



REGULAR PLANNING COMMISSION MEETING

Wednesday, February 19, 2025 @ 7:00pm

Warren County Government Center

I. CALL TO ORDER

II. ROLL CALL – DETERMINATION OF QUORUM

III. ADDITION/DELETION OF ITEMS FROM THE AGENDA

[Items added will be placed as the last item under Business Items. Unanimous vote is required to add/delete]

IV. APPROVAL OF MINUTES

- January 15, 2024 – Regular Meeting

V. CITIZEN COMMENTS

VI. CONSENT AGENDA

I move that the Planning Commission approve the Consent Agenda to publicly advertise for a public hearing in March as presented. [Items removed for further discussion will be placed as the first item under Business Items. Unanimous vote is not required to move]

- **2500049** – A request for a Special Exception from Town Code Chapter 148-820.D.6 submitted by Rappahannock HC LLC for property located at 1321 Happy Creek Road, identified by Tax Map 20A21-2-4 to reduce the required minimum street pavement width from thirty-six feet (36') to twenty-nine (29'). *(Consent to advertise for a public hearing at the March 19, 2025 regular Planning Commission meeting.)*
- **2500051** – An Ordinance Amendment to amend Front Royal Town Code Chapter 175-137 pertaining to fees. *(Consent to advertise for a public hearing at the March 19, 2025 regular Planning Commission meeting.)*
- **2500062** – A zoning text amendment to Town Code Chapter 175-12.1 to allow lodging houses by Special Use Permit in the R-1 zoning district. *(Consent to advertise for a public hearing at the March 19, 2025 regular Planning Commission meeting.)*

VII. NEW 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 Subdivision Plan FRSUB1521-2019 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.

VIII. ELECTION OF OFFICERS

- Chairman
- Vice Chairman

IX. COMMISSION MEMBER REPORTS

X. PLANNING DIRECTOR REPORT

- January Monthly Report

XI. ADJOURNMENT

JANUARY 15, 2025 REGULAR MEETING MINUTES



The following minutes are a summary of items on the agenda. This meeting may be viewed in its entirety by accessing the video of the same date online via the Town's website at www.frontroyalva.com for a limited time.

The Planning Commission meeting of the Town of Front Royal, Virginia was held on January 15, 2025, at 7:00 PM at the Warren County Government Center.

CALL TO ORDER

Chairman Marshner called the meeting of the Planning Commission to order at 7:00 pm.

ROLL CALL

Present: Connie Marshner, Chairman
Allen Neel, Vice Chairman
Megan Marrazzo, Commissioner
Andrew Brooks, Commissioner
Vacancy

Staff Present: Lauren Kopishke, Planning Director / Zoning Administrator
John Ware, Deputy Zoning Administrator
George Sonnett, Town Attorney
Connie L. Potter, Executive Assistant, Clerk of the Planning Commission

ADDITION/DELETION OF ITEMS FROM THE AGENDA

There were no additions or deletions to the agenda.

APPROVAL OF MINUTES

- December 18, 2024 – Regular Meeting

Vice Chairman Neel moved, seconded by Commissioner Marrazzo to approve the meeting minutes as written.

VOTE: Yes – Marrazzo, Brooks Marshner, Neel
No – N/A
Abstain – N/A
Absent – N/A

ROLL CALL

CITIZEN COMMENTS

There were no citizen comments.



PUBLIC HEARING

- **2400673** – A Special Use Permit Application submitted by Pennoni Associates Inc. c/o Mike Artz for Multi-Family Apartments containing thirty-six (36) units in three (3) separate apartment houses containing twelve (12) units each and an office building on a vacant parcel off of Royal Lane, identified by Tax Map 20A17-1-14B1. The property is zoned C-1, Community Business District.

Mr. Ware reviewed the Special Use Permit request submitted by Pennoni Associates c/o Mike Artz. The request is for multi-family apartments containing thirty-six (36) units in three (3) separate apartment houses containing twelve (12) units each and an office off of Royal Lane.

Included in the Planning Commission meeting packets were the application, Traffic Impact Analysis Statement, and a preliminary site plan drawing.

Mr. Ware reviewed Town Code Chapter 175-39.B noting the uses only permitted by Special Use Permit in the C-1 District.

A Traffic Impact Analysis was also included in the packet. The analysis determined that the turning lanes in and out of the property on John Marshall Highway were sufficient for the property. There is no striping at the end of Royal Lane that intersects with John Marshall Highway. The applicant submitted a preliminary site plan of the project, and this was shown in a virtual presentation. The project would include improvements to Royal Lane that would include a stormwater management facility installed in the west portion of the newly constructed cul-de-sac.

Mr. Ware asked the Planning Commissioners to consider the following:

- The governing body is authorized to grant Special Use Permits under suitable regulations and safeguards under Virginia Code 15.2-2286(A)(3).

Unlike proffers that accompany a rezoning considered by the localities governing body, Special Use Permit conditions are volunteered by the land owner and need not be developed through negotiations. Proffers are designed to reduce the impact on public infrastructure. Special Use Permits shall demonstrate the appropriateness of establishing the Special Use on that property.

The Planning Commission should consider the following standards that apply to special Use Permits:

- The impact of the special use on the character of the district.
- The impact of the special use on the welfare of the land owners and occupants of the land in the district.



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- Is it consistent with the Comprehensive Plan.
 - The character of the property.
 - The general welfare of the public.
 - The economic development of the community.

If the Planning Commission chooses to impose conditions on the Special Use Permit, the conditions must have a relationship between the private party's activity and the burden placed on the community as a result. Those should be roughly proportional to the burden imposed.

With the upgrade of Royal Lane, it would affect the single-family house north of the project on the east side of Royal Lane. The applicant is showing an upgrade to a residential driveway and an improvement to the commercial entrance to the west of the property where the current daycare is located. These improvements will be implemented to Town standards. The plan shows that the right-of-way will be extended to the property line for future extension of Royal Lane should it come forth in the future.

Mike Artz, Pennoni Associates, licensed surveyor and engineer for the project. Mr. Artz stated the application is identical to the Special Use Permit that was previously approved five (5) years ago but never went to construction. It was his opinion that the property fits into the existing character of the area. Mr. Artz noted that throughout the site plan process they will comply with all the regulations and requirements of DEQ, Inspections, and VDOT as well as any other agencies reviewing the project.

Commissioner Marrazzo referred to the application where it stated that part of the intention for the project was to provide development of apartment units to aid and satisfy workforce housing needs. She noted that the Town Code does not have a definition of workforce housing and asked Mr. Artz what his meaning was for workforce housing.

Mr. Artz explained that it was a mistake, and the term workforce housing should not have been included in the application. The apartments are not intended for workforce housing and will be open to anyone.

Commissioner Marrazzo confirmed with Mr. Artz that the apartments are not intended to be subsidized. Mr. Artz agreed.

Chairman Marshner opened the public hearing.

Jim North, 124 Robinson Road, Front Royal, VA. Mr. North expressed concern about traffic issues at Royal Lane and Route 55 intersection. Mr. North was not in favor of approving the application.



Shirley Henry, 78 Royal Lane, Front Royal, VA. Ms. Henry expressed concern about traffic issues and how individuals will get in and out of Royal Lane onto Route 55. She was not in favor of approving the application.

Katrina (*last name not stated*), 74 Royal Lane, Front Royal, VA. She expressed concern about the traffic and did not believe the Traffic Impact Analysis was accurate. Katrina asked the Planning Commission to please consider the people that live on Royal Lane and said she was not in favor of approving the application.

Mr. Artz addressed comments made by the speakers. He stated there were no easy answers. Mr. Artz said the zoning of the property was determined by the Town of Front Royal and the specific uses that are set for these properties. He explained that this property does not have to be developed in a residential capacity and could be developed as commercial. He believes that residential use would be far less intrusive than commercial use. Mr. Artz said they have to abide by VDOT guidelines regarding traffic.

There were no additional speakers. Chairman Marshner closed the public hearing.

Vice Chairman Neel moved, seconded by Commissioner Brooks that the Planning Commission forward a recommendation of approval to Town Council for Special Use Permit #2400673 for multi-family apartments containing thirty-six (36) units in three (3) separate apartment houses containing twelve (12) units each and an office building on a vacant parcel off of Royal Lane, identified by tax map 20A17-1-14B1.

Vice Chairman Neel asked if taking the wording “workforce housing” out of the application would invalidate the application.

Mr. Sonnett stated he does not believe it is relevant. He also confirmed with Vice Chairman Neel that they are to consider the evidence in front of them regarding the information provided by VDOT.

Commissioner Brooks stated it would be prudent to evaluate current traffic data since the previous Traffic Impact Analysis was done in 2014 and traffic is a primary concern of the public.

Commissioner Marrazzo commented that the R-1 zoning district is low density. The C-1 zoning district allows for apartments by Special Use Permit so that various factors including the impact on the community, specific location and the density being put forward can be taken into consideration. She is in full support of relying on the traffic data. However, she explained that she travels John Marshall Highway everyday and sees the traffic that backs up at the intersection of John Marshall Highway and Royal Lane. Commissioner Marrazzo is in favor of tabling the application until more accurate and up to date data is available and then allow the applicant an opportunity to mitigate any traffic concerns.



Vice Chairman Neel asked Commissioner Marrazzo if she was proposing to defer or place a condition that a new traffic study be done before forwarding the application to Town Council.

Commissioner Marrazzo stated she believes the application is reliant on old data that she would want to forward a recommendation of denial, and the applicant come back with something that is clean and up to date.

Commissioner Marrazzo moved, seconded by Commissioner Brooks to replace the previous motion for the Planning Commission to forward a recommendation of denial to Town Council for Special Use Permit #2400673.

There was some additional discussion related to traffic and the allowed use of the property. Comments were made that the applicant cannot solve the traffic problems at the intersection and that was a VDOT issue.

With regard to proper use of the land, Commissioner Marrazzo voiced that the impact the use has is within their consideration and how the infrastructure at the location would affect those surrounding the proposed use. With that in mind the proposed use would not be an appropriate use for the property. Apartments should not be placed in an area where roads cannot support it. She believes the traffic study being 11 years old offers concern and is not appropriate.

After some additional discussion the vote was taken.

VOTE: Yes – Brooks, Marrazzo
No – Neel, Marshner
Abstain – N/A
Absent – N/A

ROLL CALL

The original motion returned to the floor.

Commissioner Marrazzo expressed that if the Planning Commission was not looking to deny the application outright then it should be deferred to ask the applicant to obtain a current Traffic Impact Analysis from VDOT to determine an accurate impact to the area.

Ms. Kopishke stated that a Traffic Impact Analysis is not a requirement for a Special Use Permit application.

Mr. Sonnett stated a Traffic Impact Analysis was not an appropriate subject for a condition.

Commissioner Marrazzo stated that when it comes to the impact on the community there is a lack of barriers both on the west and north sides. It is within the power and right of the



Planning Commission to recommend conditions that would have physical barriers there. Obviously that has no bearing or impact on how the number of cars will affect the road. There are a number of things that weren't considered in terms of impact on the community.

Vice Chairman Neel amended his previous motion to the following motion:

Vice Chairman Neel moved, seconded by Commissioner Brooks that the Planning Commission forward a recommendation of approval to the Town Council Special Use Permit #2400673 for multi-family apartments containing thirty-six units in three (3) separate apartment houses containing twelve (12) units each and an office building on a vacant parcel off of Royal Lane, identified by Tax Map 20A17-1-14B1 with the following conditions:

- 1. On the north side of the property an appropriate barrier or fence be installed to isolate the property from the existing residential property.***
- 2. Upgrade the private drive as shown on the map.***
- 3. Extend the road to the property line and not just end at the cul-de-sac.***

Vote: Yes – Marshner, Brooks, Neel

No – Marrazzo

Abstain – N/A

Absent – N/A

ROLL CALL

- **2400687** – A Rezoning application submitted by Skyline Realty Investments, LLC requesting an amendment to the zoning map to reclassify addresses 10, 30, 44, 52, 60 and a vacant lot on W. Strasburg Road identified by Tax Map 20A12, Section 3, Parcels 22, 26, 27A, 31C, 31 and 23 from C-1, Community Business District to R-3, Residential District.

Mr. Ware explained this rezoning request is for an amendment to the zoning map to reclassify addresses 10, 30, 44, 52, 60 and a vacant lot on W. Strasburg Road from C-1, Community Business District to R-3, Residential District.

Previously the Planning Commission made a recommendation to the Town Council to amend the Comprehensive Plan in this area. Town Council will consider this at their meeting on January 27, 2025.

A rendering was provided showing the future intended use of the lots which consists of eight (8) blocks of townhomes, totaling twenty-four (24) townhomes if rezoned to R-3. No proffers were offered by the applicant.



Commissioner Marrazzo asked for clarification of the properties being owned by varying groups including Skyline Realty. She asked if Skyline Realty was representing the other owners in the rezoning request.

Mr. Ware stated that was his understanding.

Kimberly Emerson, attorney for the applicant stated that Mr. Brogan drew the renderings for the project. Skyline Realty Investment has closed on all the parcels with the exception of two (2). Those two (2) properties should be closing within the next 1-2 weeks.

Chairman Marshner opened the public hearing.

There were no speakers present. Chairman Marshner closed the public hearing.

Commissioner Marrazzo moved, seconded by Vice Chairman Neel that the Planning Commission postpone action on an approval or denial of this until such time as the Town Council approve or deny which is planned for their meeting of the 27th (January) which would mean this would be back before us in the Planning Commission meeting February 19, 2025.

Commissioner Marrazzo said when there is a sweeping change as proposed and given there is an immediate relevant decision before the Town Council that would impact this decision she believed it would be prudent to wait until the Town Council makes a decision with regard to the proposed Comprehensive Plan amendment. If the Town Council decides not to approve the Comprehensive Plan amendment then the Planning Commission has forwarded a recommendation of something not allowed.

Commissioner Brooks shared that he agreed with much of what Commissioner Marrazzo expressed. However, the surrounding area is zoned R-1 and R-2 residential. He believes it will be residential going forward.

Commissioner Marrazzo moved, seconded by Vice Chairman Neel to withdraw her motion.

Vice Chairman Neel moved, seconded by Commissioner Brooks that the Planning Commission forward a recommendation of approval to the Front Royal Town Council for Rezoning Application #2400687 to reclassify addresses 10, 30, 44, 52, 60 and a vacant lot on W. Strasburg Road, identified by tax map 20A12, Section 3, Parcels 22, 26, 27A, 31C, 31 and 23 from C-1, Community Business District to R-3, Residential District.

Vote: Yes – Marrazzo, Marshner, Brooks, Neel

No – N/A

Abstain – N/A

Absent – N/A

ROLL CALL



OLD BUSINESS

- **2400421** - A request for preliminary plan approval for a major subdivision submitted by Ali Billoo for a subdivision containing nine (9) lots and sixteen (16) dwelling units located at 336 W. Strasburg Road, identified on tax map 20A11, section 4, parcel 23B. The property is zoned R-2, Residential District.

Mr. Ware explained the application request was for a preliminary plan approval for a major subdivision. The proposed subdivision contains nine (9) lots, and sixteen (16) dwelling units located at 336 W. Strasburg Road. The property is zoned R-1, Residential District which allows this type of housing by-right.

A preliminary plan was submitted with the application. The applicant and their engineer have met all Town Code requirements for submitting the preliminary plan.

The preliminary plan does not authorize construction of improvements within the subdivision development plan. According to the Town code once a preliminary plan is approved it should be valid for a period of five (5) years provided that the subdivider submits a final subdivision plat within one (1) year after the preliminary plan approval. Failure to do so makes the preliminary approval null and void.

The applicant provided a letter that they cannot achieve water quality reduction by their system, and they would be required to purchase credits at a nutrient bank. Mr. Ware noted that Warren County, who administers the program for erosion and sediment control does not make comments on a preliminary plan nor does DEQ make comments on stormwater management.

Commissioner Marrazzo asked staff to comment on the applicant buying credits vs. meeting certain standards when it comes to water.

Mr. Ware explained that based on stormwater calculations and Best Management Practices (BMP) for the type of infiltration system they are installing, the amount of pervious surface coverage area for runoff will not meet the threshold by the state government on water quality. As of 2014 the state gives an option statewide to purchase credits from a nutrient bank within the watershed to offset this.

To further her understanding Commissioner Marrazzo asked if the inability to meet that code was based on the infrastructure being installed or the equipment being proposed.

Mr. Ware explained that it depends on the acreage and impervious surface area of certain sites. If the BMP the applicant selects will not eliminate or control all the water quality the state regulations of 2014 give the developer the option to purchase credits from a nutrient bank. The Town cannot override state code.



Commissioner Brooks moved, seconded by Commissioner Marrazzo that the Planning Commission approve Preliminary Plan Approval Major Subdivision Application #2400421.

Vote: Yes – Marshner, Neel, Marrazzo, Brooks
 No – N/A
 Abstain – N/A
 Absent – N/A

ROLL CALL

COMMISSION MEMBER REPORTS

Commissioner Brooks thanked staff for their work in 2024 related to the additional work load with the same amount of staff.

PLANNING DIRECTOR REPORT

Ms. Kopishke reviewed the December monthly report.

Staff are starting the process of what changes and adjustments need to be made to the subdivision ordinance. This review will immediately follow after the Zoning Ordinance rewrite review. Staff are hoping to bring the Capital Improvement Plan (CIP) to the Planning Commission for review in February.

ADJOURNMENT

Chairman Marshner moved, seconded by Vice Chairman Neel to adjourn the meeting.

VOTE: Yes – Marrazzo, Neel, Brooks, Marshner
 No – N/A
 Abstain – N/A
 Absent – N/A

VOICE VOTE

The meeting was adjourned at 8:17 p.m.

Approved by Planning Commission
 Date: _____

CONSENT AGENDA ITEMS

- **2500049** – A request for a Special Exception from Town Code Chapter 148-820.D.6 submitted by Rappahannock HC LLC for property located at 1321 Happy Creek Road, identified by Tax Map 20A21-2-4 to reduce the required minimum street pavement width from thirty-six feet (36') to twenty-nine (29'). (*Consent to advertise for a public hearing at the March 19, 2025 regular Planning Commission meeting.*)

2500049

SPECIAL EXCEPTION APPLICATION

TOWN OF FRONT ROYAL ~102 East Main Street, Front Royal, Va. 22630 ~ Main: 540-635-4236 ~ Fax: 540-631-2727

APPLICANT

PROPERTY OWNER (if different)

APPLICANT'S NAME: Rappahannock HC LLC ATTN: Chris Hornung	PROPERTY OWNER'S NAME: Rappahannock HC, LLC
ADDRESS: 1016 Charles Street Fredericksburg, VA 22401	OWNER'S ADDRESS: 1016 Charles St. Fredericksburg, VA 22401
PHONE NUMBER: (540) 273-7498	PHONE NUMBER: (540) 273-7498
EMAIL: chornung@teamrdg.com	EMAIL: chornung@teamrdg.com

SECTION A - Property Information

Tax Map No. <u>20A212 4</u>	Zoning District: <u>R-1, Residential</u>
Site Address: <u>1321 Happy Creek Rd., Front Royal, VA 22630</u>	
☐ Entrance Corridor	☐ Historic District
☐ Floodplain	

SECTION B - Details of Request

Project Name. <u>Marshall's Glen</u>
Special Exception Code Section(s): <u>Section 148-211.A.2.b.</u>
General Describe of the request (please attached supporting information, such as plats, plans, details, etc.): <u>Seeking approval of alternative street design standard with a minimum pavement width of 29 feet (parking one side) with supplemental traffic-calming measures. See attached letter to Lauren Kopishke and attached Traffic Calming Plan.</u>

RECEIVED
FEB 04 2025

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

SIGNATURE OF APPLICANT: [Signature] Date: 1/30/25
PRINT NAME OF APPLICANT: Chris Hornung, Chief Development Officer

SIGNATURE OF PROPERTY OWNER: [Signature] Date: 1/30/25
PRINT NAME OF PROPERTY OWNER: Chris Hornung, Authorized Signatory, Rappahannock HC, LLC

By the submission of this application, permission is hereby granted to Town Officials and employees to enter upon the subject property during reasonable hours for purposes related to the review of this application. The Applicant will be the designated contact person for this permit application. (APPLICATION FEE: \$250.00)

PA check #1017

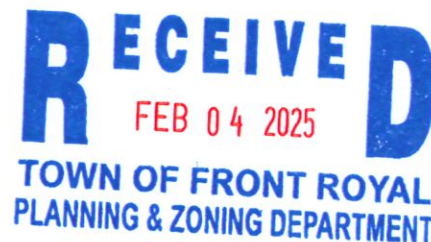


151 Windy Hill Lane
Winchester, VA 22602

2500049

January 31, 2025

Lauren Kopishke, Director
Department of Planning and Zoning
Warren County, Virginia
102 E. Main Street
Front Royal, VA 22630



RE: Marshall's Glen Subdivision
Special Exception Application - Alternative Street Design Standard

Dear Ms. Kopishke,

On behalf of Rappahannock HC LLC, enclosed please find a Special Exception application for the Marshall's Glen Subdivision to permit an alternative street design standard with a minimum pavement width of 29 feet (parking one side) with supplemental traffic-calming measures. The proposed street section and traffic-calming measures are detailed on the Traffic Calming Plan of the Preliminary Subdivision Plan (see Sheets 25 and 26 of 32), which is also attached for ease of reference. Justification for this request is provided herein.

Basis for Application

The Special Exception is requested pursuant to Section 148-211.A.2.b. of the Subdivision and Land Development Ordinance of the Town of Front Royal (hereafter Subdivision Ordinance), which permits the Town Council to approve alternative regulations for development when, in comparison to the general regulations, such regulations are demonstrated to better achieve the following goal:

Design emphasis on the principles of traditional neighborhood design, including pedestrian-friendly roads, interconnection of new local streets with existing local streets, connectivity of pedestrian networks, and mixed-use neighborhoods.

The principles of traditional neighborhood design (TND) promote compact development where streets are places for human activity, with walkability and the pedestrian experience prioritized. Narrower streets are inherently aligned with this outcome, as they have been demonstrated to slow the speed of vehicular traffic and increase driver awareness, resulting in an environment that is safer and decidedly more pedestrian-friendly. In contrast, wider streets increase risks to pedestrians and other users, with studies showing that wider streets are associated with greater crash rates and higher impact speeds.¹

In accordance with Section 148-820.D.6. of the Subdivision Ordinance, a minimum pavement width of 36 feet is required for a local street within a residential subdivision. Existing Oden Street in the adjoining Oden Ridge Subdivision is constructed with a pavement width of 40 feet and currently terminates at the site boundary and is planned to extend into Marshall's Glen. During the rezoning

¹ Dewan Karim. *Narrower Lanes, Safer Streets* (Toronto: CITE Conference, June 2015)

process for Marshall's Glen, residents on Oden Street spoke during the public hearing to express their concern about the speed of traffic in front of their homes and the risk to their safety of any increase in speeding vehicles.

The existing condition of Oden Street is shown in the image below, followed by an image of Pickett Court, a 36-foot-wide street in the adjoining Happy Creek Knolls Subdivision:



Oden Street, minimum 40-foot-wide street (parking both sides), Oden Ridge Subdivision



Pickett Court, minimum 36-foot-wide street (parking both sides), Happy Creek Knolls Subdivision

The experience of the existing Oden Street residents is indicative of the challenges to pedestrian safety associated with wide streets within residential neighborhoods. While the expanse of pavement provides generous space for vehicular movement, the abundance of asphalt ultimately invites drivers to speed, converting any convenience derived from wide travelways into dangerous conditions not conducive to a residential setting. The alternative 29-foot-wide street section proposed for Marshall's

Glen will avoid this situation by reducing the physical footprint of the street and creating an environment for pedestrians that is safer and more inviting.

The image below shows Nevermore Drive, an example of a 29-foot-wide street in the Ravens Subdivision in Frederick County, designed and constructed per the VDOT Road Design Manual.



Nevermore Drive, minimum 29-foot-wide street (parking one side), Ravens Subdivision

Alternative Standard

The alternative street design standard for Marshall's Glen will consist of a typical street section with a reduced 29-foot pavement width and traffic calming measures applied throughout the neighborhood's internal street network. These design elements are depicted on the Traffic Calming Plan included with the Preliminary Subdivision Plan (see Sheets 25 and 26 of 32). Specifically, the proposed street section will meet the geometric design standards for residential and mixed-use subdivision streets (GS-SSAR) as detailed in Appendix B of the VDOT Road Design Manual, with parking permitted on one side of the street. The traffic calming measures will consist of raised crosswalks and three-way stops, with associated pavement markings and signage.

The combination of design elements included in the proposed alternative street standard for Marshall's Glen will provide for a more pedestrian-friendly neighborhood than would be possible with the otherwise applicable street design standards. These design elements will not only achieve improved safety within the neighborhood, but in the adjoining neighborhoods as well by suppressing travel speeds, enhancing driver awareness, and discouraging cut-through traffic. Moreover, by enabling a more compact infrastructure footprint, the proposed alternative standard will reduce the amount of impervious area in the neighborhood, which is a discernable benefit to stormwater management and overall environmental quality.

In sum, the alternative street design standard proposed with this Special Exception application wholly aligns with the principles of TND and, in so doing, advances the health, safety, and welfare of the residents of the Town of Front Royal, thereby meeting the criteria for approval. Favorable consideration of this application is therefore requested.

Please do not hesitate to contact me with any questions regarding this application.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Christopher Mohn', with a stylized flourish at the end.

Christopher Mohn, AICP
Vice President/Director of Planning

Enclosures: Special Exception Application and Marshall's Glen Traffic Calming Plan

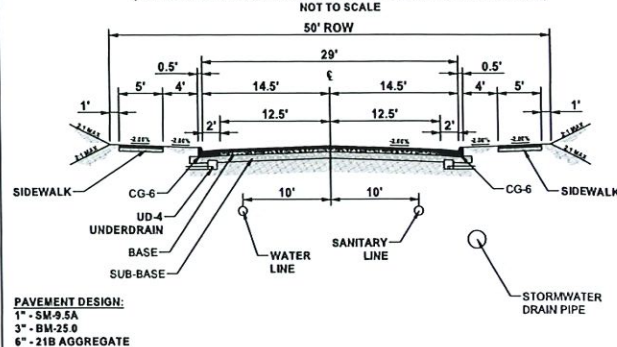
cc: Rappahannock HC LLC

*SEE SHEET 26 FOR TRAFFIC AND SIGNAGE DETAILS

EXAMPLE 29' ROAD WIDTH - PARKING ONE SIDE



TYPICAL SECTION
LOCAL RESIDENTIAL ROAD - PARKING ONE SIDE
(SPECIAL EXCEPTION REDUCED ROADWAY WIDTH)
NOT TO SCALE



NOTES:
1. PAVEMENT DESIGN SHOWN IS PRELIMINARY. FINAL PAVEMENT DESIGN WILL BE BASED ON FIELD CBR TESTS.
2. ALL ROADS ARE CLASSIFIED AS LOCAL RESIDENTIAL ROADS.
3. SAG MIN. K-VALUE: 26, SAG MIN. SIGHT DISTANCE: 155'
4. CREST MIN K-VALUE: 12, CREST MIN. SIGHT DISTANCE: 155'

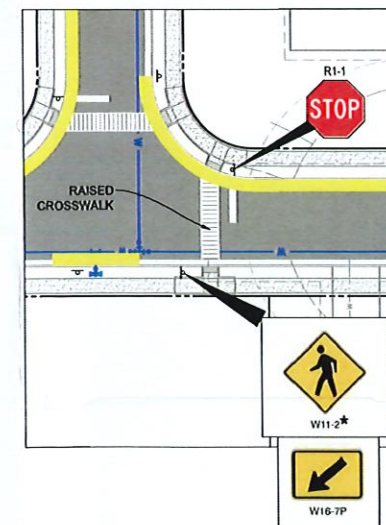
SIGNAGE AND PAVEMENT MARKING NOTES

1. ALL PROPOSED SIGNING AND PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE MOST RECENT EDITION OF EACH OF THE FOLLOWING AND ANY REVISION THERETO:
A. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
B. THE VIRGINIA SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
C. THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS.
D. THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE STANDARDS.
2. ALL SIGNS SHALL BE CONSTRUCTED FROM ENCAPSULATED LENS SHEETING.
3. PROPOSED SIGN LOCATIONS ARE APPROXIMATE AND SHALL BE MODIFIED IN THE FIELD TO AVOID CONFLICT WITH UNDERGROUND UTILITIES OR OTHER OBSTRUCTIONS, AND TO COMPLY WITH STANDARDS REFERENCED IN NOTE #1.
4. FOR COLOR COMBINATIONS AND/OR LETTERING SIZE, REFER TO THE VIRGINIA SUPPLEMENT TO THE MUTCD.
5. ANY EXISTING PAVEMENT MARKINGS WHICH WILL CONFLICT WITH PROPOSED PAVEMENT MARKINGS SHALL BE COMPLETELY ERADICATED.
6. LIMITS SHOWN OF PROPOSED MARKINGS ARE APPROXIMATE AND SHALL BE MODIFIED IN THE FIELD TO INSURE THAT PROPOSED PAVEMENT MARKINGS CONTINUE UNTIL EXISTING PAVEMENT MARKINGS CAN BE MATCHED.
7. CURB SIGNS SHALL BE PLACED 2' FROM FACE OF CURB TO LEADING EDGE OF SIGN.
8. SIGN MOUNTING HEIGHT SHALL BE A MINIMUM OF 7' PER THE MUTCD.
9. PROPOSED POSTED SPEED LIMITS GREATER THAN 25 MPH REQUIRE AN ENGINEERING SPEED STUDY STAMPED BY A LICENSED PROFESSIONAL ENGINEER TO BE SUBMITTED TO VDOT FOR REVIEW AND APPROVAL PRIOR TO ERECTING SIGNS.
10. ALL SIGNS AND PAVEMENT MARKINGS SHALL BE REVIEWED IN THE FIELD WITH THE VDOT INSPECTOR 72 HOURS PRIOR TO INSTALLATION.
11. THERMO-PLASTIC MARKINGS SHALL BE USED.

