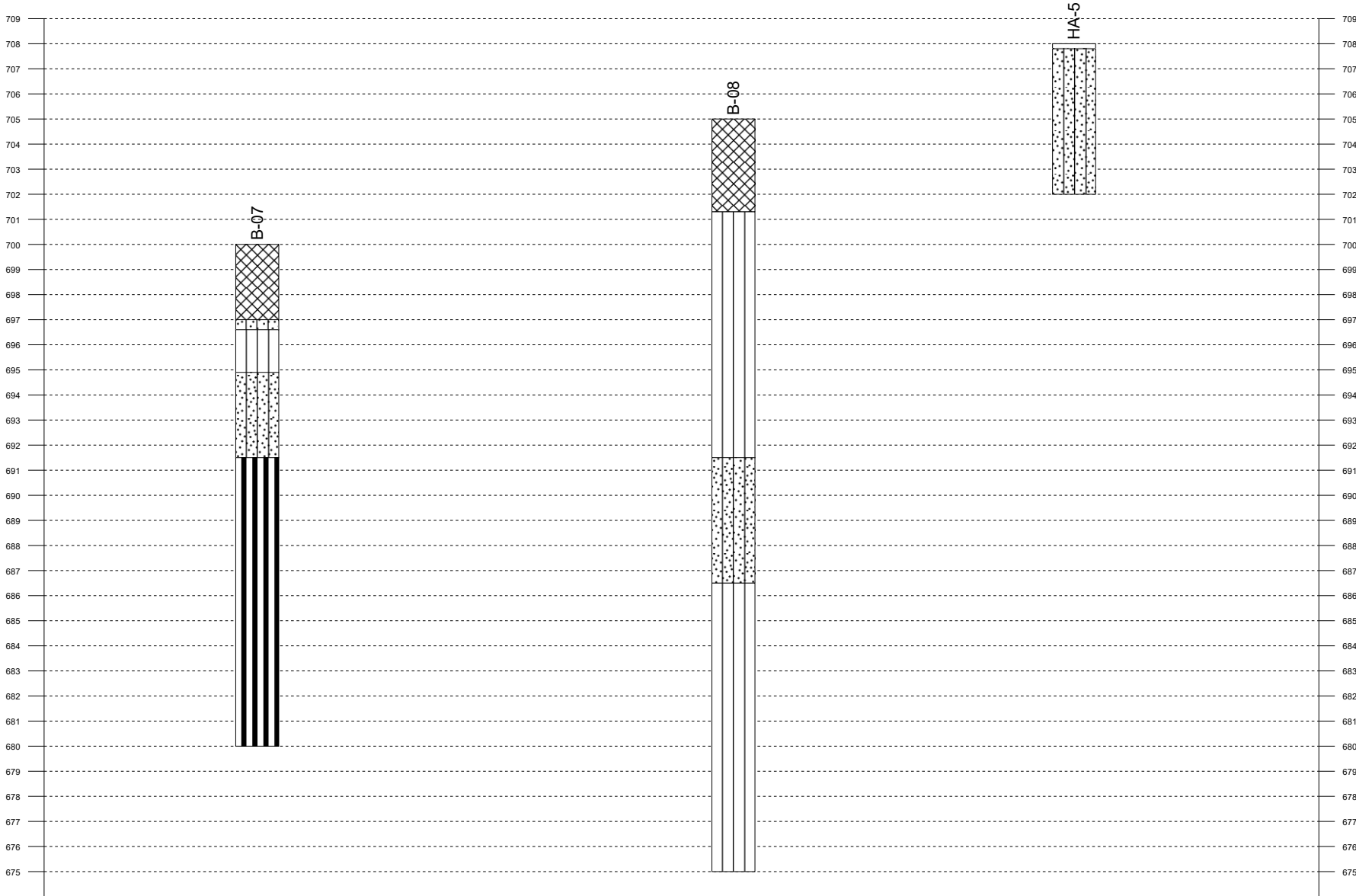
CLIENT Mr. Marty Rhodes
PROJECT NUMBER 24-0367V

PROJECT NAME Happy Creek Knolls
PROJECT LOCATION 1198 Happy Ridge Dr, Front Royal, VA 22630

VERTICAL SCALE 1:70
HORIZONTAL SCALE 1:246

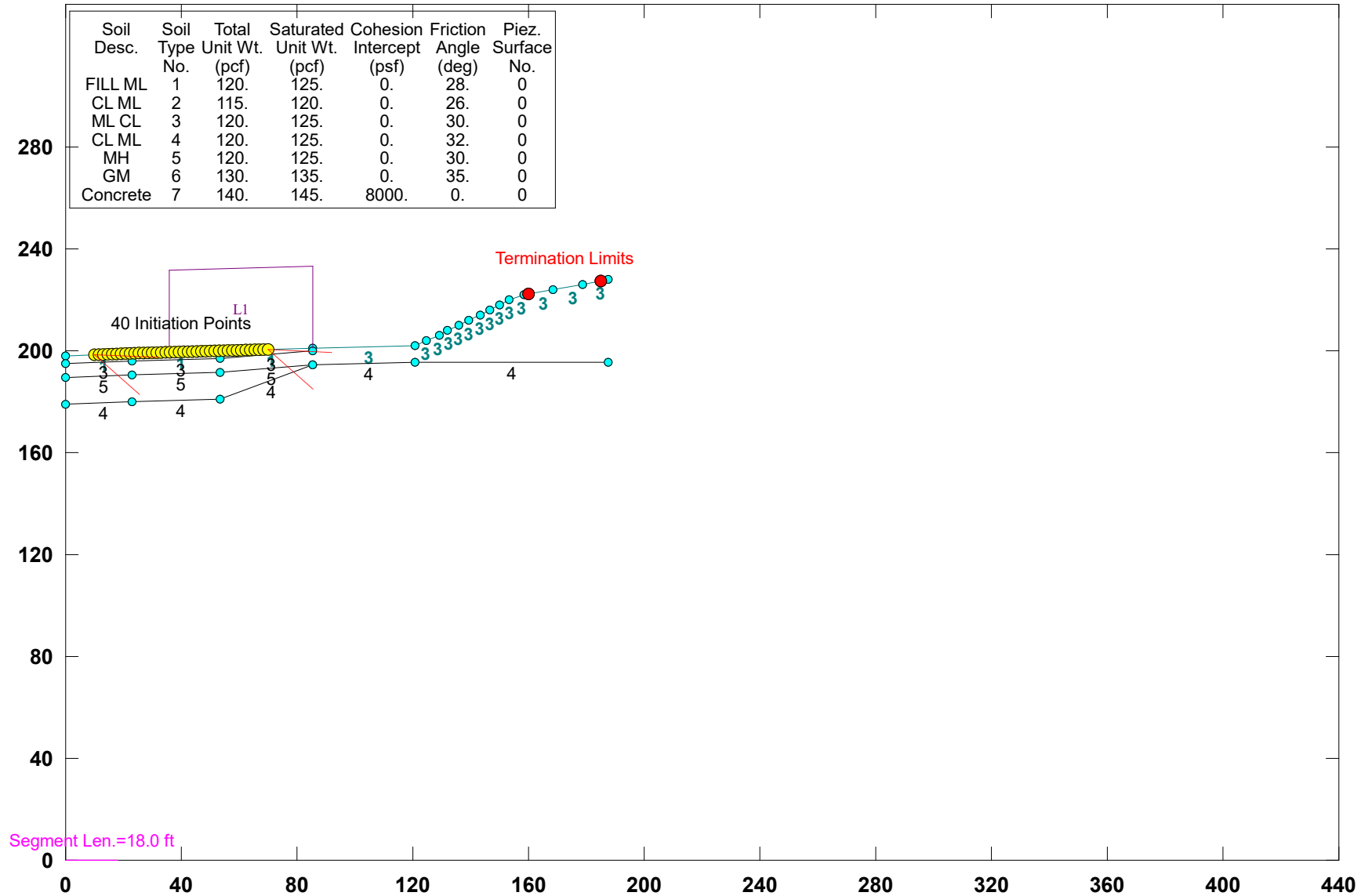
Legend Key

- OL
- MLS
- FILL
- ML
- MH



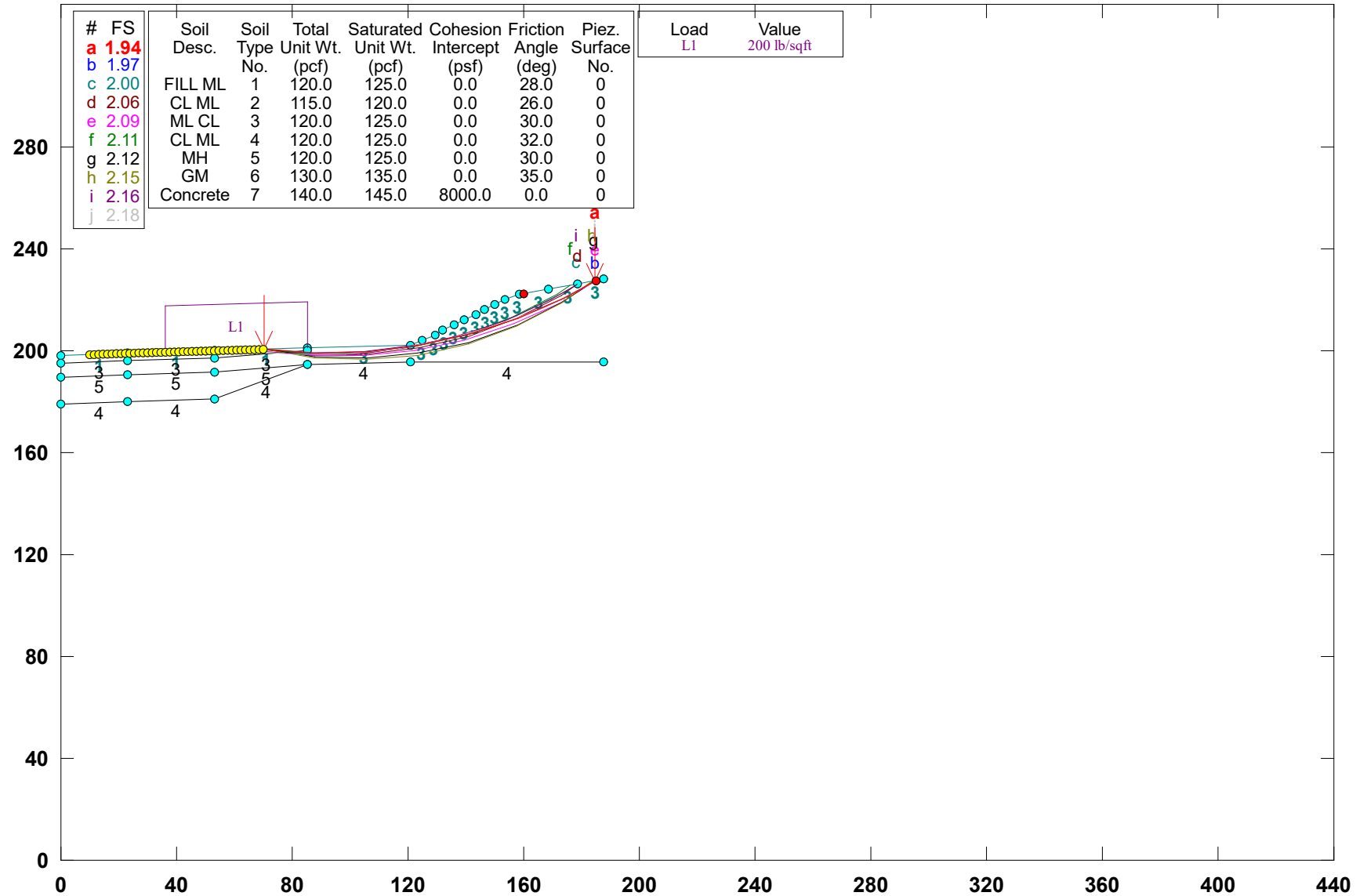
24-0367V_Happy_Creek_Lot_29_D-D'

c:\users\lpeytchev\onedrive - soils consultants engineering\desktop\stedwin and stabl\24-0367v_happy_creek_lot_29_12-9-24.pl0 Geometry Preview 12/9/2024 12:13 PM



24-0367V_Happy_Creek_Lot_29_D-D'

c:\users\lpeytchev\onedrive - soils consultants engineering\desktop\stedwin and stabl\24-0367v_happy_creek_lot_29_12-9-24.pl2 Run By: Username 12/9/2024 12:14PM



**** STABL6H ****

by

Purdue University

--Slope Stability Analysis--

Simplified Janbu, Simplified Bishop

or Spencer's Method of Slices

Run Date: 12/9/2024

Time of Run: 12:14PM

Run By: Username

Input Data Filename: C:24-0367v_happy_creek_lot_29_12-9-24.

Output Filename: C:24-0367v_happy_creek_lot_29_12-9-24.OUT

Plotted Output Filename: C:24-0367v_happy_creek_lot_29_12-9-24.PLT

PROBLEM DESCRIPTION 24-0367V_Happy_Creek_Lot_29_D-D'

BOUNDARY COORDINATES

17 Top Boundaries

28 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	198.00	23.00	199.00	1
2	23.00	199.00	53.40	200.00	1
3	53.40	200.00	85.40	201.00	1
4	85.40	201.00	120.80	202.00	3
5	120.80	202.00	124.70	204.00	3
6	124.70	204.00	129.20	206.00	3
7	129.20	206.00	132.00	208.00	3
8	132.00	208.00	135.90	210.00	3
9	135.90	210.00	139.30	212.00	3
10	139.30	212.00	143.30	214.00	3
11	143.30	214.00	146.60	216.00	3
12	146.60	216.00	150.00	218.00	3
13	150.00	218.00	153.30	220.00	3
14	153.30	220.00	158.40	222.00	3
15	158.40	222.00	168.50	224.00	3
16	168.50	224.00	178.70	226.00	3
17	178.70	226.00	187.60	228.00	3
18	0.00	195.00	23.00	196.00	3
19	23.00	196.00	53.40	197.00	3
20	53.40	197.00	85.40	200.00	3
21	0.00	189.50	23.00	190.50	5
22	23.00	190.50	53.40	191.50	5
23	53.40	191.50	85.40	194.50	5
24	85.40	194.50	120.80	195.50	4
25	120.80	195.50	187.60	195.50	4
26	0.00	179.00	23.00	180.00	4
27	23.00	180.00	53.40	181.00	4
28	53.40	181.00	85.40	194.50	4

ISOTROPIC SOIL PARAMETERS

7 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param. (psf)	Pressure Constant (psf)	Piez. Surface No.
1	120.0	125.0	0.0	28.0	0.00	0.0	0
2	115.0	120.0	0.0	26.0	0.00	0.0	0
3	120.0	125.0	0.0	30.0	0.00	0.0	0
4	120.0	125.0	0.0	32.0	0.00	0.0	0
5	120.0	125.0	0.0	30.0	0.00	0.0	0
6	130.0	135.0	0.0	35.0	0.00	0.0	0
7	140.0	145.0	8000.0	0.0	0.00	0.0	0

BOUNDARY LOAD(S)

1 Load(s) Specified

Load No.	X-Left (ft)	X-Right (ft)	Intensity (lb/sqft)	Deflection (deg)
1	35.90	85.40	200.0	0.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface. A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified. 1600 Trial Surfaces Have Been Generated.

40 Surfaces Initiate From Each Of 40 Points Equally Spaced Along The Ground Surface Between X = 10.00 ft.

and X = 70.00 ft.
 Each Surface Terminates Between X = 160.00 ft.
 and X = 185.00 ft.
 Unless Further Limitations Were Imposed, The Minimum Elevation
 At Which A Surface Extends Is Y = 0.00 ft.
 18.00 ft. Line Segments Define Each Trial Failure Surface.
 Following Are Displayed The Ten Most Critical Of The Trial
 Failure Surfaces Examined. They Are Ordered - Most Critical
 First.

* * Safety Factors Are Calculated By The Modified Bishop Method * *
 Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	70.00	200.52
2	87.95	199.15
3	105.94	199.71
4	123.77	202.19
5	141.23	206.58
6	158.11	212.81
7	174.23	220.81
8	184.35	227.27

Circle Center At X = 91.7 ; Y = 366.8 and Radius, 167.6
 *** 1.941 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	68.46	200.47
2	86.41	199.15
3	104.41	199.71
4	122.24	202.13
5	139.73	206.38
6	156.69	212.43
7	172.92	220.20
8	184.50	227.30

Circle Center At X = 90.1 ; Y = 372.4 and Radius, 173.3
 *** 1.971 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	70.00	200.52
2	87.92	198.84
3	105.92	199.34
4	123.72	202.01
5	141.06	206.81
6	157.70	213.67
7	173.39	222.50
8	177.97	225.86

Circle Center At X = 92.8 ; Y = 347.5 and Radius, 148.7
 *** 2.002 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	70.00	200.52
2	87.87	198.34
3	105.87	198.49
4	123.70	200.97
5	141.05	205.74
6	157.64	212.72
7	173.19	221.79
8	178.60	225.98

Circle Center At X = 95.7 ; Y = 336.7 and Radius, 138.6
 *** 2.061 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	68.46	200.47
2	86.31	198.12
3	104.31	197.96
4	122.19	200.02
5	139.69	204.24

6 156.53 210.58
 7 172.48 218.93
 8 184.61 227.33
 Circle Center At X = 96.5 ; Y = 344.5 and Radius, 146.7
 *** 2.094 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	68.46	200.47
2	86.36	198.57
3	104.36	198.92
4	122.17	201.52
5	139.51	206.33
6	156.12	213.27
7	171.73	222.24
8	176.02	225.47

Circle Center At X = 92.6 ; Y = 342.0 and Radius, 143.6
 *** 2.105 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	70.00	200.52
2	87.75	197.50
3	105.74	196.96
4	123.63	198.90
5	141.09	203.28
6	157.78	210.02
7	173.38	219.00
8	183.92	227.17

Circle Center At X = 100.7 ; Y = 327.4 and Radius, 130.5
 *** 2.121 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	70.00	200.52
2	87.69	197.19
3	105.67	196.44
4	123.58	198.28
5	141.04	202.67
6	157.68	209.52
7	173.17	218.69
8	183.61	227.10

Circle Center At X = 101.9 ; Y = 321.4 and Radius, 125.1
 *** 2.153 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	65.39	200.37
2	83.29	198.57
3	101.29	198.83
4	119.14	201.16
5	136.61	205.51
6	153.46	211.84
7	169.47	220.06
8	178.23	225.91

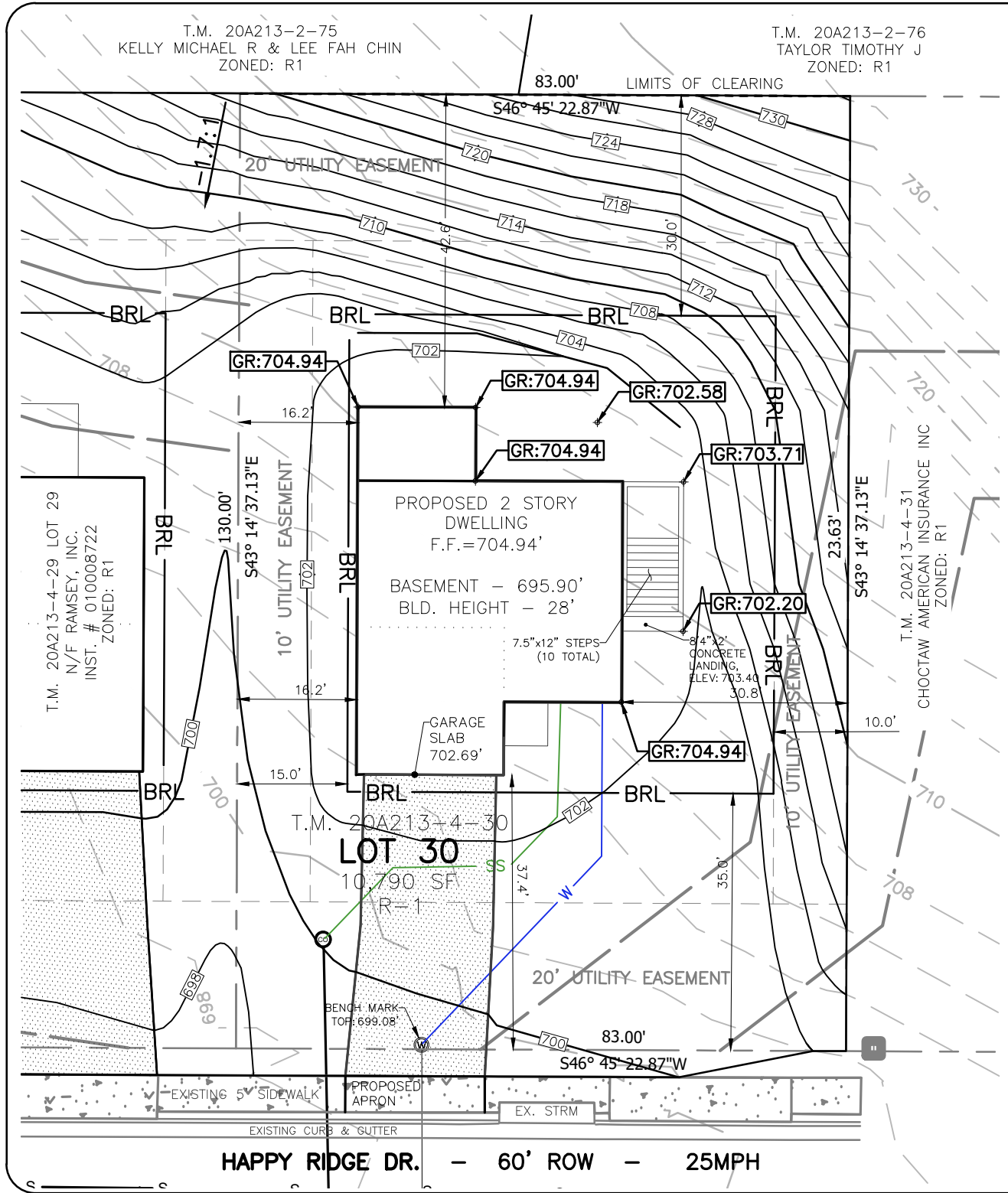
Circle Center At X = 90.0 ; Y = 355.2 and Radius, 156.8
 *** 2.164 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	62.31	200.28
2	80.23	198.57
3	98.23	198.70
4	116.12	200.66
5	133.72	204.43
6	150.84	209.99
7	167.31	217.26
8	182.95	226.17
9	184.56	227.32

Circle Center At X = 88.0 ; Y = 374.7 and Radius, 176.3

*** 2.178 ***



LOT 30

HAPPY CREEK MAGISTERIAL DISTRICT
TOWN OF FRONT ROYAL
WARREN COUNTY, VA

- EX. CONTOUR --- 706 ---
- PR. CONTOUR [706]
- SETBACK LINE BRL
- EX. WATER --- W ---
- EX. SANITARY --- S ---
- PR. WATER [W]
- PR. SANITARY [SS]
- EX. WATER METER (W symbol)
- EX. SANITARY CLEANOUT (dot symbol)

*THIS PLAT DOES NOT GUARANTEE THE EXISTANCE OR NON-EXISTANCE OF UTILITIES WITHIN THE WORK LIMITS. CALL MISS UTILITY AT 811 OR 1-800-552-7001 BEFORE DIGGING

*THE LOT GRADING SHOWN HEREON IS INTENDED FOR THE CONSTRUCTION AND DRAINAGE FOR THE SPECIFIC LOT ONLY. ADJACENT LOT GRADING AND HOUSE LOCATION IS ILLUSTRATIVE AND SUBJECT TO CHANGE WITHOUT NOTICE.

ELEVATION DATUM: NAVD 88

BOUNDARIES SHOWN HEREON ARE BASED ON FINAL PLAT PER INST. # 190006202 BY BOWMAN CONSULTING GROUP, LTD.

RESTRICTIVE COVENANTS PER INST. #210007168 REFERS TO UTILITY EASEMENTS AS SHOWN ON THESE PLANS.

NO TITLE REPORT FURNISHED - PROJECT SUBJECT TO ANY AND ALL EASEMENTS OF RECORD.

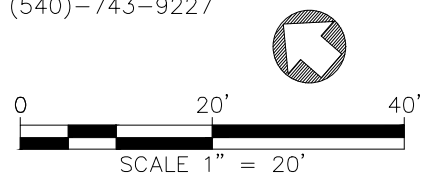
DERIVATION OF TITLE TO: RAMSEY, INC. PER INST. #010008722

SUBJECT PROPERTY IS OUTSIDE THE LIMITS OF THE FEMA FLOOD ZONE.

DRIVEWAY APRON AND DRIVEWAY SURFACE TO BE PAVED OR CONCRETE AND IN CONFORMANCE WITH TOWN STANDARD (RC-5).

BUILDING FOOTPRINT AREA: 1,440 SF
AREA OF DISTURBANCE: 10,790 SF

PREPARED BY:
RACEY ENGINEERING, PLLC
312 WEST MAIN STREET
LURAY, VA 22835
(540)-743-9227



RACEY ENGINEERING, PLLC
312 WEST MAIN ST.
LURAY VIRGINIA 22835
PH. 540-743-9227 FAX: 540-743-6118

DATE:	DESCRIPTION:	DRAWN	CHECK
07/19/24	1ST SUB GRADING PLAN	BSR	JPT
09/09/24	2ND SUB GRADING PLAN	BSR	JPT
10/18/24	3RD SUB GRADING PLAN	BSR	JPT
12/23/24	4TH SUB GRADING PLAN	ZEW	JPT

MARONDA HOMES
7051 HEATCOTE VILLAGE WAY SUITE 255
GAINESVILLE, VA 20155

HAPPY CREEK KNOLLS
LOT GRADING SURVEY - LOT 30

TOWN OF FRONT ROYAL, VIRGINIA

SCALE: 1"=20'

PRO. 10089

GENERAL NOTES:

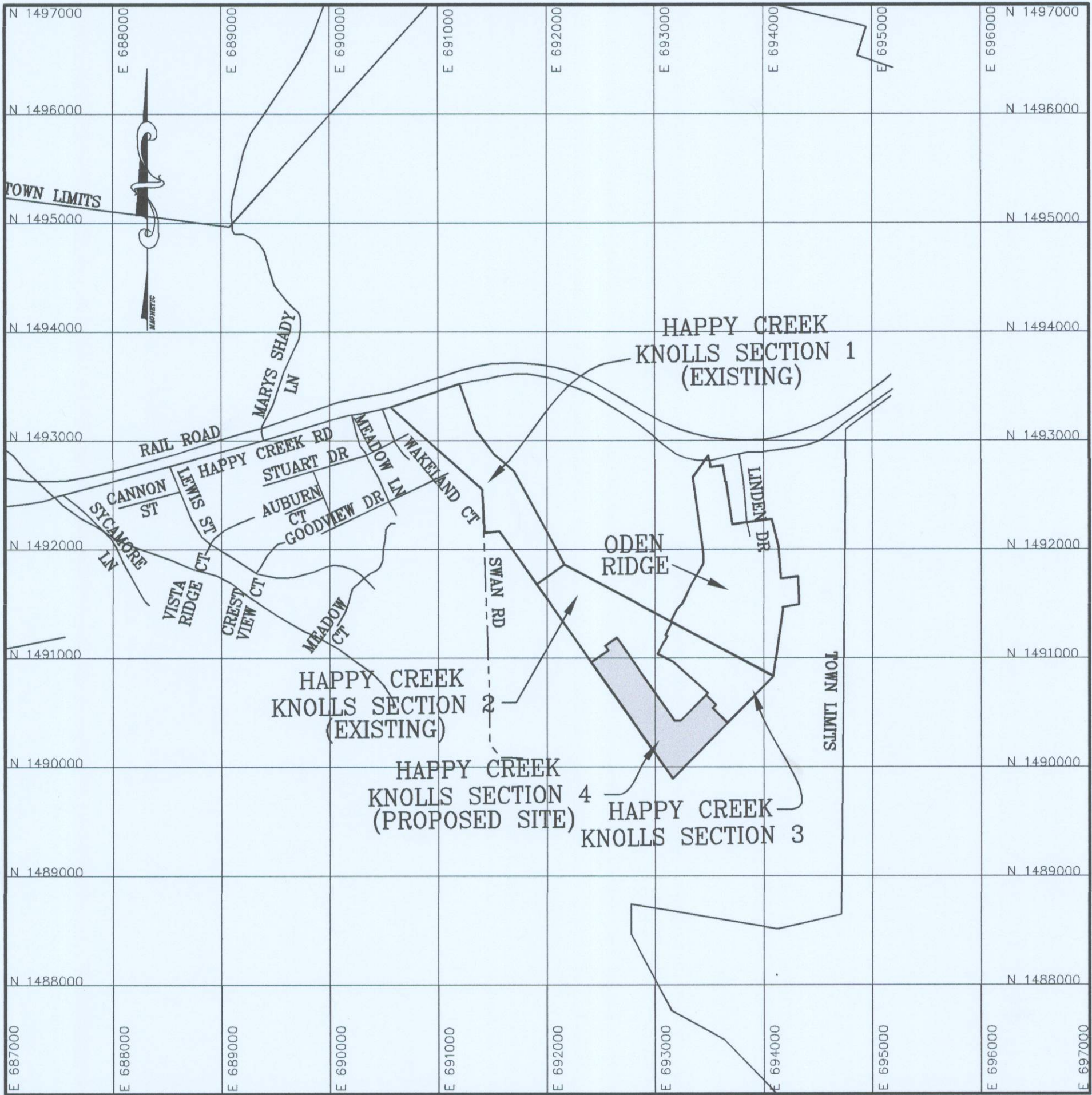
1. BOUNDARY AND NORTH MERIDIAN INFORMATION AS SHOWN HEREON ARE BASED ON A RECORD PLAT OF HAPPY CREEK KNOLLS, SECTION 1 AS RECORDED IN INSTRUMENT 01-0009421 AMONG THE LAND RECORDS OF WARREN COUNTY, VIRGINIA.
2. THESE PLANS HAVE BEEN PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND DO NOT NECESSARILY INDICATE ALL ENCUMBRANCES.
3. TOPOGRAPHIC DATA AS CONTAINED HEREIN WAS OBTAINED FROM FIELD RUN SURVEY PREPARED BY BOWMAN CONSULTING GROUP LTD. SAID SURVEY BEING DATED OCT. 12, 2017. DATUM BASED ON ASSUMED DATUM PER EXISTING FACILITIES. THE CONTOUR INTERVAL IS 2 FOOT. STEEP AND VERY STEEP SLOPES HAVE BEEN IDENTIFIED ON THE SUBJECT PROPERTY BASED ON FIELD RUN TOPO BY BOWMAN CONSULTING.
4. THE CONTRACTOR SHALL CONTACT MISS UTILITY AT 1-800-552-7001, UTILITY COMPANY REPRESENTATIVES, PERFORM TEST PITS, REVIEW CURRENT TEST PIT DATA, AND WHATEVER OTHER OPERATIONS AVAILABLE TO INSURE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES IN THE AREA OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY BOWMAN CONSULTING GROUP OF ANY POTENTIAL CONFLICTS PRIOR TO COMMENCING CONSTRUCTION.
5. THE CONTRACTOR SHALL CAREFULLY EXAMINE THE SITE AND MAKE ALL INSPECTIONS NECESSARY IN ORDER TO DETERMINE THE FULL EXTENT OF THE WORK REQUIRED TO MAKE THE PROPOSED WORK CONFORM TO THE DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK, CONDITIONS, AND CONFORMATION AND CONDITION OF EXISTING GROUND SURFACE AND THE CHARACTER OF THE EQUIPMENT AND FACILITIES NEEDED PRIOR TO AND DURING PROSECUTION OF THE WORK. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE CHARACTER, QUANTITY AND QUALITY OF SURFACE AND SUBSURFACE MATERIALS OR OBSTACLES TO BE ENCOUNTERED. ANY INACCURACIES OR DISCREPANCIES BETWEEN THE DRAWINGS AND SPECIFICATIONS MUST BE BOUGHT TO THE OWNER'S ATTENTION IN ORDER TO CLARIFY THE EXACT NATURE OF THE WORK TO BE PERFORMED PRIOR TO THE COMMENCEMENT OF ANY WORK.
6. IN ORDER TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF A GIVEN UTILITY AND TO ASSIST THE CONTRACTOR AND/OR OWNER IN DETERMINING AREAS OF SPECIAL CONCERN, BOWMAN CONSULTING GROUP HAS INDICATED HEREIN CERTAIN LOCATIONS WHERE TEST PITS SHOULD BE EXCAVATED PRIOR TO COMMENCING CONSTRUCTION. THESE INDICATIONS ARE NOT INTENDED TO BE ALL INCLUSIVE AND WILL NOT RELIEVE THE CONTRACTOR AND/OR OWNER OF THE RESPONSIBILITY OF DIGGING ADDITIONAL TEST PITS, AS MIGHT BE REQUIRED BY ACTUAL SITE CONDITIONS, ANY DISCREPANCIES FOUND BETWEEN ACTUAL AND ASSUMED CONDITIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF BOWMAN CONSULTING GROUP.
7. UNLESS OTHERWISE NOTED, ALL PROPOSED ELEVATIONS AS SHOWN HEREIN ARE FINISHED GRADE.
8. UNLESS OTHERWISE NOTED HEREIN ALL PROPOSED UTILITIES ARE TO BE INSTALLED UNDERGROUND.
9. FOR THE PURPOSE OF DESIGN COORDINATION, CERTAIN FUTURE CONSTRUCTION IMPROVEMENTS ARE SHOWN HEREIN AS EXISTING. THESE FEATURES MAY INCLUDE BUT ARE NOT NECESSARILY LIMITED TO THE HORIZONTAL & VERTICAL LOCATION OF CURBS, SIDEWALKS, PAVEMENTS AND UTILITIES.
10. ALL UNDERGROUND UTILITIES WITHIN THE STREET RIGHT-OF-WAY SHALL BE INSTALLED TO THE REQUIRED DISTANCE BEYOND THE RIGHT-OF-WAY LINE PRIOR TO THE INSTALLATION OF ANY SUBBASE MATERIAL, CURB AND GUTTER OR SIDEWALK.
11. NO BLASTING SHALL BE PERMITTED WITHIN 25' OF EXISTING UTILITIES LINE OR STRUCTURES. BLASTING TO BE EXTENDED TO 25' BEYOND PROPOSED STRUCTURES IF CONDITIONS WARRANT FUTURE EXTENSIONS.
12. THE DEVELOPER IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING ROADS AND UTILITIES WHICH OCCUR AS A RESULT OF PROJECT CONSTRUCTION WITHIN OR CONTIGUOUS TO EXISTING RIGHT-OF-WAY.
13. THE APPROVAL OF THIS PLAN SHALL IN NO WAY GRANT PERMISSION BY THE COUNTY FOR THE DEVELOPER TO TRESPASS ON OFF-SITE PROPERTIES.
14. THE APPROVAL OF THESE PLANS SHALL IN NO WAY RELIEVE THE OWNER OF COMPLYING WITH OTHER APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS.
15. THE ENGINEER SHALL NOT HAVE CONTROL OVER OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK SHOWN ON THESE PLANS. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S SCHEDULES OR FAILURE TO CARRY OUT THE WORK. THE ENGINEER IS NOT RESPONSIBLE FOR ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR THEIR AGENTS OR EMPLOYEES, OR OF ANY OTHER PERSONS PERFORMING PORTIONS OF THE WORK.
16. IN RESPONSE TO THE TOWN OF FRONT ROYAL PUBLIC WORKS REQUEST FOR FIELD ASSISTANCE, WHEN REQUIRED TO IDENTIFY SPECIFICATIONS OF PROPOSED DEVELOPMENT, AS RELATED TO SPECIFIC SITE CONDITIONS, PLEASE CONTACT JERRY DOVE AT BOWMAN CONSULTING GROUP (703) 443-2400.
17. EMERGENCY VEHICLE ACCESS SHALL BE PROVIDED DURING ALL PHASES OF CONSTRUCTION.
18. WHERE IMPROVEMENTS ARE PROPOSED WITHIN EXISTING EASEMENTS OF RECORD, THE DEVELOPER SHALL OBTAIN WRITTEN PERMISSION FROM THE AUTHORITIES THAT ARE DOMINANT TENEMENTS OF THESE EASEMENTS FOR PERMIT FOR ANY DISTURBANCES WITHIN THESE AREAS PRIOR TO CONSTRUCTION.
19. ALL FINISHED GRADING, SEEDING, SODDING OR PAVING SHALL BE DONE IN SUCH A MANNER TO PRECLUDE THE PONDING OF WATER
20. ALL EXISTING ON-SITE WELLS AND DRAINFIELDS WHICH ARE NOT REQUIRED TO SUPPORT THIS PROJECT WILL BE ABANDONED BY THE CONTRACTOR ACCORDING TO LAW.
21. NO KNOWN GRAVE SITES EXIST ON THIS SITE, IN THE EVENT GRAVE SITES ARE DISCOVERED DURING CONSTRUCTION, THE OWNER AND ENGINEER MUST BE NOTIFIED IMMEDIATELY. SHOULD GRAVE SITES BE FOUND THEY WILL BE PROTECTED IN ACCORDANCE WITH THE STATE LAW.
22. MAINTENANCE OF ALL STORM WATER MANAGEMENT FACILITIES SHALL BE THE RESPONSIBILITY OF THE HAPPY CREEK POA.
23. FINAL DESIGN OF THIS DEVELOPMENT HAS BEEN DONE IN CONFORMANCE TO THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT PREPARED BY ECS MID-ATLANTIC, LLC, DATED 10/05/2018.
24. STORMWATER MANAGEMENT FOR THE SITE HAS BEEN PROVIDED HEREIN IN ACCORDANCE WITH PART IIB CRITERIA.
25. A NOTICE OF TERMINATION PACKAGE NEEDS TO BE SUBMITTED TO DEQ PRIOR TO ARRANGING FOR A FINAL DEQ INSPECTION. THIS INSPECTION WILL BE REQUIRED PRIOR TO TERMINATION OF THE CONSTRUCTION GENERAL PERMIT.

GENERAL SPECIFICATIONS:

1. UNLESS OTHERWISE NOTED OR SHOWN HEREIN, ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE SUPPLIED AND INSTALLED IN STRICT CONFORMANCE WITH THE RULES, SPECIFICATIONS AND/OR REGULATIONS CONTAINED IN:
- A. THE VIRGINIA DEPARTMENT OF TRANSPORTATION, ROAD & BRIDGE SPECIFICATIONS AS AMENDED TO DATE.
- B. THE VIRGINIA EROSION & SEDIMENT CONTROL HANDBOOK, LATEST EDITION, AND WARREN COUNTY CODE CHAPTER 150 SOIL EROSION AND SEDIMENT CONTROL.
- C. THE TOWN OF FRONT ROYAL MUNICIPAL CODE.
- D. THE TOWN OF FRONT ROYAL SANITATION AUTHORITY STANDARDS.
- E. THE DEPARTMENT OF JUSTICE FEDERAL REGISTER IMPLEMENTING TITLE III OF THE AMERICANS WITH DISABILITIES ACT, PUBLIC LAW 101-336 FOR NONDISCRIMINATION ON THE BASIS OF DISABILITY BY PUBLIC ACCOMMODATION.
2. ALL CONSTRUCTION SHALL COMPLY WITH THE LATEST U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RULES AND REGULATIONS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTMENTS AND/OR RECONSTRUCTION OF ALL UTILITY COVER (MANHOLE FRAMES AND COVERS, VALVE BOX COVERS, ETC.) TO MATCH THE FINISHED GRADES OF THE AREAS EFFECTED BY THE CONSTRUCTION.
4. THE CONTRACTOR MUST HAVE THE APPROVED CONSTRUCTION DRAWINGS IN POSSESSION PRIOR TO THE START OF CONSTRUCTION. AT LEAST ONE (1) COPY OF THE APPROVED PLANS, WITH REVISIONS, MUST BE KEPT ON-SITE AT ALL TIMES.
5. ALL UTILITIES NOTED TO BE RELOCATED OR REMOVED SHALL BE AT THE DEVELOPERS EXPENSE, TO INCLUDE ALL POLES AND STRUCTURES AS REQUIRED. ALL POLES REQUIRED TO BE RELOCATED MUST BE MOVED PRIOR TO CONSTRUCTION.
6. CONTROLLED FILLS SHALL BE COMPACTED TO MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT PER STANDARD PROCTOR AASHTO-199, ASTM-D698 OR VTM-1 AS APPLICABLE. DENSITY SHALL BE CONFIRMED AND CERTIFIED BY A QUALIFIED AND REGISTERED PROFESSIONAL ENGINEER.
7. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION. AN ENTRANCE PERMIT SHALL BE OBTAINED FROM THE VIRGINIA DEPARTMENT OF TRANSPORTATION FOR ANY WORK WITHIN DEDICATED RIGHT-OF-WAYS OR FOR ANY TEMPORARY AND/OR PERMANENT ENTRANCE OFF OF A STATE MAINTAINED ROADWAY.
8. THE CONTRACTOR AND/OR OWNER SHALL OBTAIN A GRADING PERMIT FROM THE WARREN COUNTY BUILDING AND INSPECTIONS DEPARTMENT PRIOR TO COMMENCEMENT OF ANY LAND DISTURBING ACTIVITIES.
9. THE CONTRACTOR SHALL NOTIFY THE VIRGINIA DEPARTMENT OF TRANSPORTATION, THE TOWN OF FRONT ROYAL AND THE WATER AND SEWER AUTHORITY A MINIMUM OF THREE DAYS PRIOR TO CONSTRUCTION OF ANY IMPROVEMENTS SUBJECT TO INSPECTION AND/OR MAINTENANCE BY SAID AGENCIES.
10. STORM SEWER AND CULVERT PIPE SHALL BE REINFORCED CONCRETE PIPE CONFORMING TO THE LATEST EDITION OF A.A.S.H.T.O. DESIGNATION M170. UNLESS OTHERWISE NOTED AND/OR SPECIFIED HEREIN ALL STORM SEWER AND CULVERT PIPE SHALL BE CLASS THREE, WALL B
11. REFER TO THE LATEST EDITION OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE STANDARDS FOR CONSTRUCTION DETAILS NOT SHOWN OR CONTAINED HEREIN.
12. UNLESS OTHERWISE NOTED HEREIN V.D.O.T. STANDARD IS-1 SHAPING SHALL BE APPLIED TO THE INVERTS OF ALL DRAINAGE STRUCTURES.
13. UNLESS OTHERWISE NOTED OR SHOWN HEREIN ALL COMMERCIAL/RESIDENTIAL STREET ENTRANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH V.D.O.T. STANDARD CG-11.
14. ALL STRIPING AND SIGNAGE SHOWN HEREIN IS TO BE SUPPLIED AND INSTALLED IN CONFORMANCE WITH THE SPECIFICATIONS AND/OR REQUIREMENTS CONTAINED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS & HIGHWAYS (M.U.T.C.D.) AND THE VIRGINIA SUPPLEMENTS THERE TO.
15. STRIPING AND SIGNAGE PLANS (AS REQUIRED) SHALL BE SUBMITTED AND APPROVED BY THE VIRGINIA DEPARTMENT OF TRANSPORTATION PRIOR TO SUBMISSION OF AN ENTRANCE PERMIT APPLICATION.

FINAL
SUBDIVISION PLAN
FOR
HAPPY CREEK KNOLLS
SECTION 4

HAPPY CREEK MAGISTERIAL DISTRICT
WARREN COUNTY, VIRGINIA



VICINITY MAP

SCALE: 1"=1000'

OWNER:
RAMSEY INC.
508 COMMERCE AVENUE
FRONT ROYAL, VIRGINIA 22630
(540) 635-5637

DEVELOPER
RAMSEY INC.
508 COMMERCE AVENUE
FRONT ROYAL, VIRGINIA 22630
(540)635-5637

MISS UTILITY

CALL "MISS UTILITY" AT 811 OR 1-800-552-7001, 48 HOURS PRIOR TO THE START OF WORK. THE EXCAVATOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDER GROUND FACILITIES IN THE AREA OF PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION. THE EXCAVATOR IS RESPONSIBLE FOR COMPLIANCE WITH REQUIREMENTS OF TOWN OF FRONT ROYAL, VIRGINIA CODES AND REGULATIONS.

NOTICE REQUIRED

CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION OR BLASTING AT LEAST TWO (2) WORKING DAYS, BUT NOT MORE THAN TEN (10) WORKING DAYS, PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION. NAMES AND TELEPHONE NUMBERS OF THE OPERATORS OF UNDERGROUND UTILITY LINES APPEAR BELOW. THESE NUMBERS SHALL ALSO BE USED TO SERVE IN AN EMERGENCY CONDITION.

WATER/SEWER: TOWN OF FRONT ROYAL - DEPARTMENT OF PUBLIC UTILITIES
801 CROSBY ROAD
FRONT ROYAL, VIRGINIA 22630
(540) 635-7819

PHONE: SPRINT
450 REMOUNT ROAD
FRONT ROYAL, VIRGINIA 22630
(540) 635-3197

POWER: TOWN OF FRONT ROYAL - ELECTRIC DEPARTMENT
1101 MANASSAS AVENUE
FRONT ROYAL, VIRGINIA 22630
(540) 635-3027

MISS UTILITY: (800) 552-7001

APPROVED
Stormwater Management Plan
Date: 11/1/2021 Project #: 2020-0110
Reviewed: JMM
Approved: JMM
Department of Environmental Quality

SITE AND ZONING DATA

1. THE PROPERTY DELINEATED HEREON IS LOCATED ON WARREN COUNTY TAX ASSESSMENT MAP 20A2 ((13)) PARCEL G.
2. THE SUBJECT PROPERTY CONTAINS 541,330 SQUARE FEET OR 12.4272 ACRES OF LAND BE THE SAME MORE OR LESS.
3. THE SITE IS CURRENTLY ZONED R-1 AND IS BEING ADMINISTERED UNDER THE TOWN OF FRONT ROYAL ZONING ORDINANCE.
- MINIMUM LOT SIZE: 10,000 SF
 - REQUIRED YARD SETBACKS:
 - FRONT: 35'
 - SIDE: 15'/10' (25' TOTAL)
 - REAR: 30'
 - LOT COVERAGE: 30% MAX
 - MAX BUILDING HT: 35'
 - REQ. PARKING: 2 SPACES/DWELLING UNIT
4. THE FOLLOWING "APPROVED LAND DEVELOPMENT APPLICATIONS" WHICH PRECEDE THIS APPLICATION ARE ASSOCIATED WITH THIS PROJECT:
- A. HAPPY CREEK KNOLLS - SECTION II APPROVED
- B. HAPPY CREEK KNOLLS - SECTION III APPROVED
5. THE PROPERTY SHOWN HEREON IS NOT IN A 100-YEAR FLOODPLAIN. IT LIES IN ZONE "X" (UN-SHADED) AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOODPLAIN) AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP FOR TOWN OF FRONT ROYAL VIRGINIA, WARREN COUNTY, COMMUNITY-PANEL NUMBER 51067 0003 B, EFFECTIVE DATE JULY 15, 1988.
6. COMMON OPEN SPACE AREAS ARE TO BE DEDICATED TO AND MAINTAINED BY A HOME OWNERS' ASSOCIATION.
7. WATER AND SEWER SERVICES ARE TO BE PROVIDED BY THE TOWN OF FRONT ROYAL DEPARTMENT OF PUBLIC UTILITIES.

Sheet Index

- 1 COVER SHEET
- 2 DETAILS, TYPICAL SECTIONS, & SOILS MAP
- 3 SCHEMATIC PLAN
- 4 GEOMETRIC PLAN
- 4A UTILITY PLAN
- 5 GRADING PLAN
- 6 GRADING PLAN
- 7 PLAN AND PROFILE - HAPPY RIDGE DRIVE
- 8 PLAN AND PROFILE - HAPPY RIDGE DRIVE
- 9 PLAN AND PROFILE - HAYMAKER LANE
- 10 STORM SEWER PROFILES
- 11 STORM SEWER PROFILES & COMPUTATIONS
- 11A STORM SEWER DETAILS & COMPUTATIONS
- 12 SANITARY SEWER PROFILES AND COMPUTATIONS
- 13 PUMP STATION PLAN & DETAILS
- 14 PUMP STATION SPECIFICATIONS
- 15 PUMP STATION ELECTRICAL NOTES & CONTROL DIAGRAM
- 16 PUMP STATION ELECTRICAL SITE PLAN
- 17 PUMP STATION ELECTRICAL SPECS & DETAILS
- 18 PRE-DEVELOPMENT DRAINAGE DIVIDES
- 19 POST-DEVELOPMENT DRAINAGE DIVIDES
- 20 POND 1 DETAILS AND COMPUTATIONS
- 20A GEOTECHNICAL POND RECOMMENDATIONS
- 21 PRE-DEVELOPED OUTFALL HYDROLOGY
- 21A POST-DEVELOPED OUTFALL HYDROLOGY
- 22 POND ROUTING INFORMATION
- 22A BMP MAP, COMPUTATIONS AND NARRATIVE
- 22B POST-DEVELOPED VRRM SPREADSHEET & NUTRIENT CREDIT LETTER
- 22C POST-DEVELOPED VRRM SPREADSHEET & NUTRIENT CREDIT LETTER
- 23 EROSION AND SEDIMENT CONTROL - PHASE I
- 24 EROSION AND SEDIMENT CONTROL - PHASE II
- 25 EROSION AND SEDIMENT CONTROL NARRATIVE
- 26 EROSION AND SEDIMENT CONTROL COMPUTATIONS AND DETAILS
- 26A EROSION AND SEDIMENT CONTROL DETAILS
- 27 LANDSCAPE AND LIGHTING PLAN
- 27A SWM LANDSCAPE PLAN
- 28 LANDSCAPE DETAILS
- 29 FIRE HYDRANT LOCATION AND SIGNAGE PLAN
- 30 TOWN OF FRONT ROYAL WATER AND SEWER DETAILS
- 31 VDOT STORM AND PAVEMENT DETAILS
- 32 VDOT STORM AND PAVEMENT DETAILS
- 33 VDOT STORM AND PAVEMENT DETAILS

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THE LAND SHOWN IN THIS FINAL SUBDIVISION PLAN IS A PORTION OF THE LAND CONVEYED TO RAMSEY INC., BY DEEDS DATED MAY 29, 2001 AND NOVEMBER 6, 2001 OF RECORD IN THE WARREN COUNTY CIRCUIT COURT CLERK'S OFFICE IN INSTRUMENT # 010004122 AND 010008722.

PAUL SWARTZ, L.S. #002701

OWNER'S CERTIFICATE:

THE PLATTING OR DEDICATION OF THE FOLLOWING FINAL SUBDIVISION PLAN FOR THE RESUBDIVISION OF A PORTION OF HAPPY CREEK KNOLLS SUBDIVISION IS WITH THE FREE CONSENT AND IN ACCORDANCE WITH THE DESIRES OF THE UNDERSIGNED OWNERS, PROPRIETORS AND TRUSTEES, IF ANY.

REVISION BLOCK

NO.	REVISION	DATE
1	SHEETS 1, 3-4A, 6-8, & 27-29 - COUNTY COMMENTS	10/01/2019
2	SHEETS 1, 22A, 25, 26, & 26A - DEQ COMMENTS	11/15/2019
3	SHEETS 1, 4-6, 11A, 18-23, 25-26A & 27A - DEQ COMMENTS	09/14/2020
4	SHEETS 1, 2, 4, 6, 10, 11A, 18-20, 20A, 21, 21A, 22, 22A, 22B, 22C, 24, 26, 26A, 27, & 27A - DEQ COMMENTS	03/30/2021
5	SHEETS 1, 2, 4, 11A, 18-22A, 22C, 23, 25, 26, 26A, & 27 - DEQ COMMENTS	06/07/2021
6	SHEETS 1, 4, 6, 11A, 20, 22A, 22B, 24, 25, 27 & 27A - DEQ COMMENTS	08/26/2021
7	SHEETS 1, 4, 20, 22A, & 27 - IDEQ COMMENTS	10/07/2021
8	SHEETS 1, 4, 5, 6, 9, 23, 25, & 33 - COUNTY COMMENTS	10/07/2021
9	SHEETS 1, 6, 9, 23, & 25 - COUNTY COMMENTS	11/01/2021

APPROVAL BLOCK

ALL TOWN REAL ESTATE TAXES HAVE BEEN PAID IN FULL

DIRECTOR OF FINANCE DATE
REVIEWED AND APPROVED BY THE TOWN OF FRONT ROYAL

DIRECTOR OF PLANNING AND ZONING DATE

TOWN COUNCIL DATE

DIRECTOR OF ENVIRONMENTAL SERVICES DATE

DIRECTOR OF ENERGY SERVICES DATE

Bowman
CONSULTING

Bowman Consulting Group, Ltd.
101 South Street, S.E.
Leesburg, Virginia 20175
Phone: (703) 443-2400
Fax: (703) 443-2425
www.bowmanconsulting.com
Bowman Consulting Group, Ltd.