PAVEMENT MARKING LEGEND

- (E) STOP BAR (SOLID) - WHITE, TYPE B, CLASS I MARKINGS, 24" WIDE
- (F) CROSSWALK LINES - WHITE, TYPE B, CLASS I MARKINGS, 12" WIDE x 6' LONG, SPACED 18'. SOLID WHITE TRANSVERSE LINES PLACED PARALLEL TO ONCOMING TRAFFIC.
- (H) TYPE B, CLASS 1 PAINTED YELLOW DOUBLE LINE PAVEMENT MARKING, 4" WIDTH, SEPARATED BY A 7' SPACE, LENGTH AS SHOWN ON PLAN

PROPOSED SIGN KEY MAP



EXAMPLE RAISED CROSSWALK



EX ODEN STREET 40' ROAD WIDTH - PARKING BOTH SIDES



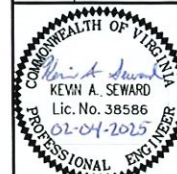
EX PICKET COURT 36' ROAD WIDTH - PARKING BOTH SIDES



80 40 0 80 160
SCALE: 1" = 80'

TRAFFIC CALMING PLAN
MARSHALL'S GLEN
PRELIMINARY SITE PLAN
HAPPY CREEK MAGISTERIAL DISTRICT
TOWN OF FRONT ROYAL, VIRGINIA

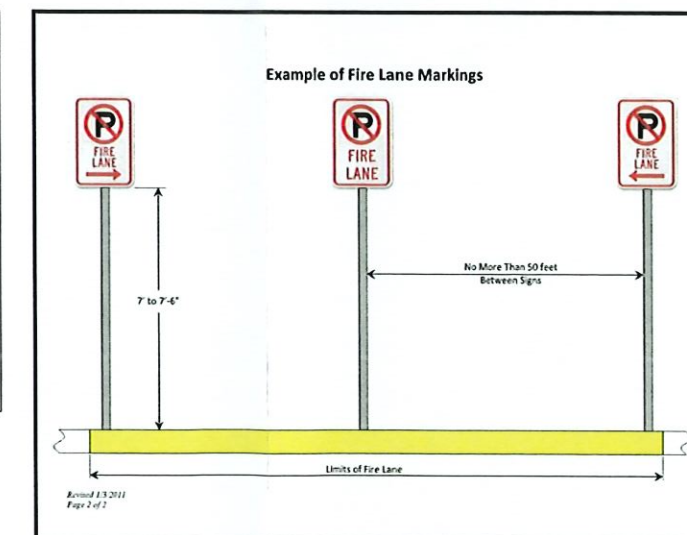
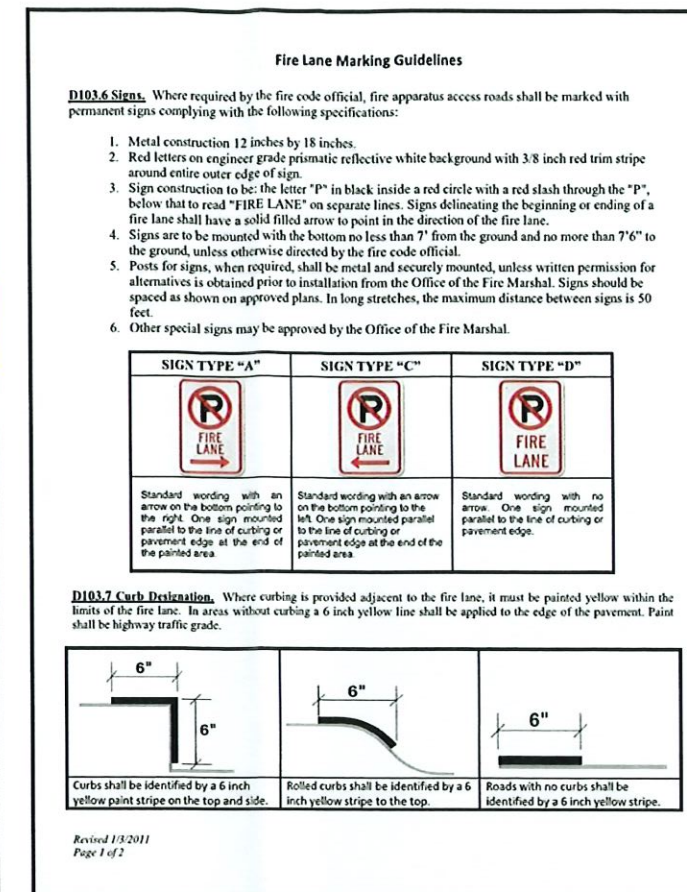
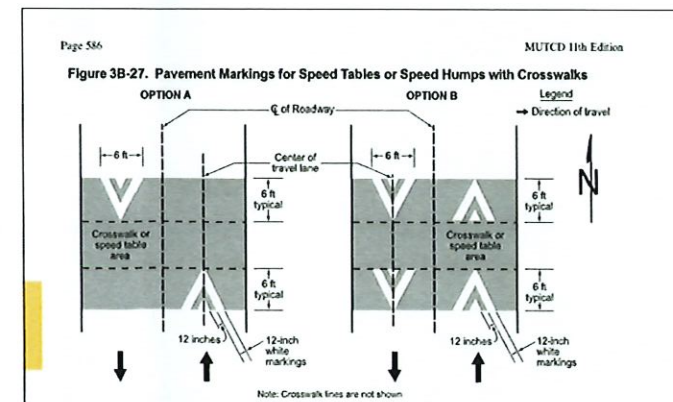
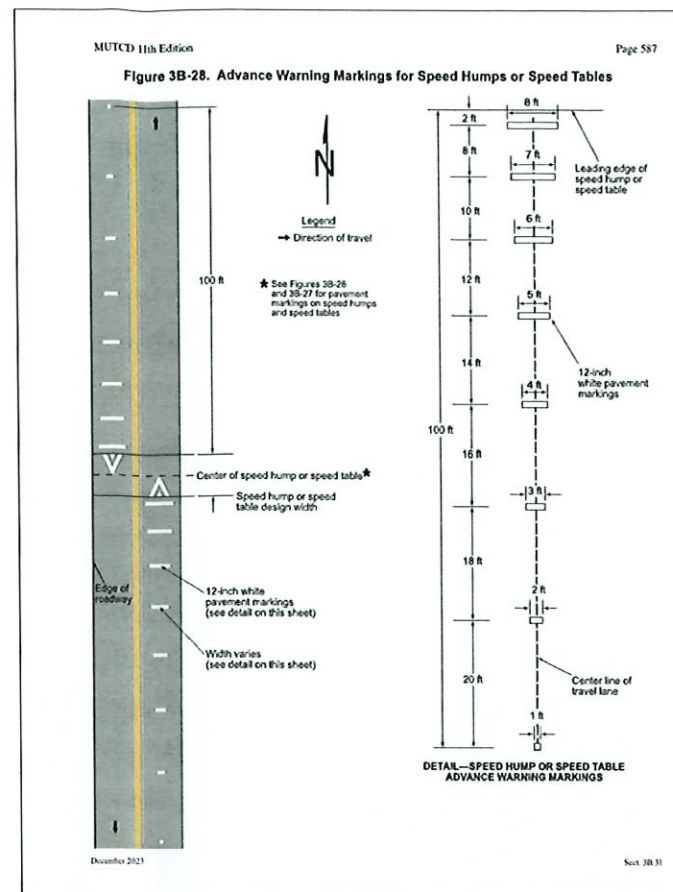
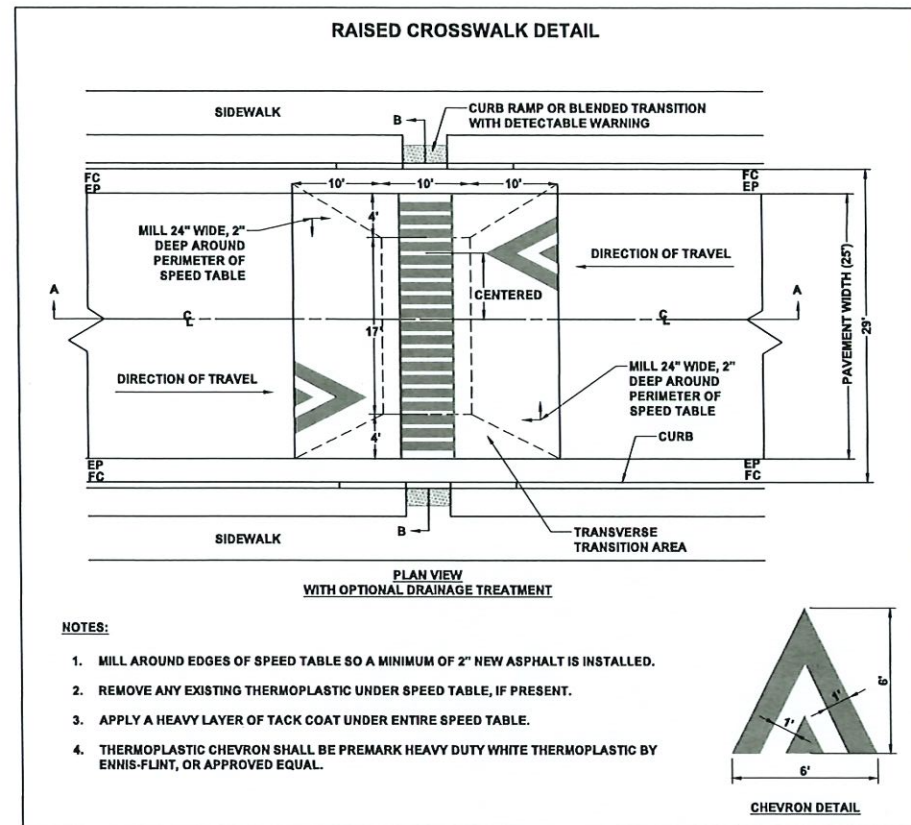
Rev. No.	Date
01	02-04-2025
DATE:	02-04-2025
SCALE:	1"=80'
DESIGNED BY:	KAS
FILE NO.	6533R
SHEET	25 OF 32
DWG #	



151 Windy Hill Lane
Winchester, Virginia 22602
Telephone: (540) 662-1855
Fax: (540) 722-8578
www.greenwayeng.com



PROUDLY SERVING VIRGINIA & WEST VIRGINIA
OFFICES IN: WINCHESTER, VA & MARTINSBURG, WV



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CONSENT AGENDA ITEMS

- **2500051** – An Ordinance Amendment to amend Front Royal Town Code Chapter 175-137 pertaining to fees. (*Consent to advertise for a public hearing at the March 19, 2025 regular Planning Commission meeting.*)

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 Relesase	\$ 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/Intinerant 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, coordinantion with Public Works
Sign Permit			
Permanent	\$ 50.00	\$ 50.00	
Entrance Cooridoor	\$ 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	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)	

CONSENT AGENDA ITEMS

- **2500062** – A zoning text amendment to Town Code Chapter 175-12.1 to allow lodging houses by Special Use Permit in the R-1 zoning district. *(Consent to advertise for a public hearing at the March 19, 2025 regular Planning Commission meeting.)*

2500062
ORD Amendment

Text amendment Proposal

I would like to propose a text amendment for the (R-1) zoning district. The proposed text amendment would be for 175-12.1 USES PERMITTED BY SPECIAL PERMIT: To add allowable use under miscellaneous by special use permit for as follows: Lodging houses, rooming houses, and boarding houses on parcels $\frac{3}{4}$ of an acre or larger.

RECEIVED
FEB 10 2025
TOWN OF FRONT ROYAL
PLANNING & ZONING DEPARTMENT

Aaron Hike



2-8-25

NEW 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.

Town of Front Royal, Virginia

Planning Commission Regular Meeting Agenda

☐ Consent Action ☒ Administrative Action ☐ Public Hearing ☐ Discussion

Agenda Item: Zoning Permit Application #2500002

MEETING DATE: February 19, 2025

SUMMARY: The application for review is a request for 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.

STAFF RECOMMENDATION: Per the submitted renderings, the applicant is proposing to clad the exterior of the structure with a mixed façade of cedar siding, metal panels and existing stucco.

The determination to be made by the Planning Commission is whether the proposed materials presented are appropriate in the Town's Entrance Corridor. Staff are concerned about the metal panels. The Planning Commission could require conditions such as brushed or patina finishes.

DRAFT MOTION: "I move that the Planning Commission approve the proposed exterior materials with the following conditions:

1. All metal panels will have a finish other than gloss to not cause glare or distraction.
2. All painted finishes will be muted, earthen tones."

NOTE: This is only a draft motion. Alternative motions are also welcome.

PLANNING COMMISSION ACTION:

Moved _____ Seconded _____

Neel _____ Brooks _____ Marshner _____ Marrazzo _____ Vacancy _____

☐ Approved ☐ Approved w/ Conditions ☐ Denied ☐ Other



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

**STAFF REPORT – FINAL PLAT APPROVAL MAJOR SUBDIVISION
PLANNING COMMISSION– FEBRUARY 19, 2025**

APPLICATION #:

Zoning Permit Application #2500002

APPLICANT:

Raad Saleh

SUMMARY OF REQUEST:

A request for exterior renovations to the structure located at 1355 N. Shenandoah Avenue. The property is zoned C-1, Community Business District and is located within the entrance corridor.

GENERAL INFORMATION:

<i>Site Addresses</i>	1355 N. Shenandoah Avenue
<i>Property Owner(s)</i>	Raad Real Estate LLC
<i>Zoning District</i>	C-1, Community Business District
<i>Tax Identification</i>	20A2-4-57-23 through 34
<i>Location</i>	The subject property is located within the Entrance Corridor at the intersection of N. Shenandoah Avenue and W. 14 th Street.
<i>Existing Use</i>	Unoccupied Bank
<i>Proposed Use</i>	Two Tenant Retail Space

AERIAL MAP – 1355 N. Shenandoah Avenue – Warren County GIS



The map shows a grid of streets and property lots. A red rectangle highlights a specific lot. The map includes labels for streets like W 14th St, W 13th St, and N Sheandoah Avenue. Property lots are numbered, and the Blue Ridge Motel is marked with a green dot.

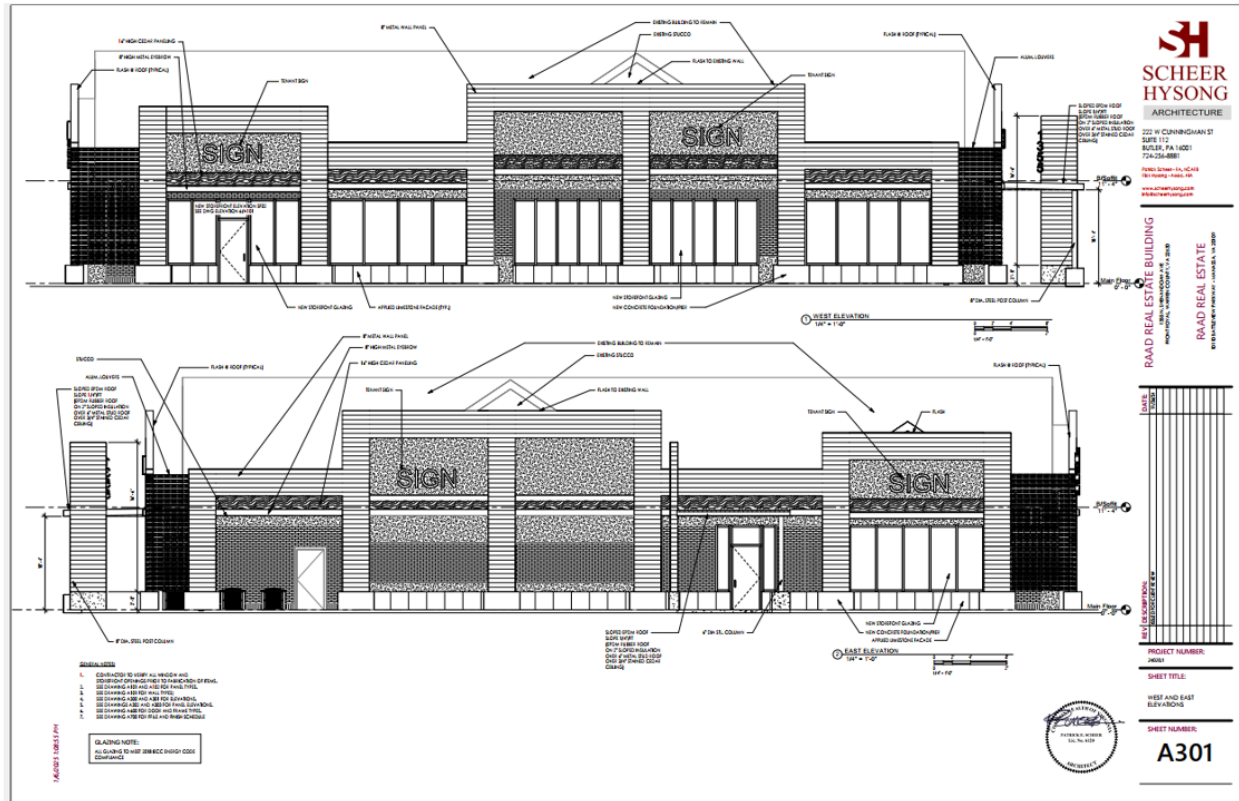
Existing North Elevation – 1355 N. Shenandoah Avenue



Existing South Elevation – 1355 N. Shenandoah Avenue



Proposed Exterior Renovations (West & East Renderings)
1355 N. Shenandoah Avenue



Existing West Elevaton – 1355 N. Shenandoah Avenue



Existing West Elevaton – 1355 N. Shenandoah Avenue



INFORMATION ON THE APPLICATION:

SUMMARY

ENTRANCE CORRIDOR OVERLAY DISTRICT (EC)
(Adopted 10-11-99)

175-98.1 STATEMENT OF INTENT (EC)

Pursuant to Section 15.2-2306 of the Code of Virginia 1950, as amended, the intent of this Entrance Corridor Overlay District (EC) is to promote and protect the health, safety, comfort and general welfare of the community through establishing high quality design criteria. The implementation of these criteria will help to stabilize and improve property values; to protect and enhance the Town's attractiveness to tourists and other visitors; to sustain and enhance the economic benefits accruing to the Town from tourism; and to support and stimulate complimentary development appropriate to the historic and architectural character of the Town. Benefits attributable to the promotion of superior design and appearance of structures constructed along the arterial entrance corridor will ultimately promote the public health, safety and general welfare of the citizens of the Town of Front Royal.

175-98.2 ESTABLISHMENT OF DISTRICTS (EC)

The Entrance Corridor Overlay District (EC) will overlay all other zoning districts where it is applied so that any parcel of land lying in an EC shall also lie within one (1) or more other land use districts. The regulations and requirements of both the underlying district(s) and the EC shall apply. However, when the regulations applicable to the EC conflict with the regulations of the underlying district, the more restrictive regulations shall apply.

175-98.3 DISTRICT BOUNDARIES (EC)

A. EC boundaries shall be designated on the official zoning map of the Town of Front Royal.

B. The district boundaries shall be designated as the full depth of all parcels of land contiguous to the following public highways, and located within the corporate boundaries of the Town:

(Amended “B” 6-22-15-Effective Upon Passage)

1. U.S. Route 340 from Interstate 66 to the southern corporate limit, except those properties lying within the adopted boundaries of the Historic Front Royal District.

(Amended to add “Interstate 66” 6-22-15-Effective Upon Passage)

C. Any property or project partially located within the EC shall be considered to be fully located within the EC and subject to the regulations herein.

175-98.4 REVIEW FOR DESIGN COMPLIANCE (EC)

A. When Required: The requirements of the EC District shall be applicable to any property located within the EC boundaries for new development, exterior renovations, and new land use activities that propose outdoor lighting, outdoor storage, outdoor sales, and/or outdoor display areas, except that the following exceptions shall be exempt from the requirements of the EC.

1. Regular maintenance of structures, including minor alterations that do not significantly alter the appearance of the structure.
2. Single-family detached dwellings.
3. Accessory buildings under 200 square feet in area.
4. Additions less than 500 square feet in area for buildings existing as of January 1, 1999.
5. Exempt signs and temporary signs.
6. Authorized temporary or seasonal activities and structures.

(Amended/Added “1-6” 1-28-13-Effective Upon Passage)

B. Review Authority: The review authority responsible for the review and approval of projects in accordance with the EC shall be the Director, except for the construction of new buildings and new non-exempt ground-mounted signs, which shall be reviewed by the Planning Commission. Such review shall take place in conjunction with the review of the site development plan or a zoning permit for the property.

(Amended “B” by Adding “Authority & Director” 1-28-13-Effective Upon Passage)

175-98.5 SITE AND DESIGN STANDARDS (EC)

A. Outside Storage, Outdoor Display or Outdoor Sales: In addition to the standards for the underlying zoning district, outdoor storage, outdoor display and/or outdoor sales within the EC District shall be reviewed by the Planning

Commission when located within the required yard adjacent to Route 340. The Planning Commission may place reasonable design conditions on such activities, including the designation of a specific area to be used, and/or the requirement of a distance buffer, screen or landscaping.

(Amended 1-28-13-Effective Upon Passage)

B. Utilities: Utility lines, including electric, cable and telephone, to serve the development project shall be installed underground. All junction and access boxes shall be screened. All utility pad fixtures, meter boxes, etc. shall be shown on the site plan and integrated with the architectural elements of the site.

C. Fences: Fences exceeding four (4) feet in height shall be located in the side and rear yards only. Chain link fences, including those with slats, are discouraged, particularly where visible from the public right-of-way. No chain link fence shall be permitted in the front yard in the EC.

D. Mechanical Equipment: Mechanical equipment shall be shielded and screened from the public view and designed to be perceived as an integral part of the building.

E. Integrated Development: All buildings within the property shall be developed as a cohesive entity, ensuring that building placement, architectural treatment, vehicular and pedestrian circulation and other development elements work together functionally and aesthetically. Architectural treatment shall be designed so that all building facades of the same building (whether front, side, or rear) that are visible from the public right-of-way, shall consist of similar architectural treatment in terms of materials, quality, appearance and detail.

F. Orientation: Building facades and entrances should be oriented in a manner toward the primary means of vehicular access.

G. Building Bulk and Mass: All buildings and parking areas should be designed with treatments to break up the mass and bulk. The treatment of buildings shall include vertical architectural treatment at least every 25-30 feet to break down the scale of the building into smaller components. Any facade with a blank wall shall be screened in a manner consistent with the requirements of environmental planting screens in Section 148-44. Architectural details shall continue on all facades visible from the public right-of-way. Large expanses of blank walls facing the street are inappropriate.

H. Scale and Proportion: New construction should relate to the dominant proportions of buildings in the immediate area. The ratio of height to width and the ratio of mass (building) to void (openings) should be balanced. The scale and mass of a proposed project should relate to nearby buildings or the streetscape.

I. Materials: Building materials shall be typical of those prevalent in Front Royal/Warren County, including, but not limited to, stucco, brick, architectural block, wood siding and standing seam metal roofs. Inappropriate materials include reflective glass and metal wall panels. No facade visible from the

	adjoining property or the roadway shall be constructed of unadorned cinder block, unadorned concrete, corrugated metal or sheet metal. J. <u>Color</u>: The permanent color of building materials (to be left unpainted) shall resemble the predominate tones, primarily earthen tones, prevalent in the historic areas of the community. Garish and striking colors shall be avoided. K. <u>Adjoining Historic Properties</u>: New construction on properties that adjoin designated historic properties should seek to incorporate the scale, massing and treatment of the historic property into the new construction. Efforts shall be made to relate to the building height, when in proximity to the principle historic structure. New construction shall not overshadow the adjoining historic property. L. <u>Lighting</u>: All outdoor lighting fixtures shall be down-directed, with light trespass not to exceed 0.5 foot-candles at the property line. All island canopy ceiling fixtures shall be recessed. 175-98.6 ADOPTION OF STANDARDS AND GUIDELINES (EC) The Front Royal Planning Commission may adopt written standards and guidelines to illustrate and clarify the design standards herein, provided that such standards and guidelines are consistent with the intent and provisions of the EC. 175-98.7 APPEALS (EC) Any decision made under the provisions of this Section may be appealed to the Front Royal Town Council, following the process outlined in Section 175-94 (A), by any applicant aggrieved by such decision. Further appeal may be made to the Circuit Court, pursuant to Section 15.2-2306.A.3 of the Code of Virginia 1950, as amended.
CONCLUSION	Per the submitted renderings, the applicant is proposing to clad the exterior of the structure with a mixed façade of cedar siding, metal panels and existing stucco. The determination to be made by the Planning Commission is whether the proposed materials presented are appropriate in the Town’s Entrance Corridor. Staff are concerned about the proposed finish on the metal panels. The Planning Commission could require conditions such as brushed or patina finishes.

ATTACHMENTS: 1) Application and supporting documentation.

TOWN OF FRONT ROYAL ZONING PERMIT APPLICATION

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 JAN 06 2025
 TOWN OF FRONT ROYAL
 PLANNING & ZONING DEPARTMENT

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

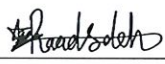
MAILING ADDRESS: 7300 BULL RUN POST OFFICE ROAD - CENTERVILLE, VA 20121

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

ARCHITECTURE

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

www.scheerhysong.com
info@scheerhysong.com

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

10110 BATTLEVIEW PARKWAY - MANASSA, VA 20109

[illegible]

SHEET TITLE:

C100

G100



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

VICINITY MAP	
<u>ENERGY CODE COMPLIANCE:</u> 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. U-FACTOR: .032 OR LESS) SHGC: 0.25 OR LESS) 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.	