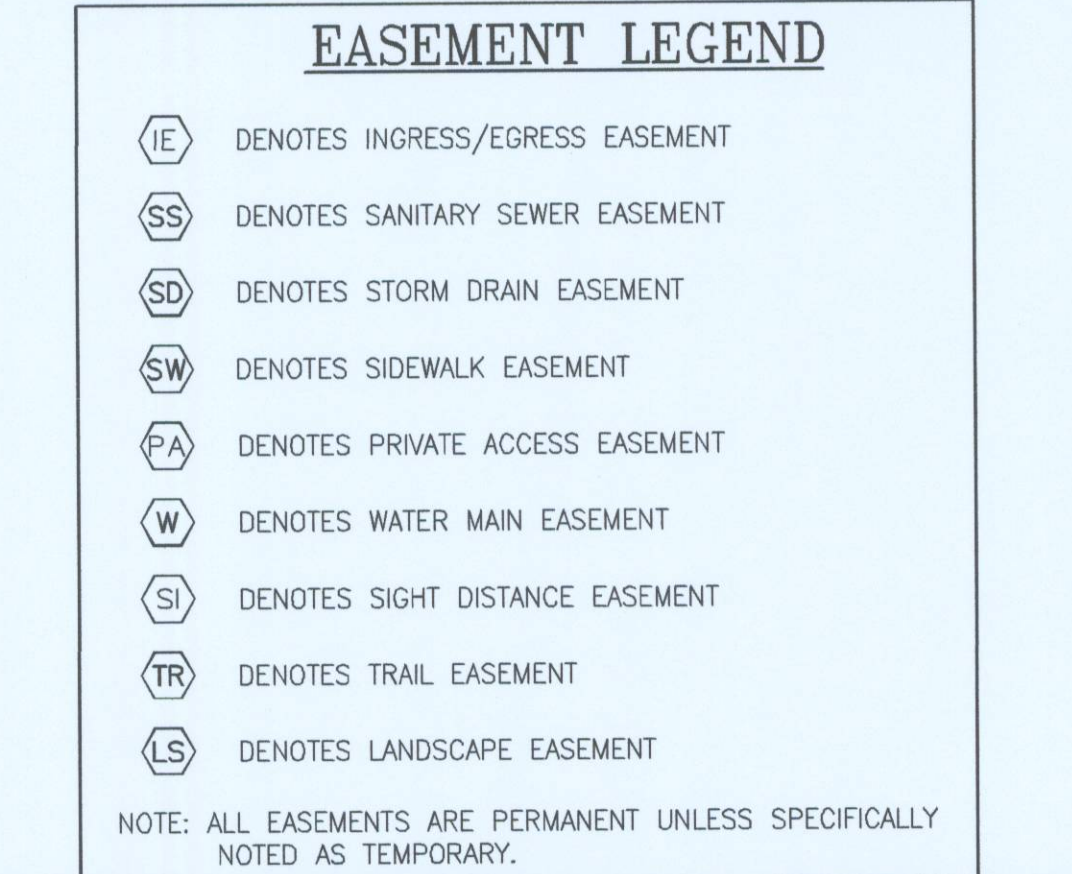
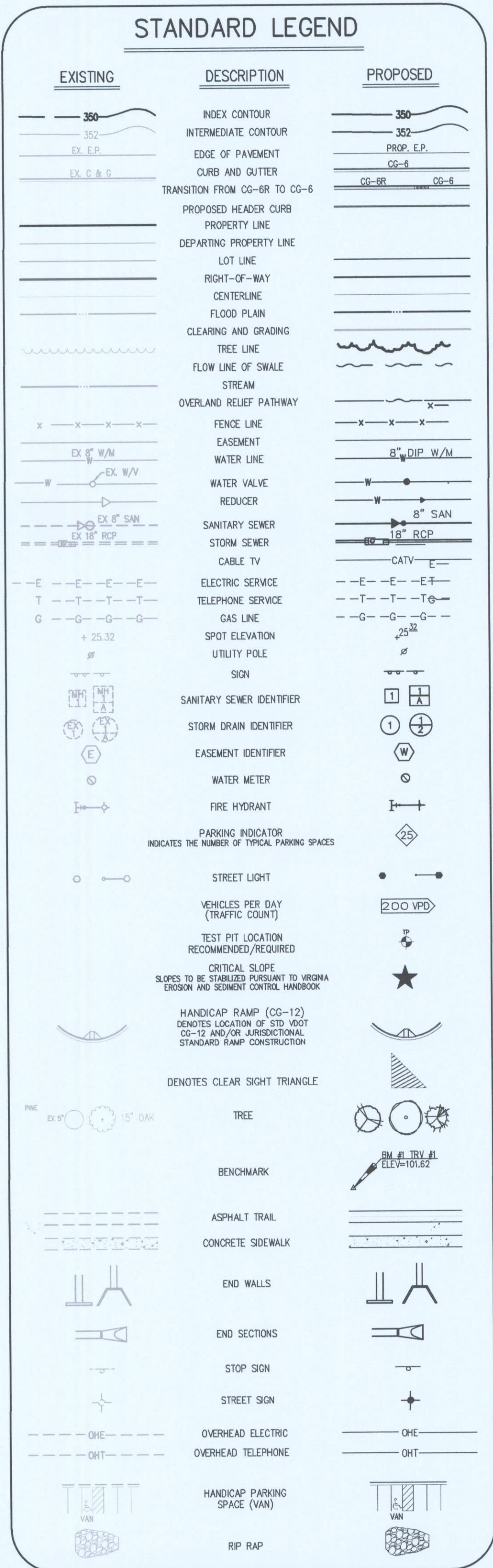
COVER SHEET
HAPPY CREEK KNOLLS
SECTION 4
FINAL SUBDIVISION PLAN
TOWN OF FRONT ROYAL
WARREN COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
DOUGLAS H. WAGNER
Lic. No. 0328003
11/01/2021
PROFESSIONAL ENGINEER

PLAN STATUS
07/24/19 COUNTY SUBMISSION
10/01/19 COUNTY COMMENTS
09/22/20 DEQ COMMENTS
03/30/21 DEQ COMMENTS
06/07/21 DEQ COMMENTS
08/26/21 DEQ COMMENTS
10/07/21 DEQ COMMENTS
10/07/21 DEQ COMMENTS
11/01/21 COUNTY COMMENTS

DATE DESCRIPTION
GC MCW CHKD
DESIGN DRAWN
SCALE H: AS SHOWN
V:
JOB No. 1602-02-016
DATE JULY 19, 2019
FILE No. 1602-D-CP-005

SHEET 1 OF 33



- VDOT GENERAL NOTES
Revised 1/31/19
- These plans were prepared in accordance with the requirements of (select one):
 - VDOT Secondary Street Acceptance Requirements (SSAR 24VAC-30-92 effective December 31, 2014 and VDOT Road Design Manual Appendix B1). Schematic street layout and computations of Connectivity Index are provided with these plans per 24VAC30-92-60.
 - VDOT Secondary Street Acceptance Requirements (SSAR 24VAC-30-92 effective December 31, 2014 and VDOT Road Design Manual Appendix B1). Schematic street layout with phasing diagram for street acceptance are provided with these plans per 24VAC30-92-60.
 - VDOT Secondary Street Acceptance Requirements (SSAR 24VAC-30-92 effective December 31, 2014 and VDOT Road Design Manual Appendix B2 as approved for use in designated high density development areas). Schematic street layout with phasing diagram for street acceptance are provided with these plans per 24VAC30-92-60.
 - Methods and materials used shall conform to the current county/town and VDOT standards and specifications.
 - All utilities, including all poles, are to be relocated at the developer's expense, prior to construction.
 - Open cutting of paved or surface treated roads is not permitted. All utilities which will be placed under existing streets are to be bored or jacked. Any exceptions, due to extenuating circumstances, are to be addressed at the permit stage.
 - Any type of reverse curb (spill curb, CG-6 with a reversed slope, etc.) and transition to these curbs shall not be used with the public right of way.
 - The developer is responsible for any damage to existing roads and utilities which occur as a result of project construction within or contiguous to the existing right of way.
 - A smooth grade shall be maintained from the centerline of the existing road to the proposed edge of pavement to preclude the forming of false gutters and/or the ponding of any water in the roadway.
 - Standard guardrails and/or handrails shall be installed at hazardous locations as designated during the field review by the county/town inspector or VDOT.
 - The developer is responsible for all traffic control. The developer shall submit a signing, striping and/or signalization plan to the VDOT Land Development Section a minimum of thirty days prior to permit application. The developer shall not commence construction of any pavement course without an approved striping plan.
 - The pavement design is based on an assumed CBR value of 10 (use a CBR value of 8 in Loudoun Co.). Soil tests of subgrade must be submitted for the actual determination of the required thickness of the pavement including layers of asphalt and subbase prior to subbase placement.
 - All untreated aggregate used in base or subbase courses shall be 21B, except on roads with an ADT of 1000 vpd or less, where 21A aggregate may be used. When 21B aggregate is used, UD-4 underdrains must be provided.
 - A 4" (min) layer of stone is required beneath curb and gutter (may be shown on typical section in lieu of a note).
 - Additional ditch linings or siltation and erosion control measures shall be provided, at the developer's expense, as determined necessary by VDOT and/or the county/town during field review. All costs shall be assumed by the developer.
 - The entire surface of the roadway (old and new portions) shall be overlaid and re-striped as required by VDOT personnel. Overlay of existing pavement shall be a minimum of 1.25" depth; any costs associated with pavement overlay, or the milling of existing pavement to obtain required depth, shall be assumed by the developer.
 - The developer is responsible for the design and construction of any traffic signal installation or modification which will be necessary as a result of the development of this site.
 - All right of way dedicated to public use shall be clear and unencumbered.
 - The county/town shall obtain a permit for all sidewalks within the right of way that do not qualify for VDOT maintenance.
 - Traffic control devices or advisory signs, such as multiway stops, speed limits, Watch for Children, Pedestrian Traffic, etc., shall not be installed unless specifically shown on these plans or a VDOT approved plan revision. A speed study certified by a professional engineer should be submitted for VDOT approval prior to the street acceptance for any road to be posted other than the statutory speed limit. Should unapproved signs be noted at the time of VDOT inspection, the road acceptance process shall be terminated immediately and not recommenced until a determination is made regarding the approval of any additional signs. Immediate removal of such signs shall not negate the need for the submission of a revision.
 - Landscaping and irrigation systems shall not be installed within the public right of way except as shown on these plans or a VDOT approved revision.
 - Beginning July 1, 2009 all Land Use Permit applications are required to provide at least one (1) person who, at a minimum, is verified by VDOT Traffic Control for all permitted activities within state maintained right of way which involves installing, maintaining, or removing work zone traffic control devices. This person shall be responsible for the placement, maintenance and removal of all work zone traffic control devices.

HAPPY CREEK KNOLLS SECTION 4 ENVIRONMENTAL IMPACT STATEMENT

HAPPY CREEK KNOLLS SECTION 4 IS THE FINAL PHASE OF THE HAPPY CREEK KNOLLS SUBDIVISION AS PLATTED IN 2002, CONTAINING APPROXIMATELY 12.4272 ACRES, HAPPY CREEK KNOLLS SECTION 4 IS THE FINAL PARCEL TO BE DEVELOPED IN AN OVERALL DEVELOPMENT OF 96 ACRES. THE HAPPY CREEK KNOLLS SUBDIVISION AND ODEN RIDGE SUBDIVISION AS DEVELOPED BY RAMSEY INC. HAS INCLUDED THE CONSTRUCTION AND PLANNED CONSTRUCTION OF 235 SINGLE FAMILY HOMES. A PORTION OF THE OVERALL DEVELOPMENT IS PART OF THE WARREN COUNTY INTERMEDIATE SCHOOL LEACH RUN PARKWAY AND ADJACENT TO THE IMMANENT DEVELOPMENT AND CONSTRUCTION OF THE NEW WARREN MEMORIAL HOSPITAL, AND ADJACENT TO A 90 ACRE SITE ZONED FOR PLANNED NEIGHBORHOOD DEVELOPMENT.

THE TOPOGRAPHY IS ROLLING WITH A VARIETY OF SOILS AS DEPICTED ON THE SOILS MAP. HAPPY CREEK KNOLLS SECTION 4 SLOPES RANGE FROM BEING FLAT TO 2:1 EXISTING GRADES. PROPOSED GRADES DO NOT EXCEED 2:1 SLOPES. OVER LOT GRADINGS IS MINIMIZED IN THE PROPOSED DEVELOPMENT OF HAPPY CREEK KNOLLS DEVELOPMENT PLANS THROUGH THE USE OF SITE SPECIFIC ADAPTIVE HOUSING, FURTHER EXPLAINED BY PROPOSING FINAL GRADES IN CONJUNCTION WITH EXISTING GRADES THAT ARE MINIMALLY ADJUSTED TO ACCOMMODATE HOUSE CONSTRUCTION AS OPPOSED TO GRADING THE LOT TO FIT A HOUSE THAT WOULD REQUIRE EXTENSIVE GRADING, EXCESSIVELY STEEP DRIVEWAYS AND/OR RETAINING WALLS. AN EXAMPLE OF ADAPTIVE HOUSE CONSTRUCTION WOULD BE THE CONSTRUCTION OF A SPLIT FOYER HOUSE ON A LOT THAT HAS A POSITIVE GRADE FROM THE STREET, WHEREBY THE MAIN ENTRANCE IS ON THE LOWER LEVEL OF THE HOUSE WITH STEPS TO THE SECOND LEVEL AND THE SECOND LEVEL (MAIN LIVING LEVEL) EXITING ON GRADE TO THE REAR (BACK YARD) OF THE HOUSE.

HAPPY CREEK KNOLLS SECTION 4 HAS BEEN ALTERED TOPOGRAPHICALLY DURING THE CONSTRUCTION OF VARIOUS PUBLIC PROJECTS. SUITABLE STRUCTURAL FILL WAS NEEDED FOR THE CONSTRUCTION OF SAMUELS PUBLIC LIBRARY AND WAS OBTAINED FROM HAPPY CREEK KNOLLS SECTION 4 WITH PROPER TESTING AND PERMITS. OVERBURDEN WAS GENERATED FROM THE HAPPY CREEK ROAD IMPROVEMENT PROJECT. WITH PROPER TESTING AND PERMITS THE EXCESS ROCK, DIRT, AND APPROVABLE FILL COMPONENTS WERE PLACED ON THE PROPERTY AND CERTIFIED FOR BOTH APPROPRIATE USE AND COMPACTION FOR RESIDENTIAL HOUSE CONSTRUCTION.

DURING THE PREVIOUSLY PERMITTED LAND DISTURBING ACTIVITIES ON HAPPY CREEK KNOLLS SECTION 4 THERE WERE NO PHYSICAL OR GEOLOGIC FEATURES OBSERVED THAT WOULD QUALIFY AS RESTRICTING FACTORS IN THE FINAL DEVELOPMENT OF THE PROPERTY FOR SINGLE FAMILY RESIDENTIAL USE. FACTORS LACKING PRESENCE INCLUDE BUT ARE NOT LIMITED TO: WET LANDS, RARE SPECIES OF ANIMALS OR FAUNA, PROTECTED SIGNIFICANT VEGETATIVE GROWTH, SINKHOLES, UNUSUAL GEOLOGIC ROCK OR SOIL FORMATIONS.

THE SINGLE MOST INVASIVE ACTIVITY PROPOSED IN THE DEVELOPMENT OF HAPPY CREEK KNOLLS SECTION 4 IS THE REDESIGN AND RECONSTRUCTION OF THE EXISTING STORM WATER MANAGEMENT POND. THE STORM WATER MANAGEMENT POND WAS DESIGNED AND CONSTRUCTED AS A STORM WATER MANAGEMENT DEVICE IN CONJUNCTION WITH THE DEVELOPMENT HAPPY CREEK KNOLLS SECTION 3 IN 2006. IT WAS LATER RECALCULATED AND ADJUSTED TO RECEIVE A PORTION OF THE STORM WATER RUN-OFF FROM HAPPY CREEK KNOLLS SECTION 2 TO FACILITATE THE PLACEMENT OF THE ABOVE REFERENCE OVERBURDEN FROM THE HAPPY CREEK ROAD IMPROVEMENT PROJECT. THE FACT THAT THE POND ALREADY EXISTS AND IS BEING MODIFIED CREATES THE LEAST INVASIVE IMPACT POSSIBLE TO SITE AS WELL AS THE ENVIRONMENT. THE STORM WATER MANAGEMENT AREA AS REQUIRED BY THE TOWN OF FRONT ROYAL WILL BE MAINTAINED BY THE NOW EXISTING HAPPY CREEK KNOLLS PROPERTY OWNERS ASSOCIATION.

IN THAT HAPPY CREEK KNOLLS SECTION 4 IS PRIMARILY AN OPEN GRASSED AREA THERE WILL BE A MINIMAL IMPACT ON THE EXISTING TREE CANOPY. THROUGH THE PROPOSED LANDSCAPING PORTION OF THE FINAL DEVELOPMENT PLAN THE NET CHANGE WILL LIKELY RESULT IN A GREATER NUMBER OF TREES ON THE SITE THAN CURRENTLY EXISTS.

AIR QUALITY WILL BE MINIMALLY IMPACTED THROUGH THE USE OF ENERGY EFFICIENT HEAT PUMPS AND LP (LIQUEFIED PROPANE) GAS FURNACES. AS DICTATED BY EXISTING BUILDING CODES AND CONSTRUCTION STANDARDS, THE CURRENT HOME CONSTRUCTION ENERGY PACKAGE RESULTS IN LOWER ENERGY CONSUMPTION AND THEREFORE LESS DEMAND ON ENERGY SERVICES AND LESS MEASURABLE POLLUTION.

ALL HOUSES WILL BE CONNECTED TO THE PUBLIC SERVICES AS PROVIDED BY THE TOWN OF FRONT ROYAL. THERE WILL BE NO ADVERSE IMPACT ON THE GROUND WATER TABLE, AS IMPACTED BY THE DRILLING OF PRIVATE WELLS, OR THE INSTALLATION AND MAINTENANCE OF PRIVATE INDIVIDUAL SEPTIC DISPOSAL SYSTEMS.

AS IDENTIFIED ON USGS MAPPING, HAPPY CREEK KNOLLS SECTION 4 IS NOT CONTAINED IN, OR ABOUT TO ANY 100 YEAR FLOOD WAYS, FLOODPLAIN, OR FLOOD ZONES.

TOWN OF FRONT ROYAL GENERAL NOTES

- FOR TECHNICAL SPECIFICATIONS AND DETAILS REFER TO THE TOWN OF FRONT ROYAL WATER AND SEWER STANDARDS AND SPECIFICATIONS, LATEST EDITION. ALL CONSTRUCTION SHALL BE IN ACCORDANCE TO THESE SPECIFICATIONS. ANY DEVIATIONS OR CHANGES SHALL BE SUBMITTED IN WRITING TO THE TOWN FOR SUPPLEMENTAL APPROVAL. INSPECTIONS SHALL BE PERFORMED BY THE DEPARTMENT OF PUBLIC WORKS. CONTACT: DIRECTOR OF PUBLIC WORKS AT (540) 635-7819 OR FAX (540) 635-8973.
- LOCATIONS OF UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING THE EXACT LOCATION, VERTICALLY AND HORIZONTALLY, OF THE UTILITIES PRIOR TO ANY EXCAVATION OR CONSTRUCTION. THE CONTRACTOR SHALL CONTACT "MISS UTILITY" AND ALL APPLICABLE UTILITY COMPANIES FOR CLEARANCE PRIOR TO EXCAVATION. CONTRACTOR WILL BE RESPONSIBLE FOR ADHERING TO THE COMMONWEALTH OF VIRGINIA UNDERGROUND UTILITY DAMAGE PREVENTION ACT, CHAPTER 10, TITLE 56 OF THE CODE OF VIRGINIA.
- CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING ALL EROSION AND SEDIMENT CONTROL MEASURES NECESSARY DURING CONSTRUCTION IN ACCORDANCE WITH CURRENT STATE AND LOCAL REGULATIONS. DISTURBED AREA SHALL NOT REMAIN DENuded FOR MORE THAN (7) CALENDAR DAYS. DURING CONSTRUCTION, ALL STORM SEWER INLETS SHALL BE PROTECTED BY INLET PROTECTION, MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROCESS. CONTRACTOR SHALL CONTACT THE COUNTY BUILDING INSPECTION OFFICE AT (540) 636-9973 PRIOR TO SCHEDULE INSPECTIONS.
- THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF CLEANING MUD FROM TRUCKS AND/OR OTHER EQUIPMENT PRIOR TO ENTERING PUBLIC STREETS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN STREETS, ALLAY DUST, AND TO TAKE WHATEVER MEASURES NECESSARY TO ENSURE THAT THE STREETS ARE MAINTAINED IN A CLEAN, MUD AND DUST FREE CONDITION AT ALL TIMES.
- ANY STREET OR UTILITIES DAMAGED BY CONTRACTOR OR SUB-CONTRACTOR SHALL BE SOLE RESPONSIBILITY OF THE PRIMARY CONTRACTOR AND PROPERLY AND IMMEDIATELY REPAIRED BY THE CONTRACTOR. SUCH REPAIRS SHALL BE TO THE ORIGINAL CONDITION AND SHALL BE TO THE SATISFACTION OF THE TOWN INSPECTOR.
- ALL PLASTIC SANITARY SEWER PIPE SHALL BE 8" DIAMETER S.D.R. 35, UNLESS OTHERWISE NOTED. PIPE BEDDING SHALL BE DETERMINED BY FIELD CONDITIONS AND TOWN SPECIFICATIONS.
- SANITARY SEWER STRUCTURES SHALL BE PRE-CAST CONCRETE OR ACCEPTABLE EQUIVALENT APPROVED BY THE TOWN OF FRONT ROYAL'S PUBLIC WORKS DEPARTMENT.
- ALL PROPOSED WATER MAINS, HYDRANT BRANCHES AND FIRE SUPPRESSION LINES SHALL BE CLASS 52 DUCTILE IRON PIPE WITH A MINIMUM OF 42" COVER UNLESS OTHERWISE NOTED.
- ALL 2" AND SMALLER WATER SERVICES SHALL BE TYPE "K" COPPER PIPE. SOLDERED JOINTS ON BURIED LINES ARE NOT ACCEPTABLE.
- ALL PRECAST CONCRETE STRUCTURES SHALL BE MINIMUM 4000 PSI AND 28 DAYS WITH BITUMINOUS COATING.
- THE UNAUTHORIZED USE OF WATER WITHOUT DUE COMPENSATION IS ILLEGAL. NO PERSON SHALL CONNECT TO OR DO ANY WORK ON THAT PORTION OF THE SYSTEM OWNED BY THE TOWN UNLESS WRITTEN AUTHORIZATION IS RECEIVED PRIOR TO COMMENCING WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL NECESSARY PERMITS BEFORE ANY CONSTRUCTION BEGINS.
- THE CONTRACTOR IS RESPONSIBLE FOR ADJUSTMENT OF ALL UTILITY BOXES, VAULTS OR OTHER APPURTENANCES TO NEW FINISHED GRADE ELEVATIONS.
- CONTRACTOR TO RELOCATE ALL SIGNS AND UTILITIES REQUIRED FOR THIS WORK.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE TRUE LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION OR CONSTRUCTION.
- SANITARY SERVICE LATERALS AND CLEAN OUTS SHALL BE CONSTRUCTED AS SPECIFIED IN NOTE #1.
- ALL CONSTRUCTION SHALL CONFORM TO ZONING AND CONSTRUCTION REQUIREMENTS OF THE TOWN OF FRONT ROYAL. ALL WATER AND SANITARY SEWER INSTALLATIONS SHALL BE INSPECTED BY THE TOWN OF FRONT ROYAL.
- CONSTRUCTION SHALL CONFORM TO THE AMERICAN WITH DISABILITIES ACT (ADA) REQUIREMENTS. CURB RAMPS SHALL BE PLACED WHERE ALL SIDEWALKS MEET CURBS.
- CONSTRUCTION LIMITS SHALL BE PROPERTY LINES OR AS INDICATED BY PLAN REQUIREMENTS.
- ANY PLANNED DISRUPTIONS OF OR TO THE EXISTING UTILITIES SHALL BE APPROVED AND COORDINATED WITH THE APPROPRIATE UTILITY OWNER. WITH EXCEPTION OF EMERGENCIES, THERE SHALL BE A MINIMUM NOTIFICATION OF 24 HOURS NOTICE GIVEN BY THE CONTRACTOR TO ALL RESIDENTIAL, COMMERCIAL AND INDUSTRIAL UTILITY USERS AFFECTED BY UTILITY INTERRUPTIONS.
- ELECTRIC SERVICE TO BE IN COMPLIANCE WITH ENERGY SERVICES CONDUIT POLICY, TFR CODE 12-1 TFR CODE 70-50.1

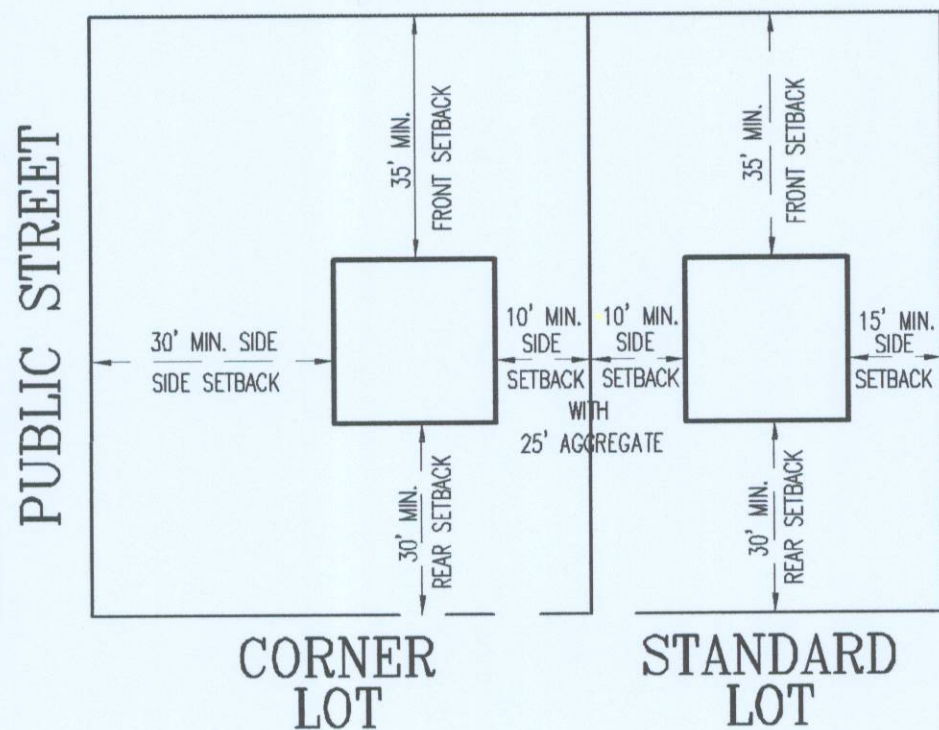
NOTE: FRONT SHALL BE THE SHORTEST SIDE PER TOWN OF FRONT ROYAL MUNICIPAL CODE SECTION 175-18.

A. OF THE TWO (2) SIDES OF A CORNER LOT, THE FRONT SHALL BE DEEMED TO BE THE SHORTEST OF THE TWO (2) SIDES FRONTING ON STREETS.

B. THE SIDE YARD ON THE SIDE FACING THE SIDE OF THE STREET SHALL BE THIRTY (30) FEET OR MORE FOR BOTH MAIN ACCESSORY BUILDINGS.

C. EACH CORNER LOT SHALL HAVE A MINIMUM WIDTH AT THE SETBACK LINE OF ONE HUNDRED (100) FEET.

PUBLIC STREET



SINGLE FAMILY DETACHED TYPICAL SET BACKS (NOT TO SCALE)

ROADWAY NOTES:

- SUBBASE DEPTH IS BASED ON A C.B.R. VALUE OF 6, BASED ON AN ACTUAL DETERMINATION PER SOIL TESTS (OR) AN ESTIMATE WHICH WILL BE REVISED ONCE THE SOIL TESTS OF SUBGRADE ARE PERFORMED.
- A SMOOTHING GRADE SHALL BE MAINTAINED FROM THE CENTERLINE OF THE EXISTING ROAD TO THE PROPOSED CURB AND GUTTER, TO PRECLUDE THE FORMING OF FALSE GUTTERS AND/OR THE PONDING OF ANY WATER ON THE ROADWAY.
- STANDARD GUARDRAIL AND HANDRAIL SHALL BE INSTALLED AT HAZARDOUS LOCATIONS AS DESIGNATED DURING FINAL FIELD INSPECTIONS.
- * SHOULDER TO BE WIDENED WHERE GUARD RAIL IS REQUIRED.
- SIDEWALKS AND TRAILS SHALL BE CONSTRUCTED ON A 4" THICK LAYER OF NUMBER 57 STONE.
- FOR DITCH & SHOULDER ROADWAY SECTIONS THE BACK SLOPE OF THE DITCH SHALL EXTEND UP AT A SLOPE OF 3:1 FOR A DISTANCE EQUAL TO THE DEPTH OF THE DITCH ASSOCIATED WITH THE FRONT SLOPE.



SOIL MAP

SCALE: 1"=200'

SITE AND ZONING DATA (CONTINUED)

TABULATION

TOTAL SITE AREA	12.43 Acres
TOTAL DEVELOPED AREA	12.43 Acres
TOTAL DISTURBED AREA	12.02 Acres
TOTAL LOT AREA	8.60 Acres
TOTAL ON-SITE STREET AREA	2.28 Acres
TOTAL ON-SITE OPEN SPACE	0.41 Acres
STORMWATER MANAGEMENT FACILITY	1.55 Acres
TOTAL ON-SITE RESIDUE	0.00 Acres

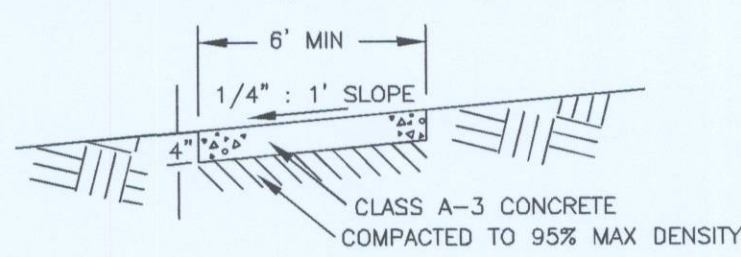
SOILS DESCRIPTIONS

TYPE	NAME	GROUP	SLOPE	CLASS	K-FACTOR
22E	LEW VERY STONY LOAM	B	25-65%	VI	0.17
32C	MYERSVILLE AND MONTALTA	B	7-15%	VI	0.32

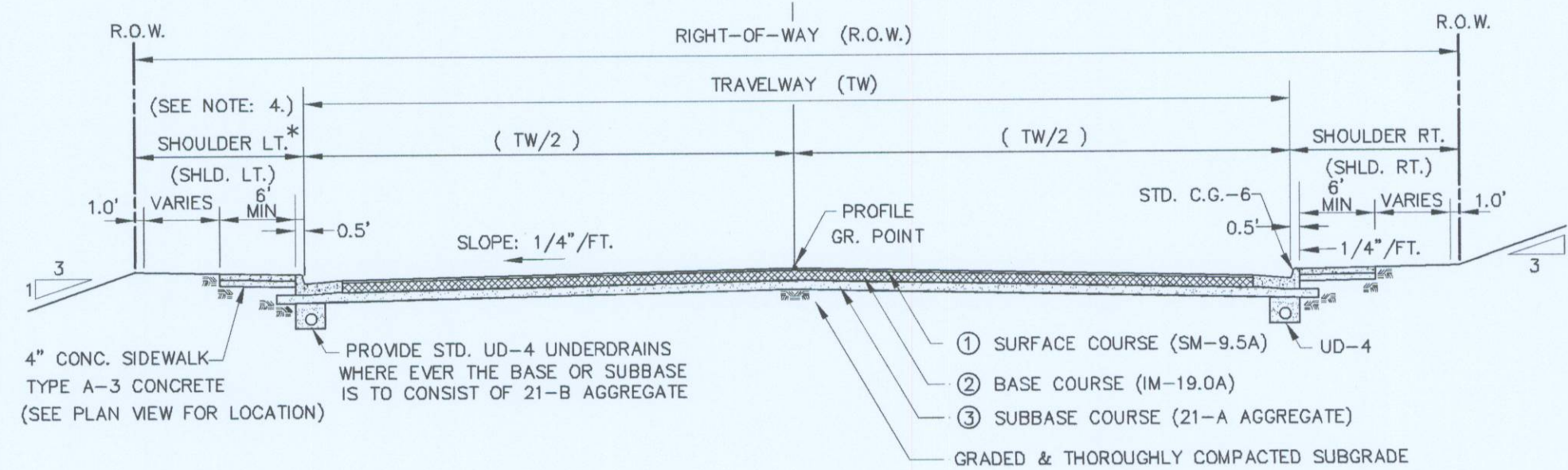
788 DENOTES SOIL TYPE

MODERATELY STEEP SLOPES (15%-25% SLOPE)

VERY STEEP SLOPES (25% OR GREATER)



TYPICAL SECTION SIDEWALK (NOT TO SCALE)



TYPICAL CURB AND GUTTER PUBLIC STREET SECTION

NOT TO SCALE

STREET NAME	CLASSIFICATION/ TERRAIN	ADT (10+M LOTS)	DESIGN SPEED	①	②	③	④	R.O.W.	T.W.	MEDIAN	SHLD. (L.T.)	SHLD. (RT.)
HAPPY RIDGE DRIVE	URBAN COLLECTOR/ROLLING	330	25	1 1/2"	3"	8"	N/A	60'	40'	N.A.	10.0'	10.0'
HAYMAKER LANE	STUB/SLOPE	N/A	25	1 1/2"	3"	8"	N/A	60'	40'	N.A.	10.0'	10.0'

NOTE: NO TIA WAS PREPARED FOR THIS SUBDIVISION

Bowman
CONSULTING

Bowman Consulting Group, Ltd.
101 South Street, S.E.
Laningsburg, Virginia 20175
Phone: (703) 443-2400
Fax: (703) 443-2425
www.bowmanconsulting.com
© Bowman Consulting Group, Ltd.

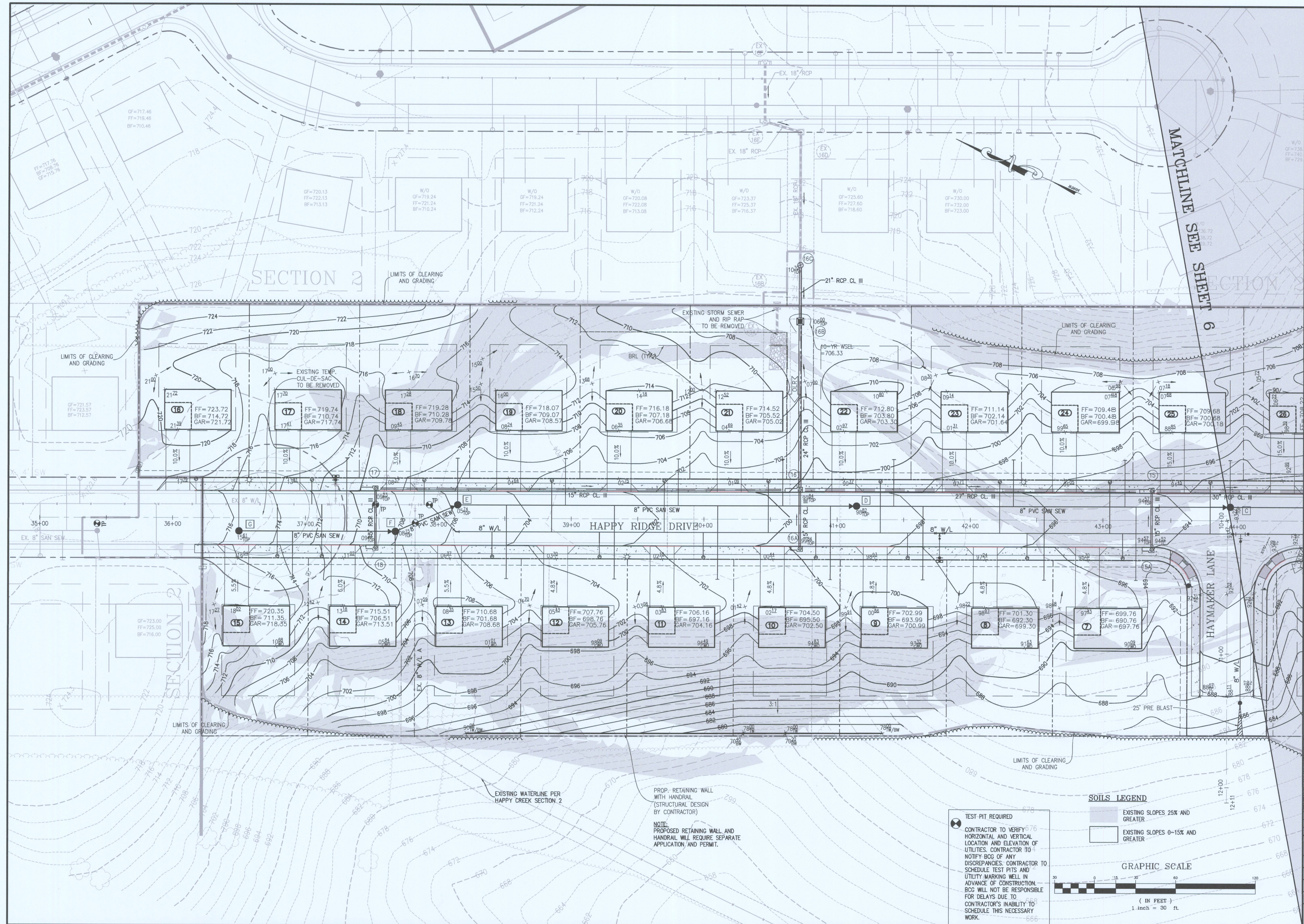
DETAILS, TYPICAL SECTIONS, & SOILS MAP
HAPPY CREEK KNOLLS
SECTION 4
FINAL SUBDIVISION PLAN
TOWN OF FRONT ROYAL
WARREN COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
DOUGLAS H. WAGNER
Lic. No. 032903
10/08/2021
PROFESSIONAL ENGINEER

PLAN STATUS
07/24/19 COUNTY SUBMISSION
10/01/19 COUNTY COMMENTS
09/22/20 DEO COMMENTS
03/30/21 DEO COMMENTS
06/07/21 DEO COMMENTS
08/26/21 DEO COMMENTS
10/07/21 DEO COMMENTS
10/07/21 COUNTY COMMENTS

DATE	DESCRIPTION
GC	MCW
DESIGN	DRAWN
SCALE	H: AS SHOWN
JOB No.	1602-02-019
DATE	JULY 19, 2019
FILE No.	1602-D-CP-005

SHEET 2 OF 33



MATCHLINE SEE SHEET 5

HAYMAKER LANE

SECTION 4

NOTE: EX. EWELL STREET FROM THE INTERSECTION OF IMBODEN DRIVE SOUTH TO BE RENAMED HAPPY RIDGE DRIVE

Bowman
CONSULTING

Bowman Consulting Group, Ltd.
101 South Street, S.E.
Leesburg, Virginia 20175
Phone: (703) 445-2400
Fax: (703) 445-2425
www.bowmanconsulting.com
Bowman Consulting Group, Ltd.

GRADING PLAN
HAPPY CREEK KNOLLS
SECTION 4
FINAL SUBDIVISION PLAN
TOWN OF FRONT ROYAL
WARREN COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
DOUGLAS H. WAGNER
Lic. No. 033903
11/01/2021
PROFESSIONAL ENGINEER

PLAN STATUS
07/24/19 COUNTY SUBMISSION
10/01/19 COUNTY COMMENTS
09/22/20 DEQ COMMENTS
03/30/21 DEQ COMMENTS
06/07/21 DEQ COMMENTS
08/26/21 DEQ COMMENTS
10/07/21 DEQ COMMENTS
11/01/21 COUNTY COMMENTS

DATE	DESCRIPTION
GC DESIGN	MCW
DRAWN	CHKD
SCALE	H: 1"=30'
	V: 1"=30'
JOB No.	1602-02-016
DATE	JULY 19, 2019
FILE No.	1602-D-CP-005

6 OF 33
SHEET

22.5' X 26' CL. 1 RIPRAP (2.5' DEEP)
EX. SANITARY SEWER
EX. SANITARY EASEMENT

VARIABLE WIDTH DRAINAGE EASEMENT
INSTRUMENT # 210004424

EX. SPILLWAY AND RIP-RAP TO BE REMOVED
LIMITS OF CLEARING AND GRADING

HEPTAD LLC
INSTR. # 49351
T.M. 20A212 Z
ZONED: PUD

VARIABLE WIDTH DRAINAGE EASEMENT
INSTRUMENT # 210004424

LIMITS OF CLEARING AND GRADING

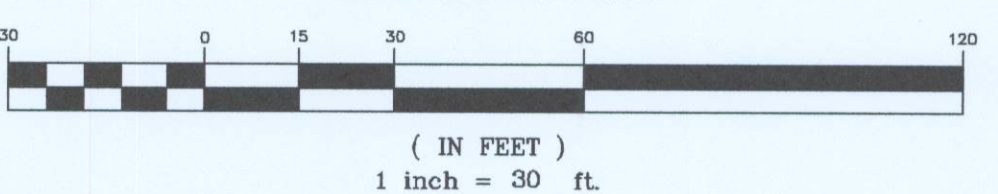
LIMITS OF CLEARING AND GRADING

LIMITS OF CLEARING AND GRADING

SOILS LEGEND

EXISTING SLOPES 25% AND GREATER
EXISTING SLOPES 0-15% AND GREATER

GRAPHIC SCALE



TEST PIT REQUIRED
CONTRACTOR TO VERIFY HORIZONTAL AND VERTICAL LOCATION AND ELEVATION OF UTILITIES. CONTRACTOR TO NOTIFY BCG OF ANY DISCREPANCIES. CONTRACTOR TO SCHEDULE TEST PITS AND UTILITY MARKING WELL IN ADVANCE OF CONSTRUCTION. BCG WILL NOT BE RESPONSIBLE FOR DELAYS DUE TO CONTRACTOR'S INABILITY TO SCHEDULE THIS NECESSARY WORK.

USE: AGRICULTURE/UNDEVELOPED (20-99ACRES)
INST. # 3553
T.M. 20A212 Z
ZONED: A-1

WARREN MEMORIAL HOSPITAL

EXISTING CUL-DE-SAC TO BE REMOVED

LIMITS OF CLEARING AND GRADING

PROP. RETAINING WALL (STRUCTURAL DESIGN BY CONTRACTOR)

PROPOSED GRADE PER HAPPY CREEK SECTION 3

LIMITS OF CLEARING AND GRADING

LIMITS OF CLEARING AND GRADING

LIMITS OF CLEARING AND GRADING

LIMITS OF CLEARING AND GRADING

LIMITS OF CLEARING AND GRADING

LIMITS OF CLEARING AND GRADING

LIMITS OF CLEARING AND GRADING

LIMITS OF CLEARING AND GRADING

LIMITS OF CLEARING AND GRADING

LIMITS OF CLEARING AND GRADING

LIMITS OF CLEARING AND GRADING

LIMITS OF CLEARING AND GRADING

LIMITS OF CLEARING AND GRADING

(IN FEET)
1 inch = 30 ft.

2500023 - A REQUEST FOR FINAL SUBDIVISION PLAT APPROVAL FOR A MAJOR SUBDIVISION SUBMITTED BY ALI BILLOO FROM A ONE (1) 3.52-ACRE PARCEL INTO EIGHT (8) RESIDENTIAL LOTS, ONE (1) STORMWATER MANAGEMENT LOT, AND A RESIDUE LOT LOCATED AT 336 W. STRASBURG ROAD, IDENTIFIED ON TAX MAP 20A11, SECTION 4, PARCEL 23B. THE PROPERTY IS ZONED R-2, RESIDENTIAL DISTRICT.



TOWN OF FRONT ROYAL
DEPARTMENT OF PLANNING & ZONING
102 EAST MAIN STREET
P.O. BOX 1560
FRONT ROYAL, VA 22630

RECEIVED
JAN 24 2025
TOWN OF FRONT ROYAL
PLANNING & ZONING DEPARTMENT
Main: 540.631.4236
Fax: 540.631.2727
Internet: www.frontroyalva.com
#2500023

APPLICATION FOR FINAL PLAT APPROVAL
(involving new streets, utilities or more than 8 lots)
MAJOR SUBDIVISIONS

Application is hereby made for approval of a final plat of a major subdivision as shown on the accompanying documents.

1. Applicant's name ALI Billu Phone (703) 346 6254
Applicant's Address 7214 Sipes Ln Ashburn VA 22007
2. Subdivision name STARSTRUGY ROAD
3. Present owner (if other than #1) own
4. Location of Subdivision Forest Hill Rd
5. Tax Map Number 20A174-2317 Parcel Number 102
6. Total Acreage 3.52 ac Zoning Classification R2
Number of Existing Lots/Parcels 1
Total Number of Lots 10
7. Acreage of adjoining land in same ownership (if any) Jan
8. Date of Preliminary Plat Approval by Planning Commission Jan 15
9. List any changes made in this plat since preliminary plat approval _____

(attach additional sheets if needed)
10. Number of lots proposed for final approval 10

PLEASE COMPLETE REVERSE SIDE

11. Attach:
- (A) Eight copies of Final Plat, along with a *digital copy*
 - (B) Street Cross - Sectional Drawings showing existing & proposed grades (Section 148-14)
 - (C) Land Disturbing Permit (obtained through Building Inspector's office)
 - (D) Surface Drainage/Erosion & Sediment Control Information
 - (E) Landscaping Plan (Section 148-46)
 - (F) Performance Bond in amount determined by Town Engineer and approved by Town Attorney
 - (G) Additional documents required by Sections 148-14 and 148-15 of the Subdivision and Land Development Ordinance

The above information is correct and the proposed subdivision will conform with the regulations of the Town of Front Royal Subdivision and Land Development Ordinance and the Standards and Specifications for Water & Sewer, adopted January 11, 1988, as amended.

1/23/25
Date

[Signature]
Signature of Applicant

By submitting this application, the applicant grants permission to Town officials and employees to enter upon the property, which is the subject of this application, during reasonable hours and for purposes related to the application process.

Designated contact for applicant: _____

Fee \$2,000.00 *

Date Paid 1-24-25

CK# 4111

*Final plat fee is \$1,000.00 per plat, plus \$100.00 per lot.



Application Number: 2500023

148-1035 FINAL SUBDIVISION PLAT DETAIL CHECKLIST

The final subdivision plat shall be prepared by a land surveyor or professional engineer licensed by the Commonwealth of Virginia and shall conform to the Standards for Plats of the Virginia State Library Board (17VAC15-60-10, et seq). The final plat shall be prepared at a scale of no greater than one (1) inch equals one hundred (100) feet and shall be drawn in ink on sheets no larger than eighteen by twenty-four (18 x 24) inches and no smaller than eight and one-half by eleven (8.5 x 11) inches. Unless otherwise approved by the Director, the Final Plat shall include the following:

- ☒ Y ☐ N ☐ N/A 1. Cover Sheet (or first sheet) requirements:
- ☒ a. Revision block. Show date and nature of all revisions.
 - ☒ b. Index of sheets and match lines.
 - ☒ c. Name, address and phone number of owner and developer.
 - ☒ d. Name, address and phone number of plan preparer.
 - ☒ e. Zoning designation(s) with minimum lot size requirements.
 - ☒ f. Front, side and rear yard setback dimensions.
 - ☒ g. FEMA Flood Zone designations, if applicable.
 - ☒ h. Vicinity map (1'=1000'), with sheet index for multiple sheets.
 - ☒ i. Area Tabulation showing total area and number of lots, streets, open space and residue. The number of units by type when mixed uses are proposed.
 - ☒ j. Tax map number and/or parcel identification.
 - ☒ k. Legend of symbols, abbreviations and line types used.
 - ☒ l. Approval Block:

All Town Real Estate Taxes Have Been Paid in Full

Director of Finance Date

Reviewed and Approved by the Town of Front Royal

Town Council* Date

Director of Planning & Zoning Date

*use Town Manager for Minor Subdivision.



Application Number: 2500023

- ☒ Y ☐ N ☐ N/A 2. Title Block requirements, on each sheet.
- ☒ a. Plat type.
 - ☒ b. Owner's name
 - ☒ c. Lot, block, and subdivision name.
 - ☒ d. Town and County designation.
 - ☒ e. Sheet number.
 - ☒ f. Plan date.
- ☒ Y ☐ N ☐ N/A 3. Scale of drawing, written and graphic, on each sheet.
- ☒ Y ☐ N ☐ N/A 4. North arrow with meridian reference on each sheet
- ☒ Y ☐ N ☐ N/A 5. Preparer's seal, signature, and date on each sheet. (Original signature on first sheet)
- ☒ Y ☐ N ☐ N/A 6. A statement that the final plat is substantially in accordance with the approved preliminary plan, if applicable. The final plat may include all or any part of the area covered by the preliminary plan, in accord with phasing designations shown on the preliminary plan.
- ☒ Y ☐ N ☐ N/A 7. A statement or certificate signed by the preparer certifying to the correctness of the survey, the drawn plat, the placement of lot corner and street monuments and stating the source of title to the land subdivided and the place of record of the last instrument in the chain of title. When the property is of land acquired from more than one source of title, the outlines of the several tracts shall be indicated by means of a dotted line or within an inset block.
- ☒ Y ☐ N ☐ N/A 8. A statement or certificate that "The subdivision and dedication of the land shown hereon is with the free consent and in accordance with the desire of the undersigned owner(s), proprietor(s) and trustee(s)". The statement shall be signed by such persons and duly acknowledged before an officer authorized to make such acknowledgements.
- ☒ Y ☐ N ☐ N/A 9. The boundary lines of the land being subdivided shall be determined from a field survey meeting the requirements of the 'Minimum Standards and Procedures for Land Boundary Surveying Practice' (18 VAC 10-20-370) of the regulations promulgated by the Virginia State Board for Architects, Professional Engineers, Land Surveyors, Certified Interior Designers and Landscape Architects. The survey



Application Number: 25 00023

shall be referenced to the Virginia Coordinate System of 1983 and the plat shall show the coordinate values of at least two corners of the subdivision.

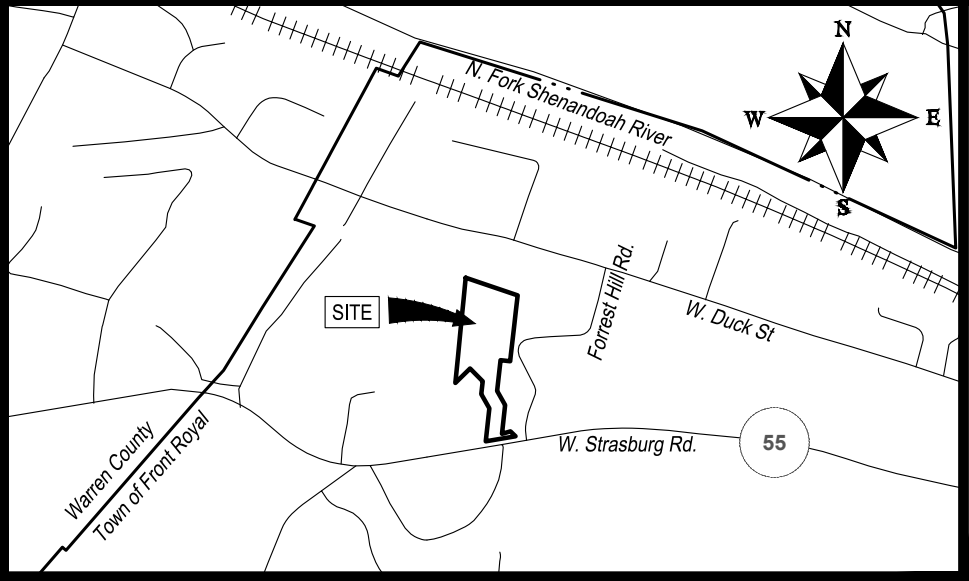
- ☒Y ☐N ☐N/A 10. The location, number and area (square feet or acres) of proposed lots and parcels (both residential and non-residential).
- ☒Y ☐N ☐N/A 11. All dimensions, angular and linear, for locating boundary lines, lots, parcels, streets, street centerlines, alleys, and easements (public and private). Angular measurements shall be expressed in bearings shown in degrees, minutes, and seconds. Linear dimensions shall be expressed in feet to the nearest one hundredth of a foot. All curves shall be defined by their radius, arc length, central angle, tangent length, chord bearing and chord distance. A line and/or curve table may be used provided the data being tabulated and numbered corresponds with the respective information shown throughout the plat.
- ☒Y ☐N ☐N/A 12. A statement regarding the use and dedication of all non-residential parcels and lots.
- ☒Y ☐N ☐N/A 13. Proposed easements or rights-of-way, their widths and use, and any limitation on such easements or rights-of-way. Easements must be located in cooperation with the appropriate public utility provider.
- ☒Y ☐N ☐N/A 14. Existing easements or other encumbrances of record known to the professional. Indicate if a title report was furnished.
- ☒Y ☐N ☐N/A 15. Lot numbers in numerical order and block identification in accordance with the approved preliminary plan.
- ☒Y ☐N ☐N/A 16. Proposed streets and widths. Use street name(s) per approved preliminary plan with statement regarding dedication and use.
- ☒Y ☐N ☐N/A 17. Names and/or route numbers of existing roads or highways adjoining the property. Indicate if access is limited.
- ☐Y ☐N ☒N/A 18. Distance to nearest road intersection where applicable.
- ☐Y ☐N ☒N/A 19. A bearing and distance tie to the exterior boundary for parcels or sections located entirely within the perimeter boundary lines.



Application Number: 2500023

- ☐ Y ☐ N ☒ N/A 20. The location of any easement, right-of-way, or street to be vacated, if any.
- ☒ Y ☐ N ☐ N/A 21. The location and type of all boundary line and permanent reference monuments.
- ☒ Y ☐ N ☐ N/A 22. Adjoining property owner information, including name, deed reference and/or subdivision lot designation.
- ☒ Y ☐ N ☐ N/A 23. Building restriction setback lines with dimensions.

Reviewed By: *J. M. Wane* Date: 1/28/25



VICINITY MAP
1" = 1000'

NOTE: 2400673 – SUP Royal Lane Apts.

2400687 – Rezoning W. Strasburg Rd
BOUNDARY INFORMATION TAKEN FROM PLAT RECORDED AT DEED BOOK 306, PAGE 41
AS FOUND AMONG THE LAND RECORDS OF WARREN COUNTY, VIRGINIA, AND A FIELD
SURVEY DONE BY RACEY ENGINEERING.