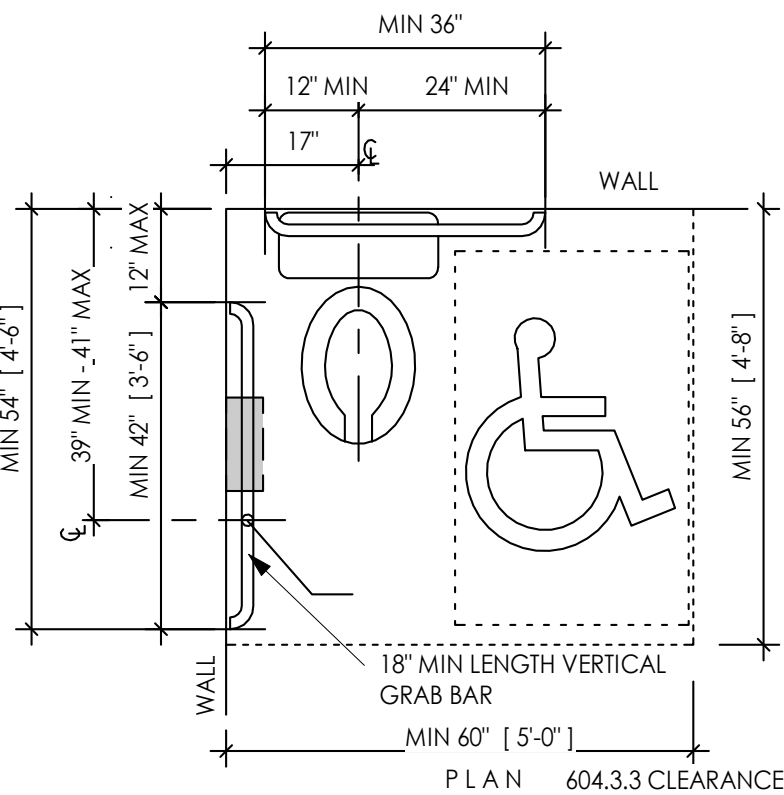
MATERIAL SPECS:		INTERIOR WALLS:	
EXTERIOR:	AMERICALD AC6000 FLUSH ALUMINUM PANEL SYSTEM THICKNESS: 0.063" FINISH: KYNAR 500/HYLAR 5000 RESIN COLORS: MAIN SCREEN WALLS: CHARCOAL GRAY OBELISK WALLS: AGED PENNY EXTRUSIONS, FLASHINGS, AND BRAKE METAL TO MATCH		RESTROOMS, HALL, & JANITOR CLOSET: 5/8" GYPSPUM (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
	EXTERIOR INSULATION FINISH SYSTEM (EIFS): LA HABRA FINISH: SMOOTH COLOR TO BE: MOONSTONE 10446L (51) - PAREX USA		INTERIOR CEILINGS: RESTROOMS, HALL, & JANITOR CLOSET: 5/8" GYPSPUM (SMOOTH, PAINTED FINISH) COLOR: OFF-WHITE FINISH: SEMI-GLOSS SALES FLOOR: 5/8" GYPSPUM (SMOOTH, PAINTED FINISH) COLOR: BLACK FINISH: FLAT CIGAR ROOM: 1x6 CEDAR T&G PLANKS COLOR: NATURAL FINISH: SATIN
EXTERIOR LOUVERS:	AMERICALD 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	INTERIOR FLOORING:	ALL AREAS: VINYL LOCK-TOGETHER PLANKS GRAY (WOOD GRAIN)
	SHERWIN WILLIAMS KEM-400 (EXTERIOR STEEL COLUMNS @ ENTRANCE CANOPIES) PRIMER: PER MANUFACTURER INSTRUCTIONS COLOR: BLACK FINISH: SATIN		EXTERIOR LIGHTS: ALL LIGHTS PER ELECTRICAL ENGINEER DRAWINGS AND MUST BE DARK SKY APPROVED PER FRONT ROYAL ENTRANCE CORRIDOR ORDINANCE
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	ENTRY CANOPIES:	SHALLOW SQUARE RECESSED LED NORA MODEL: NLCBS-4561227BB
		SCREENWALL CAP:	CONCEALED ROPE LED
		SCREENWALL SCONCE:	DARK SKY LED ARTIKA MODEL: 12OUT-DS-MB



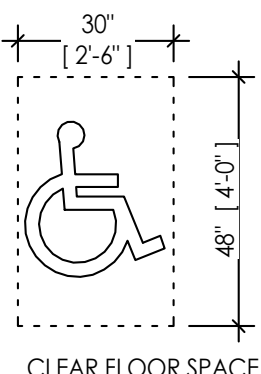
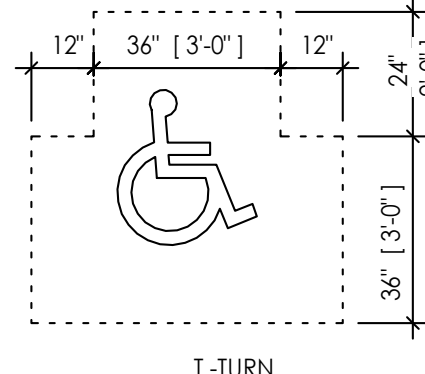
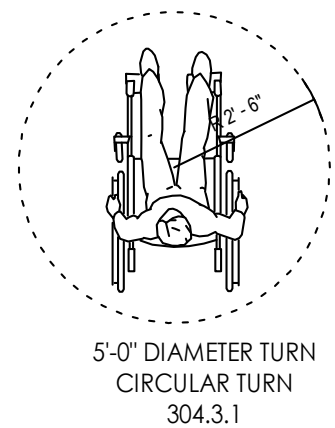
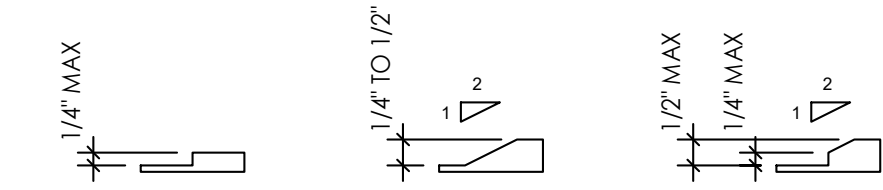
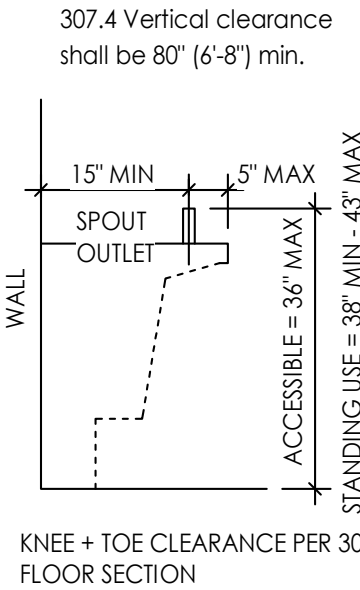
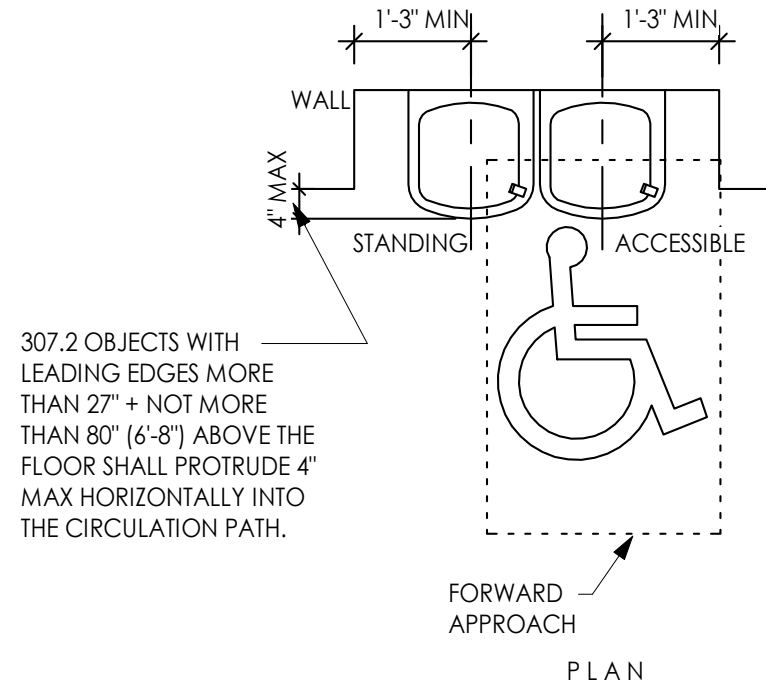
1. THE DRAWINGS SHOW GENERAL INFORMATION ONLY. IT SHALL BE THE RESPONSIBILITY OF THE BUILDER TO EXAMINE THE SITE TO DETERMINE THE EXISTING CONDITIONS AND CHARACTER AND EXTENT OF THE WORK TO BE PERFORMED AND OPERATIONS REQUIRED.
2. THE FAILURE OR OMISSION OF THE BUILDER TO VISIT THE SITE AND ACQUAINT 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.

NOTE:
ELECTRICAL, MECHANICAL AND PLUMBING
SUBMITTALS SHALL BE DEFERRED

1/6/2025 1:09:00 PM



2018 IBC FINISH MATERIALS
1209.2.1 FLOORS IN TOILET, BATHING + SHOWER ROOMS SHALL HAVE A SMOOTH, HARD, NONABSORBENT SURFACE. THE INTERSECTIONS OF SUCH FLOORS WITH WALLS SHALL HAVE A SMOOTH, HARD, NON-ABSORBENT VERTICAL BASE THAT EXTENDS UPWARD ONTO THE WALLS NOT LESS THAN 4\"/>



ACCESSIBILITY NOTES:

- ALL CONTRACTORS ARE RESPONSIBLE FOR UNDERSTANDING + MEETING THE HANDICAP CODE REQUIREMENTS PER CHAPTER 11 OF 2018 ICC INTERNATIONAL BUILDING CODE (IBC) ICC A117.1-2009.
- ACCESSIBLE DETAILS ARE PROVIDED FOR GENERAL REFERENCE ONLY. EVERY PROJECT + ENVIRONMENT IS DIFFERENT + MUST BE REVIEWED INDEPENDENTLY. VERIFY WITH ARCHITECT ANY QUESTIONABLE ITEMS THAT ARE NOT SHOWN PRIOR TO INSTALLATION.
- PROVIDE WOOD BLOCKING OR CONCEALED ANCHOR PLATES FOR ALL WEIGHT BEARING ACCESSORIES MOUNTED IN STUD PARTITIONS TO CARRY MIN LOAD OF 250 POUNDS. INSTALL FIRE TREATED WOOD OR METAL STRAP BLOCKING IN FIRE RATED WALLS TO MAINTAIN THE INTEGRITY OF THE FIRE RATING.
- ACCESSIBLE CLEAR FLOOR SPACE, PROJECTION + REACH RANGE REQUIREMENTS FOR ALL PLUMBING FIXTURES + ACCESSORIES MUST BE MAINTAINED. DEVIATION FROM LOCATION, PLACEMENT + STYLE OF UNITS MUST BE APPROVED BY THE ARCHITECT PRIOR TO INSTALLATION.
- DIMENSIONS SHOWN ON PROJECT CALLOUT ELEVATIONS ARE FOR REFERENCE -ALL ACCESSIBLE FIXTURES, GRAB BARS, ACCESSORIES ETC TO BE INSTALLED PER THE TYPICAL DETAILS AS SHOWN + IN STRICT ACCORDANCE WITH ICC A117.1-2009.

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

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

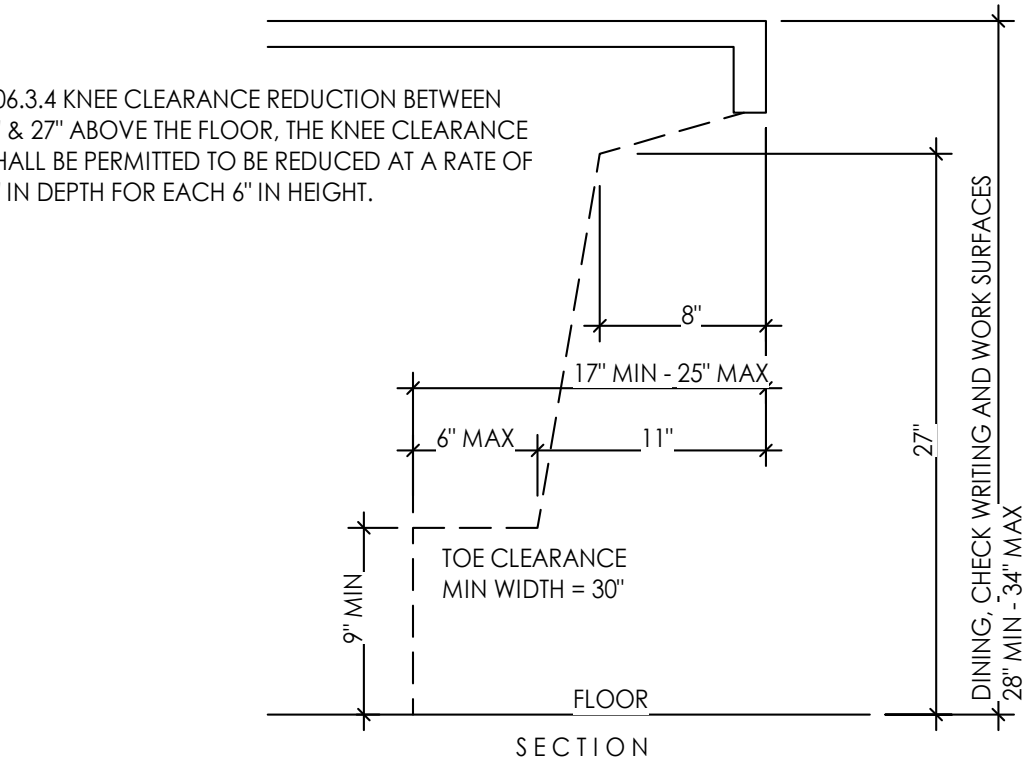
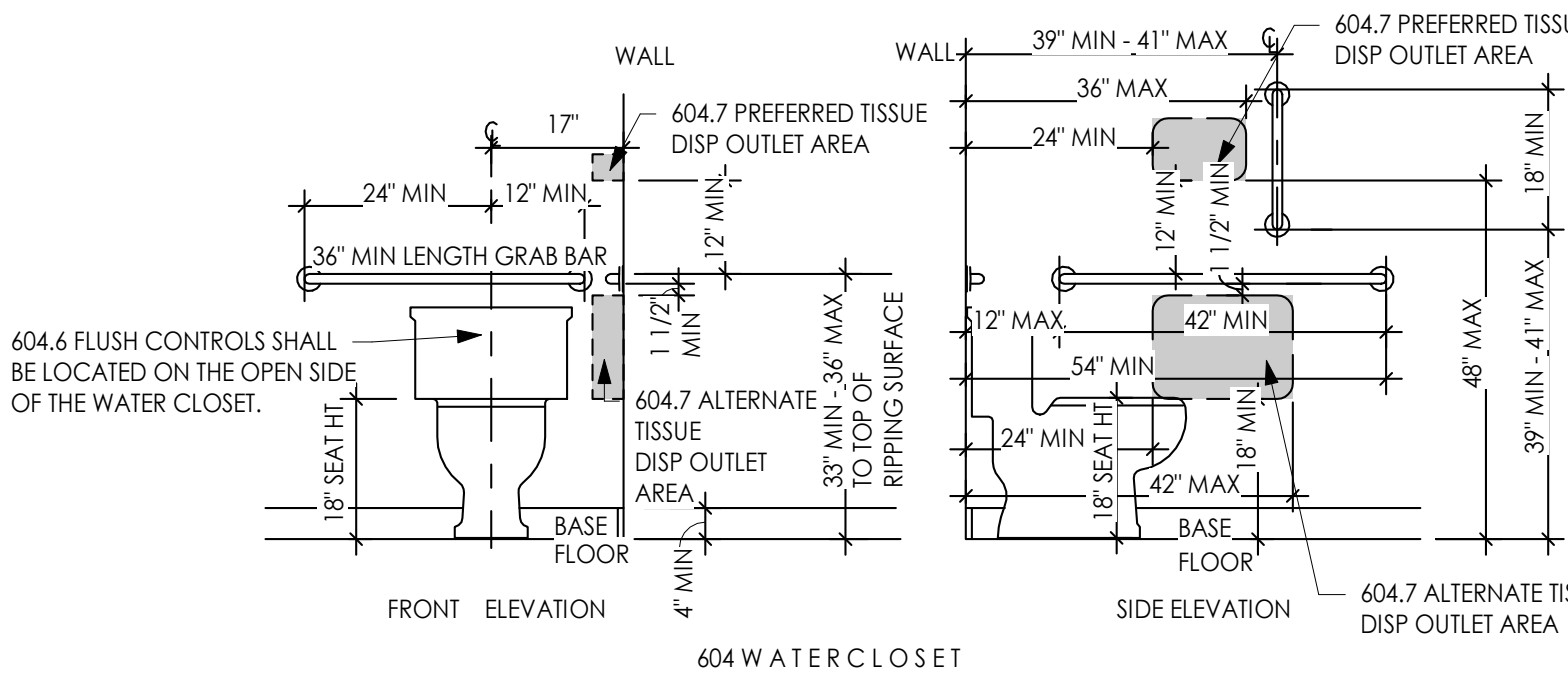
www.scheerhysong.com
info@scheerhysong.com

RAAD REAL ESTATE BUILDING

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

RAAD REAL ESTATE

10110 BATTLEVIEW PARKWAY - MANASSA, VA 20109



THIS DETAIL IS A SUMMARY OF ICC A117.1-2009 CODE SECTIONS 902+904 CONTRACTORS SHALL VERIFY REQUIREMENTS OF ALL ELEMENTS.

902.2 DINING SURFACES + WORK SURFACES SHALL HAVE A 30\"/>

EXCEPTIONS:

1. AT DRINK SURFACES 12\"/>
2. DINING SURFACES THAT ARE 15\"/>

902.3 THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER THE EXPOSED PORTIONS OF DINING SURFACES + WORK SURFACES.

902.4 THE TOPS OF DINING SURFACES + WORK SURFACES SHALL BE 28\"/>

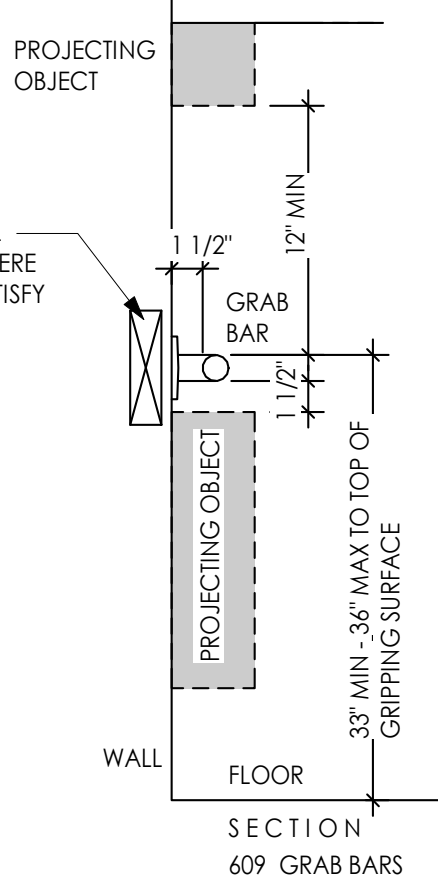
904.3 SALES + SERVICE COUNTERS AND WINDOWS...PORTION OF THE COUNTERTOP SHALL EXTEND THE SAME DEPTH AS THE SALES + SERVICE COUNTERTOP.

904.3.1 PARALLEL APPROACH. A PORTION OF THE PUBLIC USE SIDE OF THE COUNTER SURFACE 36\"/>

904.3.3 FORWARD APPROACH. A PORTION OF THE PUBLIC USE SIDE OF THE COUNTER SURFACE 30\"/>

904.4.2 COUNTERS. THE CHECKOUT COUNTER SURFACE SHALL BE 38\"/>

904.4.3 CHECK WRITING SURFACES. WHERE PROVIDED, CHECK WRITING SURFACES SHALL BE 28\"/>



609.2.1 CIRCULAR GRAB BARS SHALL HAVE AN OUTSIDE DIAMETER OF 1-1/4\"/>

609.2.2 NONCIRCULAR GRAB BARS SHALL HAVE A CROSS SECTION DIMENSION OF 2\"/>

609.3 THE SPACE BETWEEN THE WALL + THE GRAB BAR SHALL BE 1-1/2\"/>

609.4.1 GRAB BARS SHALL BE INSTALLED IN A HORIZONTAL POSITION, 33\"/>

609.5 GRAB BARS + ANY WALL OR OTHER SURFACES ADJACENT TO GRAB BARS, SHALL BE FREE OF SHARP OR ABRASIVE ELEMENTS. EDGES SHALL BE ROUNDED.

609.6 GRAB BARS SHALL NOT ROTATE WITHIN THEIR FITTINGS.

609.7 GRAB BARS SHALL BE INSTALLED IN ANY MANNER THAT PROVIDES A GRIPPING SURFACE AT THE LOCATIONS SPECIFIED IN THIS STANDARD + DOES NOT OBSTRUCT THE CLEAR FLOOR SPACE. HORIZONTAL + VERTICAL GRAB BARS SHALL BE PERMITTED TO BE SEPARATE BARS, A SINGLE PIECE BAR, OR COMBINATION THEREOF.

609.8 ALLOWABLE STRESSES SHALL NOT BE EXCEEDED FOR MATERIALS USED WHERE A VERTICAL OR HORIZONTAL FORCE OF 250 POUNDS (1112 N) IS APPLIED AT ANY POINT ON THE GRAB BAR, FASTENER MOUNTING DEVICE, OR SUPPORTING STRUCTURE.

THIS IS A SUMMARY OF THE ICC A117.1-2009 SECTION 404 + [2018 IBC] CODES CONTRACTOR SHALL VERIFY REQUIREMENTS OF ALL ELEMENTS.

404.2.2 + [IBC 1010.1.1] CLEAR OPENING WIDTH OF 32\"/>

404.2.2(X1) + [IBC 1010.1.1.1(X)] CLOSERS + STOPSSHALL BE PERMITTED TO BE 78\"/>

404.2.7.1 CLOSER SPEEDSHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90\"/>

404.2.7.2 SPRING HINGE SPEEDSHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 70\"/>

404.2.8 + [IBC 1010.1.3] OPENING FORCEFOR PUSHING OR PULLING OPEN DOORS OTHER THAN FIRE DOORS SHALL BE 5.0 POUNDS (22.2 N) MAX. FIRE DOORS SHALL HAVE THE MINIMUM OPENING FORCE ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY.

404.2.10 VISION LITES + SIDELITES ADJACENT TO DOORS CONTAINING ONE OR MORE GLAZING PANELS THAT PERMIT VIEWING THROUGH THE PANELS SHALL HAVE THE BOTTOM OF AT LEAST ONE PANEL ON EITHER THE DOOR OR AN ADJACENT SIDELITE 43\"/>

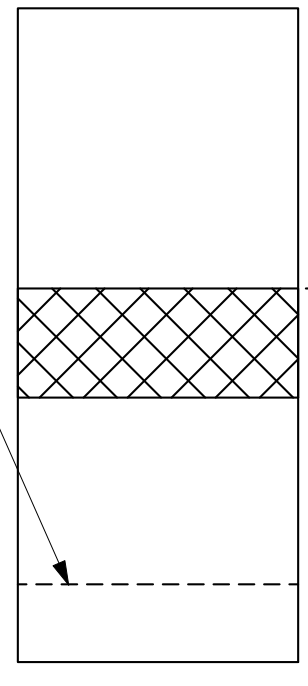
404.2.9 DOOR SURFACE WITHIN 10\"/>

404.2.3.1 + [IBC 1010.1.5] FLOOR SURFACE WITHIN THE MANEUVERING CLEARANCES SHALL BE 2\"/>

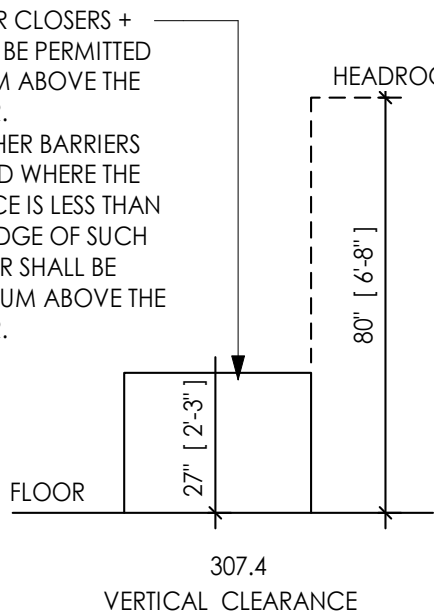
404.2.4 + [IBC 1010.1.7] THRESHOLDS.IF PROVIDED, SHALL BE 1/2\"/>

404.2.6 + [IBC 1010.1.9] HARDWAREHANDLES, PULLS, LATCHES, LOCKS + OTHER OPERABLE PARTS ON ACCESSIBLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND + DOES NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST TO OPERATE. THE OPERATIONAL FORCE TO RETRACT LATCHES OR DISENGAGE DEVICES THAT HOLD THE DOOR OR GATE IN A CLOSED POSITION SHALL BE AS FOLLOWS:

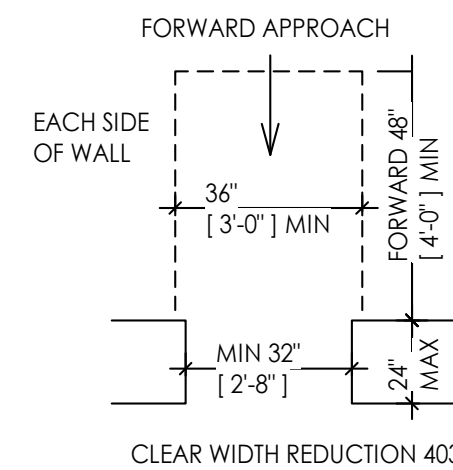
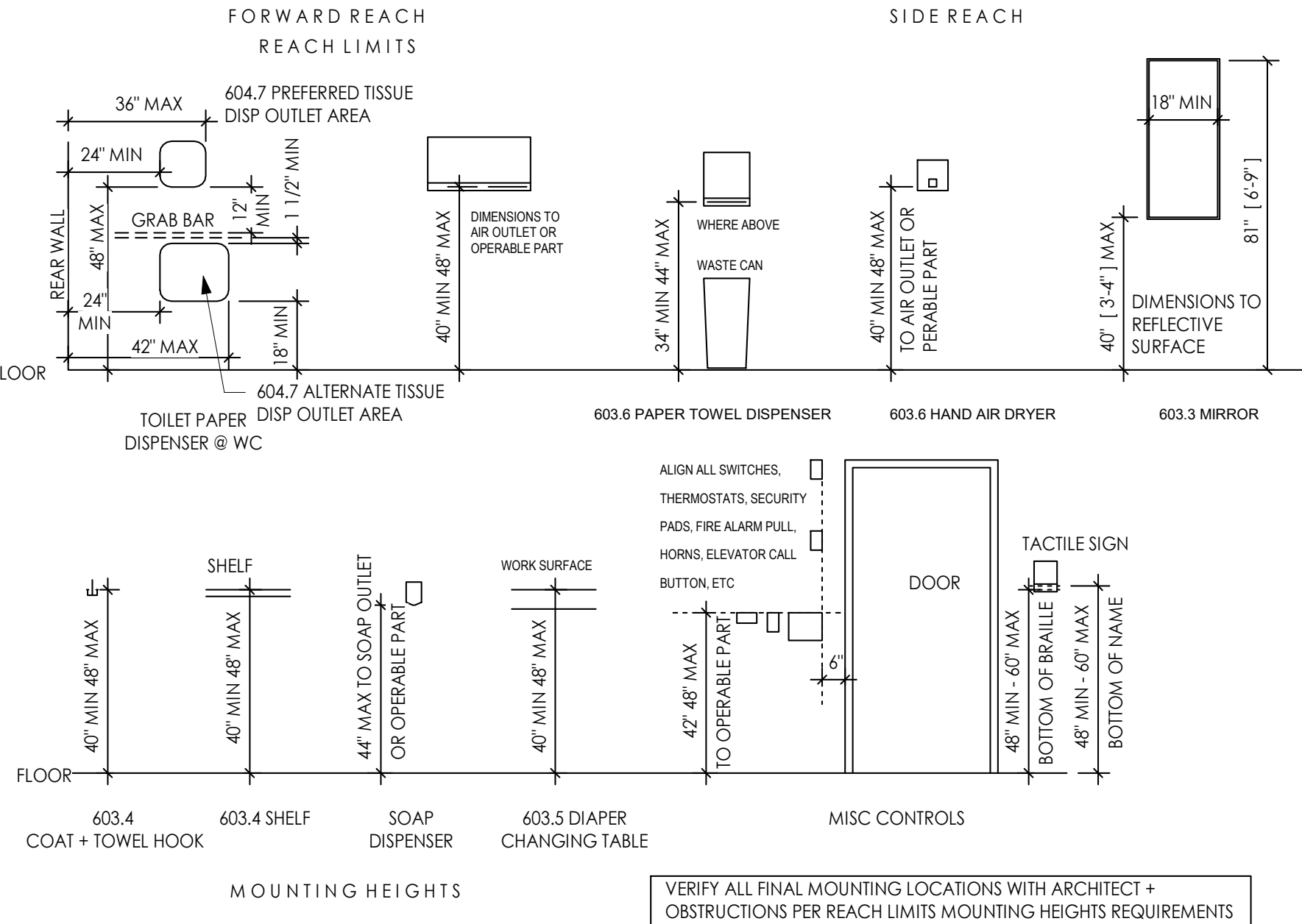
1. HARDWARE OPERATION BY A FORWARD, PUSHING OR PULLING MOTION: 15 POUNDS (66.7 N) MAX.
2. HARDWARE OPERATION BY A ROTATIONAL MOTION: 28 INCH POUNDS (315 N-CM) MAX [IBC 1010.1.9.2] OPERABLE PARTS OF SUCH HARDWARE SHALL BE 34\"/>