THE SUBJECT PROPERTY IS CURRENTLY IN THE NAME OF "BILL'S INVESTMENTS, LLC, a
Virginia limited liability company", AS RECORDED AT INSTRUMENT NO. 220004952 AS
FOUND AMONG THE LAND RECORDS OF WARREN COUNTY, VIRGINIA.

THIS SURVEY WAS DONE WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT.
THEREFORE ALL SETBACKS, EASEMENTS, ENCUMBRANCES AND RESTRICTIONS MAY NOT
BE SHOWN HEREON.

THE SUBJECT PROPERTY IS LOCATED ON FEMA FLOOD INSURANCE RATE MAP, NUMBER
51187C, PANEL 0104C, DATED 6/3/2008 AND IS IN ZONE "X".

ALL PROPERTY CORNERS NOT LABELED ARE TO BE SET AT THE TIME OF RECORDATION.

THE FINAL PLAT IS SUBSTANTIALLY IN ACCORDANCE WITH THE APPROVED PRELIMINARY
PLAN.

TAX MAP NUMBER 20A-114-23B IS CURRENTLY ZONED RESIDENTIAL (R-2)

1f.

Front Setback: 30'
Side Setback: 10'
Rear Setback: 25'
Minimum Frontage: 70'
Minimum Lot Size: 8,000 SF

Owner/Developer: Bills Investments, LLC
7214 Sipes Lane
Annandale, Va 22003
Contact: Ali Billoo
Phone: 703-346-6254
Email: billshomes@hotmail.com

THIS SUBDIVISION AND DEDICATION OF THE OF
LANDS AS DESCRIBED HERE IN IS WITH FREE
CONSENT AND IN ACCORDANCE WITH THE DESIRES
OF THE UNDERSIGNED OWNERS, PROPRIETORS AND
TRUSTEES.
BY: BILL'S INVESTMENTS, LLC

By: _____

Name: _____

Its: _____

City/County of _____

Commonwealth/State of _____

The foregoing instrument was acknowledged before
me by _____, the _____ of BILL'S
INVESTMENTS, LLC, on behalf of the LLC,
this ____ day of ____, 2025.

By: _____

Notary Public: _____

My Commission Expires: _____

SURVEYORS CERTIFICATE

I, KEVIN S. BLANKENSHIP, A DULY LICENSED LAND SURVEYOR IN THE
COMMONWEALTH OF VIRGINIA, DO HEREBY CERTIFY THAT THE INFORMATION
SHOWN HEREON IS CORRECT TO THE BEST OF MY PROFESSIONAL KNOWLEDGE AND
EXPERIENCE AND THE PROPERTIES SHOWN HEREON ARE NOW IN THE NAME OF BILL'S
INVESTMENTS, LLC, AS RECORDED IN INSTRUMENT NO. 220004952, AS FOUND
AMONG THE LAND RECORDS OF WARREN COUNTY, VIRGINIA.

KEVIN S. BLANKENSHIP

NO.	Submittal / Revision	By	Appr'd	Date
1	CLIENT SUBMITTAL	KSB		1/21/2025
2	Town Comments	KSB		1/28/2025
3	XXXXXXX			
4	XXXXXXX			
5	XXXXXXX			

1k.

LEDGEND

These standard symbols will
be found in the drawing.

Iron Pipe Found IPF

Iron Rod Found IRF

Iron Rod Set IRS

Adjoiner

Property Line

Road Centerline

Setback

Utility Easement

21

14

1g.

6

1e. 1j.

1f.

23

Corner Lots
Front Setback: 30'
Side Setback: 10'
Side Setback: 10'
Road-Adjacent Setback: 25'
Minimum Frontage: 100'

1c.

2b.

8

Line #	Bearing	Distance
L1	N 83° 44' 05" W	50.06'
L2	S 82° 30' 26" E	49.45'
L3	S 7° 29' 34" W	36.31'
L4	S 82° 30' 26" E	14.36'
L5	N 82° 30' 26" W	62.96'
L6	N 82° 30' 26" W	53.73'
L7	N 39° 31' 11" W	29.85'
L8	N 75° 12' 14" W	14.94'
L9	N 5° 28' 51" E	103.19'
L10	S 26° 10' 58" E	10.00'
L11	N 5° 28' 51" E	116.81'
L12	N 82° 30' 26" W	32.33'
L13	N 37° 30' 26" W	14.14'

Curve #	Arc Length	Radius	Delta	Tangent	Chord Bearing	Chord Length
C1	41.84'	100.00'	23° 58' 20"	21.23'	S 70° 31' 16" E	41.53'
C2	53.85'	100.00'	30° 51' 06"	27.59'	S 43° 06' 34" E	53.20'
C3	53.91'	100.00'	30° 53' 26"	27.63'	S 12° 14' 18" E	53.26'
C4	44.83'	47.00'	54° 39' 11"	24.29'	S 25° 03' 28" E	43.15'
C5	72.43'	47.00'	88° 17' 30"	45.62'	S 46° 24' 52" W	65.47'
C6	99.46'	47.00'	121° 14' 57"	83.50'	N 28° 48' 54" W	81.91'
C7	25.87'	47.00'	31° 32' 11"	13.27'	N 47° 34' 40" E	25.54'
C8	76.78'	50.00'	87° 59' 17"	48.27'	S 38° 30' 48" E	69.46'
C9	168.92'	110.00'	87° 59' 17"	106.20'	N 38° 30' 46" W	152.81'
C10	109.88'	57.00'	110° 27' 17"	82.10'	N 8° 35' 24" E	93.64'
C11	61.43'	40.00'	87° 59' 17"	38.62'	N 38° 30' 48" W	55.57'
C12	3.97'	100.00'	2° 16' 25"	1.98'	S 4° 20' 38" W	3.97'

11.

All Town Real Estate Taxes Have Been Paid in Full

Director of Finance Date

Reviewed and Approved by the Town of Front Royal

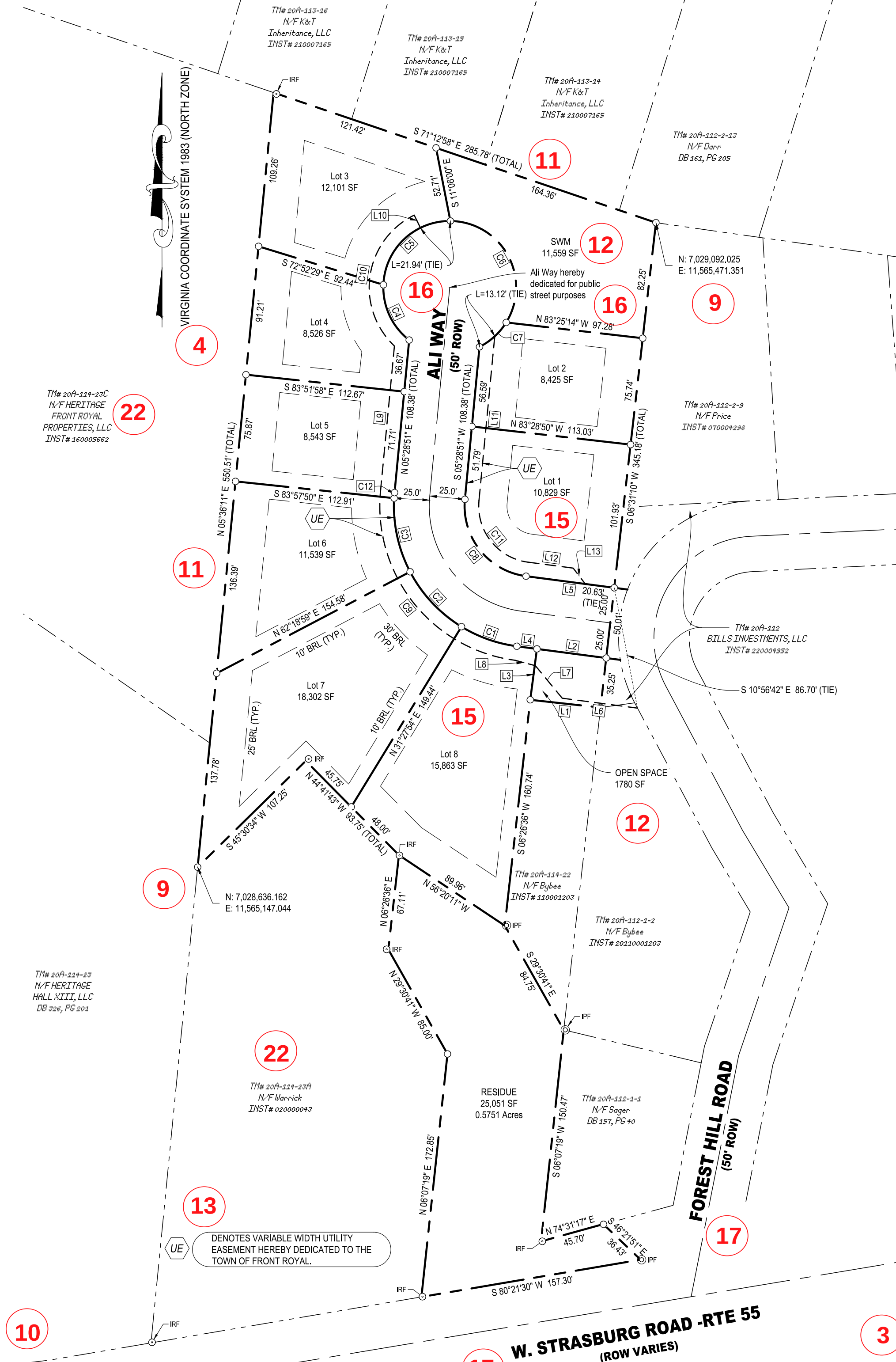
Town Council Date

Director of Planning & Zoning Date

1i.

Area Tabulation				
	Original		New	
Lots	SF	Acres	SF	Acres
20A-114-23B	153,561	3.5253		
Lots 1-8			94,127	2.1609
Residue			25,051	0.5751
SWM Lot			11,559	0.2654
ROW			21,043	0.4831
Open Space			1,780	0.0409
Total	153,561	3.5253	153,561	3.5253

10



17

W. STRASBURG ROAD - RTE 55
(ROW VARIES)

3



1d.



5

STRASBURG ROAD SUBDIVISION

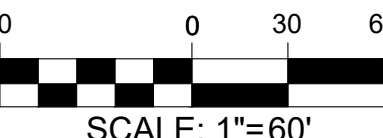
PLAT SHOWING A FINAL SUBDIVISION ON THE LANDS OF

TM# 20A-114-23B
INST# 220004952
NORTH RIVER-TOWN MAGISTERIAL DISTRICT
TOWN OF FRONT ROYAL
WARREN COUNTY, VIRGINIA
JANUARY 21, 2025

2d.

2a.

2c.



RACEY PROJECT # 9276

SHEET NO. 1 of 1

2e.

1b.

REVISIONS TO THE SCHEDULE OF FEES.

Town of Front Royal			
	Current Fees	Proposed Fees	Justification
Certificate of Appropriateness			
BAR Review	\$ 100.00	\$ 250.00	break even point for meeting
Administrative	\$ 50.00	\$ 100.00	
Demolition of Historically Significant Structure	\$ 200.00	\$ 400.00	to cover board fees and advertisements
Board of Zoning Appeal			
Administrative Variance	\$ 100.00	\$ 100.00	
Board of Zoning Appeal Request	\$ 400.00	\$ 650.00	to cover board fees and advertisement requirements
Administrative			
Boundary Adjustment	\$ 100.00		
Boundary Plat /Survey Review	\$ -	\$ 50.00	staff review time, which can include site visits
Business License Review	\$ -	\$ 50.00	staff review time, which can include site visits
Certificate of Compliance (Commercial rate / 1000 ft)	\$ 25.00	\$ 75.00	staff review time, which can include site visits
Lot Line Vacation	\$ 100.00	\$ 150.00	staff review time, which can include site visits
Performance Bond Release	\$ 100.00	\$ 200.00	significant staff time, potential consultation with Town Attorney and various departments
Requested Readvertisement (per meeting)	\$ 200.00	\$ 200.00	if applicant delays the hearing
Urban Agriculture Permit	\$ 25.00	\$ 100.00	requires annual inspections by staff and outside agency review
Zoning Ordinance Amendment	\$ 400.00	\$ 650.00	requires multiple meetings with staff, multiple PC meetings, plus advertisement
Zoning Permit major	\$ 100.00	\$ 300.00	new construction and commercial uses
Zoning Permit minor	\$ 25.00	\$ 50.00	typically residential accessory structures
multifamily, new	50/unit	\$ 75/unit	
SFD new	\$ 75.00	\$ 100.00	
POD	\$ 25.00	\$ 50.00	
Zoning Determination	\$ -	\$ 100.00	requires significant research and staff time
Final Compliance	\$ -	\$ 50.00	final compliance requires staff inspections
Legislative Permits			
Special Use Permit	\$ 400.00	\$ 1,000.00	requires PC and TC approval
Telecommunication Tower SUP	\$ 400.00	\$ 1,500.00	requires review by outside agencies
CPAM (Comprehensive Plan Amendment)	\$ 400.00	\$ 1,000.00	requires staff research, meetings, several PC meetings, advertisement for Public Hearings, GIS map changes
Special Use Permit for POD	\$ 400.00	\$ 650.00	requires PC and TC approval
Special Use Permit for STR	\$ 400.00	\$ 1,200.00	requires additional inspections and site visits for staff as well as PC meetings and Advertisement
Solicitor/Itinerant Merchant	\$ 20.00	\$ 200.00	requires coordination with state agencies for background checks and significant staff time with review
Rezoning Application			
Proffer Amendment	\$ 400.00	\$ 650.00	PC review and Public hearings
1 acre or less	\$ 500.00	\$ 650.00	PC review and Public hearings
over 1 acre	500+100/acre	\$ 650+100/acre	PC review and Public hearings
Downzoning	\$ 400.00	\$ 650.00	PC review and Public hearings
Right-of-way Utilization Permit	\$ 25.00	\$ 100.00	staff review time, which can include site visits, coordination with Public Works
Sign Permit			
Permanent	\$ 50.00	\$ 50.00	
Entrance Corridor	\$ 75.00	\$ 250.00	requires PC review
Temporary	\$ 25.00	\$ 50.00	
Relocation of approved sign	\$ -	\$ 50.00	
Site Development Plan			
Minor Site Plan	\$ 100.00	\$ 500.00	requires staff review plus routing and coordination with internal and external departments
Major Site Development Plan	\$ 750.00	\$1000 for 1st and 2nd s	the initial fee will allow for one round of comments and resubmission. The hope is to encourage applicants to not use staff for site design, but to comply with current requirements
Sketch Plan	\$ 100.00	\$ 150.00	
Special Exception	\$ 250.00	\$ 650.00	requires multiple meetings with staff, multiple PC meetings, plus advertisement
Subdivision Variance	\$ 250.00	\$ 250.00	
Subdivision Final Plat (major)	1000 + 100/lot	1000 + 100/lot	requires PC review
Subdivision Final Plat (minor)	200 + 100/lot	200 + 100/lot	
Preliminary Plat minor	500+ 25/lot	600+ 25/lot	requires PC review
Preliminary Plat major	300+25/lot	400+25/lot	

PC = \$100 once per month only if a meeting attended (not paid for additional meetings in same month)	500
BZA = \$75 once per month only if a meeting attended (not paid for additional meetings in same month)	375
BAR = \$50 once per month only if a meeting attended (not paid for additional meetings in same month)	250
LBBCA = \$50 once per month only if a meeting attended (not paid for additional meetings in same month)	250
FREDA = \$200 once per month only if a meeting attended (not paid for additional meetings in same month)	



CITY OF WINCHESTER

FEE SCHEDULE

PLANNING & ZONING DEPARTMENT

111-0000-205.02-00	PUBLIC HEARING SIGN DEPOSIT	\$ 50.00 per sign
111-0000-313.05-04	LAND USE APPLICATION FEES	
	Conditional Use Permit	\$ 500.00 (\$200.00 if filed with site plan)
	Telecommunications Facility (New Or Major Modification)	\$ 1,500.00
	Telecommunications Facility (Minor Modification or Collocation)	\$ 500.00
	Site Plan:	
	New or Major Revision	\$1,200.00 + \$25.00 per provided parking & display space
	Minor Revision	\$ 300.00 + \$25.00 per provided parking & display space
	Mobile Food Establishment	\$ 500.00
111-0000-313.05-06	PLANNING ADVERTISING FEES	
	List of Properties/Owners within 300'	\$ 25.00
111-0000-313.05-07	RE-ZONING & SUBDIVISION PERMITS	
	Planned Development Revision	\$ 500.00
	Proffer Revision	\$ 500.00
	Re-Zoning	\$1,000.00 + \$200.00 per acre (or fraction thereof)
	Subdivision:	
	Minor (Administrative)	\$ 300.00 + \$50.00 per lot
	Major	\$2,000.00 + \$250.00 per lot
	Revision	\$ 100.00 + \$20.00 per lot
	Re-approval	\$ 200.00
	Deferral of Improvements	\$ 100.00
	Zoning Text Amendment	\$ 600.00
111-0000-313.05-19	SIGNS, PERMITS, AND INSPECTIONS	
	Event Permit	\$ 100.00
	30-Day Temporary Permit	\$ 100.00 (per unit)
	90-Day Seasonal Permit	\$ 250.00
	Temporary Storage Unit	\$ 200.00 (per unit)
	Portable Sign or Sign not Requiring a Building Permit	\$ 40.00
111-0000-313.05-33	BOARD OF ARCHITECTURAL REVIEW	
	Demolition of Structure more than 75 years old	\$ 300.00
111-0000-313.05-34	BOARD OF ZONING APPEALS	
	Administrative Modification	\$ 500.00 – 1 st code section + \$100.00 per each additional section
	Appeal/Variance/Interpretation	\$ 500.00 – 1 st code section + \$100.00 per each additional section
111-0000-313.05-40	MISCELLANEOUS FEES	
	Zoning Confirmation Letter	\$ 500.00
	Zoning Determination/Verification Letter	\$ 100.00
	DMV Letter	\$ 50.00
	Waiver of Underground Utilities	\$ 100.00
111-0000-313.05-41	CIVIL PENALTIES	Per Section 21-3 of the Ordinance

111-0000-318.99-14

SALES

Zoning & Subdivision Ordinance
Comprehensive Plan
24 x 36 Zoning or Street Map (B&W)
24 x 36 Zoning or Street Map (Color)
Photocopy
24 x 36 Plan Copy
Postage for Ordinance/Comp. Plan

111-0000-227.01-00

\$33.33 +
\$23.81 +
\$ 9.52 +
\$14.29 +
\$ 0.50 +
\$ 4.29 +
\$ 6.00

TAX

\$1.67 = \$35.00
\$1.19 = \$25.00
\$0.48 = \$10.00
\$0.71 = \$15.00
\$0.02 = \$ 0.52
\$0.21 = \$ 4.50
N/A

(Code same as original)

RE-ADVERTISEMENT FEES

\$ 100.00

ADOPTED: 10/08/02

UPDATED: 03/15/06, 12/04/07, 10/23/08, 8/28/13, 2/19/16

NOTE: Make all checks payable to: "Treasurer, City of Winchester"

FAUQUIER COUNTY

FEE SCHEDULE¹ DEPARTMENT OF COMMUNITY DEVELOPMENT LAND DEVELOPMENT EFFECTIVE APRIL 1, 2019

Code of Development Consultant Review	
For projects proposing or involving the use of a Code of Development, review by an outsourced Contractor may be required. Fees for such review are paid for by the applicant on an actual cost basis for time spent by the approved Contractor. Depending on the County's contractual arrangement with the Contractor, such additional fees may either be paid directly to the County or to the Contractor. Accounting and billing oversight is provided by the County.	
Postponement of any Public Hearing by Applicant after Advertisement \$150	
Zoning Permits, Variances, Appeals, Amendments & Waivers	
Zoning Permit	\$75; except \$200 if requires COD conformance review; and No Fee if in conjunction w/Site Plan or Administrative Permit
Administrative Permit	\$150 if public notice is required \$75 if public notice is not required; except \$25 for Home Occupation Permit No fee for non-profit events pursuant to Section 6-102 of the Ordinance \$500 fee for Telecommunications
Sign Permit	\$25 Temporary Real Estate \$50 per sign plus \$2 per square foot for All Others
Zoning Compliance Letter/Form	\$100 per parcel except \$250 per parcel if proffers apply
Buildable Lot Determination	\$100
Floodplain Determination Letter	\$25
Zoning or Subdivision Ordinance Text Amendment	\$750
Appeal of Zoning Administrator Determination	\$500 ²
Zoning Variance by BZA	\$500
Waiver or Modification of Subdivision or Zoning Ordinance Regulation (BOS or PC approval required)	\$350 if PC or BOS approval required \$200 if Administratively approved
Waiver of Submission Requirement	No fee
Sign Package Permit	\$1,000 plus COD Consultant Fees (as applicable)
Special Exceptions and Special Permits	
Special Exception – New or Amendment	<u>Base Fees:</u> \$700 Category 1 thru 8, 32 and those not in a Category \$1,000 Category 9 thru 31

¹ Fees will be deposited when received. This does not reflect that an application has been accepted. If an application should be rejected for completeness or withdrawn prior to review upon written request, fees may be returned as appropriate or permitted. All fees specified on a per unit basis shall be calculated based on the whole unit and portion thereof.

² Fee is returned if the appellant prevails.

	<u>Additional Fees:</u> \$500 for each additional Special Exception beyond the first \$300 for each Special Permit included in application \$25 per acre for Category 1 \$30 per 1,000 gpd for Category 20 Sewage System > 1,000 gpd
Special Exception Extension/Renewal	50% of fee for New SE if approved by BOS \$150 if Administratively approved
Special Permit – New or Amendment	<u>Base Fees:</u> \$800 Category 9 thru 22 \$500 All other Categories or not in a Category <u>Additional Fees:</u> \$300 for each additional Special Permit beyond the first
Special Permit Extension/Renewal	50% of fee for New or Amendment if approved by BZA \$150 if Administratively Approved \$75 for Major Home Occupations;
For minor amendments requiring minimal staff review, the Director may reduce the fee to \$300 for Special Permits and \$500 for Special Exceptions or the amount needed to cover all County expenses related to the review.	
Comprehensive Plan and Rezoning	
Comprehensive Plan Amendment	\$1,600 if no rezoning required 50% of current rezoning fee if rezoning required
Comprehensive Plan Compliance Review	\$800
Rezoning to Historic District	No Fee
Rezoning to RA/RC	\$550
Rezoning to RR-2	\$1,250 plus \$40/acre
Rezoning to R-1, R-2, R-3, R-4, V, C-1, C-2, C-3, VC, BP, I-1, I-2	\$1,250 plus \$150/acre
Rezoning to GA or MHP	\$1,450 plus \$150/acre
Rezoning to PRD, PDMU, PCID, MU-Bealeton	\$2,150 plus \$150 per acre plus COD Consultant Review Fees, if applicable
Rezoning Amendment	Rezoning Fee, as applicable
For minor applications requiring minimal staff review, the Director may reduce the fee to \$800 or the amount needed to cover all County expenses related to the review.	
Agricultural and Forestal Districts	
Agricultural & Forestal District Addition	\$100 per parcel
Agricultural & Forestal District Withdrawal (out-of-turn)	\$100 per parcel
Division of Land	
Subdivision Potential Research	\$100 per parcel \$25 reissue after regulation or property change
Administrative Subdivision (includes GIS Addressing Fee)	\$600 plus \$60 per lot
Family Transfer (includes GIS Addressing Fee)	\$600 plus \$60 per lot
Large Lot (Divisions > 50 acres in RA/RC) (includes GIS Addressing Fee)	\$500 plus \$110 per lot

All other Administratively Approved Divisions	\$600 plus \$60 per lot except \$300 utility lots
Plan of Development	\$750
Boundary Adjustment (includes Health Dept. charge)	\$650 \$500 if all involved lots served by public sewer
Plat Amendment	\$300
Easement Plat	\$300 except no fee if included on another plan or plat being reviewed by the County
Deed/Plat of Vacation/Rededication	\$200 for 1-5 lots \$300 for 6-24 lots \$400 for over 25 lots
Preliminary Plat	\$2,900 plus \$198 per lot – 1 st Submission w/drainfield \$2,500 plus \$120 per lot – 1 st Submission w/public sewer \$400 for 3 rd and Subsequent Submissions
Preliminary Plat Resubmissions with significant plan changes initiated by applicant	\$1,000
Preliminary Plat Extension	\$100 for 1 st Extension 50% of the base fee for 2 nd Extension
Preliminary Plat Amendment	\$500 if Condition Only \$1,000 Minor 50% of Current Fee if Major
Combined Preliminary Plat/Construction Plan (with no public infrastructure) Requires Pre-Approval	Preliminary Plat fee only
Final Plat	\$1,000 plus \$80 per lot – 1 st Submission \$400 for 3 rd & Subsequent Submission No Fee for Signature Sets
Final Plat Extension	50% of Base Fee
Land Development	
Site Plan – Waiver	\$100
Site Plan – Minor	\$550
Site Plan – Amendment to Minor	\$250
Site Plan – Minor Telecommunications	\$500
Site Plan – Major (Fee includes easement plat and bond estimate review. Additional fee for Review of Preliminary Soils Map is necessary when a Type 1 Soils Map has not been prepared by the County.)	\$3,600 plus \$400 per disturbed acre – 1 st Submission See Additional Fees below for possible additional fees
Site Plan – Small Cell Facilities	\$100 per small cell facility up to 5 facilities \$50 per small cell facility 6-35
Site Plan – Amendment to Major (no new acreage)	\$1000 plus \$50 per lot See Additional Fees below for possible additional fees
Site Plan Amendment for co-location of cell facilities on existing structures	\$500
Site Plan – Code of Development (Fee includes easement plat and bond estimate review. Additional fee for Review of Preliminary Soils Map is necessary when a Type 1 Soils Map has not been prepared by the County.)	\$5,600 plus \$400 per disturbed acre – 1 st submission if commercial or mixed-use \$5,600 plus \$250 per lot/unit – 1 st submission if single family residential

		See Additional Fees below for possible additional fees
Site Plan – Code of Development – Amendment		\$1,000 plus \$50 lot See Additional Fees below for possible additional fees
Infrastructure Plan		\$3,600 plus \$400 per disturbed acre – 1st Submission See Additional Fees below for possible additional fees
Infrastructure Plan - Amendment		\$1,000 See Additional Fees below for possible additional fees
Construction Plans (Fee includes associated easement plat and bond estimate review. Additional fee for Review of Preliminary Soils Map required when Type 1 Soils Map has not been prepared by the County.)		\$2,500 for 2-lot subdivision (including residue) \$3,600 plus \$250 per lot/unit – 1 st Submission for all other projects See Additional Fees below for possible additional fees
Construction Plan Amendment		\$1,000 plus \$50 per lot See Additional Fees below for possible additional fees
Additional Land Development Fees		
Resubmission and Late Fees	3 rd and Subsequent Submissions of Site Plans, Infrastructure Plans and Construction Plans	\$600 per submission
	Resubmission Late Fee	\$200
	Resubmission Late Fee – More than one year elapsed	50% of the original application fee (plus full VSMP fees if applicable)
	3rd and Subsequent Submissions of As-Builts	\$300
Consultant Expenses	Engineering Review	Actual Consultant Expense
	Community Architect Review	Actual Consultant Expense
	Telecommunications Review, for new wireless support structures greater than 50 feet in height	\$4,000 for Special Exception, Board Waiver or Site Plan Application (where applicable)
Streets	Street Sign Application (GIS fee)	\$30 plus cost of sign
	Street Name Change (Cost of sign will be reimbursed if not approved) (GIS fee)	\$30 plus postage, advertising and sign cost
	Street Resolutions/VDOT Acceptance into State System	\$500 plus \$400 per street segment
	Street Inspection	\$500 covers 2 inspections (pre- and post)
Technical Reviews and Studies	Traffic Impact Analysis Review	\$1,000
	Floodplain Study (Requires FEMA processing)	\$500
	Design Standards Modification Request	\$300
	Hydrogeological Study	\$1,500
	Limited Hydrogeological Assessment (LHA)	\$500
	LHA Preparation and Analysis	\$5,000
	Type 1 Soil Map & Report/ Review of Preliminary Soils Report	\$325 for less than 3 acres \$750 for 3 to 30 acres \$750 plus \$25 per acre in excess of 30 acres

Bonds	Initial Bond Estimate (only where not approved with larger Land Development application)	\$450 for Bonds up to \$300,000 in value \$900 for Bonds greater than \$300,000 in value
	Bond Reduction or Release Request	\$500 per request
Land Disturbing Permits*/ E&S³	LDP - Single Family w/Agreement in Lieu of Plan for E&S and SWM, as required for each individual SFH dwelling.	\$200 E&S \$209.00 SWM for disturbing over 1 acre \$250 additional fee if work started without a permit \$50 re-inspection fee for Stop work \$250 re-inspection fee for Notice to Comply
	Site/Construction/ Infrastructure Plans	\$200 plus 10% of E&S Bond if plan reviewed as part of a larger plan review \$25,000 maximum
	Minor site plans	\$200 plus \$50 per acre or 10% of E&S Bond, if one is required
	LDP and Zoning Permit not associated with a common plan of development	\$200 plus \$50 per acre \$75.00 zoning permit
		Applies to all items above except individual Single-Family Agreements: 10% of current E&S Bond or \$1,500, whichever is less for reinstatement of permit after Stop Work Order or work started without a permit \$250 re-inspection fee for Notice to Comply
	LDP Maintenance Fees Note: Paid annually on the anniversary date of permit issuance until construction completed and as-built approved.	\$1,200 disturbance $\geq$ 10,000 sq. ft. < 5 acres \$1,500 - disturbance $\geq$ 5 acres < 10 acres \$1,950 - disturbance $\geq$ 10 acres < 50 acres \$2,700 – disturbance $\geq$ 50 acres < 100 acres \$4,200 – disturbance $\geq$ 100 acres Maximum of Original Permit Fee
*Permits expire after one year		

³ For properties with an established agricultural use, the local fees for LDP/E&S permits shall be waived. On properties preparing for an agricultural use, local fees will be refunded upon establishment of the agricultural use. State fees will not be waived or refunded. The minimum parcel size is 25 acres. For the purposes herein, agricultural use is defined as the cultivation of land for the growing of crops and the rearing of animals to provide food, wool or other products.

Virginia Stormwater Management Program Fees Note: this fee includes the required fee payment to the State	New VSMP General/Stormwater Management, Including Review of SWM Facilities not Previously Approved by the County Note: Fee is based on the total area within common plans of development or sale	50% of fee upon application	50% due upon LDP application	Total Amount	Total Acres of Disturbance	
		\$1978	\$1978	\$3,956	≥ 10,000 sq. ft. to 5 acres	
		\$2251	\$2251	\$4,502	≥ 5 to 10 acres	
		\$2730	\$2730	\$5,460	≥ 10 to 50 acres	
		\$3665	\$3665	\$7,330	≥ 50 to < 100 acres	
		\$5594	\$5594	\$11,188	≥ 100 acres	
	Grandfathered Projects – VSMP submitted to the state, includes SWM facilities not previously approved by the county or additional SWM plan review is required. Note: Fee is based on the total area within common plans of development or sale	\$3,200 - disturbance ≥ 10,000 sq. ft. < 5 acres \$3,550 – disturbance ≥ 5 acres < 10 acres \$4,200 – disturbance ≥ 10 acres < 50 acres \$5,622– disturbance ≥ 50 acres < 100 acres \$8,500 – disturbance ≥ 100 acres				
	Modification or Transfer of VSMP Registration Note: Fee is based on the total area within common plans of development or sale on the approved permit. Modifications resulting in an increase in total disturbed acreage pay the difference in the initial permit fee and the permit fee that would have applied for the total disturbed acreage if new.	\$200 – disturbance ≥ 10,000 sq. ft. < 5 acres \$250 – disturbance ≥ 5 acres < 10 acres \$300 – disturbance ≥ 10 acres < 50 acres \$450 – disturbance ≥ 50 acres < 100 acres \$700 – disturbance ≥ 100 acres				
	VSMP Maintenance Fees Note: Paid annually by the anniversary date of permit coverage until a Notice of Termination is effective.	\$400 – disturbance ≥ 10,000 sq. ft. < 5 acres \$500 – disturbance ≥ 5 acres < 10 acres \$650– disturbance ≥ 10 acres < 50 acres \$900 – disturbance ≥ 50 acres < 100 acres \$1,400 – disturbance ≥ 100 acres				

PAGE COUNTY LAND USE FEE SCHEDULE
(no levy collected)

ZONING PERMITS	
Residential (new homes, additions to existing homes, and porches)	200.00
Residential Accessory (new accessory structures, additions to existing accessory structures, decks)	45.00
Commercial (new structures, additions to existing commercial structures, and porches)	300.00
Commercial Accessory (new accessory structures, additions to existing accessory structures, decks)	75.00
Towers (new towers and/or collocating antennas on an existing tower)	1600.00
Signs (any type)	90.00

ADMINISTRATIVE	
Boundary Line Adjustment	100.00
Partition Deed (one lot)	200.00
Home Occupation/Business License Review	
a. Expedited	25.00
b. Non-Expedited	50.00
Zoning Certification Letter	50.00
Public Hearing Sign Deposit (for SUPs, Rezoning, Variances & Appeals)	50.00
Re-Inspection Fee	40.00
Failure to Obtain a Permit	Double the cost of the permit

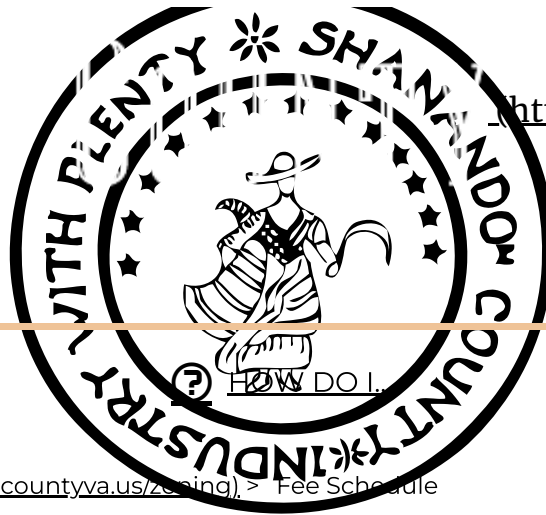
SPECIAL USE PERMITS	
Special Use Permit (fee is per parcel, unless parcels are contiguous)	900.00
Special Use Permit for Home Occupation	500.00
Special Use Permit for new Telecom Towers	5,800.00
Special Use Permit for Collocating Antennas > 20 ft over highest point of existing tower	2,200.00

SITE PLANS	
Non-Residential Site Plans	1,000.00
Residential Site Plans	500.00

REZONING	1,000.00 PLUS 50.00 per acre; parts of an acre will be rounded up
VARIANCE	500.00
APPEAL TO THE BZA	600.00

SUBDIVISIONS – CLASS A & B	
Preliminary Plat (includes 2 reviews)	500.00
a. Upon submittal for 3rd preliminary review, this add'l amount will be charged	250.00
Final Plat	500.00 PLUS 40.00 per lot

ORDINANCE FEES	
Zoning Ordinance	\$40.00 + \$4.00 by mail
Subdivision Ordinance	\$15.00 + \$3.00 by mail
Trailer Park Ordinance	\$15.00 + \$3.00 by mail
Erosion and Sediment Ordinance	\$35.00 + \$3.50 by mail



<https://shenandoahcountyva.us/>)

Search Services, Events, etc.



MENU

[Home \(/\)](#) > [Zoning & Subdivision \(https://shenandoahcountyva.us/zoning/\)](https://shenandoahcountyva.us/zoning/) > [Fee Schedule](#)

 Services

 We Can Help



Fee Schedule

Home Occupations

Home Occupations	\$100.00
------------------	----------

Level 1 Home Business

Level 1 Home Business	\$200.00
-----------------------	----------

Rezoning

Residential/Commercial/Industrial	\$800.00 plus \$50.00 per acre*
Agriculture/Conservation	\$500.00 plus \$50.00 per acre*

Site Plan Review

Commercial/Industrial	\$1500.00 plus \$100.00 per acre
Residential	\$1000.00 plus \$100.00 per unit
Institutional – Churches/Schools	\$500.00 plus \$20.00 per acre

Special Use Permits

Level 2 Home Business	\$400.00
Other	\$500.00
Telecommunication Towers	\$4,500.00

Subdivision Approval

Preliminary Plat	\$1500.00 plus \$100.00 lot
Final Plat	\$1000.00 plus \$100.00 lot
Administrative (One Lot)	\$100.00
Boundary Line Adjustment	\$50.00
Family Subdivision/Ag & Forestal	\$35.00
Zoning Ordinance Text Amendment	\$300.00

Board of Zoning Appeals

Appeal or Variance Request to Board of Zoning Appeals \$400.00

Zoning Permit

Residential (New Dwelling)	\$100.00
Residential Additions/Accessory Structures	\$35.00
Commercial/Industrial/Other	\$200.00
Commercial Additions/Accessory Structures	\$75.00
Signs	\$35.00
Inspection prior to issuance of permit	\$50.00
Airport Zoning Appeals	\$100.00

Effective 07/01/19

Navigation

[Applications \(https://shenandoahcountyva.us/zoning/applications/\)](https://shenandoahcountyva.us/zoning/applications/)

[Quick Reference for Zoning and Subdivision \(https://shenandoahcountyva.us/zoning/zoning-quick-reference/\)](https://shenandoahcountyva.us/zoning/zoning-quick-reference/)

[Fee Schedule \(https://shenandoahcountyva.us/zoning/fee-schedule/\)](https://shenandoahcountyva.us/zoning/fee-schedule/)

[Boards & Committees \(https://shenandoahcountyva.us/zoning/boards-committees/\)](https://shenandoahcountyva.us/zoning/boards-committees/)

[Report a Damaged or Missing Road Sign \(https://shenandoahcountyva.us/zoning/report-downed-missing-road-sign/\)](https://shenandoahcountyva.us/zoning/report-downed-missing-road-sign/)

Contact Zoning & Subdivision

- 📍 600 North Main Street
Suite 107
Woodstock, VA 22664-1855
[Map](http://maps.google.com/?q=600+North+Main+Street%0D%0ASuite+107%0D%0AWoodstock%2C+VA++22664-1855) (<http://maps.google.com/?q=600+North+Main+Street%0D%0ASuite+107%0D%0AWoodstock%2C+VA++22664-1855>).
- 🕒 M-F: 8:30am - 5pm
- ✉ [Email](https://shenandoahcountyva.us/zoning/contact/) (<https://shenandoahcountyva.us/zoning/contact/>).
- ☎ tel: (540) 459-6185
fax: (540) 459-6193

We Can Help You

- [Find My Zoning](https://shenandoahcountyva.us/zoning/find-my-zoning/) (<https://shenandoahcountyva.us/zoning/find-my-zoning/>).
- [Download Planning & Zoning Forms](https://shenandoahcountyva.us/zoning/applications/) (<https://shenandoahcountyva.us/zoning/applications/>).
- [View Zoning Fees](https://shenandoahcountyva.us/zoning/fee-schedule/) (<https://shenandoahcountyva.us/zoning/fee-schedule/>).
- [Report a Missing or Damaged Road Sign](https://shenandoahcountyva.us/zoning/report-downed-missing-road-sign/) (<https://shenandoahcountyva.us/zoning/report-downed-missing-road-sign/>).

© 2022 Shenandoah County



<https://www.facebook.com/shenandoahcounty>

[LEGAL](https://shenandoahcountyva.us/legal/) (<https://shenandoahcountyva.us/legal/>).

[EMPLOYEE ACCESS](https://shenandoahcountyva.us/employees/) (<https://shenandoahcountyva.us/employees/>).

[PRIVACY](https://shenandoahcountyva.us/privacy-policy/) (<https://shenandoahcountyva.us/privacy-policy/>).



Warren County

Planning Department

Fee Schedule

SUBDIVISION FEES

Class A Subdivision	\$250.00, plus \$100.00 for each lot
Class B Subdivision	\$500.00, plus \$100.00 for each lot
Class C Subdivision	\$1,000.00, plus \$100.00 for each lot
Family Subdivision or Agricultural Use Only	\$200.00, plus \$100.00 for each lot
Subdivision Variance	\$200.00
Boundary Adjustment	\$ 50.00
Bond/Letter of Credit Renewal	\$250.00

ZONING FEES

Conditional Use Permit	
For-Profit	\$500.00
Non-Profit	\$200.00
Rezoning	\$500.00, plus \$100.00 per acre
Zoning Permits	
Accessory Structure	\$15.00
Residential	\$25.00
Non-Residential	\$75.00
Sign Permit	\$15.00
Home Occupation Permit	\$15.00
Site Plan Review	
(Commercial and Industrial)	\$500.00 (\$50.00 per acre over 5 acres)
Zoning Variance or Appeal To Board of Zoning Appeals	\$250.00
Well and Septic Variance	\$100.00
Zoning Text Amendment	\$250.00
Bond/Letter of Credit Renewal	\$250.00

TEXTS

Zoning Ordinance	\$15.00
Zoning Map	\$15.00
Future Land Use Map	\$ 5.00
Subdivision Ordinance	\$ 5.00
Well & Septic Ordinance	\$ 5.00
Soil & Erosion Ordinance	\$ 3.00
Comprehensive Plan	\$20.00
Comprehensive Plan Survey	\$ 5.00
Build-out Study	\$ 5.00
Annual Report	\$ 2.50
Capital Improvement Plan	\$ 5.00
Copies	\$0.25/page

TAX MAP FEES

Set of Tax Maps	
30" x 42"	\$300.00
15" x 22"	\$100.00
11" x 17"	\$ 50.00

*Prices for individual GIS products are available upon request.

Approved By the Board of Supervisors on: **April 15, 2003**
Amended by the Board of Supervisors on: **April 6, 2004**

Douglas P. Stanley,
Clerk of the Board

ORDINANCE 2018-05

AN ORDINANCE TO ADOPT A REVISED COMMUNITY DEVELOPMENT FEE SCHEDULE EFFECTIVE JULY 1, 2018

BE IT ORDAINED by the Council of the **Town of Warrenton**, Virginia, that the following Fee Schedule is hereby adopted effective July 1, 2018:

PLANNING & ZONING		
DESCRIPTION	CODE	FEE
REZONING		
Rezoning	REZO 10	\$1,250 + \$150 per acre**
Planned Unit Development (PUD)	REZO 30	\$2,150 + \$150 per acre + COA Consultant Review Fees**
Text Amendment	ZONE 40	\$750 + Consultant Review Fee
Rezoning Additional submissions (4+)	REZO 50	\$500
Special Use Permit (SUP)	ZONE 30	\$750 + \$300 for each additional use
Comprehensive Plan Amendment	ZONE 20	\$1,600 if no rezoning required 50% of current rezoning fee if rezoning required
Section 15.2-2232 Compliance		\$800
BOARD OF ZONING APPEALS (BZA)		
Administrative Appeal	ZOAP 10	\$400
Variance	ZOAP 30	\$400
SITE DEVELOPMENT PLAN		
Site Development Plan (SDP)	SITE 10	\$3,600 + \$400x disturbed acres +\$200 late fee +600 (each review 3+)
BONDS		
Bond Reduction or Release	SITE 40	\$300
Bond Extension Fee		\$300/year
As-Built Submissions	SITE 50	\$300 (each 3+ review)
SUBDIVISION		
Preliminary / Final Plat (Commercial & Residential)	SUBD 10	\$2,000 + \$250 per lot
Easement Plat	SUBD 80	\$300
Re-approval (After 6 Months Signatures)		\$200
Administrative Plat / Boundary Adjustment	SUBD 60	\$650
Record Plat / Vacation of Plat	SUBD 80	\$200 (1-5 lots) \$300 (6-24 lots) \$400 (>25 lots)
Concept or Sketch Plan Review	SUBD 70	\$10 per parcel + \$25 reissue after reg/prop change
LAND DISTURBANCE PERMIT		
Single Family Residential (<10,000 SF)	SITE 50	\$200 + \$250 if work started without a permit; + \$50 re-inspection fee for Notice to Comply or Stop Work
Residential/Commercial (All)		Per Zoning Ordinance (Article 5-16)
Plan Review		\$200 + \$50/acre
E&S Compliance Inspection (Reinstatement)		50% of fee or \$1,500 (whichever less)

**Plus the cost of advertising and property notice mailings*

***or any portion thereof, whichever is greater*

DESCRIPTION	CODE	FEE
ARCHITECTURAL REVIEW BOARD (Per property or design as applicable)		
ARB Review	ZONE 10	\$100 (Non-Residential) / \$50 (Residential)
ARB Review – Administrative		\$25
REVIEW/MODIFICATION		
Amendments (All Permit Re-Submissions including SDP)*	ZONE 50	\$500* (condition amendment only) \$1,000* (minor) 50% of fee* (major)
ZONING PERMIT		
Temporary Use	ZOPM 10	\$100
Zoning Determination Letter	ZOPM 20	\$350
Zoning Confirmation Letter		\$30 / \$100 if requires Conditions of Development conformance review
Expedited Letter		\$250
Zoning Permit	ZOPM 30	\$75 / \$200 if requires Conditions of Development conformance review; No fee if in conjunction with Site Plan
Home Occupation Permit		\$25
Massage Therapy Business		\$75
Massage Therapist		\$50
Mobile Food Establishment		\$25 (included in zoning permit)
Zoning Inspections	ZOPM 40	\$80
Sign Permit	SIGN	\$50 + \$2 per SF \$100 + \$66.30 per sign (if building permit required) \$1,000 + Consultant Fee (Sign Package)
Special Events	SPEV	\$100
MISCELLANEOUS		
Administrative Waiver	ZONE 70	\$200
Waiver / Exception*		\$350*
ADDITIONAL FEES		
Property List	ZONE 70	\$25
New structure address		\$75
Deferrals / Continuance / Tabling*		\$200* (if re-advertised)
Work Without Permit (Permit After the Fact; Signs, E&S, Zoning, etc.)	ZOPM 40	\$100
Technical Reviews and Studies	ZONE 70	\$1,000 (Traffic Impact Analysis) \$500 (Floodplain Study) \$300 (Design Standards Modification) \$750 (Wireless/Telecommunication) As Charged by Consultant (E&S / SWM Review)

**Plus the cost of advertising and property notice mailings*

***or any portion thereof, whichever is greater*

BUILDING & FIRE		
DESCRIPTION	CODE	FEE
ELECTRIC SERVICE		
0 - 600 A	BLDG 32	\$50.00***
601 A - 1200 A		\$95.00***
Over 1200 A		\$160.00***
Temp Elect. Service	BLDG 30 RES / BLDG 31 COMM	\$55.00***
Residential Circuits	BLDG 33	\$55.00***
Commercial Circuits		\$0.01 / SF - \$100.00 Min.***
Electrical @ Residential Accessory Bldg.	BLDG 38	\$50.00***
ALARM SYSTEM		
Fire	BLDG 37	\$0.01 / SF - \$100.00 Min.***
GAS		
Residential Gas	BLDG 40	\$50.00***
Commercial Gas	BLDG 41	\$0.01 / SF - \$100.00 Min.***
LP Tank	BLDG 81	\$50.00***
PLUMBING		
Residential Plumbing	BLDG 40	\$50.00***
Commercial Plumbing	BLDG 41	\$0.01 / SF - \$100.00 Min.***
WATER LATERAL		
Residential	BLDG 44	\$55.00***
Commercial	BLDG 45	\$55.00***
SEWER LATERAL		
Residential	BLDG 42	\$55.00***
Commercial	BLDG 43	\$55.00***
IRRIGATION / RPZ		
Residential	BLDG 46	\$35.00***
Commercial	BLDG 47	\$50.00***
MECHANICAL		
Residential Mechanical	BLDG 50	\$50.00***
Commercial Mechanical	BLDG 51	\$0.01 / SF - \$100.00 Min.***
BUILDING		
New Residential Finished	BLDG 10	\$0.14 SF / \$100.00 Min.***
New Residential Unfinished	BLDG 11	\$0.14 SF / \$100.00 Min.***
New Commercial < 5,000 SF	BLDG 12	\$0.18 SF / \$150.00 Min.***
New Commercial > 5,000 SF		\$0.13 SF / \$150.00 Min.***
Residential Alterations	BLDG 20	\$0.13 SF / \$75.00 Min.***
Commercial Alterations	BLDG 21	\$0.17 SF / \$100.00 Min.***
Roofing / Siding Commercial	BLDG 27	\$65.00***
Retaining Walls - Commercial	BLDG 12	\$0.18 SF / \$150.00 Min.***
Retaining Walls - Residential	BLDG 11	\$0.12 SF / \$75.00 Min.***
Accessory Structures		\$50.00***
Moved Structures	BLDG 24 RES / BLDG 25 COMM	\$65.00***
MASONRY FIRE PLACE / FLUE		
Residential	BLDG 16	\$65.00***
Commercial	BLDG 17	\$65.00***

***Plus 2.00% Virginia Levy Fee – subject to change without notice, set by State of Virginia

****Returned if Applicant Prevails

DESCRIPTION	CODE	FEE
MISCELLANEOUS		
Sprinkler System	BLDG 68	\$0.01 / SF - \$100.00 Min.***
Hood Suppression		\$75.00***
Demo	BLDG 24 RES / BLDG 25 COMM	\$65.00***
Re-inspection	BLDG 60	\$50.00
Permit Renewal / Administrative	BLDG 60 / BLDG 81	\$45 per 6 months
Consultation	BLDG 60	\$50.00
Modification		\$75.00
Signs	SIGN	\$65.00***
After Hours Inspect.	BLDG 81	\$200.00
Certificate of Occupancy (C of O)	BLDG 64	\$45.00
C of O; Existing Structure		\$100.00
Change of Use	BLDG 26	\$65.00
Tents	BLDG 66	\$50.00 1st + \$25.00 each additional***
Moved Structures	BLDG 24 RES / BLDG 25 COMM	\$65.00***
Appeals****	BLDG 81	\$500.00****
Work without permit – Minor or Major		\$100.00
Violation Notices	N/A	\$0.00
ELEVATORS		
Annual Certificate	BLDG 63	\$50.00
Repair Permit	BLDG 62	\$50.00*
New Elevator	BLDG 61	\$50.00 + \$20.00 per floor
POOLS		
Residential Pool	BLDG 48	\$65.00***
Commercial Pool	BLDG 49	\$0.07 SF / \$100.00 Min.***
PLAN REVIEW (PR)		
Residential Plan Review	BLDG 70	\$0.03 SF / \$50.00 Min.
Residential Electric PR		\$35.00
Residential Plumbing - Mechanical PR		\$35.00
Commercial Plan Review	BLDG 71	\$0.01 SF / \$100.00 Min.
Commercial Electric PR		\$45.00
Commercial Plumbing - Mechanical PR		\$45.00
Fire Suppression	BLDG 72	\$0.01 SF / \$75.00 Min.
Tenant Build-out	BLDG 13	\$0.03 SF / \$75.00 Min.
AMUSEMENT DEVICES		
Kiddie	BLDG 81	\$25.00***
Circulate / Flat > 20'		\$35.00***
Spectacular Ride		\$55.00***
Coasters < 30'		\$150.00***
All other devices		\$55.00***
After Hours Inspect.		\$200.00
FIRE OFFICIAL		
Open Burning or Blasting Permit	BLDG 81	\$50.00***
FP Inspection	ZONE 60	\$50.00 for 1 st 2,500 SF + \$0.01 for each additional SF

***Plus 2.00% Virginia Levy Fee – subject to change without notice, set by State of Virginia

****Returned if Applicant Prevails

**DRAFT ZONING ORDINANCE REVIEW
ARTICLES 3, 4, AND 5**

E. Nothing in this chapter shall be deemed to prevent the strengthening or restoring to a safe condition of any structure or part thereof declared to be unsafe by any official charged with protecting the public safety, upon order of such official

Section 2.4.9 – Percent of Damage (175-132)

The cost of land or any factors other than the cost of the structure are excluded in the determination of fair market value for the purpose of calculating the percent of damage. Such percentage shall be determined by the Town Manager or designee

Section 2.4.10 – Uses Under Special Use Permit Provisions (175-133)

Any use which is permitted by a Special Use Permit in a zoning district under the terms of this chapter (other than a change through the Town Council action from one nonconforming use to another nonconforming use) shall not be deemed a nonconforming use in such zoning district, but shall without further action be considered a conforming use.

ARTICLE 3 – ADMINISTRATION, DECISION MAKING, AND ENFORCEMENT

DIVISION 3.1 – ADMINISTRATIVE STAFF

Section 3.1.1 - Planning Director – Duties and Authority

The Director of the Department of Planning and Zoning ("Planning Director") is designated by the Town Manager to assist in the administration of this Ordinance. Any act authorized by this Ordinance to be carried out by the Planning Director may be delegated to staff under the Planning Director's direction, with appropriate authorization. The designated Planning Director for the purposes of this Ordinance is the Director of the Department of Planning and Community Development, or the head of the equivalent department that carries out the planning and zoning functions of the Town.

Section 3.1.2 - Zoning Administrator – duties and authority (175-147)

The Director of Planning shall be designated as the Zoning Administrator and have all necessary authority for the enforcement and administration of the Zoning Ordinance. The Zoning Officer, or other individual as appointed by the Town Manager, shall serve as the deputy of the Zoning Administrator.

Section 3.1.3 - Building Inspector

All building inspections in the Town of Front Royal shall be conducted by the Warren County Building Inspections Department.

Section 3.1.4 - Flood Plain Administrator

The Director of the Department of Planning and Zoning, or their designee, shall act as the Floodplain Administrator.