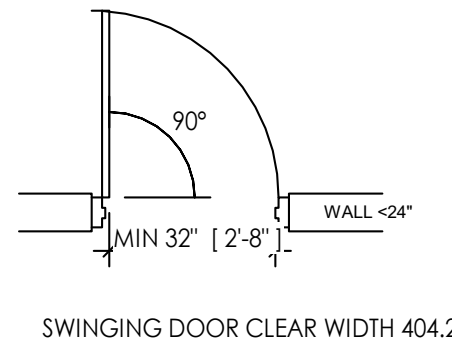
TYPICAL DOOR HARDWARE NOTES



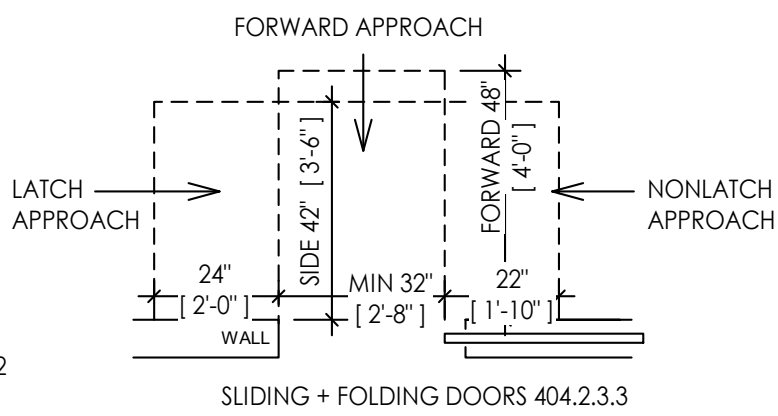
307.4 VERTICAL CLEARANCE



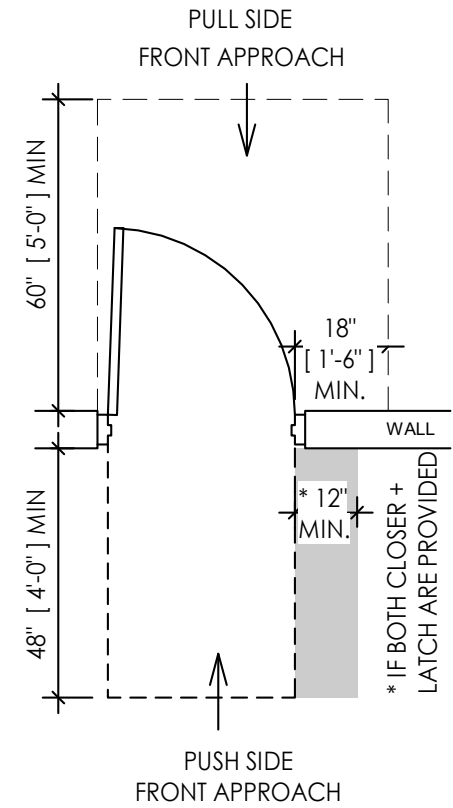
CLEAR WIDTH REDUCTION 403.5



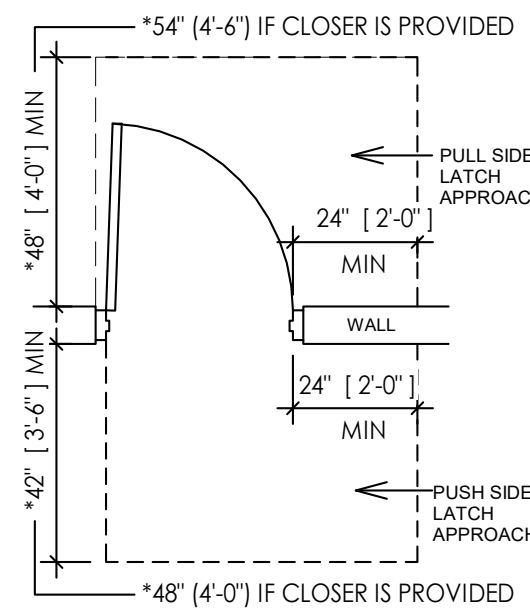
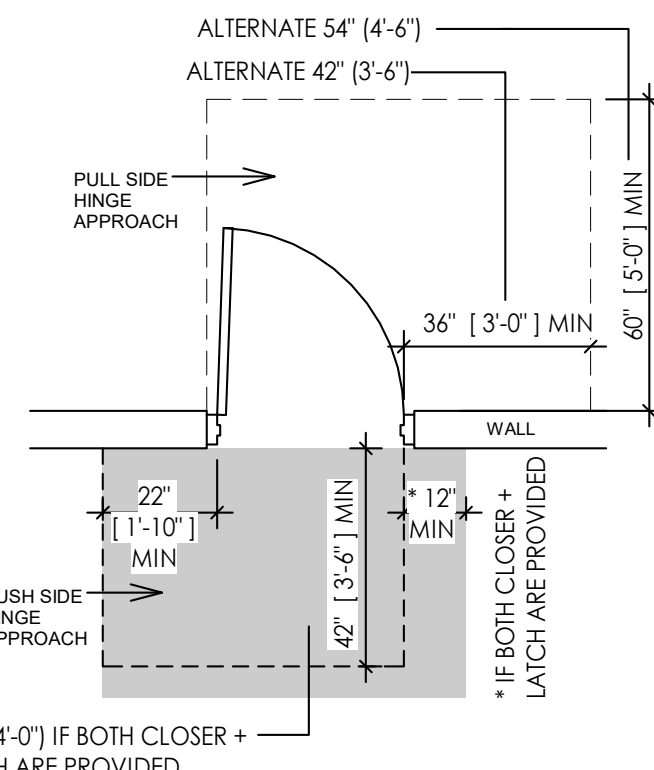
SWINGING DOOR CLEAR WIDTH 404.2.2



SLIDING + FOLDING DOORS 404.2.3.3

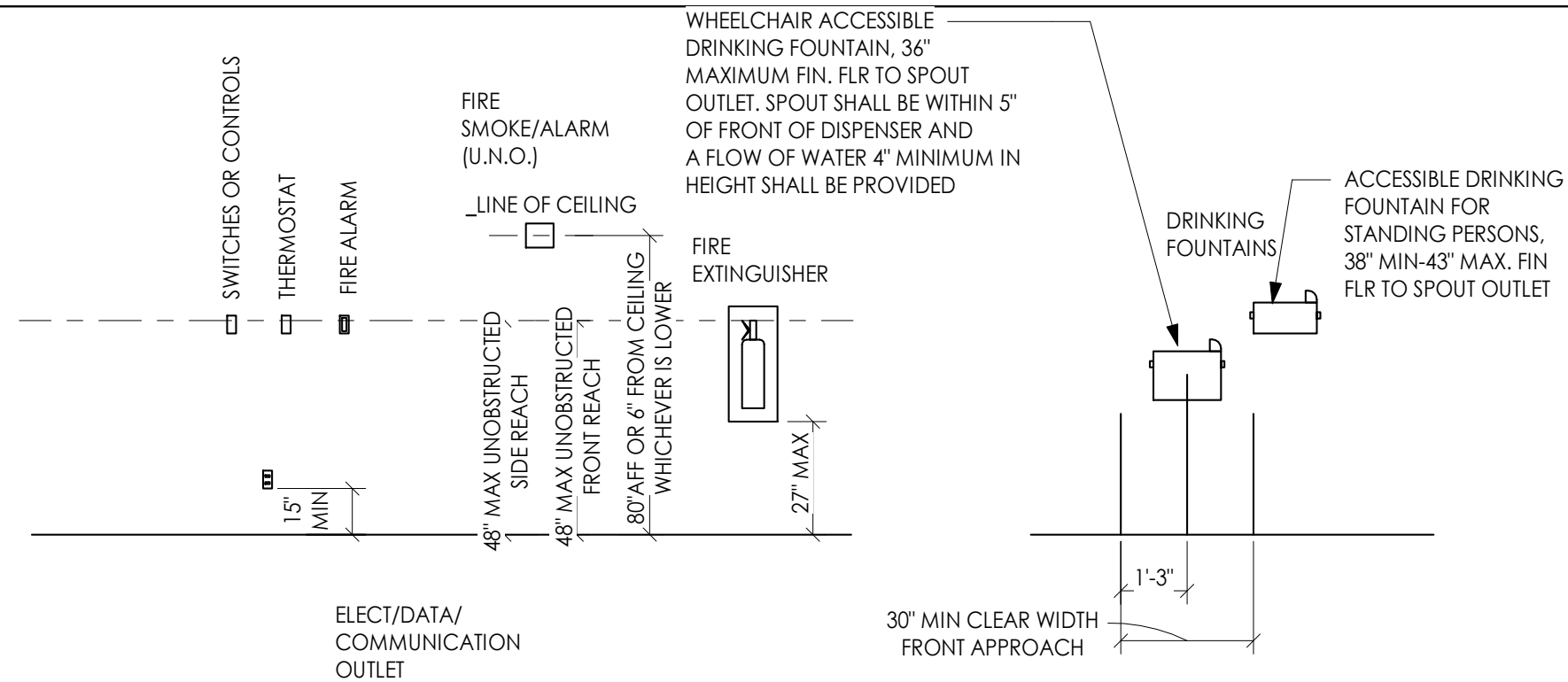
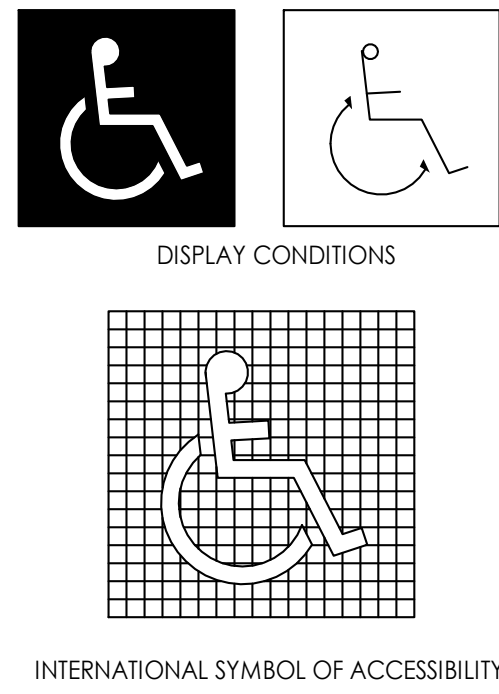
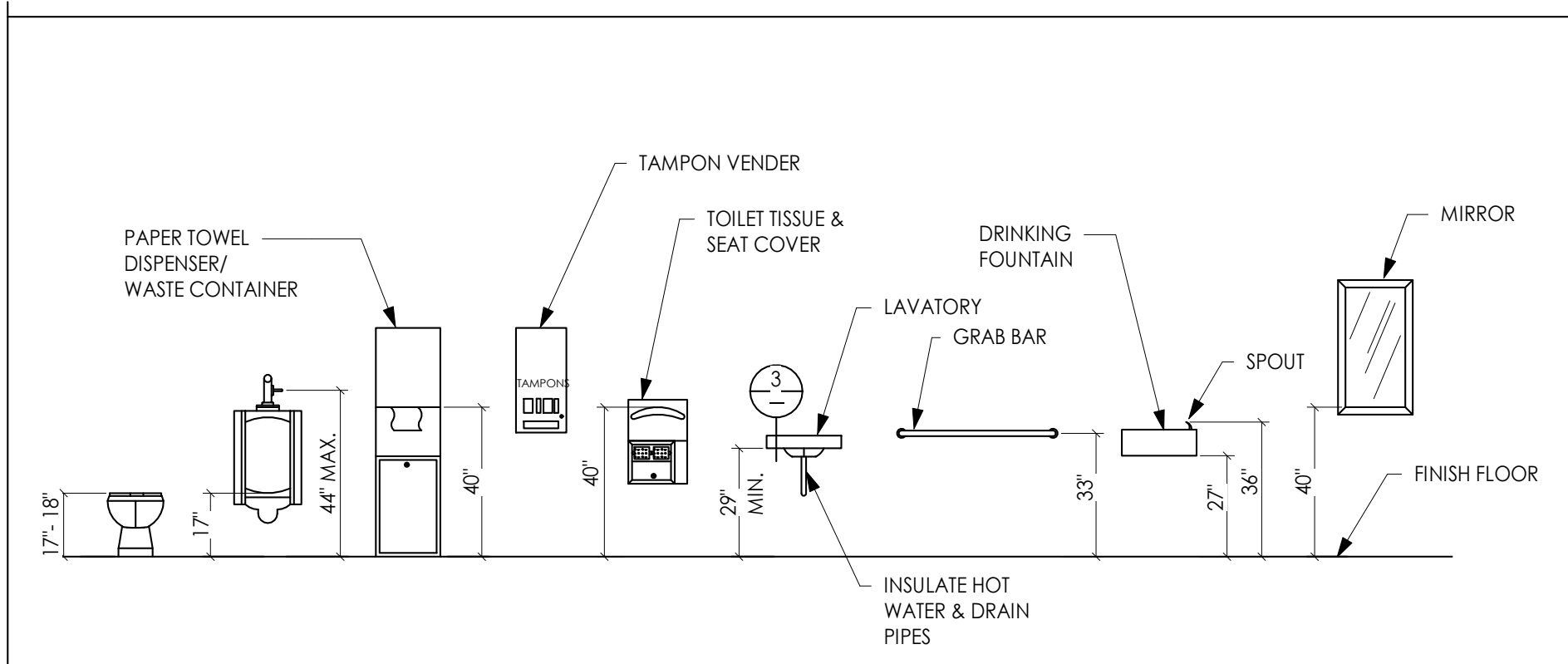


MANEUVERING CLEARANCES AT DOORS
FIG 404.2.3.2



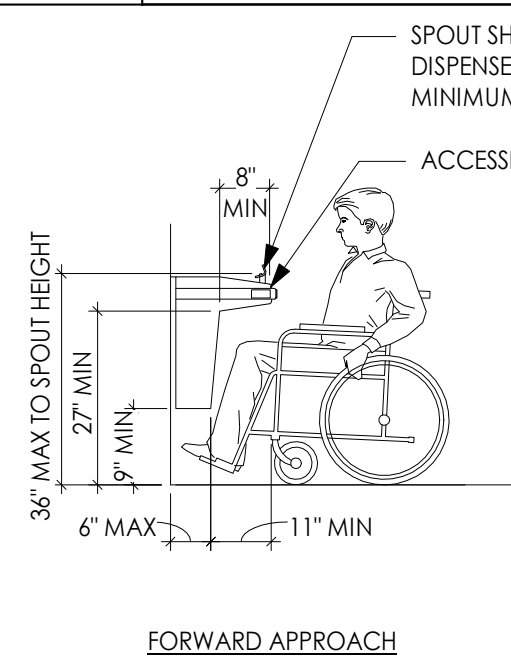
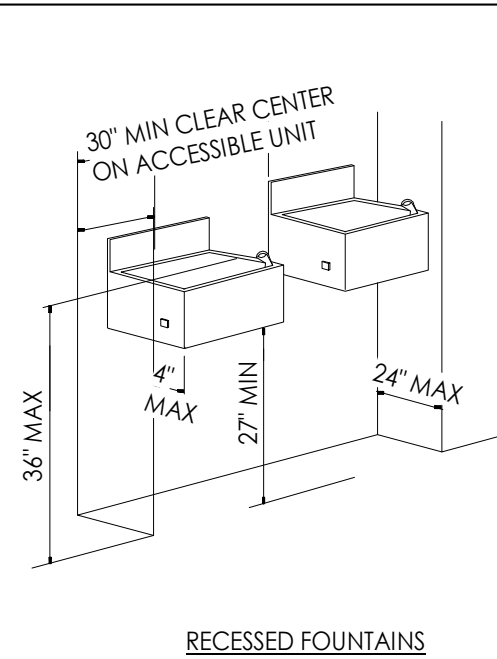
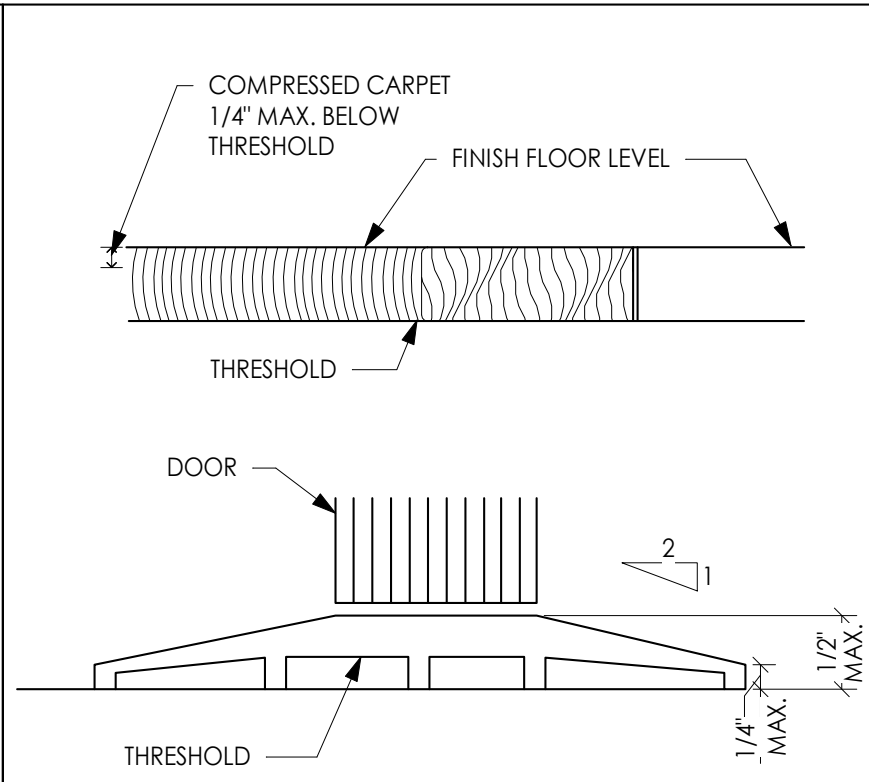
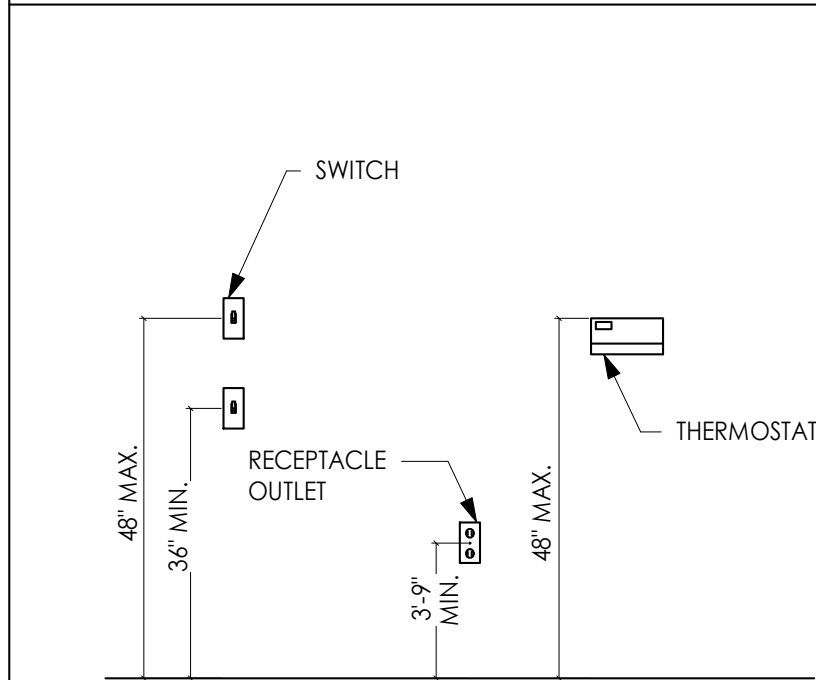
404.2.3.1 FLOOR SURFACE WITHIN DOOR MANEUVERING CLEARANCE SHALL NOT BE STEEPER THAN 1:48 + PER 302



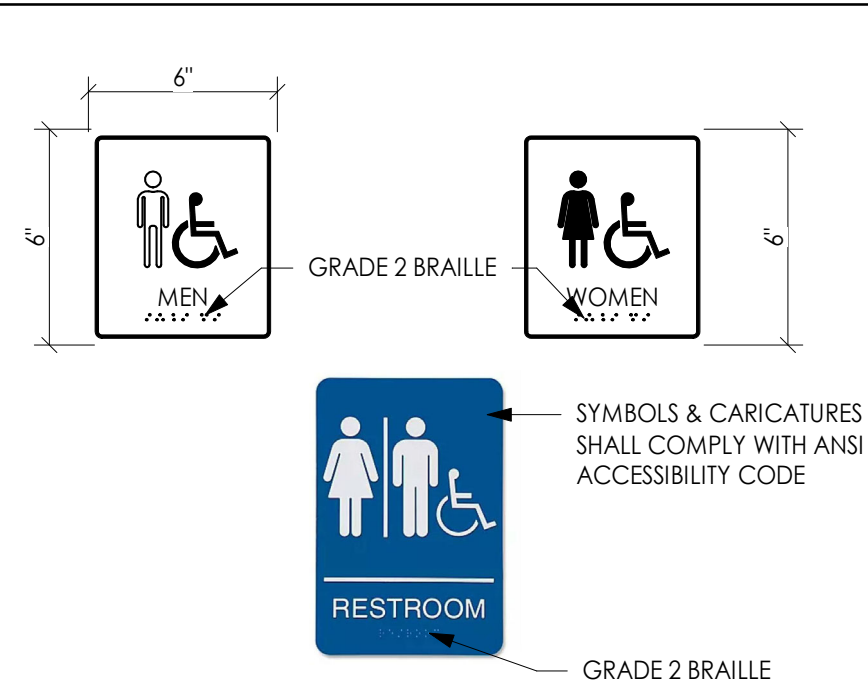


TYPICAL LEVER HANDLE

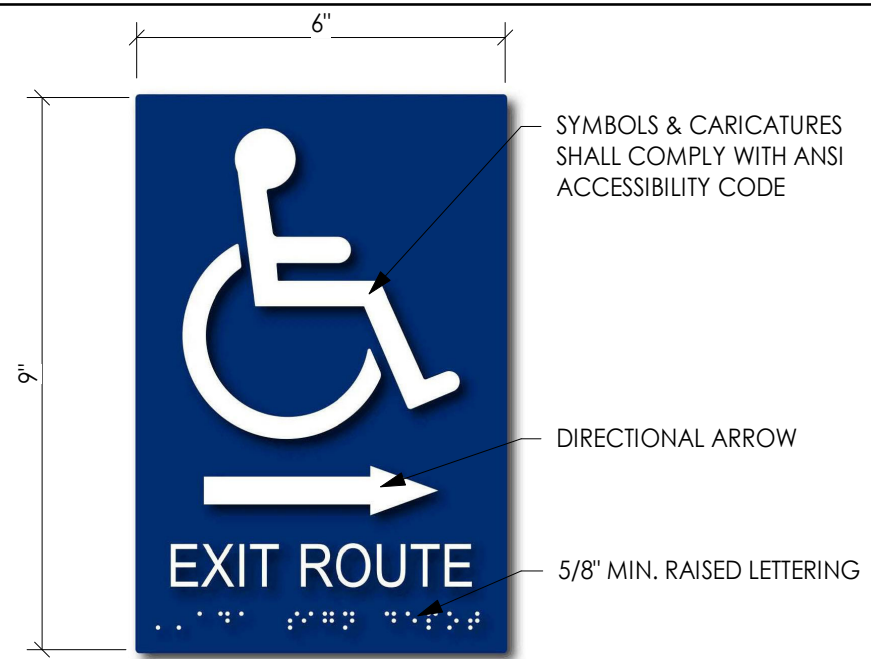
NOTE:
DOORS SHALL COMPLY WITH SECTION 404.2
AREAS AND SPACES SHALL REMAIN ACCESSIBLE
TO INDIVIDUALS WITH DISABILITIES.



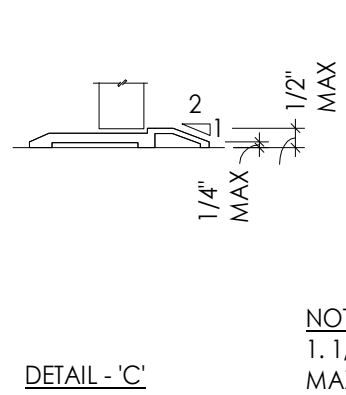
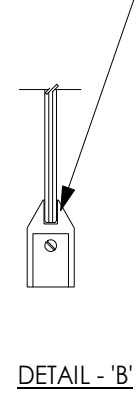
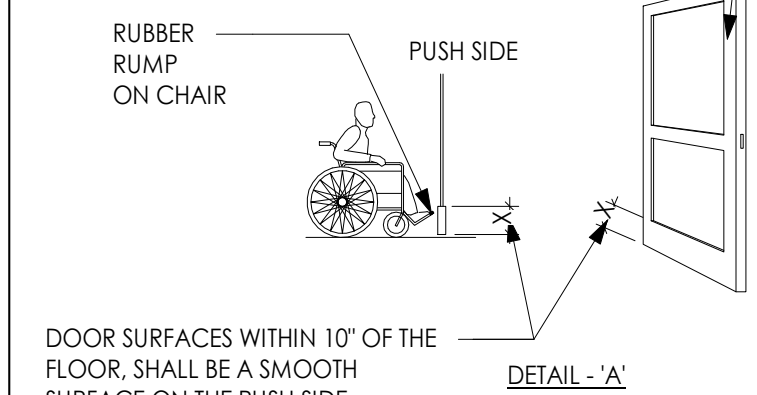
DRINKING FOUNTAIN CLEARANCES



ALL CARICATURES & LETTERS TO BE
RAISED 1/32" MIN.



ICC/ANSI A117.1-2009, SECTION 404.2.6 DOOR HARDWARE - HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERABLE PARTS ON ACCESSIBLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST TO OPERATE. OPERABLE PARTS OF SUCH HARDWARE SHALL BE 34" MIN. AND 48" MAX. ABOVE THE FLOOR.

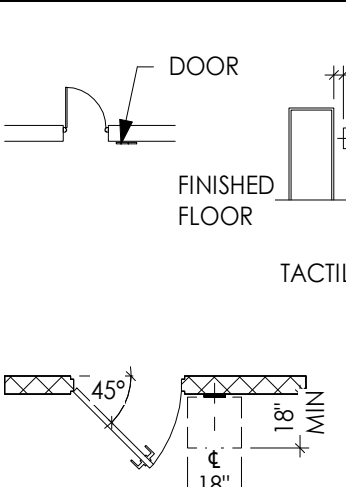
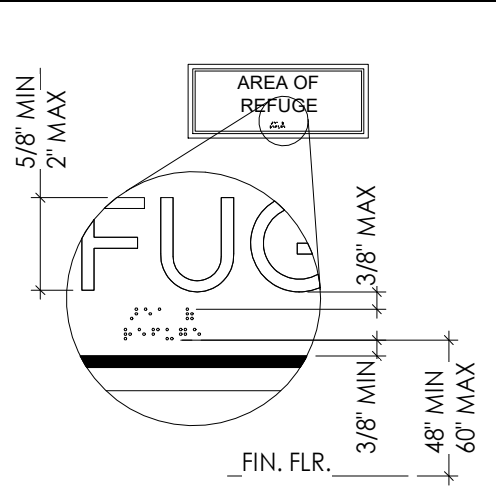
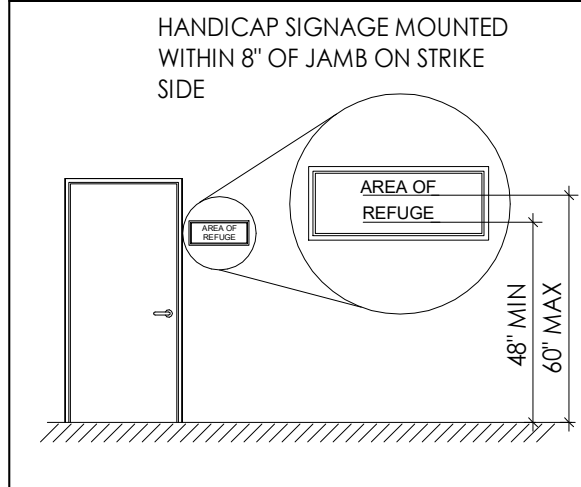


DOOR SURFACES AND THRESHOLDS AT DOORWAYS

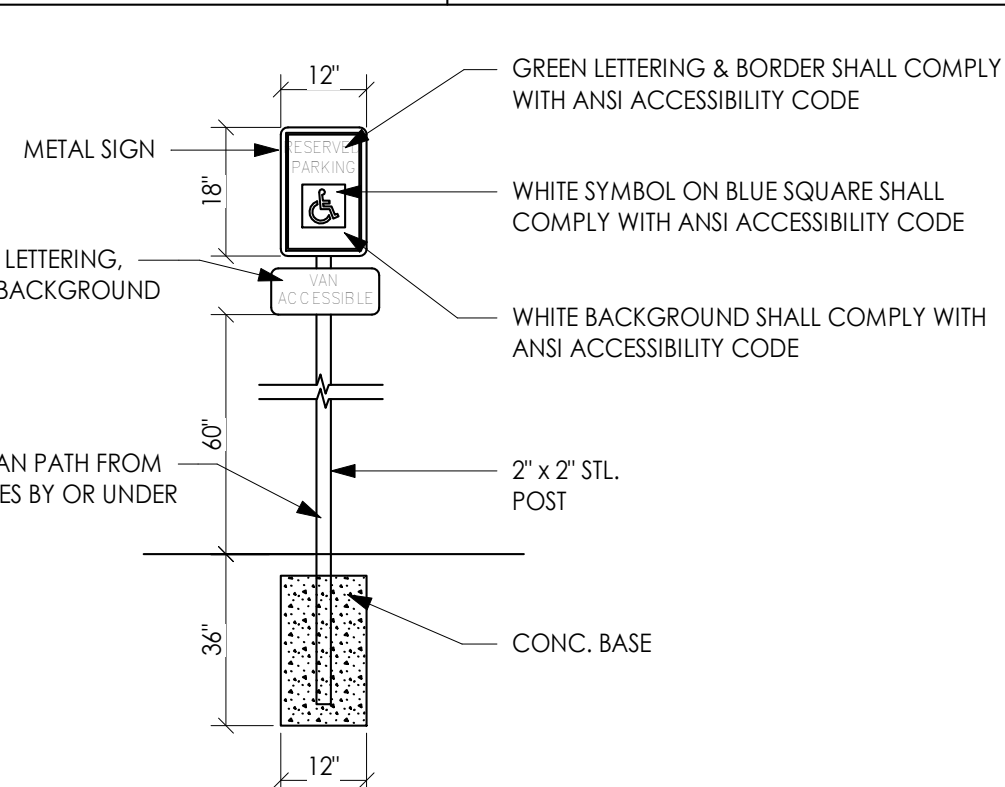
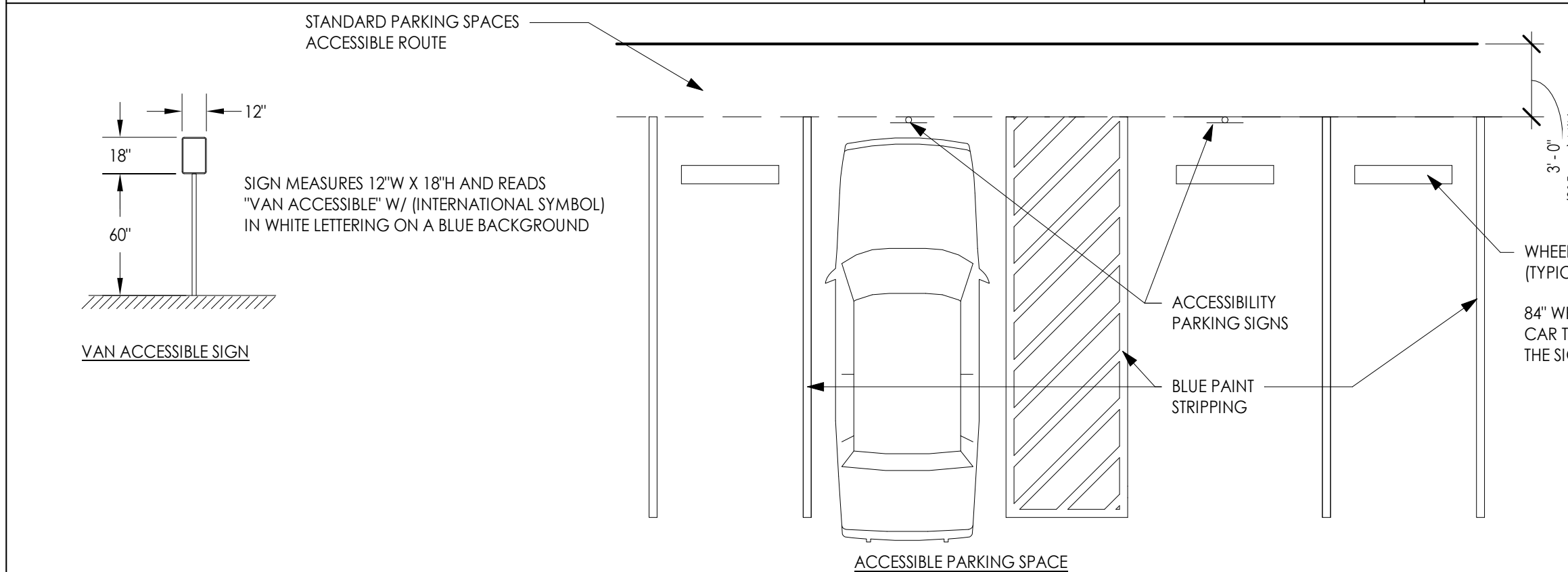
ICC/ANSI A117.1-2009, SECTION 404.2.9 DOOR SURFACE - EXCEPTION 2
TEMPERED GLASS DOORS WITHOUT STILES AND
HAVING A BOTTOM RAIL OR SHOE WITH A TOP
LEADING EDGE TAPERED AT NO LESS THAN 60
DEGREE FROM THE HORIZONTAL SHALL NOT
BE REQUIRED TO MEET THE 10 INCH BOTTOM
RAIL HEIGHT REQUIREMENT.

NOTES:

1. 1/2" MAXIMUM TOTAL HEIGHT WITH 1/4" MAXIMUM VERTICAL CHANGE AT EDGE.
2. 1 : 2 SLOPED BEVEL REQUIRED IF LEVEL CHANGE IS OVER 1/4" VERTICAL LEVEL CHANGE.
3. 1/4" MAXIMUM VERTICAL LEVEL CHANGE.



TITLE	SIGNS CONTAINING TACTILE CHARACTERS SHALL BE LOCATED SO THAT A CLEAR FLOOR AREA 18" MIN BY 18" MIN CENTERED ON THE TACTILE CHARACTERS, IS PROVIDED BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED POSITION AND 45 DEG. OPEN POSITION
-------	---

[illegible]

PROJECT NUMBER:

24020.1

SHEET TITLE F.

ACCESSIBILITY DETAILS

SHEET 2

SHEET NUMBER:

G102





SCHEER
HYSONG

ARCHITECTURE

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FRONT ROYAL, WARREN COUNTY, VA 22630

RAAD REAL ESTATE

101 TO BATTLEVIEW PARKWAY - MANASSA, VA 20109

DATE:

11/26/24

01/06/2025

REV DESCRIPTION:

ISSUED FOR CLIENT REVIEW

AGENCY SUBMITTAL

PROJECT NUMBER:

24020.1

SHEET TITLE:

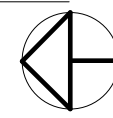
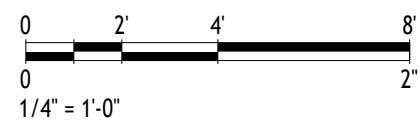
FIRST FLOOR PLAN
LIFE SAFETY

SHEET NUMBER:

A100



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



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

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"

TOTAL TRAVEL DISTANCE = 67'-0"

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

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

A101

CONCRETE FOUNDATION
PER ENGINEER (TYPICAL)

PANEL ELEVATION C - SEE DRAWING 1/A303

A303

A303
2

PANEL ELEVATION D - SEE DRAWING 2/A303

ALUMINUM LOUVERS

PANEL ELEVATION B - SEE DRAWING 2/A302

ALUMINUM LOUVERS

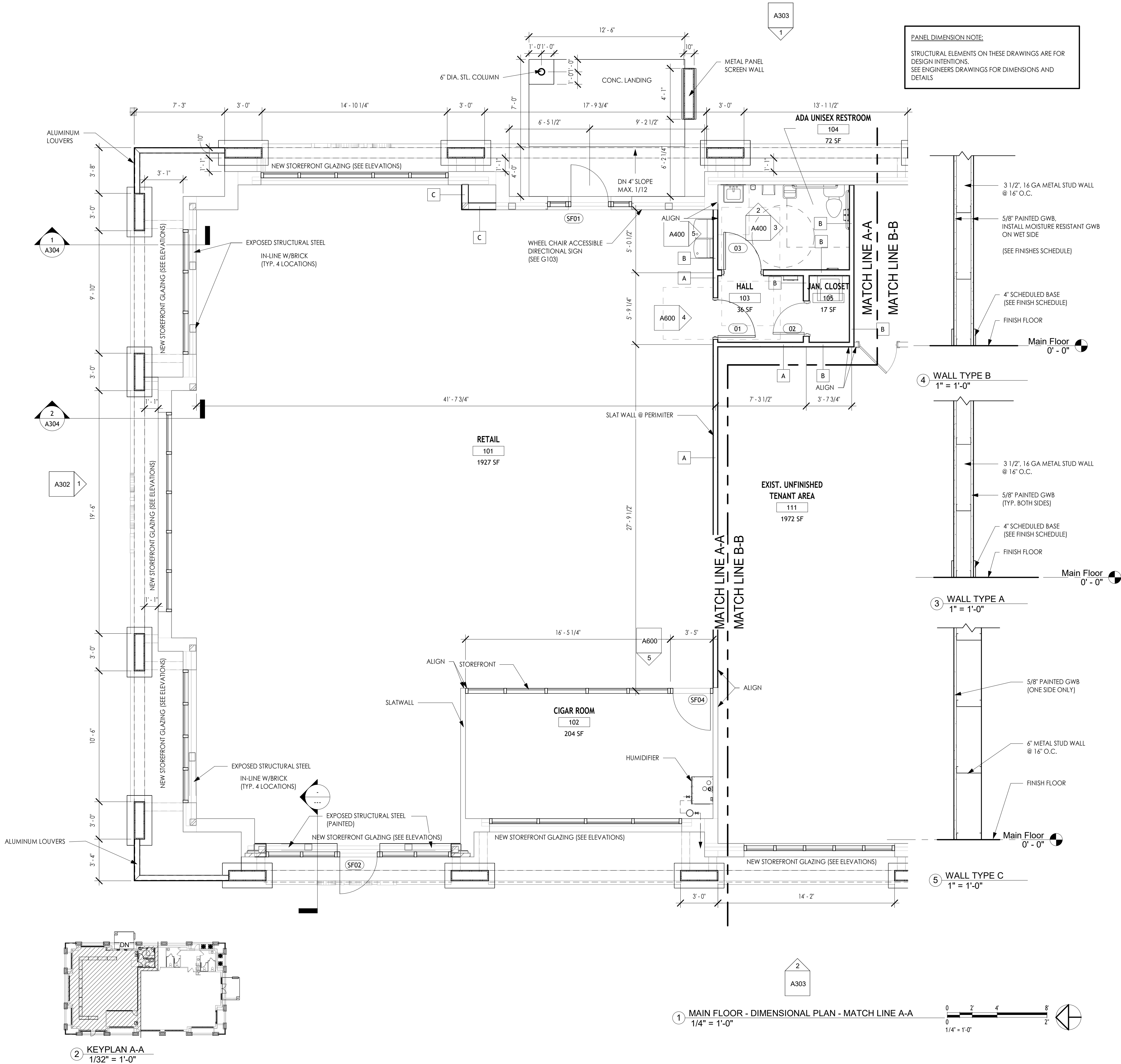
PANEL ELEVATION A - SEE DRAWING 1/A302

A302

A302
1

1/6/2025 1:08:40 PM

1/6/2025 1:08:43 PM



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

- GENERAL NOTES:
- CONTRACTOR TO VERIFY ALL WINDOW AND STOREFRONT OPENINGS PRIOR TO FABRICATION OF ITEMS.
 - SEE DRAWING A101 AND A102 FOR PANEL TYPES.
 - SEE DRAWING A101 FOR WALL TYPES.
 - SEE DRAWING A300 AND A301 FOR ELEVATIONS.
 - SEE DRAWINGS A302 AND A303 FOR PANEL ELEVATIONS.
 - SEE DRAWING A600 FOR DOOR AND FRAME TYPES.
 - 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)
 - MEP & SIGNAGE DESIGN TO BE PROVIDED AS DEFERRED SUBMITTAL & WILL BE PERMITTED SEPARATELY.

REV	DESCRIPTION	DATE
1	ISSUED FOR CLIENT REVIEW	11/26/24

PROJECT NUMBER:
24020.1

SHEET TITLE:

FIRST FLOOR -
DIMENSIONAL PLAN -
MATCH LINE A-A

SHEET NUMBER:

A101



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

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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 FOR FUTURE TENANT NEEDS. MINIMAL MEP TO BE PROVIDED FOR THE SPACE. SEE SPACE SAVED FROM WEATHER AND OTHER ASSOCIATED ISSUES RELATED TO 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

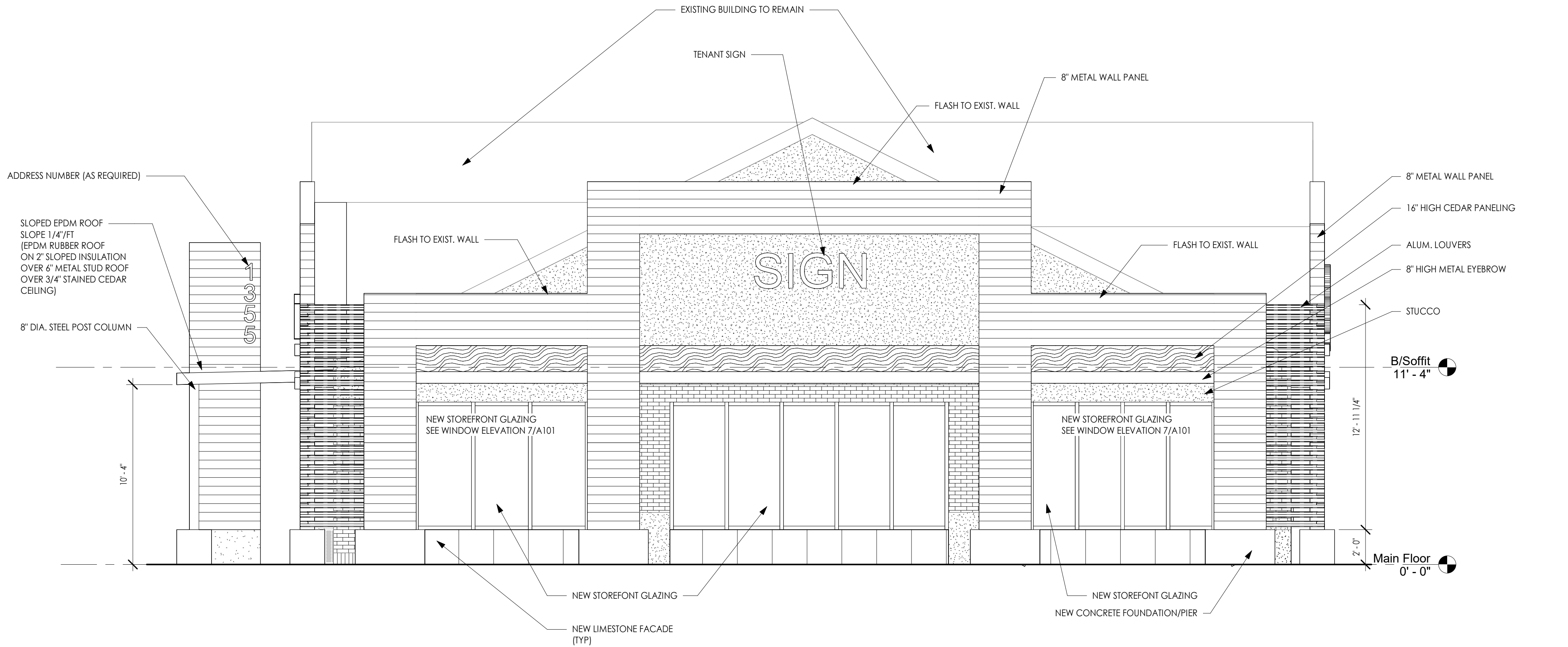
② KEYPLAN B-B
 $\frac{3}{64}'' = 1'-0''$

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

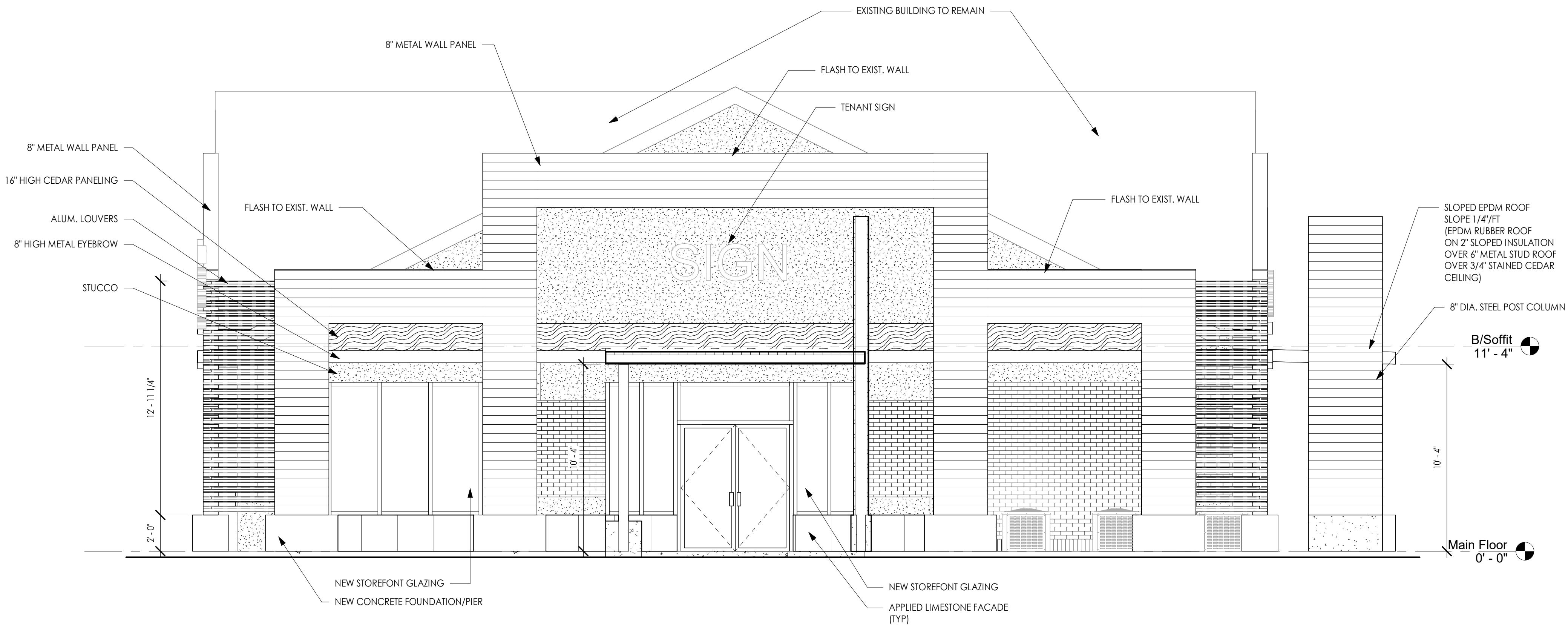
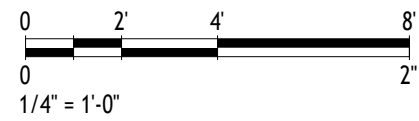
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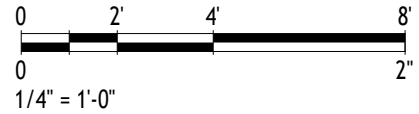
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1 NORTH ELEVATION
1/4" = 1'-0"



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:
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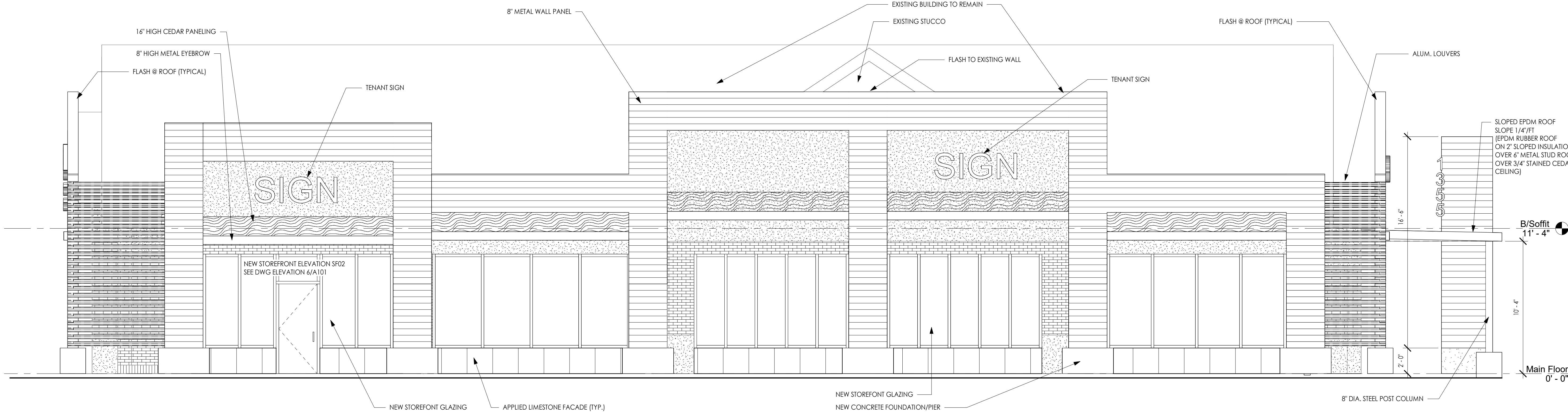
SHEET TITLE:

NORTH AND SOUTH
ELEVATIONS

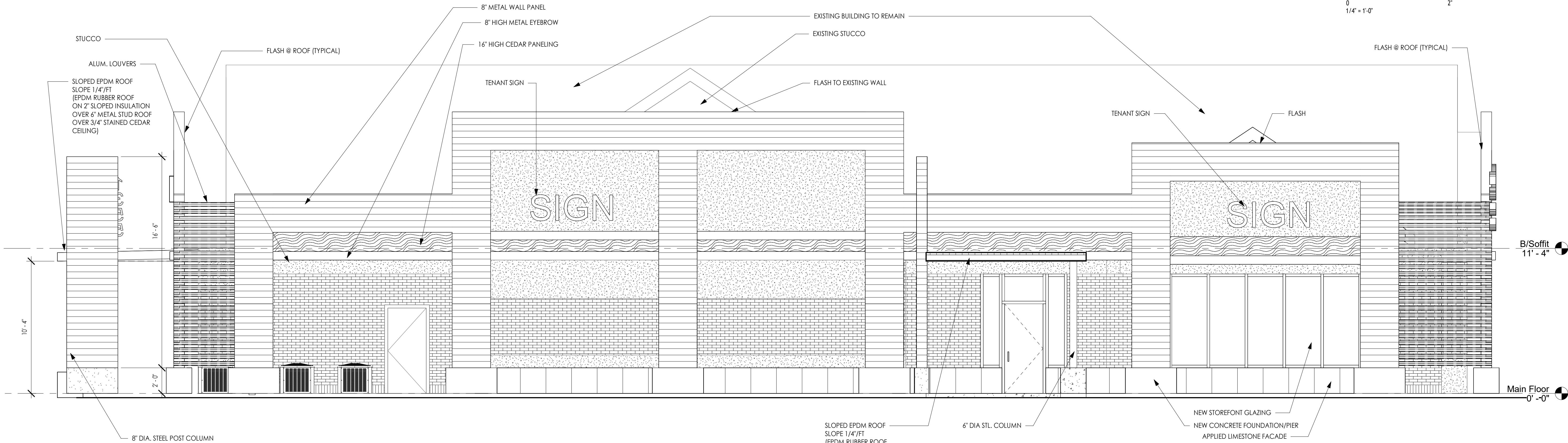
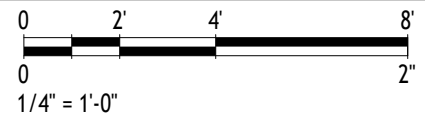
SHEET NUMBER:

A300





① WEST ELEVATION
1/4" = 1'-0"

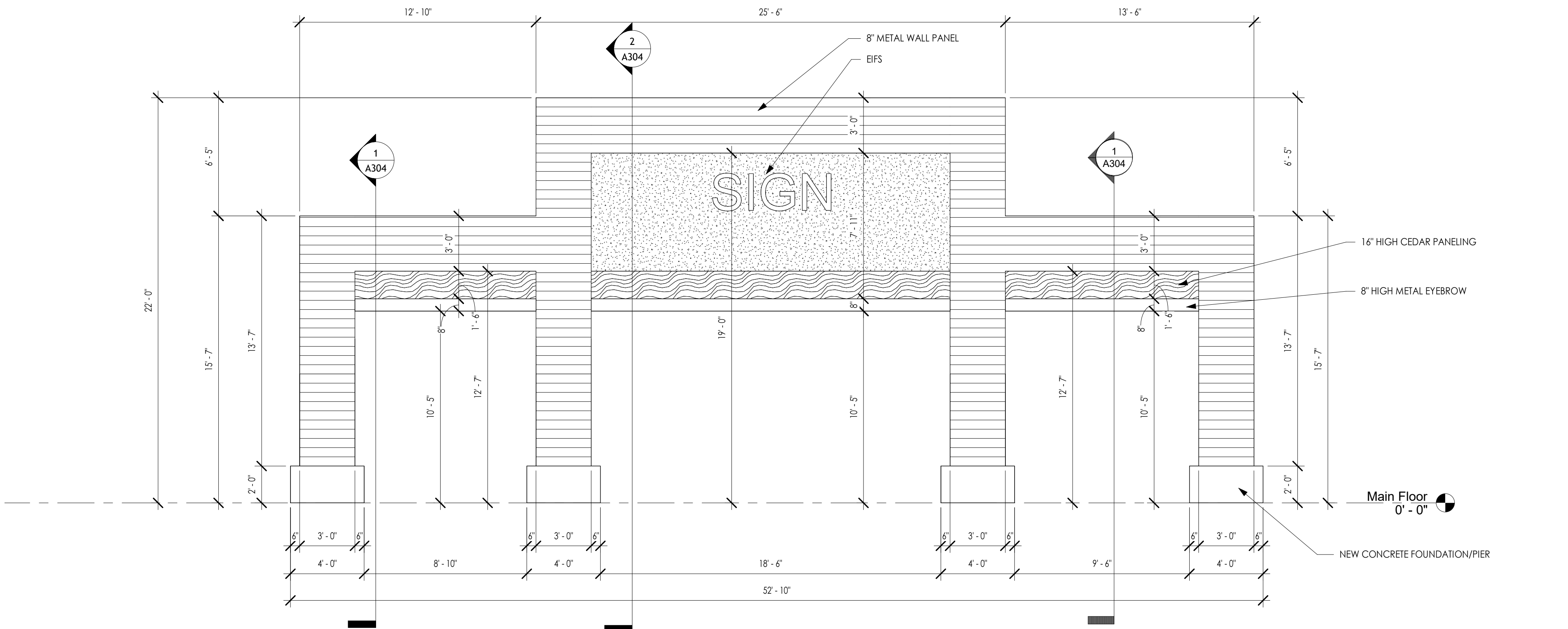


② EAST ELEVATION
1/4" = 1'-0"



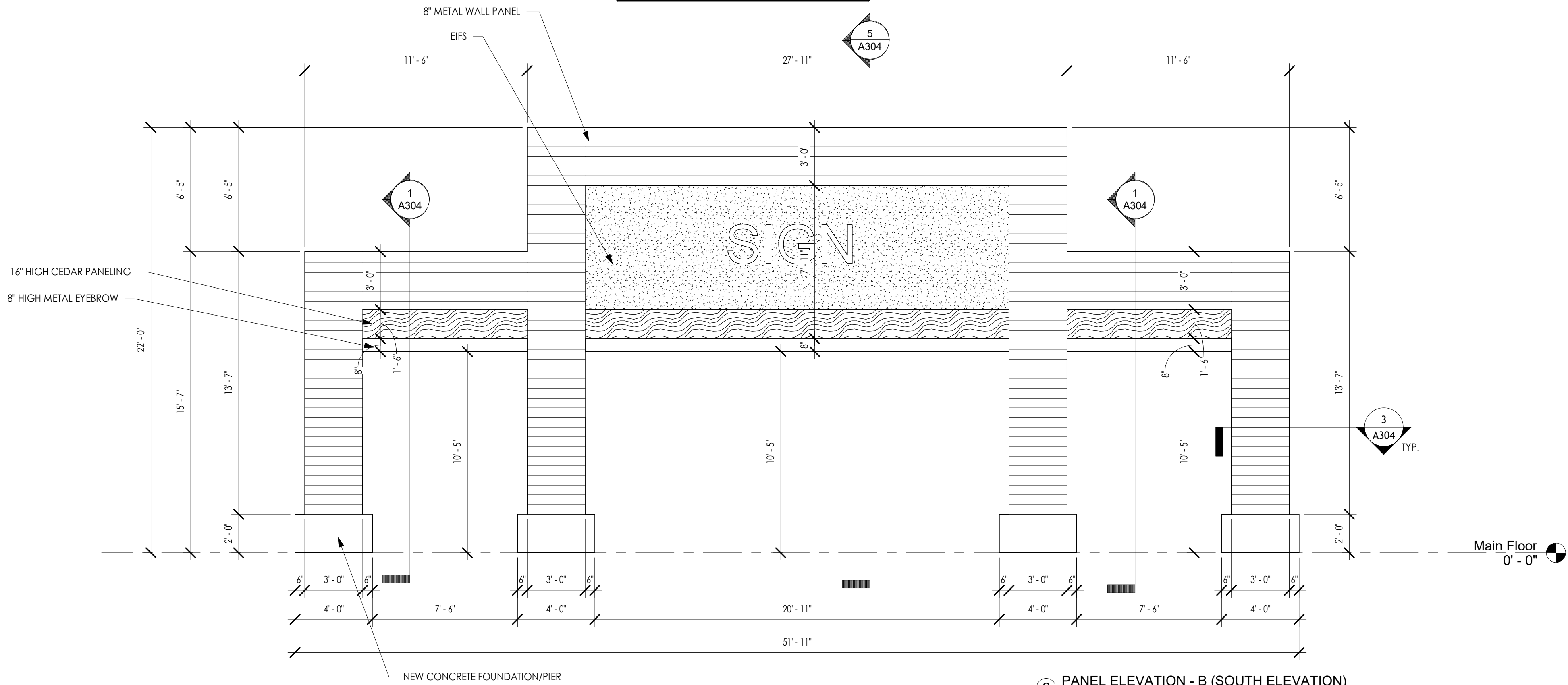
- GENERAL NOTES:
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 2. SEE DRAWING A101 FOR WALL TYPES.
 3. SEE DRAWING A300 AND A301 FOR ELEVATIONS.
 4. SEE DRAWINGS A302 AND A303 FOR PANEL ELEVATIONS.
 5. SEE DRAWING A600 FOR DOOR AND FRAME TYPES.
 6. SEE DRAWING A700 FOR FF&E AND FINISH SCHEDULE

GLAZING NOTE:
ALL GLAZING TO MEET 2018 IECC ENERGY CODE COMPLIANCE



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.



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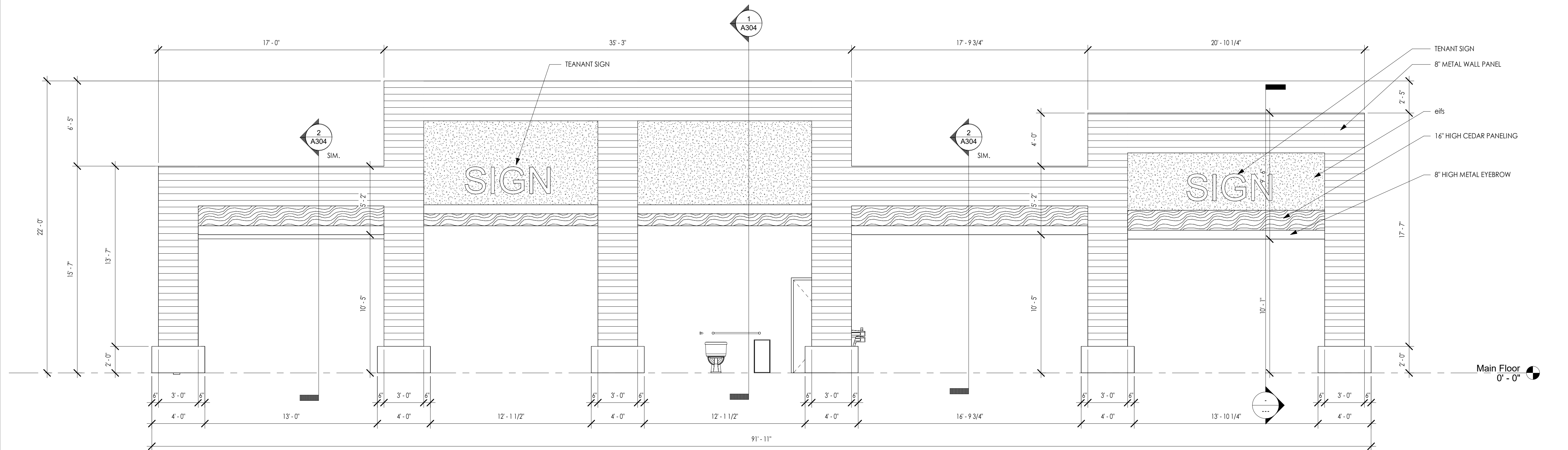
SHEET TITLE:

PANEL ELEVATIONS

SHEET NUMBER:

A302

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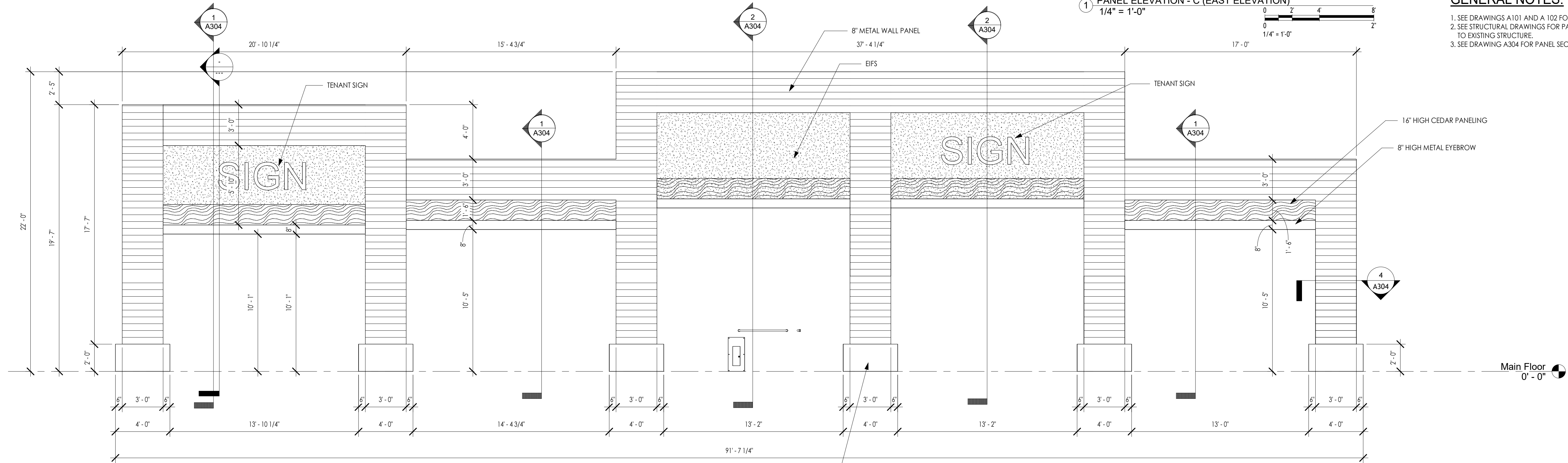


① PANEL ELEVATION - C (EAST ELEVATION)
1/4" = 1'-0"

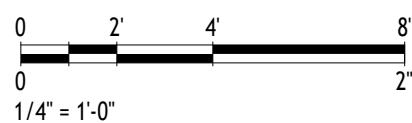


GENERAL NOTES:

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.



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



PANEL DIMENSION NOTE:

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SEE ENGINEERS DRAWINGS FOR DIMENSIONS AND DETAILS



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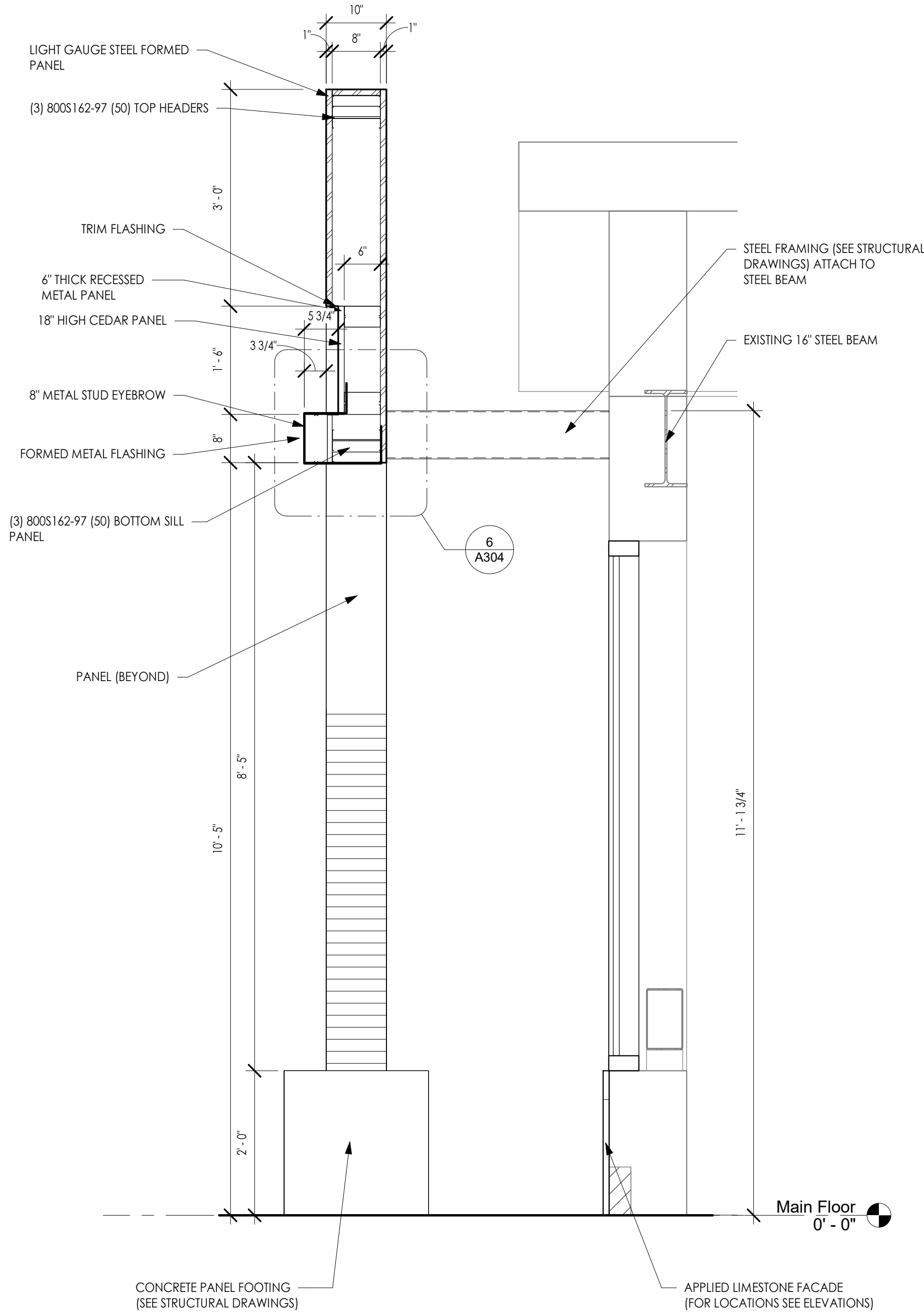
SHEET TITLE:

PANEL ELEVATIONS

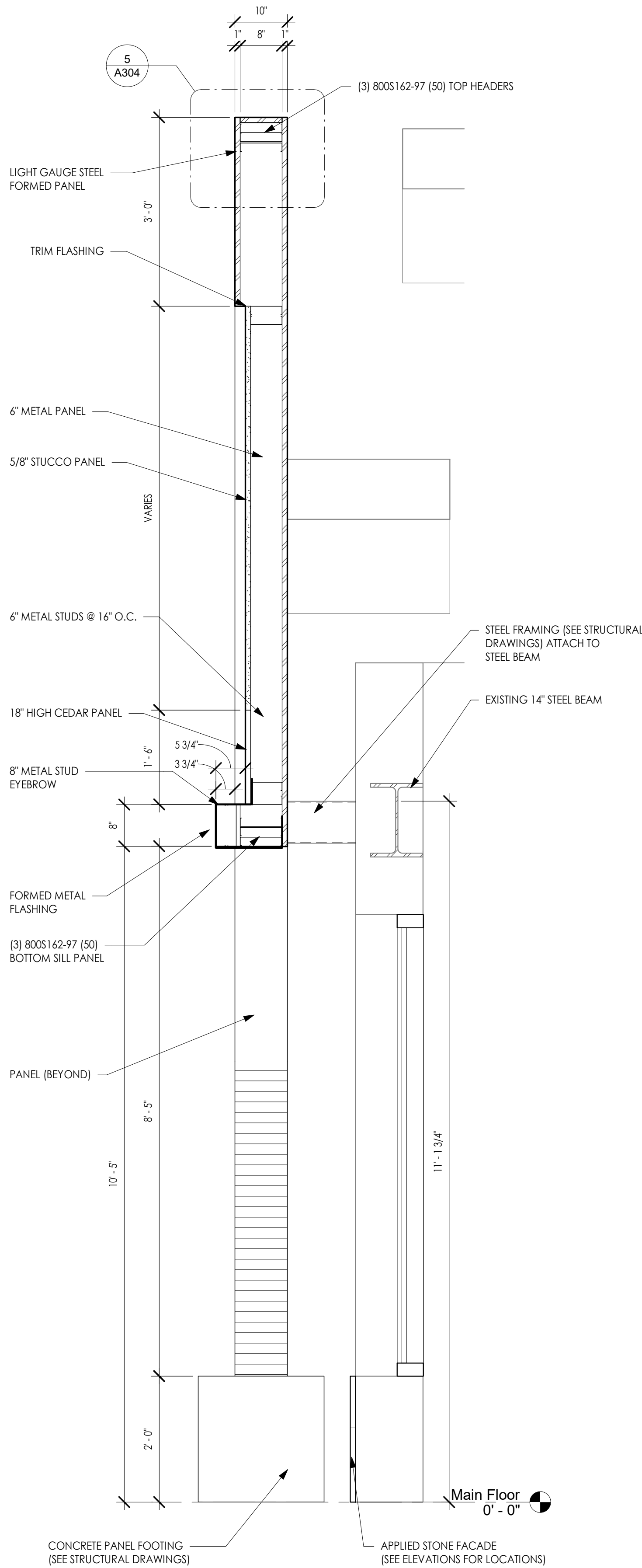
SHEET NUMBER:

A303

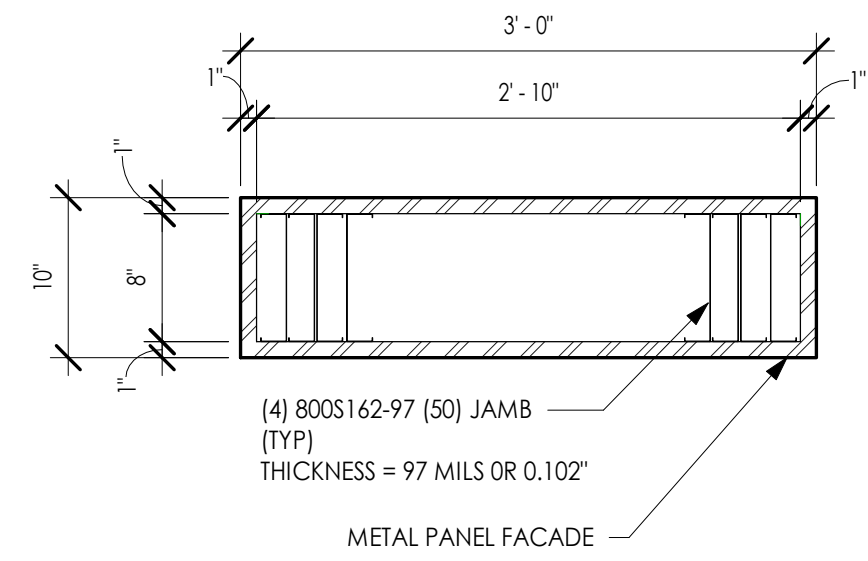




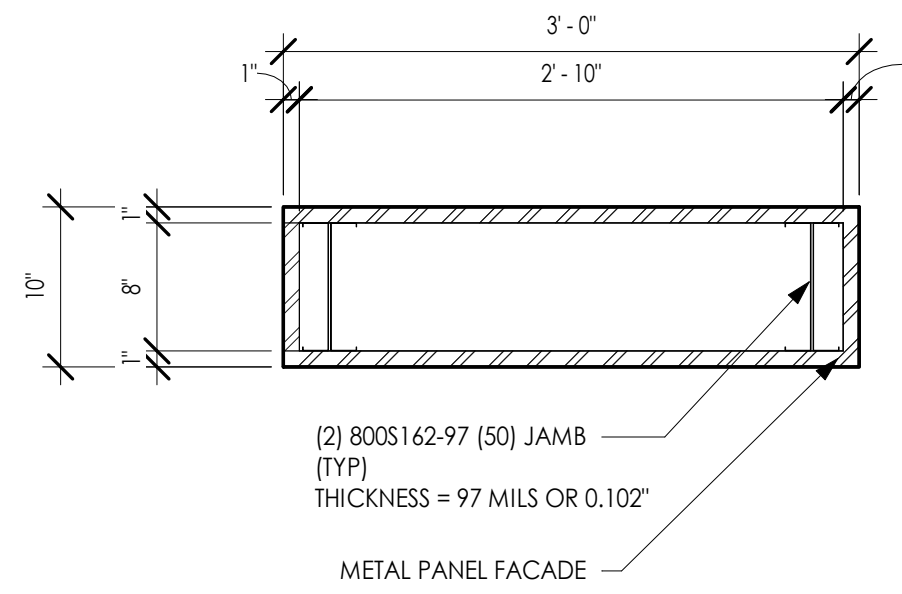
1 SECTION AT LOW PANEL (PANEL ELEVATION A & B)
3/4" = 1'-0"



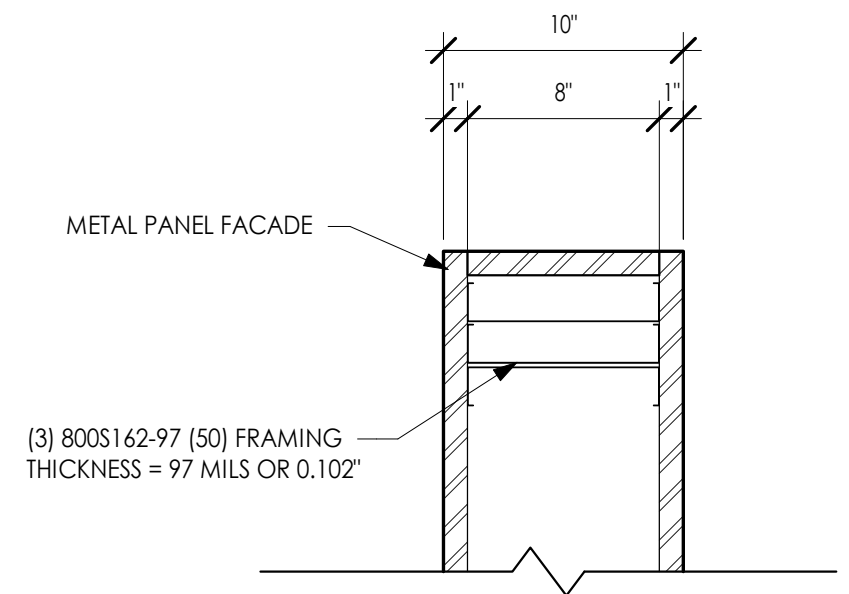
2 SECTION AT HIGH PANEL (PANEL ELEVATION A & B)
3/4" = 1'-0"



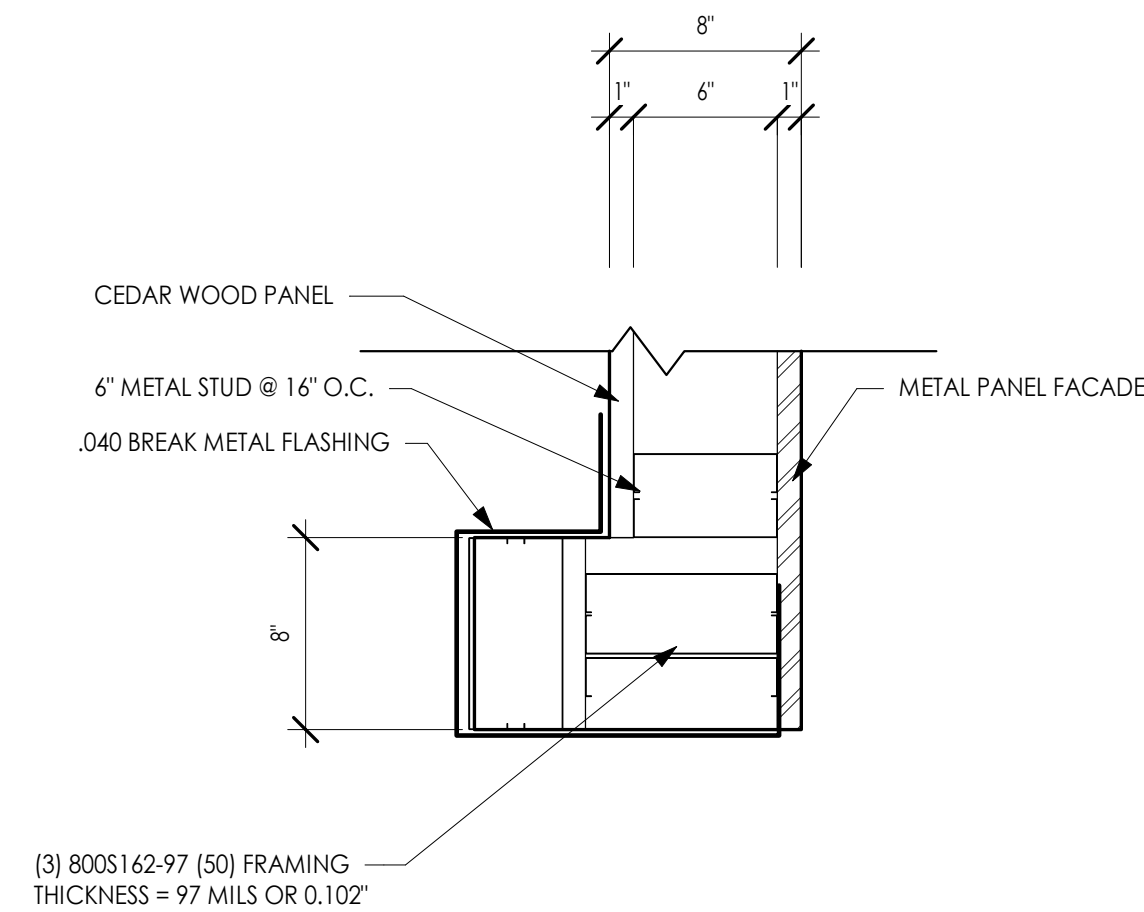
3 PANEL SECTION A-A
1" = 1'-0"



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



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



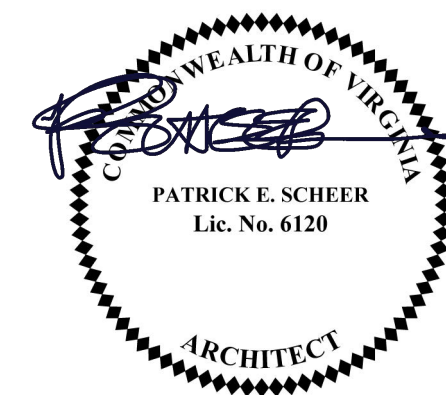
6 DETAIL AT PANEL EYEBROW
1 1/2" = 1'-0"

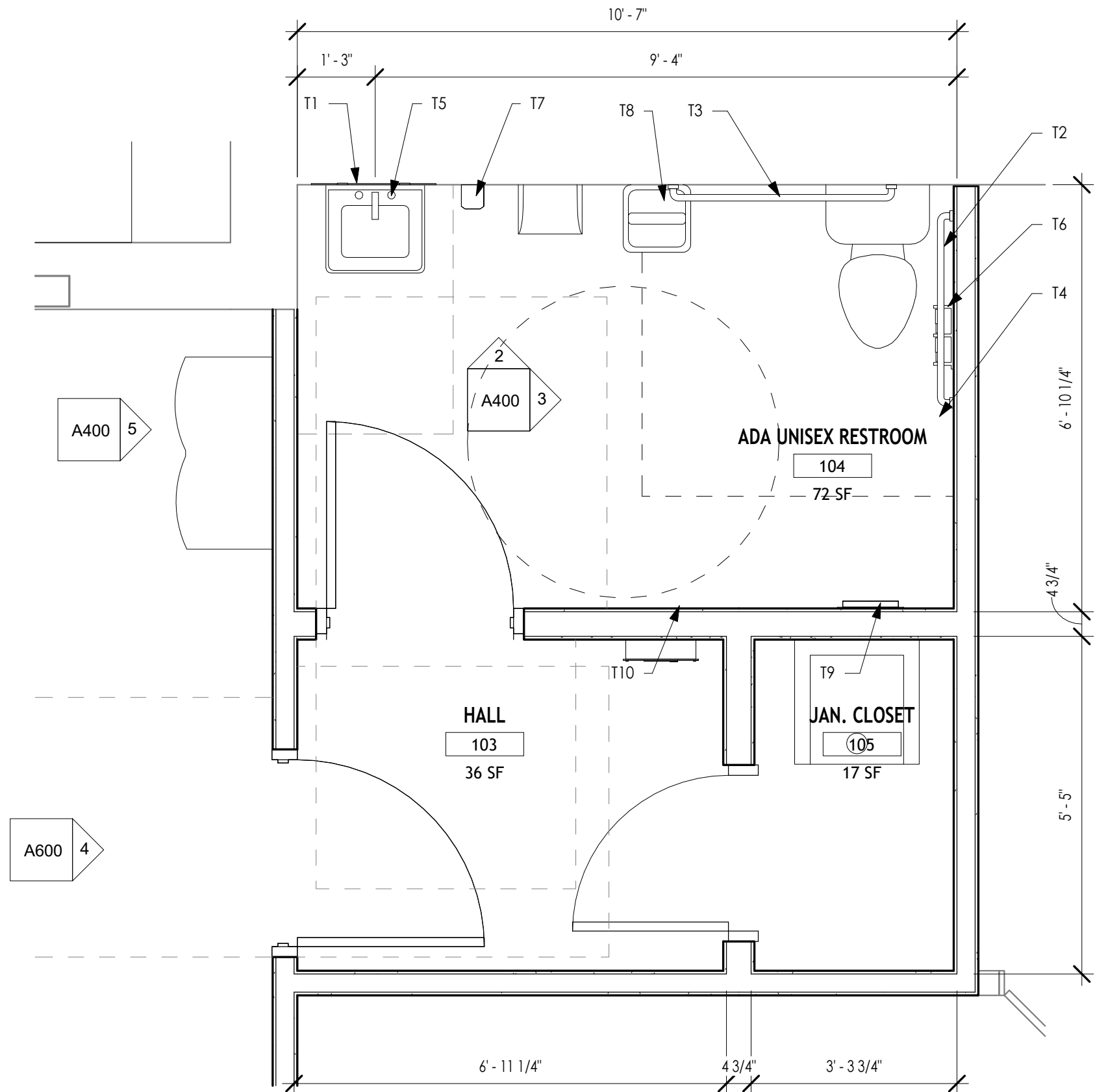
GENERAL NOTES:

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:

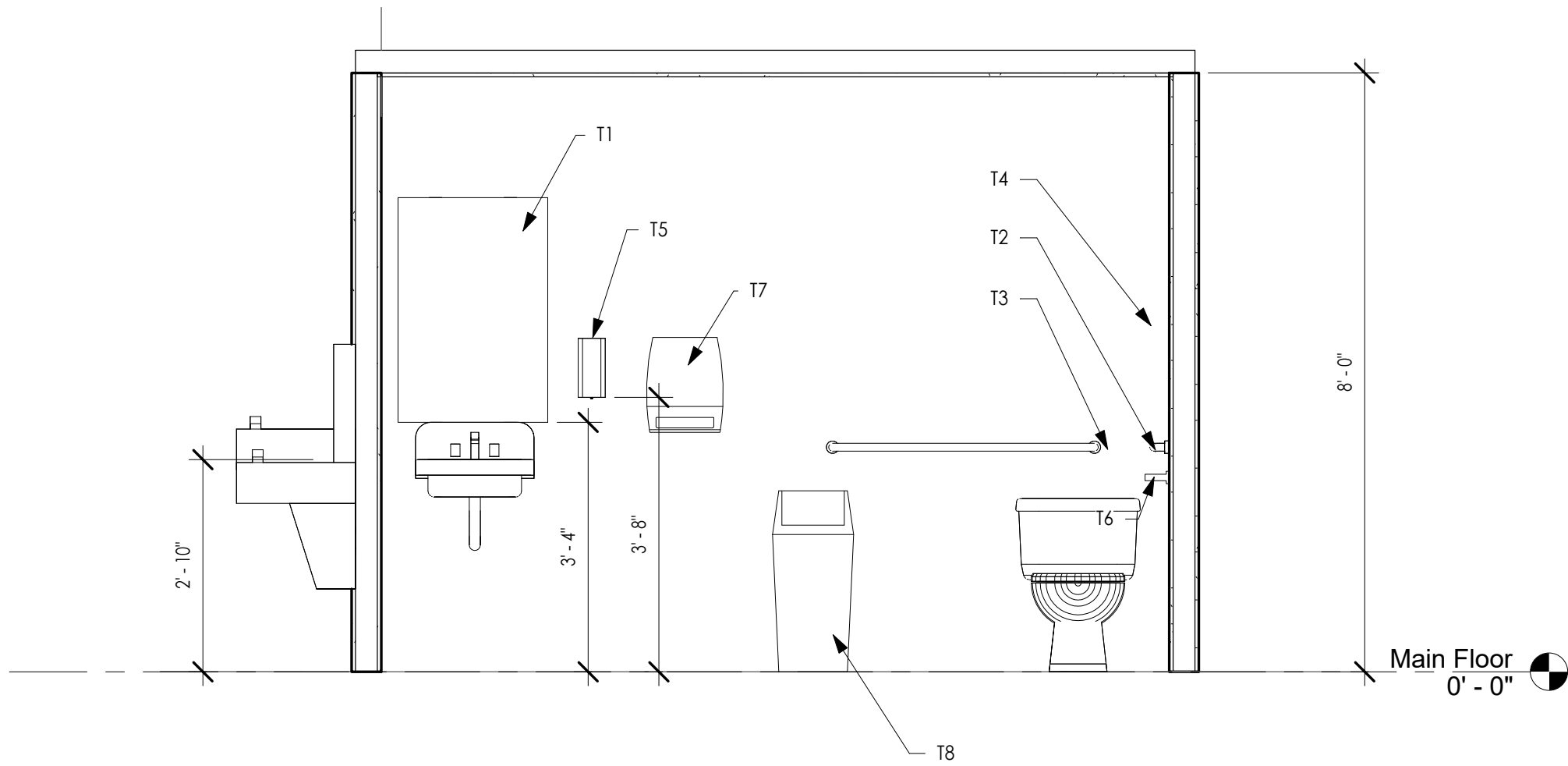
STRUCTURAL ELEMENTS ON THESE DRAWINGS ARE FOR DESIGN INTENTIONS. SEE ENGINEERS DRAWINGS FOR DIMENSIONS AND DETAILS



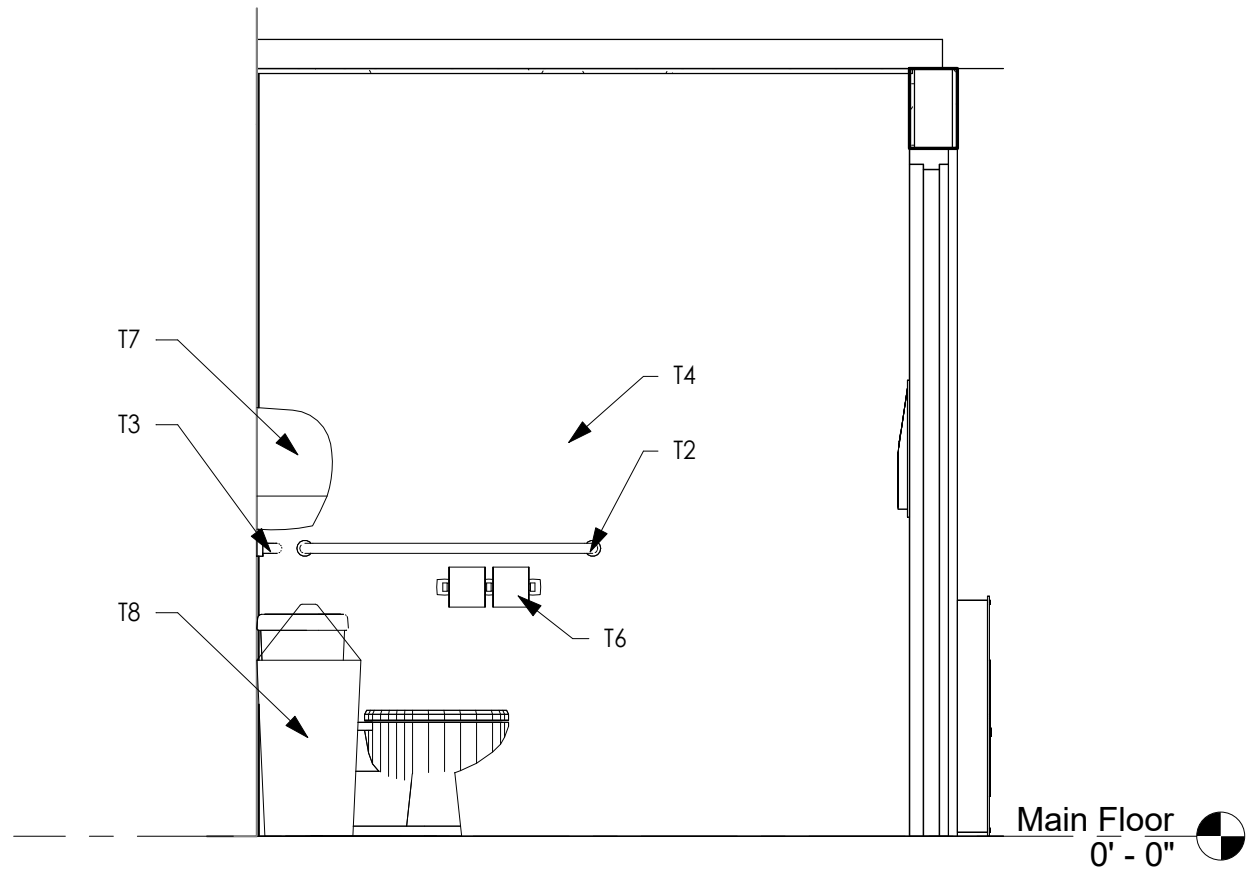


1 ENLARGED UNISEX RESTROOM
1/2" = 1'-0"

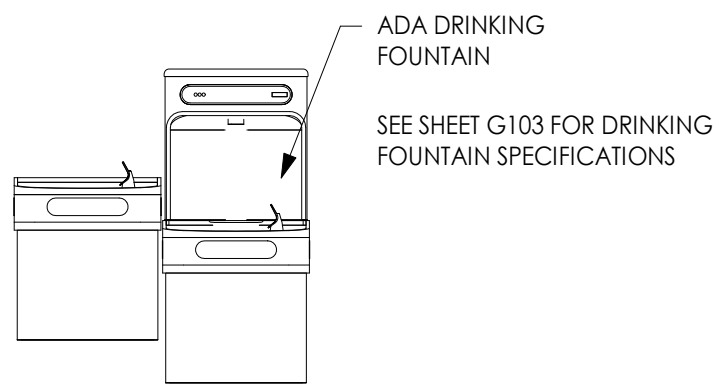
TOILET ROOM ACCESSORY SCHEDULE		
MARK	ACCESSORY	MANUFACTURER NUMBER
T1	MIRROR	BRADLEY MODEL 747 SERIES, 24" x 42" OR EQUAL WITH CLIP FASTENERS
T2	TOILET GRAB BAR	BRADLEY MODEL 001 - 42" OR EQUAL (HORIZONTAL SIDEWALL)
T3	TOILET GRAB BAR	BRADLEY MODEL 101 - 36" OR EQUAL (HORIZONTAL REAR WALL)
T4	TOILET 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"



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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

1 1/2 PAIR BUTT HINGES
1 CLOSER
1 LEVER PASSAGE SET
2 KICKPLATES

HARDWARE SET 2

1 1/2 PAIR BUTT HINGES
1 CLOSER
1 LEVER LOCKSET
1 KICKPLATE

HARDWARE SET 3

1 1/2 PAIR BUTT HINGES
1 CLOSER
1 LEVER PRIVACY SET
2 KICKPLATES

HARDWARE SET 4

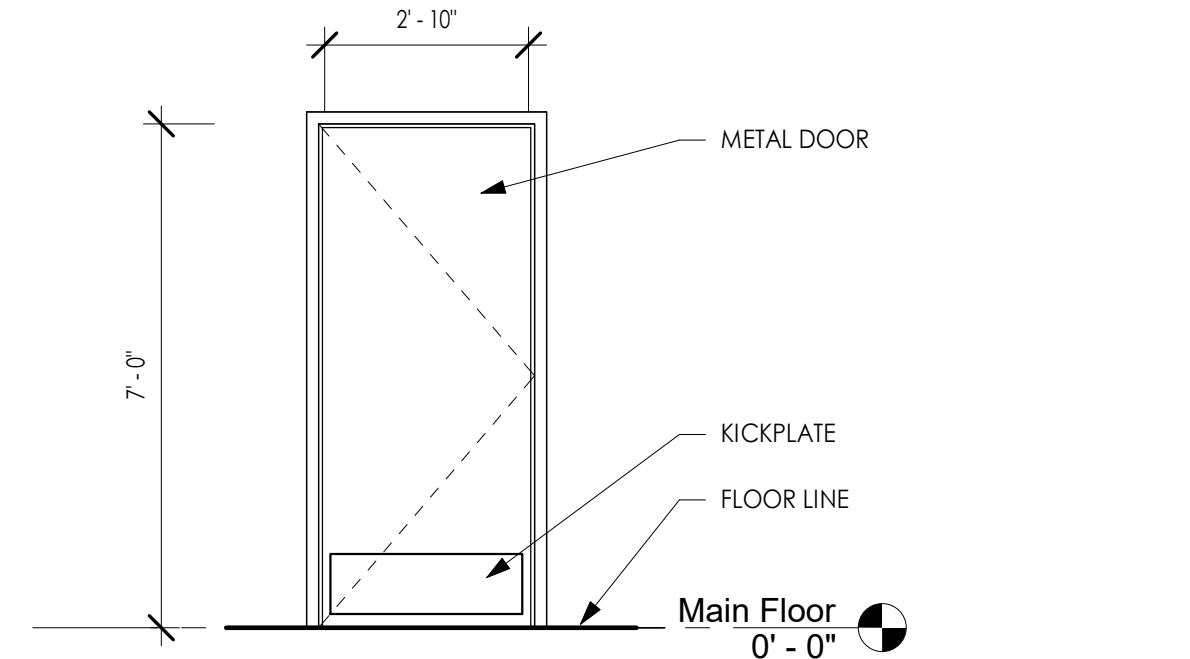
STANDARD HINGES
1 CLOSER
1 PUSH/PULL

HARDWARE SET 5

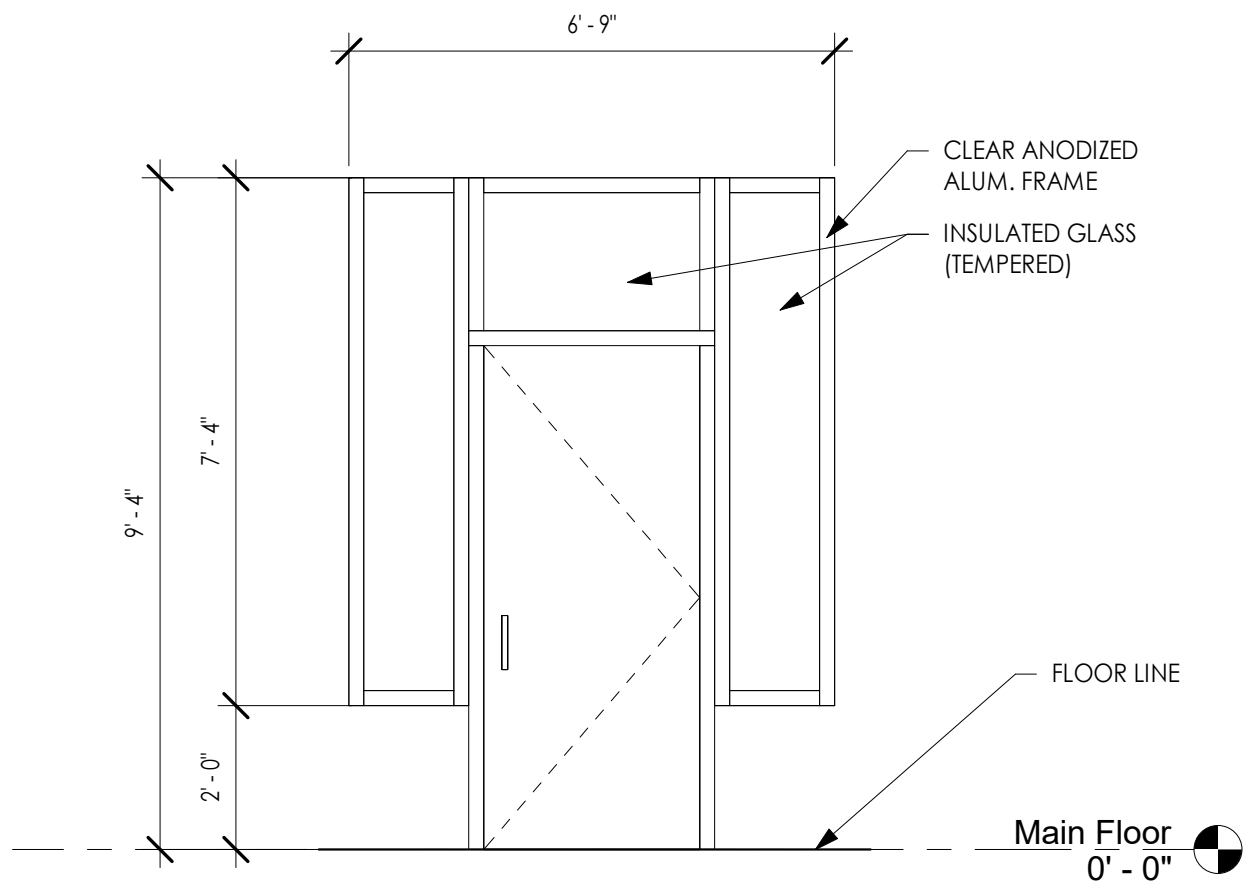
STANDARD HINGES
1 CLOSER
1 KEYED CYLINDER
1 PUSH PULL

HARDWARE SET 6

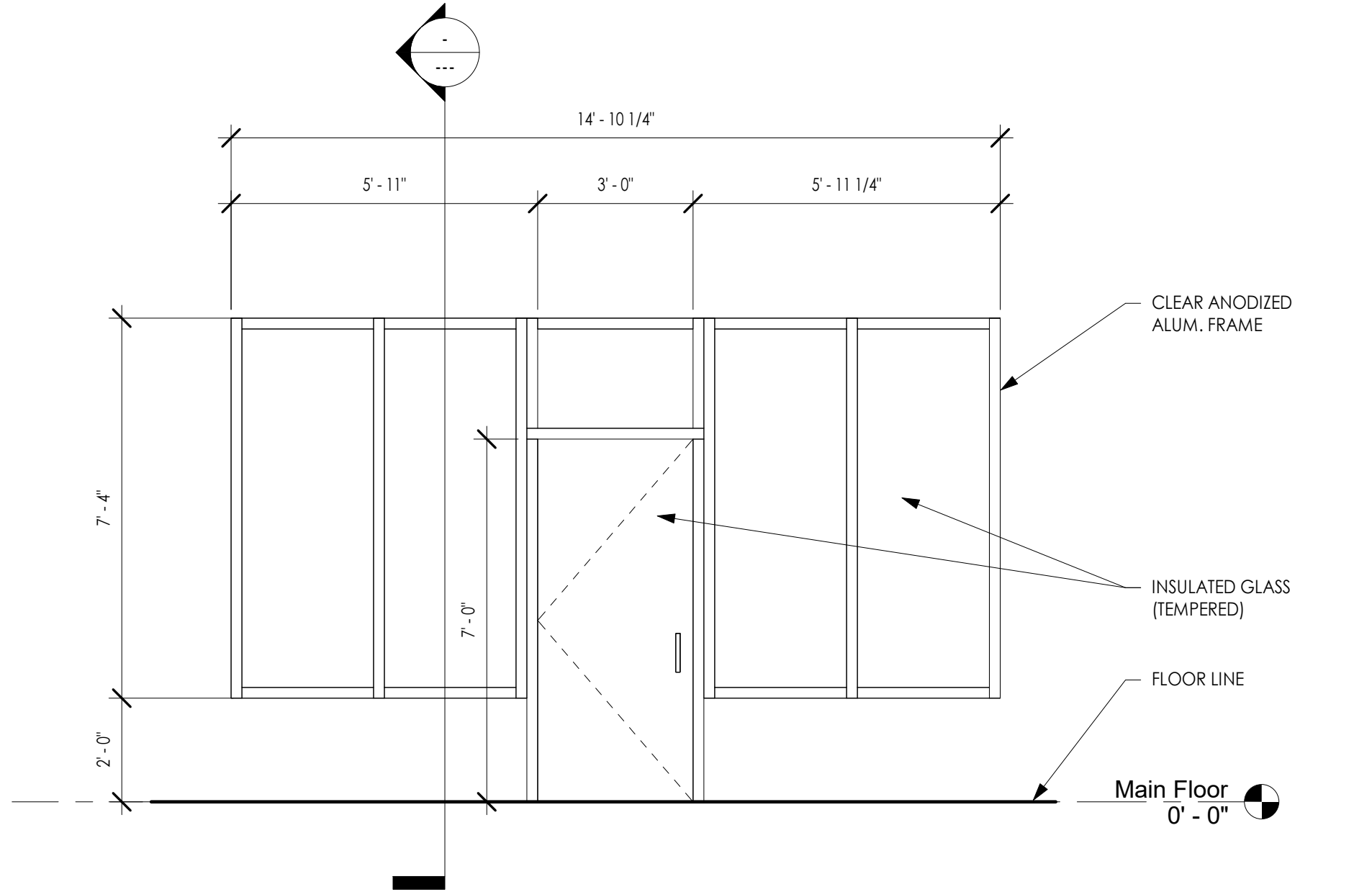
STANDARD HINGES
2 CLOSERS
1 KEYED CYLINDER
2 SET PUSH/PULLS



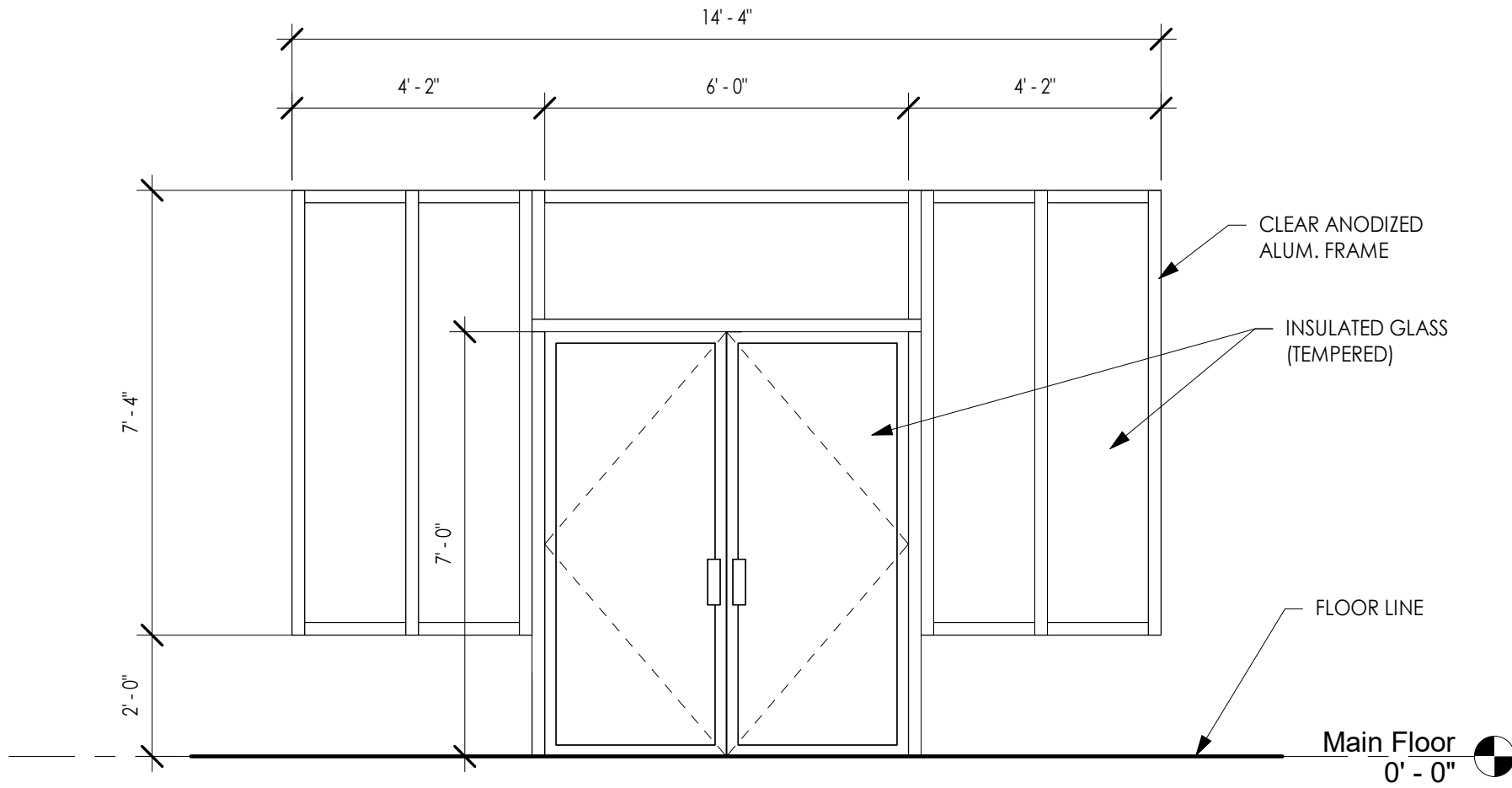
④ DOOR TYPE 1
3/8" = 1'-0"



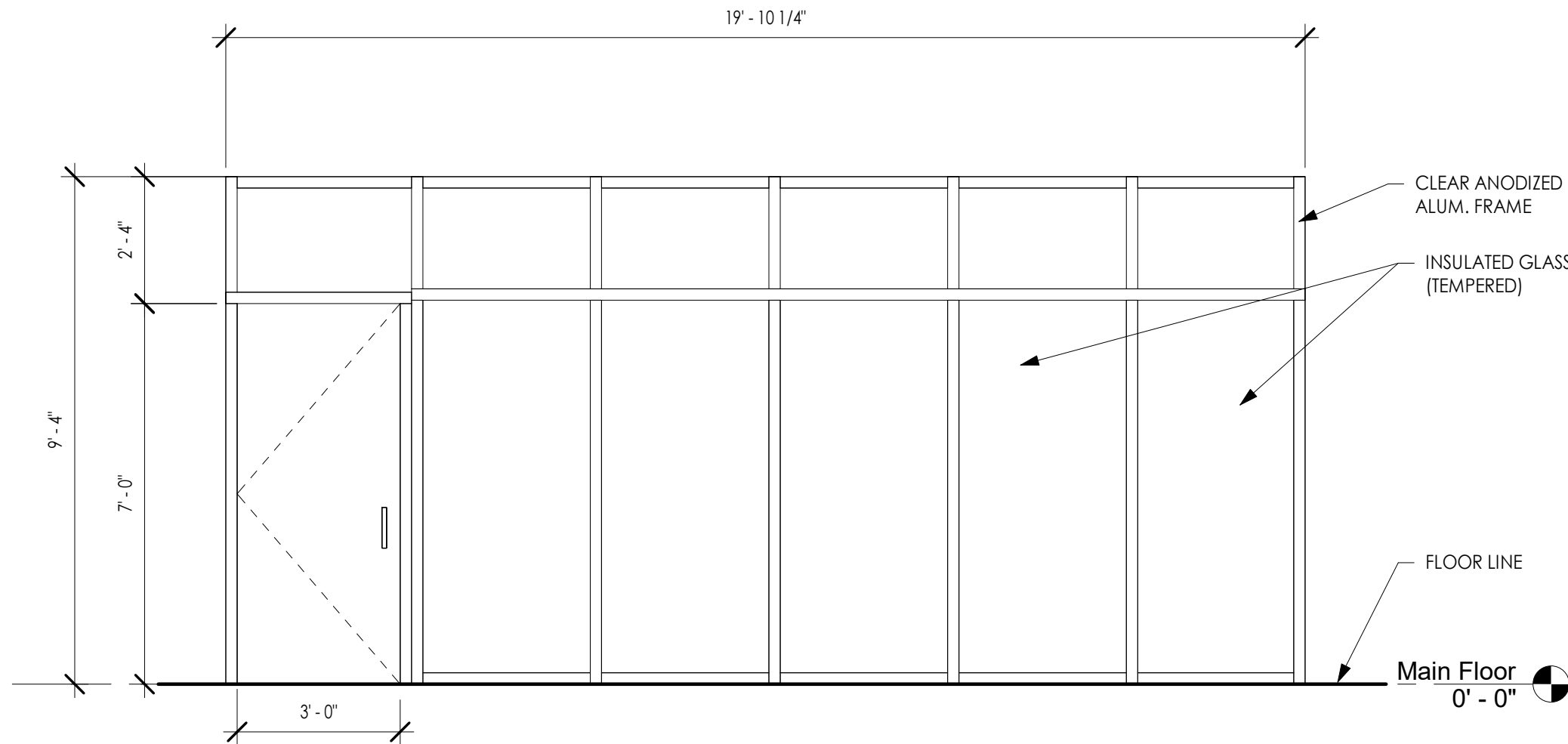
① STOREFRONT - SF01
3/8" = 1'-0"



② STOREFRONT - SF02
3/8" = 1'-0"



③ STOREFRONT - SF03
3/8" = 1'-0"



⑤ STOREFRONT - SF04
3/8" = 1'-0"

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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-6867-2001_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.

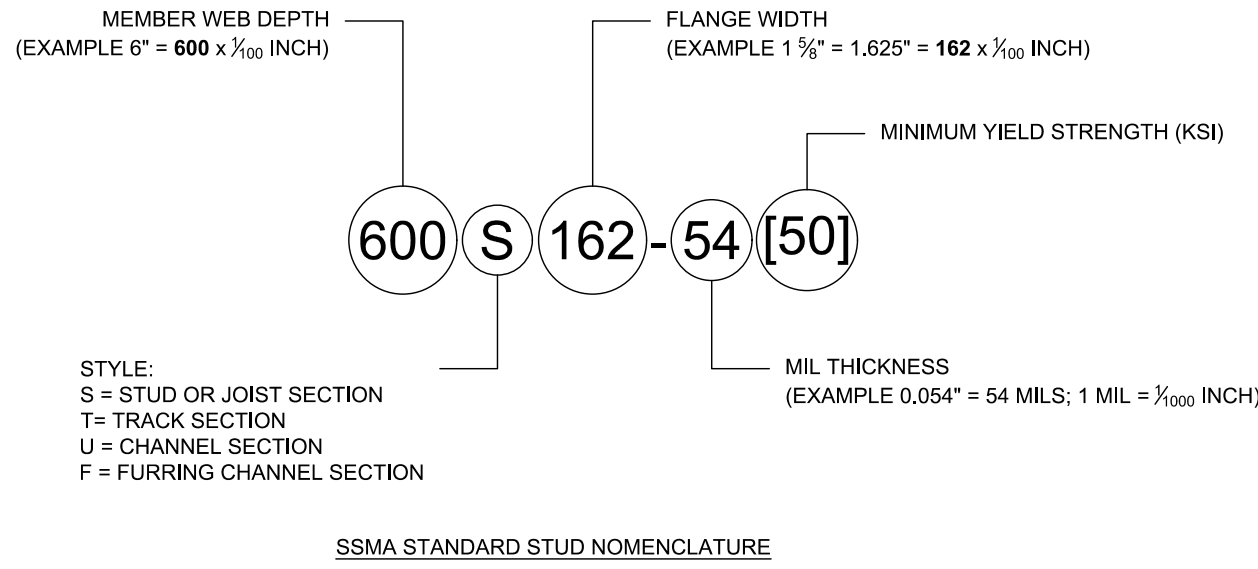
REINFORCED CONCRETE NOTES

- 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, W/31 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.



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

REVISION RECORD

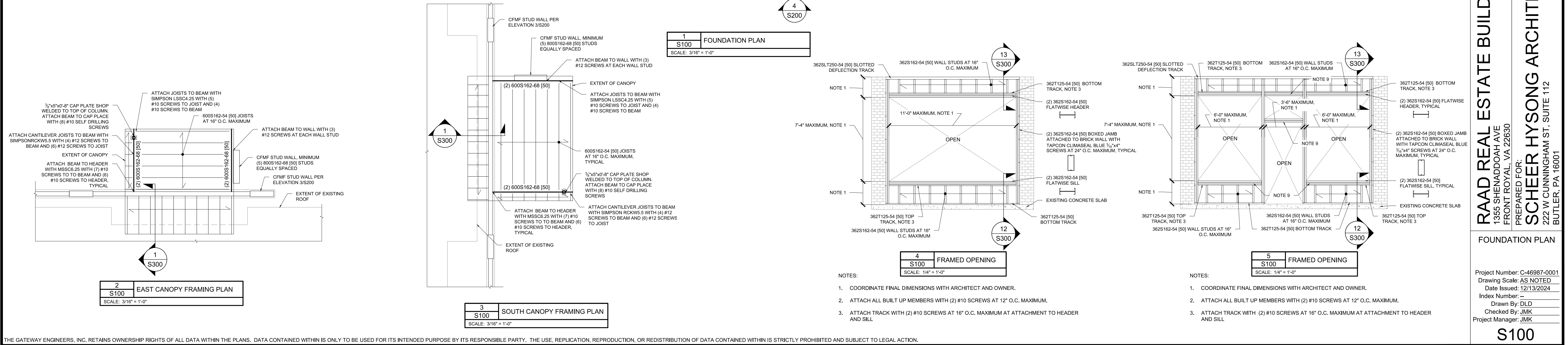
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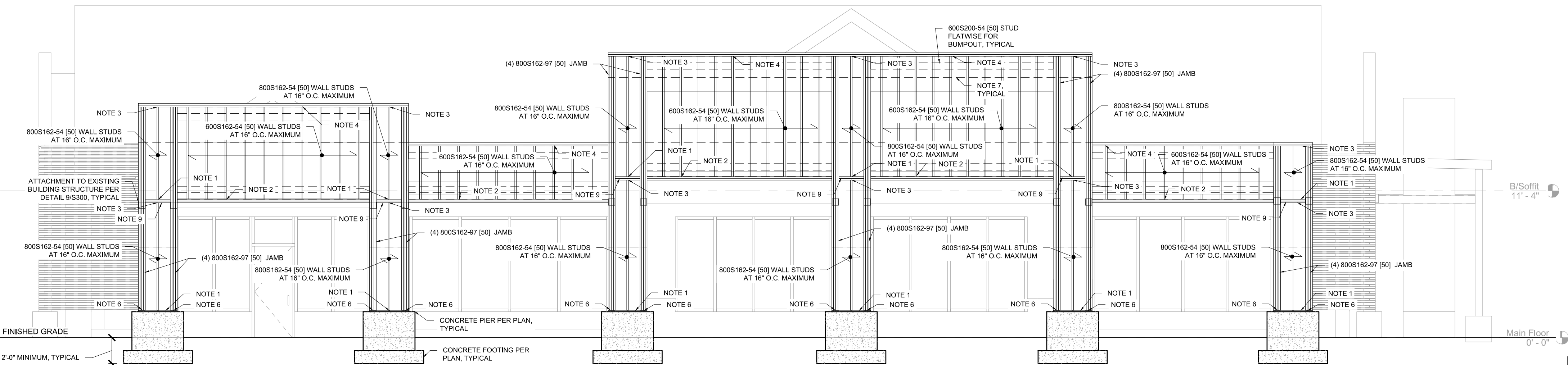
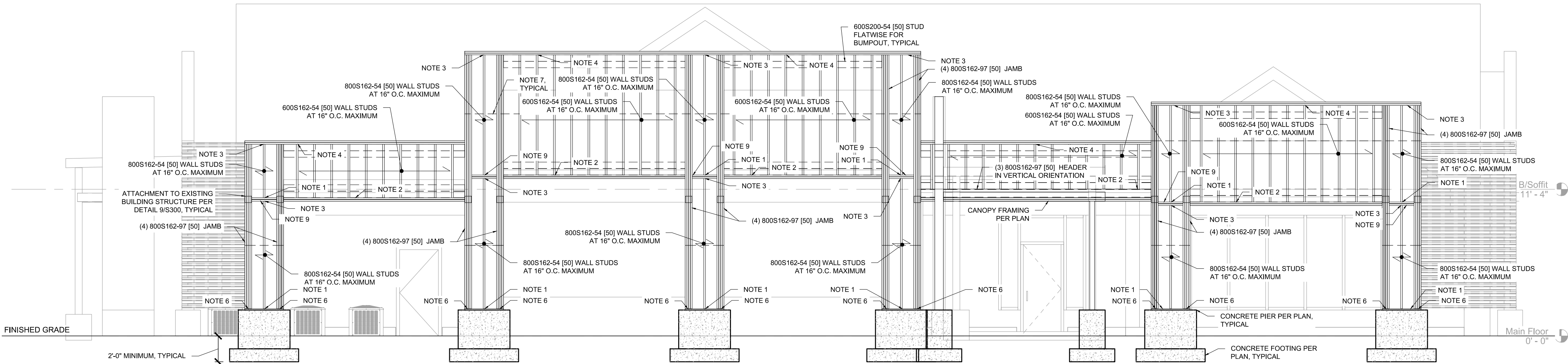
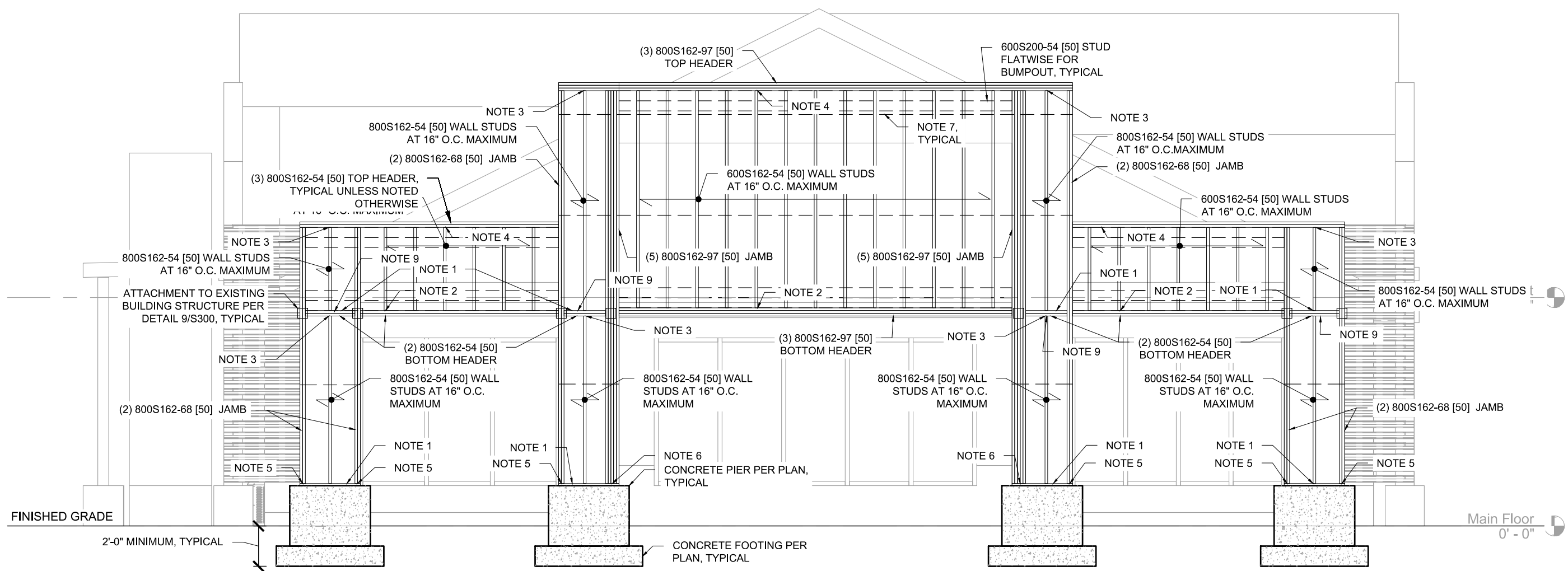
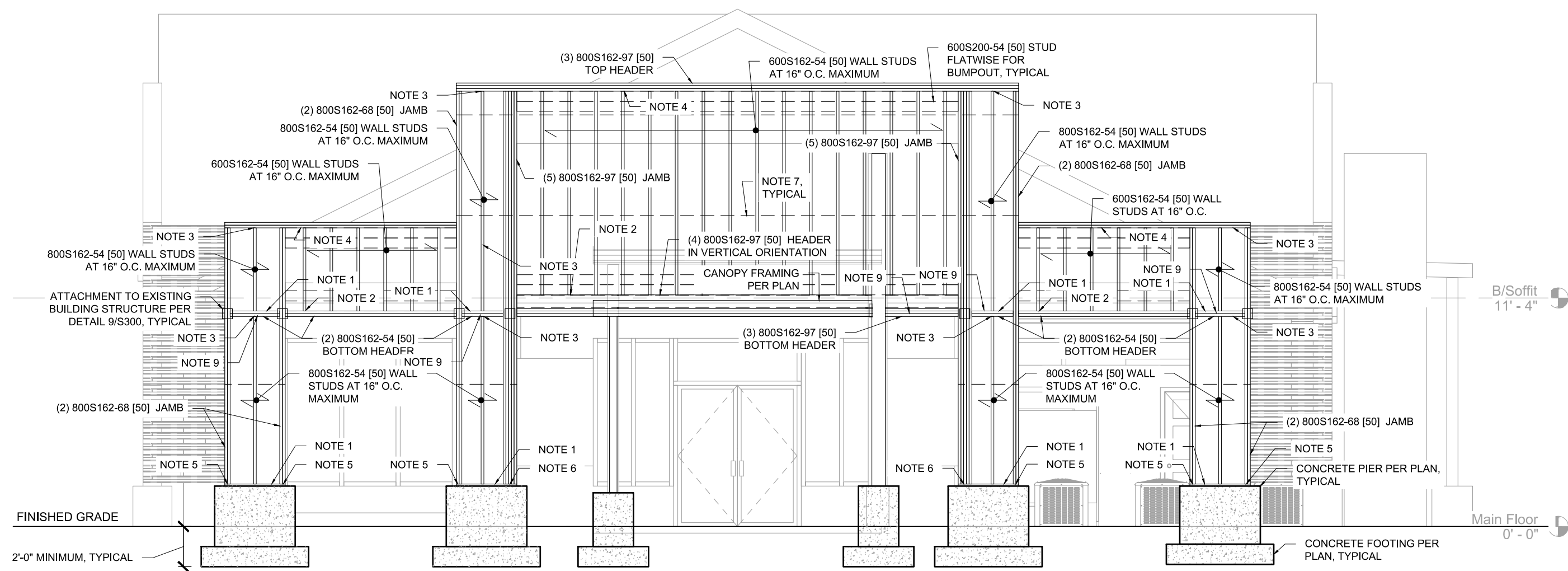
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User: jmk

22

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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

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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

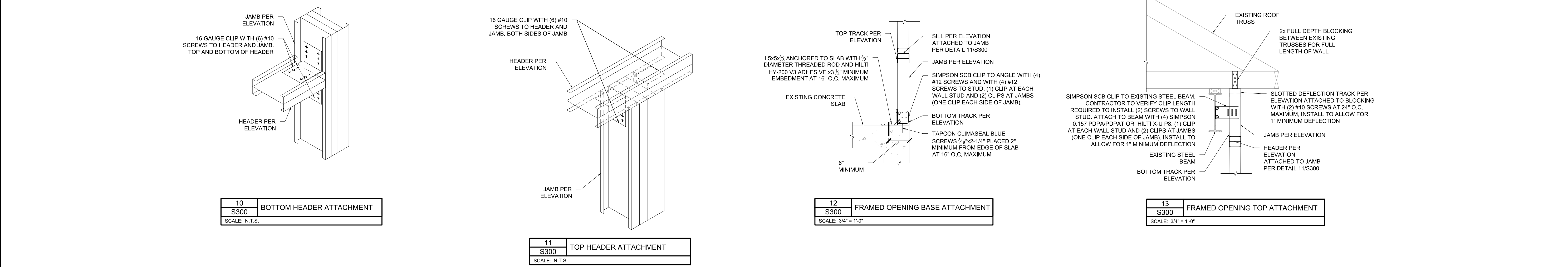
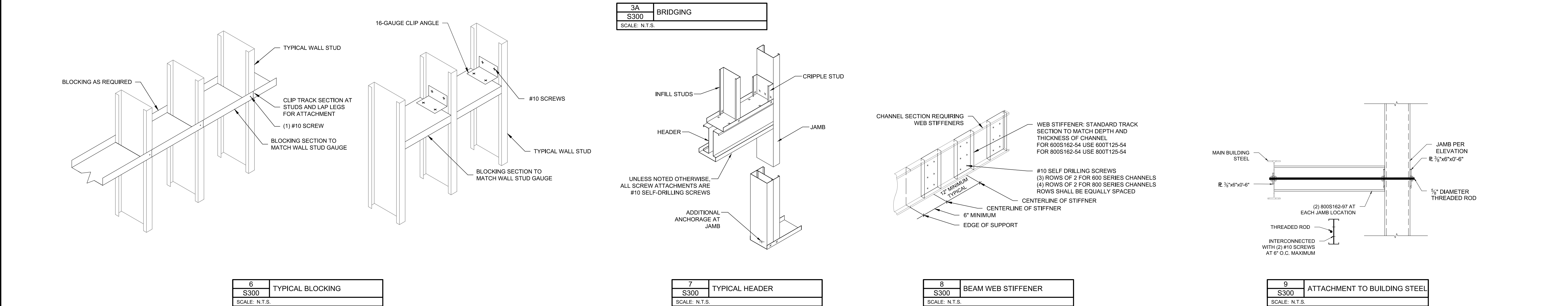
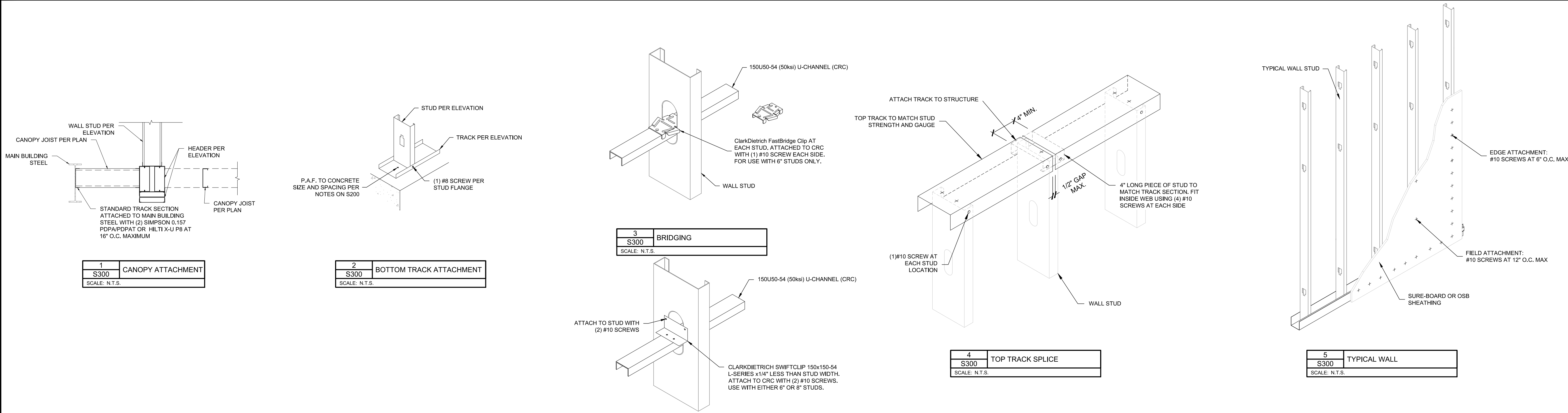
ELEVATIONS

Project Number: C-46987-0001
Drawing Scale: AS NOTED
Date Issued: 12/13/2024
Index Number: _____
Drawn By: DLD
Checked By: JMK
Project Manager: JMK

S200

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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™

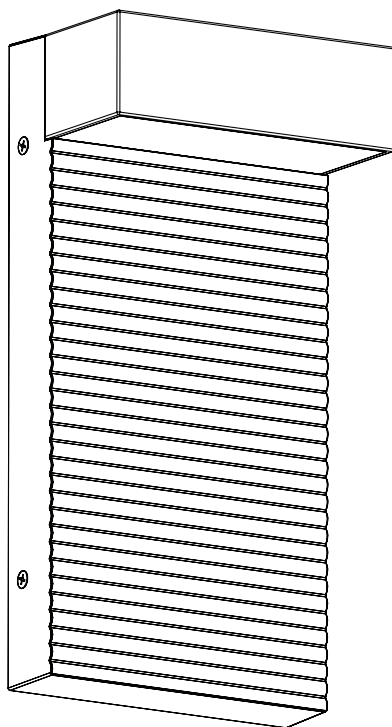
MANUEL D'INSTRUCTIONS

IMPORTANT :
À LIRE ATTENTIVEMENT
ET À CONSERVER.

Lámpara de pared LED - Dark Sky™

MANUAL DE INSTRUCCIONES

IMPORTANTE:
LEER DETENIDAMENTE
Y CONSERVAR.



Intertek

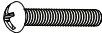
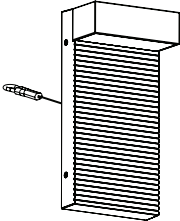
Rev. 14-12-2020

Made in China
Residential use only
Indoor or outdoor use

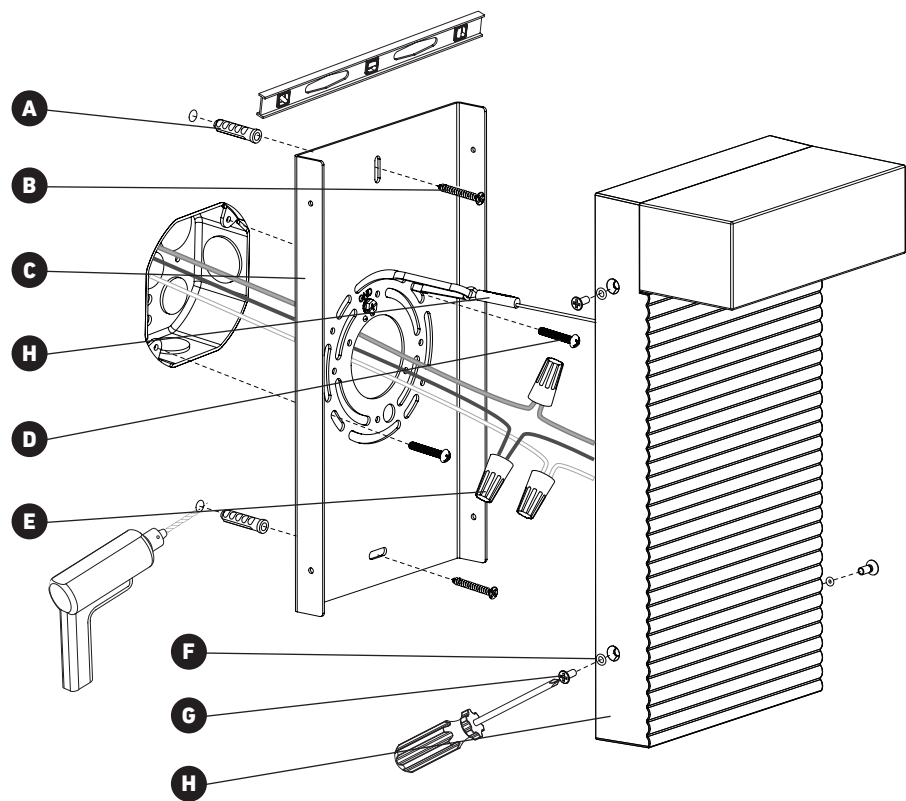
Fabriqué en Chine
Usage résidentiel seulement
Usage intérieur ou extérieur

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

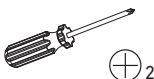
STEP-BY-STEP INSTALLATION
INSTALLATION DÉTAILLÉE
INSTALACIÓN ETAPA POR ETAPA



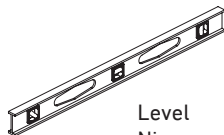
WHAT YOU WILL NEED
VOUS AUREZ BESOIN
LO QUE NECESITARÁ



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.

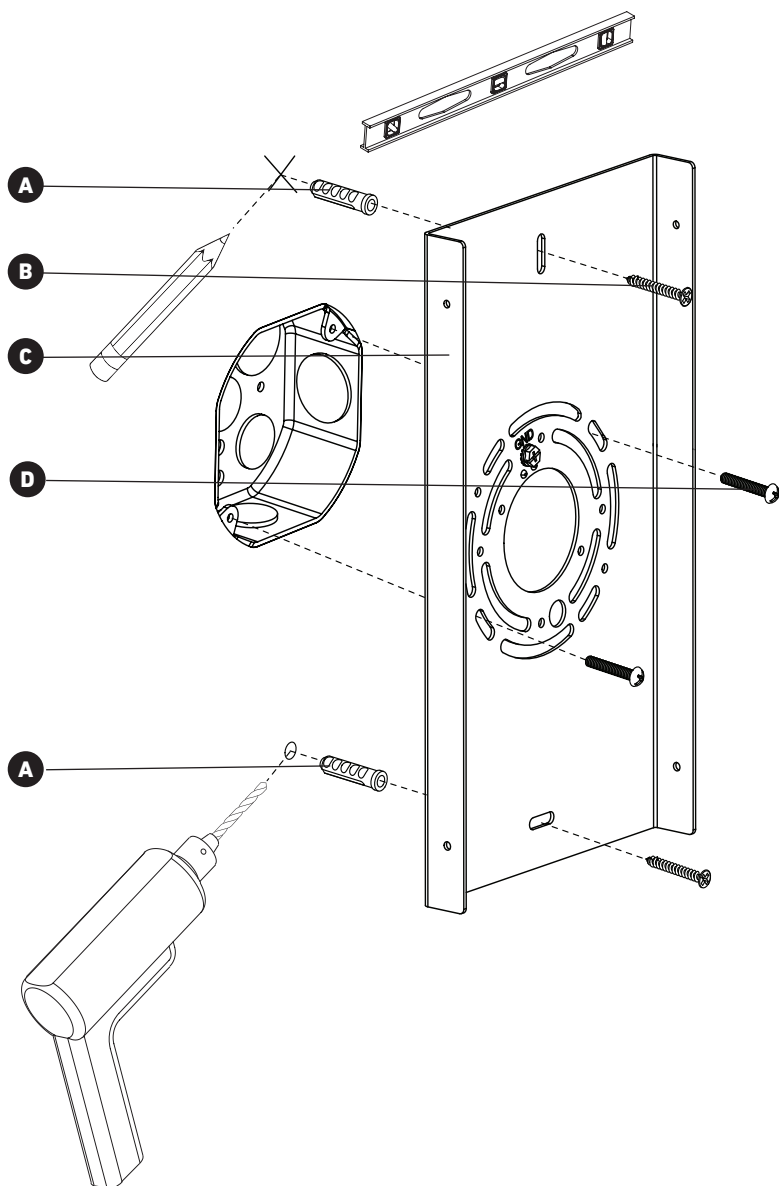
éclairage intérieur / extérieur.

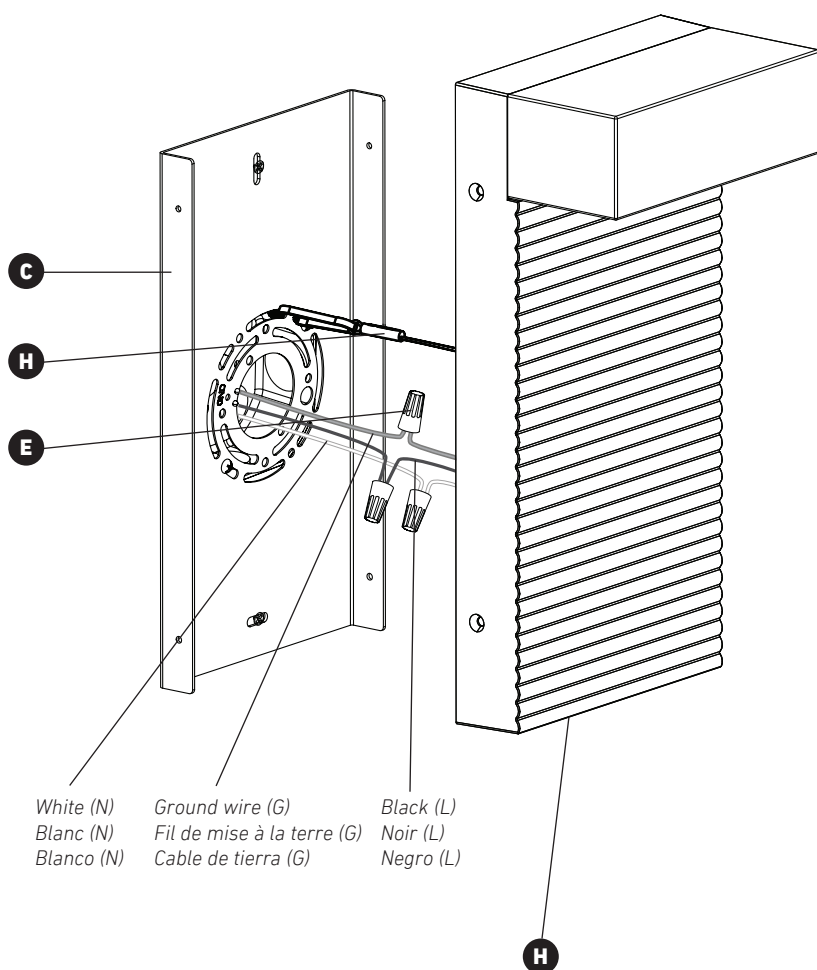
Desconecte la instalación eléctrica en la caja de circuitos/ disyuntor antes de instalar esta unidad o realizar tareas de mantenimiento en ella.

Luz interior / exterior.

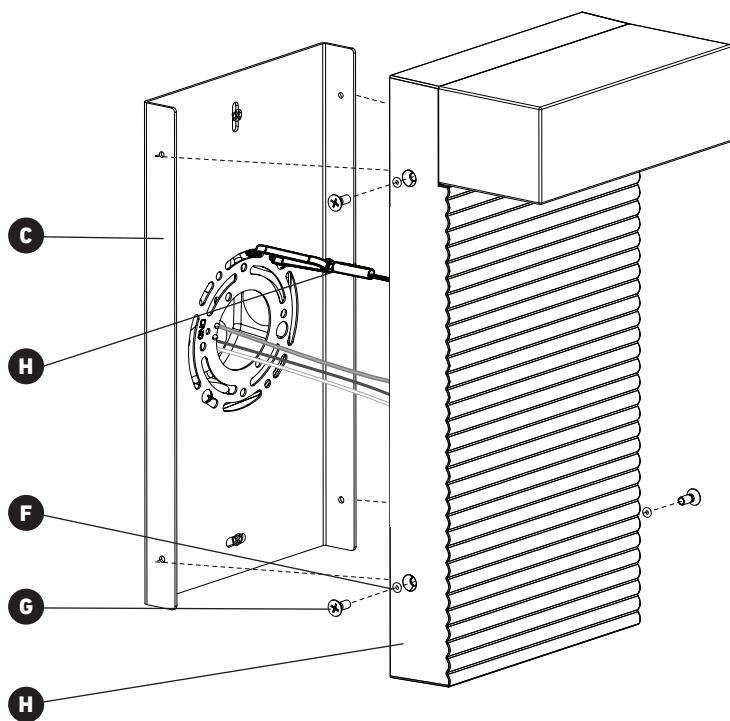
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MOUNTING BRACKET INSTALLATION
INSTALLATION DU SUPPORT DE MONTAGE
INSTALACIÓN DEL SOPORTE DE MONTAJE





3 FINAL INSTALLATION INSTALLATION FINALE INSTALACIÓN FINAL



CANADA (IC)

Operation is subject to the following two conditions:

1. this device may not cause interference, and

2. this device must accept any interference, including interference that may cause undesired operation of the device.

L'exploitation est autorisée aux deux conditions suivantes :

1. l'appareil ne doit pas produire de brouillage; et

2. l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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.

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

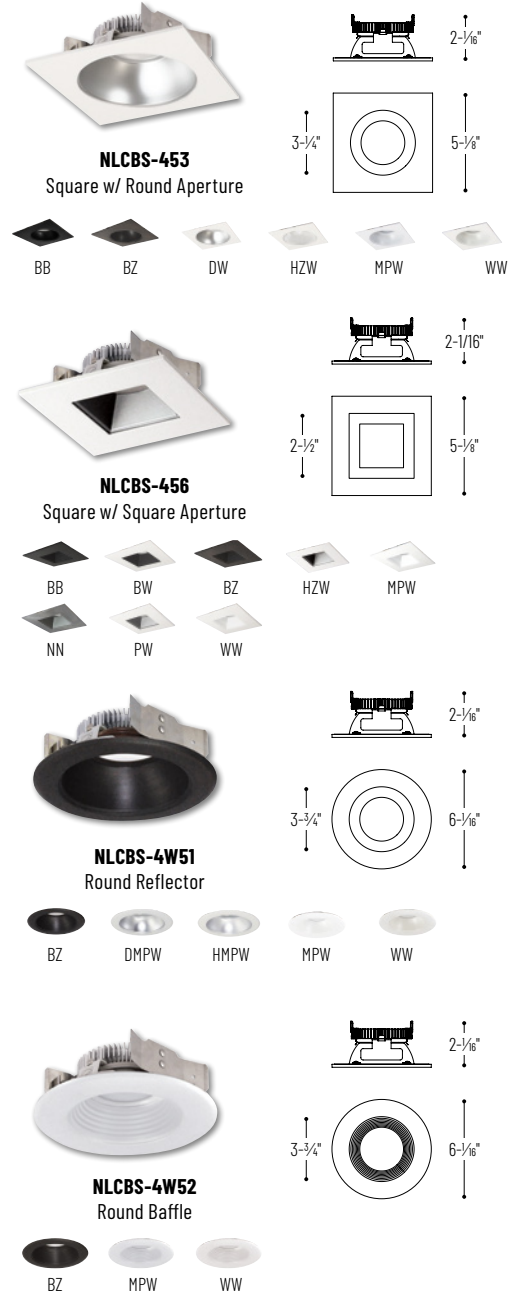
Available Trim Finishes

	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

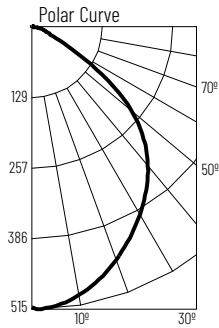
Wattage: 13.3W

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