DIVISION 3.2 – DECISION-MAKING BODIES

Section 3.2.1 - TOWN COUNCIL

The Town Council of Front Royal has adopted this Zoning Ordinance and must approve and adopt any amendments to either the text or map. For all legislative land use applications, the Town Council shall review the recommendation of the Planning Commission and determine whether to grant a Special Use Permit ("SUP") or adopt an Amendment to re-zone or conditionally re-zone a property.

Section 3.2.2 - PLANNING COMMISSION

The duties of the Planning Commission shall be as described in Chapter 28, Section 5 of the Town of Front Royal Municipal Code.

The Planning Commission shall review and provide a recommendation to the Town Council for legislative land use applications, including Special Use Permits or Amendments to the Zoning Map.

Section 3.2.3 - BOARD OF ZONING APPEALS

1.Membership and Terms of Office of the Board of Zoning Appeals (175-138)

A. A Board consisting of five (5) Town residents shall be appointed by the Circuit Court of the county. Members of the Board shall each be compensated in an amount determined by the Town Council. Members shall be removable malfeasance, misfeasance or nonfeasance, upon written charges and after public hearing. Appointments for vacancies occurring otherwise than by expiration of term shall in all cases be for the unexpired term.

B. The term of office shall be for five (5) years, except that, of the first five (5) members appointed, one (1) shall serve for five (5) years, one for four (4) years, one for three (3) years, one for two (2) years and one for one (1) year. One (1) of the five (5) appointed members may be an active member of the Planning Commission.

C. Members may be removed for cause by the appointing authority upon written charges and after a public hearing held after at least fifteen (15) days notice.

D. Any member of the Board shall be disqualified to act upon a matter before the Board with respect to property in which the member has an interest.

E. The Board shall choose annually, from its own membership, its own Chairman, Vice Chairman, who shall act in the absence of the Chairman, and Secretary.

2. Powers of the Board of Zoning Appeals (175-139)

The Board of Zoning Appeals shall have the following powers and duties:

A. To hear and decide appeals from any order, requirement, decision and determination made by an administrative officer in the administration or enforcement of this chapter.

B. To authorize, upon appeal in specific cases, such variance from the terms of the chapter as will not be contrary to the public interest when, owing to special conditions, a literal enforcement of the provisions will result in unnecessary hardship, provided that the spirit of the chapter shall be observed and substantial justice done, as follows:

1. When a property owner can show that his property was acquired in good faith and where, by reason of the exceptional narrowness, shallowness, size or shape of a specific piece of property at the time of the effective date of the chapter, or where, by reason of exceptional topographic conditions or other extraordinary situation or condition of the piece of property, or of the condition, situation, or development of property immediately adjacent thereto, the strict application of the terms of the chapter would effectively prohibit or unreasonably restrict the use of the property, or where the Board is satisfied, upon the evidence heard by it, that the granting of such variance will alleviate a clearly demonstrable hardship, as distinguished from a special privilege or convenience sought by the applicant, provided that all variances shall be in harmony with the intended spirit and purpose of the chapter.
2. No such variance shall be authorized by the Board, unless it finds:
 - a. That the strict application of the chapter would produce undue hardship.
 - b. That such hardship is not shared generally by other properties in the same zoning district and the same vicinity.
 - c. That the authorization of such variance will not be of substantial detriment to adjacent property and that the character of the district will not be changed by the granting of the variance.
3. No such variance shall be authorized except after notice and hearing as required by Section 15.2-2204 of the Code of Virginia as amended.

4. No variance shall be authorized unless the Board finds that the condition or situation of the property concerned or the intended use of the property is not of so general or recurring a nature as to make reasonably practicable the formulation of a general regulation to be adopted as an amendment to the chapter.
5. In authorizing a variance, the Board may impose such conditions regarding the location, character and other features of the proposed structure or use as it may deem necessary in the public interest and may require a guaranty or bond to ensure that the conditions imposed are being and will continue to be complied with.
6. In the event that a variance is not granted, the same variance application, or a variance application that is substantially the same, may not be submitted to the Board for consideration for a period of one (1) year from the date on which the variance request was denied.

C. To hear and decide appeals from the decision of the Zoning Administrator.

D. To hear and decide applications for interpretation of the district map where there is any uncertainty as to the location of a district boundary. Public hearings after appropriate notice must be held prior to such adjustments. The Board shall not have the power to change substantially the locations of district boundaries as established by this chapter. The Board shall not have the power to rezone property.

3. Rules and Regulations of the Board of Zoning Appeals (175-140)

A. The Board of Zoning Appeals shall adopt such rules and regulations as it may consider necessary.

B. The meeting of the Board shall be held at the call of its Chairman or at such time as a quorum of the Board may determine.

C. The Chairman or, in his absence, the Acting Chairman may administer oaths and compel the attendance of witnesses.

D. The Board shall keep minutes of its proceedings, showing the vote of each member upon each question or, if absent or failing to vote, indicating such fact. It shall keep records of its examinations and other official actions, all of which shall be immediately filed in the office of the Board and shall be a public record.

E. All meetings of the Board shall be open to the public.

F. A quorum shall be at least three (3) members.

G. A favorable vote of three (3) members of the Board shall be necessary to reverse any order, requirement, decision or determination of any administrative official or to decide in favor of the applicant on any matter upon which the Board is required to pass.

4. Appeals to the Board of Zoning Appeals (175-141)

A. An appeal to the Board may be taken by any person aggrieved or by any officer, department, board or bureau of the county or municipality affected by any decision of the Zoning Administrator. Such appeal shall be taken within thirty (30) days after the decision appealed from by filing with the Zoning Administrator and with the Board a notice of appeal specifying the grounds thereof. The Administrator shall forthwith transmit to the Board all the papers constituting the record upon which the action appealed from was taken. An appeal shall stay all proceedings in furtherance of the action appealed from unless the Zoning Administrator certifies to the Board that by reason of facts stated in the certificate a stay would, in his opinion, cause imminent peril to life or property, in which case proceedings shall not be stayed otherwise than by a restraining order granted by the Board or by a court of record, on application and on notice to the Zoning Administrator, and for good cause shown.

B. From notices of violation for temporary or seasonal commercial uses, parking of commercial trucks in residential districts or similar short-term, recurring violations, as determined by the Zoning Administrator, an appeal shall be filed within ten (10) days of the date of receipt of such notice of violation.

5. Appeal Procedure (175-142)

Appeals shall be mailed to the Board of Zoning Appeals in care of the Zoning Administrator, and a copy of the appeal shall be mailed to the Secretary of the Planning Commission. A third copy shall be mailed to the individual, official, department or agency concerned, if any.

6. Public Hearing of Application of Appeal (175-143)

The Board shall fix a reasonable time for the hearing of an application or appeal, give public notice thereof as well as due notice to the parties in interest and decide the same within sixty (60) days. In exercising its powers, the Board may reverse or affirm, wholly or partly, or may modify an order, requirement, decision or determination of an administrative officer or decide in favor of the applicant on any matter upon which it is required to pass under this chapter or effect any variance from the chapter. The Board shall keep minutes of its proceedings and other official actions, which shall be filed in the office of the Board and shall be

public records. The Chairman of the Board or, in his absence, the Acting Chairman may administer oaths and compel the attendance of witnesses.

7. Appeal of Decision of Board of Zoning Appeals (175-144)

A. Any person or persons jointly or severally aggrieved by any decision of the Board of Zoning Appeals, or any taxpayer or any officer, department, board or bureau of the municipality, may present to the Circuit Court of the county a petition specifying the grounds on which aggrieved within thirty (30) days after the filing of the decision in the office of the Board.

B. Upon the presentation of such petition, the Court shall allow a writ of certiorari to review the decision of the Board of Zoning Appeals and shall prescribe therein the time within which a return thereto must be made and served upon the relator's attorney, which shall not be less than ten (10) days and may be extended by the Court. The allowance of the writ shall not stay proceedings upon the decision appealed from; but, the Court may, on application, on notice to the Board and on due cause shown, grant a restraining order.

C. The Board of Zoning Appeals shall not be required to return the original papers acted upon by it, but shall be sufficient to return certified or sworn copies thereof or of such portions thereof as may be called for by such writ. The return shall concisely set forth such other facts as may be pertinent and material to show the grounds of the decision appealed from and shall be verified.

D. If, upon the hearing, it shall appear to the Court that testimony is necessary for the proper disposition of the matter, it may take evidence or appoint a Commissioner to take such evidence as it may direct and report the same to the Court with his findings of fact and conclusions of law, which shall constitute a part of the proceedings upon which the determination of the Court shall be made. The Court may reverse or affirm, wholly or partly, or may modify the decision brought up for review.

E. Costs shall not be allowed against the Board, unless it shall appear to the Court that it acted in bad faith or with malice in making the decision appealed from.

Section 3.2.4 - BOARD OF ARCHITECTURAL REVIEW

A. Establishment and Terms of Office (175-84)

1. A Board to be known as the "Board of Architectural Review (BAR)" is hereby established and shall consist of five (5) voting members who shall be appointed by the Town Council. All members shall have a demonstrated interest competence or knowledge in historic preservation. One (1) member shall be a property owner/resident of an historic district overlay area and

one (1) shall have professional training or equivalent experience in architecture, history, American studies, architectural history, archaeology or planning. All members shall be residents of Warren County, with knowledge of and demonstrated interest in the historic character of the Town. These members shall serve terms of four (4) years each.

2. BAR members may be reappointed for consecutive terms.
3. The BAR shall elect from its own membership a Chairman and Vice Chairman, who shall serve annual terms as such and who may succeed themselves. The Board shall appoint a Secretary who shall serve at its pleasure.
4. When a vacancy occurs, a new appointment shall be made by the Town Council for the unexpired terms within sixty (60) days after the vacancy occurs. The Town Council shall publicly announce and solicit qualified candidates for Board of Architectural Review vacancies.
5. Any appointed member of the BAR may be removed from office by the Town Council for inefficiency, neglect of duties or malfeasance. An appointment to fill a vacancy shall be only for the unexpired term on the vacancy.
6. Members shall make every effort to attend at least one (1) training session annually sponsored by the Department of Historic Resources, the Preservation Alliance of Virginia or other organizations that are involved with historic preservation issues, design and review standards or other work of the BAR.

B. Duties, powers and responsibilities:

The Board of Architectural Review shall have the power and authority for issuing or denying certificates of appropriateness for construction, reconstruction, substantial exterior alteration, razing or relocation within the historic district overlay area. In addition, the Board shall have the following duties:

1. To assist and advise the Town Council, the Planning Commission and other Town departments, agencies and property owners in matters involving historically significant sites and buildings or other properties in historic districts, such as but not limited to appropriate land usage, parking facilities and signs.
2. To continuously evaluate conditions and to advise owners of historic landmarks or contributing structures or other properties in historic districts on problems of preservation.

3. To conduct studies deemed necessary by the Town Council or the Planning Commission concerning location of historic districts and means of preservation, utilization, improvement and maintenance of historic assets in the Town.
4. To propose additional historic districts or additions or deletions to districts.
5. To adopt standards for review to supplement the standards set forth in this Article.
6. To establish an appropriate system of markers for selected historic sites and buildings, including proposals for the installation and care of such historic markers, and to invite each owner of a building of historical significance to display the marker thereon.
7. To cooperate with and enlist assistance from the Virginia Department of Historic Resources, the National Trust for Historic Preservation and other interested parties, both public and private, in its efforts to preserve, restore and conserve local historic landmarks, buildings, sites or areas within the Town.
8. To prepare and adopt specific guidelines, illustrated as necessary, for those historic districts which have special characteristics and architectural features that are peculiar to the district and which should be preserved and to make these guidelines available to property owners within each historic district and to the general public. After these historic districts are approved, specific guidelines shall be adopted for such historic districts as may require specific guidelines.
9. To sponsor public information activities, when deemed appropriate, publicizing historic preservation efforts, which activities may include, but not be limited to, speaking engagements, handouts, press releases and films.
10. To hold public meetings as often as necessary to fulfill the responsibilities assigned by this Article.

C. Organization and Meetings:

1. The Chairman shall conduct the meetings of the BAR.
2. The Secretary shall keep the minutes of the meetings and a permanent record of all resolutions, motions, transactions and determinations.
3. All members of the BAR, except for advisory members, shall be entitled to vote; and the decisions of the BAR shall be determined by a majority vote.

4. A quorum of three (3) voting members present is required before the BAR may take any official action.
5. The BAR shall meet within twenty (20) days after notification by the Zoning Administrator of an application for a certificate of appropriateness or a permit requiring action by the BAR.
6. The Board of Architectural Review shall have regularly scheduled meetings at least four (4) times a year. The meetings of the BAR shall be open to the public, and a full and impartial hearing shall be granted. All regularly scheduled meetings shall be conducted in the evening hours for the convenience of the public.
7. The BAR shall vote and announce its decision on any matter properly before it not later than forty-five (45) days after the conclusion of the hearing on the matter, unless the time is extended with the written consent of the applicant.
8. In matters covering the procedures for meetings not covered by this document, the BAR may establish its own rules, provided that they are not contrary to Town policy or the intent of this Article.

D. Authority to Receive Funding and Advisory Services:

1. All persons interested in the preservation of historic buildings or historic sites in the Town are invited to make gifts, devises and bequests to the Town to be used for that purpose. All such donations, other than money, shall be subject to acceptance by the Town Council. All donations of money shall be made through the Department of Finance, and it is hereby authorized and directed to receive such donations and to deposit them in a special fund to be known as the "Historic Buildings and Sites Trust Fund," and shall be used only for the purpose of preserving and promoting the preservation of historic buildings and sites in the Town. Expenditures from such fund shall be made by the Town Manager as authorized, from time to time, by the Town Council.
2. The BAR may seek federal, state or private grants or funding to assist in the performance of its duties as herein defined.
3. Within the limits of funds that may be made available to the BAR for the performance of its work, the BAR may obtain services of qualified persons to advise and assist the BAR as required.
4. Upon request of the BAR, with approval by the Town Manager, the departments, boards, commissions, offices and agencies of the Town

government shall furnish to the Board such available information and render such service as may be required for the exercise of the powers and performance of the duties of the BAR.

E. Creation of Historic Districts and Landmarks (175-85)

1. The Board of Architectural Review shall prepare and recommend for adoption as part of this Article a district boundary map and an inventory map covering the area or areas to be considered for inclusion in an historic district overlay area. These maps, when adopted in accordance with the provisions of the Code of Virginia Section 15.2-2285, shall be as much a part of this Article as if fully described herein and shall be filed as a part of this Article by the Clerk of the Town of Front Royal. The inventory map shall delineate local historic landmarks, contributing properties and noncontributing properties. The inventory and district boundary maps may be amended, from time to time, in the same manner as the Zoning District Map.
2. The Board of Architectural Review may propose to the Planning Commission and the Town Council such amendments as deemed appropriate, including the establishment of historic districts or revision to existing historic districts. Upon receipt of said proposal, the Council may initiate such amendment pursuant to [Division 5.2](#). The Board of Architectural Review shall prepare and submit simultaneously with said proposal a report to substantiate establishment of a historic district or a proposed amendment. Such report shall establish and define the historic district boundaries, as delineated upon an appropriate map, as well as describe the historic and/or architectural significance of the buildings, structures or sites to be protected, and the special characteristic, qualities and/or fabric to be preserved, and shall describe present trends and conditions, current and long-range planning and desirable public objectives for preservation. The report may also include plans for public action in or adjoining a district that is likely to affect its character or development/
3. Applications for the creation or expansion of an historic district or for the designation of landmarks or landmark sites may also be filed by the Planning Commission, the Town Council, the owner, the contract purchaser with the owner's written consent or the owner's agent or sixty percent (60%) of the owners of all buildings within a proposed historic district. All requests shall be made in the same manner as other zoning amendments, as provided for in [Division 5.2](#).
4. Any historic district and any historic district map which have been created and adopted by the Front Royal Town Council prior to the amendment of

this Article shall not be repealed but shall remain intact and in effect, subject now to the provisions of this amended Article.

5. Any historic district created and adopted by the Front Royal Town Council after February 1, 1993, shall remain in effect, except as amended or modified pursuant to the regulations herein, for an initial maximum period of ten (10) years from the date of its adoption. Subsequent action by the Front Royal Town Council shall be made to continue the district beyond the initial ten-year period.
6. Upon the presentation of a request to withdraw from an adopted subarea within the historic district overlay area, with such request having been duly executed by at least sixty-seven percent (67%) of the owners of taxable parcels (with a vote for each separate tax parcel) within the designated historic subarea, the Town Council, at its next meeting, shall take appropriate action to remove the historic district designation. This provision shall be applicable only where the historic resource overlay area shall have been in place for a period of not less than two (2) years.

F. Criteria for Selection of Historic Districts and Landmarks (175-86)

Criteria for evaluating the merits of a given structure or space shall be based on architectural features as well as historic factors. Certain buildings or areas, although not associated with an historic personage or event, may be valuable examples of the Town's physical and cultural heritage. Structures of local significance shall be evaluated, as well as those of state and national significance, and any structures individually listed upon the National Register of Historic Places or the Virginia Landmarks Register shall be designated upon the Town Register. In addition, such evaluation shall be based on the following specific matters:

A. Architectural and landscape style: The evaluation shall respect the qualities of each architectural and landscape style and shall judge a structure's merit on how well it exemplifies the distinguishing characteristics of said style. Consideration will be given to:

1. The significance of the architectural design.
2. The scale and/or interrelationships of the structures and/or environmental features.
3. The significant patterns of development.
4. The quality of workmanship.
5. The amount of surviving original fabric.

6. The original location and use.
7. The remaining outbuildings or dependencies.
8. The surrounding environment; gardens, landscaping and walks.
9. The aesthetic quality.
10. The original integrity of the structure and its details.

B. Historical and/or cultural significance:- Structures or spaces relating to one (1) or more of the following criteria will be considered historically or culturally valuable:

1. Association with an historic personage.
2. Association with an historic event.
3. Work of the leading architect or master craftsman.
4. Site or structure of cultural significance.

C. In addition, sole or infrequent surviving building types and structures not historic in themselves but adding to the character of an historic district need to be looked at as potentially deserving preservation.

G. Boundaries of Historic Districts or Landmarks (175-87)

A. The boundaries of an historic district or overlay area shall, in general, be drawn to include areas containing buildings or places in which historic events occurred or having special public value because of notable architectural or other features relating to the cultural or artistic heritage of the community of such significance as to warrant conservation and preservation. The district may include either individual buildings or places of such character and a reasonable distance beyond, or it may include areas or groupings of structures which have significance relative to their patterns of development or social and economic or architectural interrelationships even though some structures in the area might not possess significant merit when considered alone. In any case, the location of the district shall be based upon careful studies that describe the characteristics of the area and support the purposes of conservation and preservation.

B. The boundaries of an historic district shall conform to the boundaries of individual lots of record. Where a street is proposed as an historic district boundary, the edge right-of-way adjoining the district shall be deemed the district boundary.

C. Historic districts are created as special overlay districts to be superimposed on other zoning districts contained in these regulations, and are to be so designated

on the Official Zoning Map. The uses, housing types, minimum lot requirements, minimum yard requirements, maximum height and accessory uses and accessory signs shall be determined by the regulations applicable to the other districts over which the historic districts superimposed, except as these other districts may be modified by application of the regulations in the historic district.

D. A map delineating the adopted boundaries of each historic district shall be maintained in the office of the Zoning Administrator.

H. Certificate of Appropriateness Required (175-88)

A. No building or structure within the Chester Street and downtown business areas of the Historic Front Royal District shall be erected, reconstructed, altered or restored unless and until an application for a certificate of appropriateness shall have been approved under the provisions of this Article.

B. No building or structure within the downtown residential area of the Historic Front Royal District or property designated as a local historic landmark shall be erected, reconstructed or undergo substantial exterior alteration unless and until an application for a certificate of appropriateness shall have been approved under the provisions of this ordinance.

C. No building existing in any designated historic district shall be demolished or removed, in whole or in part, unless and until an application or a certificate of appropriateness shall have been approved by the Board of Architectural Review.

D. No application for a certificate of appropriateness to demolish a building in any historic district shall be considered by the BAR until a public hearing has been held thereon, pursuant to the notice of public hearing as required in Section 15.2-2204, Code of Virginia, as amended.

I. Board Review of Major Actions (175-89)

A. The following major actions and any other actions not specifically exempted by the terms of this ordinance or which, in the opinion of the Administrator, may constitute a major permanent and detrimental change to the character of an historic district shall be approved only after a public meeting and favorable action by a majority vote of the Board of Architectural Review:

1. The razing, demolishing or moving of a designated landmark or contributing structure.
2. Construction of any new main building, or an accessory building which exceeds five hundred (500) square feet in size within a designated historic district or on a site adjacent to a designated landmark site.

3. Any addition to or substantial alteration of a designated landmark or structure on a contributing property, which increases the square footage of the structure or otherwise alters substantially its size, height, contour or outline.
4. Any significant change or alteration of the exterior architectural style of a designated landmark or contributing property.
5. Any addition to a non-contributing structure, which alters substantially the size height, contour or outline by increasing the square footage and/or volume of the structure by one hundred percent (100%) or more of the original structure.
6. Any fence or sign that is not in conformance with the design guidelines adopted in accordance with this Article.
7. Any other major actions not specifically covered by the terms of this section but which would have a substantial effect on the character of the Historic District.

B. The Board of Architectural Review shall be guided in its review by the guidelines and criteria established in **Section 3.2.4(M)**. The BAR shall have authority to request modifications in order to comply with the guidelines and criteria.

C. The Board of Architectural Review shall not disapprove an application except with respect to the criteria and guidelines set forth in **Section 3.2.4(M)**. The BAR shall give reasons for its decisions, shall act promptly on applications before it and shall coordinate its procedures with those of other agencies and individuals charged with the administration of this Article. The BAR shall be strict in its judgment of plans for those structures designated as landmarks and contributing properties but shall be lenient in its judgment of plans for non-contributing properties. For plans involving new construction the Board's concern shall focus on whether such plans are compatible with and enhance the historic or architectural value of surrounding structures or the surrounding area.

D. In all final decisions rendered pursuant to this Article, the BAR shall briefly state its findings in writing, and in the case of disapproval, it may make recommendations to the applicant with respect to the design, texture, material, color, line, mass, dimension or lighting of the alteration or the improvement involved. The requirements of this section shall be deemed to have been satisfied if such findings and recommendations, if any, are set forth in the regularly maintained minutes of the BAR.

J. Actions Requiring Administrative Review (Historic District) (175-89.1)

A. The following actions will require administrative review by the Zoning Administrator:

1. The razing, demolishing, or moving of a non-contributing structure or a structure which is substantially damaged to the point of being completely uninhabitable.
2. Construction of a new accessory structure less than five hundred (500) square feet in size within a designated historic district or on a site adjacent to a designated landmark site that is generally in keeping with the character of the historic district and its surroundings.
3. Substantial alteration of a non-contributing structure.
4. Any addition to a non-contributing structure, which increases the size (square footage and/or volume) of the structure by less than one hundred percent (100%) of the original structure.
5. Landscaping, fences and signs in conformance with the design guidelines adopted in accordance with this Article.

B. The Zoning Administrator shall be guided in his decisions by the standards and guidelines adopted by the Board of Architectural Review and shall have authority to request modifications of specific proposal in order that the proposal may comply with said standards and guidelines. In any case where the Administrator is uncertain of his authority to act on a particular application under this section or in any case where the Administrator and the applicant cannot agree on changes in the proposal, the application shall be referred to the Board of Architectural Review for action by said Board. In case of disapproval by the Administrator, the applicant may appeal the Administrator's decision within thirty (30) days thereof to the Board of Architectural Review. The Administrator shall keep a record of his decisions under this section and shall report such decisions to the Board of Architectural Review at its next regular meeting.

K. Exemptions from Review (Historic District) (175-90)

Certain minor actions which are deemed not to permanently affect the character of the historic district are exempted from review for architectural compatibility. Such actions shall include:

1. Repainting resulting in the same or a similar color. (Original painting of masonry surfaces is not exempted from review.)

2. Repair or construction in kind, resulting in no significant changes in appearance or form.
3. Addition or deletion of storm windows and doors, window gardens, awnings, temporary canopies or similar appurtenances and window air conditioners.
4. Addition or deletion of television or radio antennas, skylights or solar collectors in locations not visible from a public place.
5. Installation of plant materials but not including landscape treatment which substantially alters the contour of a contributing property or involves landscaping or construction of fences, pools and the like that affect the appearance of a contributing property.
6. Permitted outside storage in a residential or commercial district that does not require structural changes.
7. Improvements, alterations and renovations that can be accomplished without obtaining a building permit, except fences, signs, and window replacement.
8. Any changes to a structure that are not visible from a public street, alley or public place.
1. Temporary window signs

L. Authority to Stop Work (Historic District) (175-90.1)

The Zoning Administrator shall have authority to order that work be stopped and that an appropriate application be filed or reviewed in any case where, in his opinion, the action may produce arresting and spectacular effects, violent contrasts or materials or colors and intense and lurid colors or patterns or a multiplicity of incongruous details clearly inconsistent with the character of the present structures or with the prevailing character of the surroundings and the historic district or when it appears that the work does not conform to the list of administrative review or exempted actions stated herein and, in fact, is more extensive than originally represented.

M. Guidelines and Criteria for Review (Historic District) (175-91)

A. All reviewing bodies shall be guided by the following guidelines and criteria:

1. The historic archaeological or architectural value and significance of a structure and its relationship to the historic value of the surrounding area.

2. The age and character of the historic structure, its condition, and its probable life expectancy and the appropriateness of the proposed changes to the period or periods during which the structure was built.
3. The general compatibility of the site plan and the exterior design arrangement, texture and materials proposed to be used.
4. The view of the structure or area from a public street or road, present or future.
5. The present character of the setting of the structure or area and its surroundings.
6. The probable effect of proposed construction on trees, wooded areas or historic sites.
7. Any other factors, including aesthetic factors, which the reviewing bodies deem to be pertinent.
8. The appropriateness of the exterior architectural features of such building or structure to the compatibility with the exterior architectural features of landmarks, buildings or structures in the district, taking into consideration the following:
 - a. General design.
 - b. Character and appropriateness of design.
 - c. Form.
 - d. Proportion and scale.
 - e. Mass.
 - f. Configuration.
 - g. Arrangement.
 - h. Texture.
 - i. Material
 - j. The permanent color of exterior materials (excluding paint).
 - k. The relationship of such elements to similar features of structures in the immediate surroundings.
 - l. Congruity with the character of the Historic District.

B. The reviewing bodies shall not adopt or impose any specific architectural style in the administration of this Article.

C. The reviewing bodies shall also be guided by the purposes for which landmarks, landmark sites and historic districts are designated and by the particular standards and considerations contained in the Secretary of the Interior's Standards for Rehabilitation.

N. Issuance of Certificate of Appropriateness (Historic District) (175-92)

A. Within fifteen (15) days of approval for construction or alteration pursuant to **Section 3.2.4 (I)**, a certificate of appropriateness signed by the Zoning Administrator and bearing the date of issuance but subject to the provisions of **Section 3.2.4(N)(B)**, shall be made available to the applicant.

B. Any certificate of appropriateness issued **pursuant to Section 3.2.4 (I)** shall expire of its own limitations twelve (12) months from the date of issuance if the work authorized by said certificate has not commenced and, further, if any such work is suspended or abandoned for a period of twelve (12) months after being commenced. Any period or periods of time during which the right to use any such certificate is stayed pursuant to this Article shall be excluded from the computation of the twelve- month period.

O. Building Demolition and Relocation (Historic District) (175-93)

A. No historic landmark, building or structure within any historic district shall be razed, demolished or moved until the razing, demolition or movement thereof is approved by the Board of Architectural Review or approved on appeal as provided herein.

B. Notwithstanding the provisions of Subsection A, the owner of a historic landmark, building or structure shall, as a matter of right, be entitled to raze or demolish such a building or structure, provided that:

1. He has applied to the Town Council for such right;
2. The owner has, for the period of time set forth in the time schedule hereinafter contained and at a price reasonably related to its fair market value, made a bona fide offer to sell such building or structure and the land pertaining thereto to any person, firm, corporation, government or agency thereof or political subdivision or agency thereof which gives reasonable assurance that it is willing to preserve and restore the building or structure and the land pertaining thereto. In order to demonstrate the making of a bona fide offer to sell, the owner shall file a notice with the Zoning Administrator identifying the property and stating the offering price and the

name of the real estate agent, if any. No time period set forth herein shall begin to run until said notice has been filed. Within five (5) days of receipt, copies of the notice shall be delivered by the Zoning Administrator to the members of the Town Council, the members of the Planning Commission and the Town Manager; and

3. No bona fide contract, binding upon all parties thereto, shall have been executed for the sale of any such building or structure and the land pertaining thereto prior to the expiration of the applicable time period set forth in the time schedule hereinafter contained. Any appeal from the decision of the BAR, whether instituted by the owner or by any other proper party, notwithstanding the provisions herein pertaining to a stay on appeal, shall not affect the right of the owner to make the bona fide offer to sell. No offer to sell shall be made more than one (1) year after the final decision of the BAR, but thereafter the owner may renew his request to the BAR to approve the razing or demolition of the historic landmark, building or structure. The time schedule for offers to sell shall be as follows:

OFFERING PRICE

MINIMUM OFFER-TO-SELL

Period (Months)

Less than \$25,000.00	3
\$25,000.00 to \$39,999.99	4
\$40,000.00 to \$54,999.99	5
\$55,000.00 to \$74,999.99	6
\$75,000.00 to \$89,999.99	7
\$90,000.00 or more	12

4. For the purpose of this Article, a bona fide offer to sell shall be defined as a selling price not greater than ten percent (10%) more than the fair market value appraisal of a certified land appraiser employing appropriate, recognized appraisal criteria for the area in question. The Town shall retain the right to contest the bona fide nature of the offer as follows: the reasonable relationship of the offering price to the fair market value of the historic landmark, building or structure, by filing injunctive proceedings in the Warren County Circuit Court, whenever the Town obtains an appraisal

of the property in question by a certified land appraiser at a value at least ten percent (10%) below the offering price asked by the owner, regardless of any conflicting appraisal obtained by the property owner.

P. Appeals (Historic District) (175-94)

A. Any applicant aggrieved by a final decision of the Board of Architectural Review may appeal said decision to the Front Royal Town Council, provided that such appeal is filed, in writing, with the Town Clerk within ten (10) days after the final decision is rendered by the BAR. The Town Council will hear the matter at its next regularly scheduled meeting and will render its decision on the appeal at the following regularly scheduled meeting. The Council, in its discretion, may consider additional evidence and submissions during the period between meetings and at the second regularly scheduled meeting prior to rendering its decision.

B. Any applicant aggrieved by a final decision of the Board of Architectural Review following the decision rendered on appeal to the Front Royal Town Council, may appeal said decision to the Circuit Court of Warren County, Virginia, by filing a petition at law setting forth the alleged illegality of the BAR's action, provided that such petition is filed with the Circuit Court within thirty (30) days after the appealed decision of the Front Royal Town Council. The filing of said petition with the Circuit Court shall stay the decision of the BAR pending the outcome of the appeal, except that the filing of such petition shall not stay the decision of the BAR if such decision denies the right to raze or demolish an historic landmark, building or structure. The Circuit Court may reverse or modify the decision of the BAR, in whole or in part, if the Court finds, upon review, that the decision is arbitrary and constitutes an abuse of discretion. The Circuit Court may also affirm the decision of the BAR.

Maintenance, Public Safety, and Permitted Uses (Historic District) (175-95)

A. Nothing in this Article shall allow the BAR to prevent the routine maintenance or repair of any exterior elements of any building or structure so long as there is no change in form or materials; nor shall anything in this Article be construed to prevent the construction, reconstruction, alteration or demolition of any exterior elements that the authorized municipal officers shall certify as required by public safety.

B. Nothing in this Article shall be construed to prevent any use of any land, building or structure permitted by the regulations prescribed in this Chapter for the district in which such land, building or structure is otherwise located. Due to peculiar conditions of design and construction in historic neighborhoods where buildings and structures are often built close to the lot lines, it is in the public interest to retain a neighborhood's historic appearance by granting variances to normal yard

requirements, where appropriate and where it is deemed that such a variance will not adversely affect neighboring properties. The BAR may recommend to the Board of Zoning Appeals that such variance to standard yard requirements be made.

Q. Yard Variances (Historic District) (175-96)

Due to peculiar conditions of design and construction in historic neighborhoods where buildings and structures are often built close to the lot lines, it is in the public interest to retain a neighborhood's historic appearance by granting variances to normal yard requirements, where appropriate and where it is deemed that such a variance will not adversely affect neighboring properties. The BAR may recommend to the Board of Zoning Appeals that such variance to standard yard requirements be made.

Exemption for Public Works (Historic District) (175-98)

The Front Royal Town Council may exempt public structures, works, utilities and buildings from compliance with this Article where public safety is endangered or an emergency situation arises. Retroactive approval for emergency work undertaken shall be sought within thirty (30) days following completion of the work. All work shall strive to maintain architectural compatibility within the historic district for its public works and structures.

Section X.X - OATH REGARDING PROPERTY INTEREST OF LOCAL OFFICIALS (VA Code Sec 15.2-2287)

In accordance with Section 15.2-2287 of the Code of Virginia, petitions brought by property owners, contract purchasers or the agents thereof, shall be sworn to under oath before a notary public or other official before whom oaths may be taken, stating whether or not any member of the local planning commission or governing body has any interest in such property, either individually, by ownership of stock in a corporation owning such land, partnership, as the beneficiary of a trust, or the settler of a revocable trust or whether a member of the immediate household of any member of the planning commission or governing body has any such interest.

ARTICLE 4 – STANDARD REVIEW PROCEDURES

DIVISION 4.1 - ZONING PERMITS (175-134)

A. No buildings, structures or uses shall be started, reconstructed, enlarged or substantially altered until after a zoning permit has been obtained from the Zoning Administrator.

B. Each application for a zoning permit shall be accompanied by one (1) hard copy, or one (1) digital copy of an adequately dimensioned drawing, to scale, unless as otherwise specified.

The drawing shall show:

- the size, shape and dimensions of the parcel of land on which the building is to be constructed, as surveyed and prepared by a licensed surveyor or registered architect, the nature of the proposed use of the building or land, the location and arrangement of off-street parking,
- the location of such building or use with respect to the property line of said parcel of land and to the right-of-way of any street or highway adjoining said parcel of land, the developers drainage plan for properly distributing surface water and additional information as required by this chapter. Such dimensional drawing shall be prepared by a licensed surveyor or a registered engineer or architect for new main building.
- Any other information which the Administrator may deem necessary for the consideration of the application may be required. If the proposed building or use is in conformity with the provisions of this chapter, a permit shall be issued to the applicant by the Administrator.
- One (1) copy of the drawing shall be returned to the applicant with the permit.
- The required dimensional drawing is not required for applicants who have submitted site plans in accordance with [Chapter 148](#).

Section 4.1.1 - Duration of valid zoning permit

Any zoning permit issued shall become invalid if the authorized work is not commenced within one (1) year of the date of issuance or is suspended or abandoned for a continuous period of one (1) year. The Zoning Administrator may, upon good cause shown, extend a permit with or without charge for an additional period not exceeding one (1) year.

Section 4.1.2 - Zoning permit fees

Fees established by the Town Council, and posted in accordance with [Division 4.2 Fees](#), shall be paid at the time of application and are non-refundable.

Section 4.1.3 - Plans of Development (15.2-2286(A)(8))

1. As consistent with § 15.2-2286(A)(8) of the Code of Virginia, prior to issuance of a Zoning Permit, an applicant must submit a Plan of Development. Plans of Development will be either a Site Plan or a Sketch Plan, according to the size and complexity of the development. Site Plan required. For any development other than one single- or two-family home, a Site Plan will be required. For developments of one single- or two-family home or an addition to a single- or two-family home, a Sketch Plan will be required. Both Site Plans and Sketch Plans must be submitted in a printed copy as well as in digital format as a Portable Document Format (PDF) file.
2. Site plan requirements in accordance with § 15.2-2286(A)(8) of the Code of Virginia. Site plans shall require plans and profiles of water lines, sewer lines and storm drains, as well as storm water management ponds where applicable,

parking lot details, size of spaces and travel aisles, landscaping plans, with individual plant species identified.

3. Sketch plan including the project name, north arrow, vicinity sketch, proposed use, location of trash receptacle, lighting plan, building elevations, building colors, building materials, roof drainage system, sprinkler systems, and compliance with the Chesapeake Bay Act.

Section 4.1.4 - Foundation Location Inspections (175-134.1)

A. For the purpose of this section, a "foundation" shall be defined as that portion of the building consisting of the footers, slab, block, concrete or other building materials constructed under and upon the ground and rising no more than three (3) feet above grade.

B. No building or structure shall be constructed beyond the foundation stage until such time as the foundation location has been inspected and approved by the Administrator. Upon construction of a foundation, the builder shall submit to the Zoning Administrator and the Building Inspector a plat prepared by a certified land surveyor certifying the location of the foundation and all structural projections therefrom upon the property. The Zoning Administrator shall respond within ten (10) days. In the event that the foundation is in its proper location as shown on the zoning permit and all building setbacks and area requirements have been met, the Zoning Administrator shall mark the plat approved. If the plat is rejected, the Zoning Administrator shall give to the builder a written basis for the rejection.

C. No certificate of occupancy shall be issued without a foundation location survey plat marked approved by the Zoning Administrator.

D. The provisions of this section shall not apply to accessory buildings, as defined in Section 175-3, with an area of two hundred (200) square feet or less. Furthermore, the Zoning Administrator may waive the foundation location survey where previous surveys adequately demonstrate that the new building or addition, as proposed by the zoning permit application, will comply with the required setbacks.

Section 4.1.5 - Effect on Permits Issues Prior to Adoption (175-148)

Nothing contained herein shall require any change in the plans or construction of any building or structure for which a permit was granted prior to the effective date of this chapter. However, such construction must commence within thirty (30) days after this chapter becomes effective and be completed within a period of one (1) year after construction is initiated. If construction is discontinued for a period of six (6) months or more, further construction shall be in conformity with the provisions of this chapter for the district in which the operation is located.

DIVISION 4.2 – FEES

The Town Council shall adopt a schedule of fees to be paid upon the filing of each application, permit and inspection required by this zoning ordinance.

Section 4.2.1. Application and Permit Fees

Each application or other request for any permit, inspection or subdivision plat submitted for review for compliance with this zoning ordinance or site plan or use permit conditions shall be accompanied by a fee in accordance with the schedule adopted by the Town Council. Until all application fees, charges and expenses have been paid in full, no action shall be taken on any application or appeal.

Section 4.2.2. Fee Schedule to be posted

The Planning Director shall cause to be posted a current fee schedule on the Town website.

Section 4.2.3. Fees to be paid before applications processed

In accordance with Section 15.2-2286(16)(B) of the Code of Virginia, no application shall be processed for any Town approval until all outstanding real estate taxes or other fees have been paid.

Section 4.2.4. Freedom of Information Act

Freedom of Information Act (FOIA) requests for available information shall be submitted to the appropriate department that maintains the records sought for processing. Any request for records or documents from the Town is considered a FOIA request. All FOIA requests shall be communicated by the Department of the Town Manager and Town Attorney. FOIA regulations allow the Town to assess a reasonable charge for the costs to access, search, duplicate, and supply the requested materials if they exist. The Town shall not assess fees if staff time is less than thirty (30) minutes and ten pages of 8 ½ x 11 paper. An individual requesting materials through a FOIA request will be notified as soon as practicably possible. The Town shall conform to all FOIA regulations established by the Commonwealth of Virginia to ensure access to all available Town documents.

DIVISION 4.3 – CERTIFICATES OF OCCUPANCY

Section 4.3.1 – Certificates of Occupancy (175-135)

Land may be used or occupied and buildings structurally altered or erected may be used or changed in use only after certificate of occupancy has been issued by the Administrator. Such a permit shall state that the building or the proposed use or the use of the land complies with the provisions of this chapter. A similar certificate shall be issued for the purpose of maintaining, renewing, changing or

extending a nonconforming use. A certificate of occupancy either for the whole or a part of a building shall be applied for simultaneously with the application for a zoning permit. The permit shall be issued within ten (10) days after the erection or structural alteration of such building or part has conformed with the provisions of this chapter.

DIVISION 4.4 – VIOLATIONS AND PENALTIES

Section 4.4.1 - VIOLATIONS AND PENALTIES (175-145)

A. All departments, officials and public employees of this jurisdiction which are vested with the duty or authority to issue permits or licenses shall conform to the provisions of this chapter. They shall issue permits for uses, buildings or purposes only when they are in harmony with the provisions of this chapter. Any such permit, if issued in conflict with the provisions of this chapter, shall be null and void.

B. Any person, firm or corporation, whether as principal, agent, employed or otherwise, violating, causing or permitting the violation of any of the provisions of this chapter shall be guilty of a misdemeanor and, upon conviction thereof, may be fined up to one thousand dollars (\$1,000.). Such person, firm or corporation shall be deemed to be guilty of a separate offense for each and every day during which any portion of any violation of this chapter is committed, continued or permitted by such person, firm or corporation and shall be punishable as herein provided.

DIVISION 4.5 – BUILDING PERMITS

Building Permits for any development activities in the Town of Front Royal are issued by the Warren County Building Department. In order for a property owner to be issued a building permit by the Warren County, the Town must issue a letter of Zoning Approval, in accordance with stating that the proposed development is in compliance with the requirements of this chapter. Until the letter of Zoning Approval is issued, no building activities may commence.

ARTICLE 5 – EXCEPTIONS OR CHANGES TO THE ZONING ORDINANCE

DIVISION 5.1 - Special Use Permits (175-136)

A. Where uses are permitted by Special Use Permit, the location and beginning of operation of such uses shall require, in addition to the zoning permit and certificate of occupancy, a special use permit. The issuance of these permits

shall be subject to such conditions as are required in this chapter and such conditions as are deemed necessary by the Front Royal Town Council, after recommendations of the Front Royal Planning Commission. At a minimum, a special use permit may only be permitted, when Town Council determines that the use (i) is not detrimental to the overall health, safety and general welfare of the public, (ii) does not conflict with the Comprehensive Plan, (iii) is substantially compatible with surrounding land uses, and (iv) complies with laws of the Commonwealth of Virginia. Application for a special use permit shall be made to the Zoning Administrator, and a public hearing shall be held in accordance with the provisions of Virginia Code § 15.2-2204 or § 15.2-2286. Special use permits are not transferable to another property. In the event that a special use request is denied, the same special use request, or substantially the same special use request, shall not be considered by the Town Council or the Board of Zoning Appeals for a period of one (1) year from the date on which the special use permit request was denied.

B. New special use permit applications shall include the submission of a preliminary site development plan to be reviewed in concurrence with the special use permit application. No special use permit application may be authorized to operate until a final site development plan is approved.

DIVISION 5.2 -Variances

Section 5.2.1 – Variances

Variances shall be permitted in accordance with the Code of Virginia Section 15.2-2309, as described in [Section 3.2.3\(2\) of this Ordinance](#).

Section 5.2.1 - Administrative Variances (175-147.1)

The Zoning Administrator is authorized to grant a variance from the requirements contained in [sections 6.4.7\(c\), 6.6.8\(c\), and 6.7.8\(c\)](#), if the Zoning Administrator finds in writing that:

- A. The strict application of the ordinance would produce undue hardship or prove impractical due to topographic, architectural or other unusual conditions;
- B. Such hardship is not shared generally by other properties in the same zoning district and the same vicinity; and
- C. The authorization of the variance will not be of substantial detriment to adjacent property and the character of the zoning district will not be changed by the granting of the variance.

DIVISION 5.3 – Conditional Zoning

Section 5.2.2 - CONDITIONAL ZONING PROFFERS IN REZONING APPLICATIONS (175-149)

A. Owners of land making applications to the Town of Front Royal for a zoning reclassification of their land in the Town of Front Royal may voluntarily proffer in writing, as part of the rezoning petition, certain conditions related to the future physical development and/or physical operation of the land to be rezoned, subject to the following requirements:

1. The rezoning of the land must itself give rise for the need for the conditions.
 2. The conditions must have a reasonable relation to the rezoning of the land.
 3. The conditions shall not include a cash contribution to the Town of Front Royal.
 4. The conditions shall not include a mandatory dedication of real or personal property for open space, parks, schools, fire departments or other public facilities which are not otherwise provided for in Virginia Code 15.2-2241.
 5. The conditions shall not include payment for or construction of off-site improvements, except those provided for in Virginia Code Section 15.2-2241.
 6. No conditions shall be proffered that are not related to the physical development or physical operation of the property to be rezoned.
 7. All conditions shall be in conformity with the Comprehensive Plan of the Town of Front Royal.
 8. All conditions shall be in writing and shall be submitted to the Town of Front Royal as part of the rezoning petition prior to public hearing before the governing body.
- B. Once proffered and accepted as part of an amendment to this chapter, the conditions shall continue in full force and effect until a subsequent amendment changes the zoning on the property covered by the conditions; provided, however, that such conditions shall continue if the subsequent amendment is part of a comprehensive implementation of a new or substantially revised Zoning Ordinance.

C. The Zoning Administrator shall administer and enforce the conditions attached to a rezoning or amendment to the Zoning Map, * including:

1. The ordering in writing of the remedy of any noncompliance with the conditions.
2. The bringing of legal action to ensure compliance with such conditions, including injunction, abatement or other appropriate action or proceeding.
3. Requiring a guaranty, satisfactory to the governing body, in an amount sufficient for and conditioned upon the construction of any physical improvements required by the conditions, or a contract for the construction of such improvements and the contractor's guaranty, in like amount and so conditioned, which guaranty shall be reduced or released by the governing body, or agent thereof, upon the submission of satisfactory evidence that construction of such improvements has been completed in whole or in part.

D. The failure to meet all conditions shall constitute cause to deny the issuance of any of the required use, occupancy or building permits as may be appropriate.

E. The Zoning Map shall show by an appropriate symbol on the map the existence of conditions attached to zoning. The Zoning Administrator shall keep in his office and make available for public inspection a conditional zoning index. The index shall provide ready access to the ordinance creating conditions in addition to the regulations provided for in a particular zoning district or zone.

Section 5.2.3 - CONDITIONAL ZONING PROFFERS IN REZONING APPLICATIONS; HIGH GROWTH PERIODS (175-150)

As provided in Virginia Code Section 15.2-2298, notwithstanding any contrary provisions in **section 5.2.2**, the provisions of this section shall apply during periods wherein the Town and/or County of Warren has had a population growth of five percent (5%) or more from the next-to-latest decennial census year, based on population reported by the United States Bureau of the Census, or during periods when Warren County is contiguous with at least three (3) counties which have experienced ten-percent population growth or more as described herein.

A. Owners of land making application to the Town of Front Royal for a zoning reclassification of their land in the Town of Front Royal may voluntarily proffer in writing, as part of the rezoning petition, certain conditions, subject to the following requirements:

1. The rezoning of the land must itself give rise to the need for the conditions.
2. The conditions must have a reasonable relation to the rezoning of the land.

3. All conditions shall be in conformity with the Comprehensive Plan for the Town of Front Royal.
4. The conditions may include a cash contribution to the Town of Front Royal or contributions of personal property and services.
5. The conditions may include dedication of real property for open space, parks, schools, fire departments or their public facilities.
6. The conditions may include payment for or construction of off-site improvements.
7. All conditions shall be in writing and shall be submitted to the Town of Front Royal as part of the rezoning application prior to public hearing before the governing body.
8. All applicable requirements of the Virginia Code shall be complied with, including, but not limited to, the requirements of §15.2-2298.

B. No proffer shall be accepted under this section unless and until the Town has adopted a capital improvement program. In the event that the proffered conditions include a dedication of real property or payment of cash, such property shall not transfer and such payment of cash shall not be made until the facilities for which such property is dedicated or such cash is tendered are included in the capital improvement program. However, the Town may accept proffered conditions which are not normally included in the capital improvement program. Proffered conditions shall provide for the disposition of dedicated property or cash payments in the event that said property or cash payments are not used for the purposes for which they are proffered.

C. Once preferred and accepted as part of an amendment to this chapter, the conditions shall continue in full force and effect until a subsequent amendment changes zoning of the property covered by the conditions; provided, however, that such conditions shall continue if the subsequent amendment is part of a comprehensive implementation of a new or substantially revised Zoning Ordinance.

D. The Zoning Administrator shall administer and enforce the conditions attached to a rezoning or amendment to the Zoning Map, including:

1. Ordering by written notice the remedy of any noncompliance with zoning conditions.
2. Bringing legal action to ensure compliance with such conditions, including injunction, abatement or other appropriate action or proceeding.

3. Requiring a guaranty satisfactory to the governing body in an amount sufficient for and conditioned upon the construction of any physical improvements required by the zoning conditions or a contract for the construction of such improvements and the contractor's guaranty in like amount and so conditioned, which guaranty shall be reduced or released by the governing body or agent thereof upon the submission of satisfactory evidence that the construction of such improvements has been completed, in whole or in part.

E. The failure to meet all conditions shall constitute cause to deny the issuance of any required use, occupancy or building permit as may be appropriate.

F. The Zoning Map shall show by an appropriate symbol on the map the existence of conditions attached to zoning. The Zoning Administrator shall keep in his office and make available for public inspection a Conditional zoning index. This index shall provide ready access to the ordinance creating conditions in addition to the regulations provided for in a particular zoning district or zone.

G. The Zoning Administrator shall record in the deed book records of the Office of the Clerk of the Circuit Court of Warren County a certificate with the name of the property owner and a description of the property and indicating that the property is subject to conditional zoning as shown on the Town of Front Royal Zoning Map.

DIVISION 5.2 – AMENDMENTS (175-146)

- The regulations, restrictions and boundaries established in this chapter may, from time to time, be amended, supplemented, changed, modified or repealed by a favorable majority of votes of the Town Council, provided that:
 - A. A public hearing shall be held in relation thereto at which the parties in interest and citizens shall have an opportunity to be heard.
 - B. Notices shall be given of the time and place of such hearings by publication in at least two (2) issues of some newspaper having a general circulation in the jurisdiction. Such notice shall be presented in accordance with Section 15.2-2204, Code of Virginia, as amended. After enactment of any such amendment, further publication shall not be required.
 - C. When a proposed amendment of the Zoning Ordinance involves a change in the zoning classification of twenty-five (25) or less parcels of land, then, in addition to the advertising as above required, written notice shall be given by the Commission at least five (5) days before the hearing to the owner or owners, their agent or the occupant of each parcel involved and to the owners, their agent or the occupant of all abutting property and

property immediately across the street or road from the property affected. In any county or municipality where notice is required under the provisions of this section, notice shall be given to the owner, their agent or the occupant of all abutting property and property immediately across the street from the property affected which lies in an adjoining county or municipality of the commonwealth. Notice sent by registered or certified mail to the last known address of such owner as shown on the current real estate tax assessment books shall be deemed adequate compliance with this requirement. If the hearing is continued, notice shall be remailed. Whenever the notices required hereby are sent by an agency, department or division of the local governing body, such notices may be sent by first class mail; provided, however, that a representative of such agency, department or division shall make affidavit that such mailings have been made and file such affidavit with the papers in the case. Costs of any notice required under this section shall be taxed to the applicant.

- D. Changes shall be made by the governing body in the Zoning Ordinance or the Zoning Map only after such changes have been referred to the Planning Commission for its recommendations. Action shall be taken by the governing body only after a report has been received from the Planning Commission, unless a period of ninety (90) days has elapsed after the date of the first regular meeting of the Commission after the proposed amendment has been referred to the Commission, after which time it may be assumed the Commission has approved the change or amendment. No land may be zoned to a more intensive use classification than was contained in the public notice without an additional public hearing after notice as required herein.
- E. Individual property owners may petition the governing body to have their property rezoned by submitting their request in writing to the Administrator. The application for rezoning shall be accompanied by a Phase I environmental site assessment based on the anticipated use of the property proposed for rezoning that meets generally accepted national standards for such assessments, such as those developed by the American Society for Testing and Materials (ASTM), and Phase II environmental site assessments, that also meet accepted national standards, such as, but not limited to, those developed by ASTM, if the Town deems such to be reasonably necessary, based on the findings of the Phase I assessment, and in accordance with the regulations of the United States Environmental Protection Agency and ASTM; provided, however, that where the applicant clearly demonstrates to the satisfaction of the Director of Planning and Zoning that there will be no land disturbing activity as a

consequence of the proposed rezoning, the requirement for a Phase I environmental site assessment may be waived in writing of such absence of land disturbing activity. An applicant shall disclose and remediate any contamination and other adverse environmental conditions of property revealed by such environmental assessment, prior to the approval of subdivision and development plans.

- After proper public hearing, the Planning Commission shall make its recommendation to the Town Council, who will then act upon the applicant's request. If the Planning Commission makes no recommendation within ninety (90) days from the date of referral, the Council may assume that the Commission concurs with the applicant.

ARTICLE 6 – ZONING DISTRICTS/DISTRICT REGULATIONS

DIVISION 6.1 - AGRICULTURE AND OPEN SPACE PRESERVATION DISTRICT (A-1)

Section 6.1.1 - STATEMENT OF INTENT (A-1) (175-10.2)

The A-1 District is composed of large contiguous parcels of at least ten (10) acres in size used for agricultural pursuits and other uses involving preservation of open spaces, including parks and forested areas. The standards set forth for this district are designed to promote and protect open spaces and agricultural and forested areas. Development is to be discouraged, and the only structures permitted shall be those which are directly related to agriculture and the open space uses provided herein.

Section 6.1.2 - USES PERMITTED BY RIGHT (A-1) (175-10.3)

Subject to the standards and requirements set forth in this Chapter, except as prohibited or restricted by separate restrictions of record that may pertain to property within the A-1 District, the following uses of land and buildings are permitted by-right in the A-1 District.

RESIDENTIAL:

Manufactured home, subject to the standards of Section 5.1.9C

Single family dwelling, provided that only one single family dwelling may be permitted per parcel.

COMMERCIAL: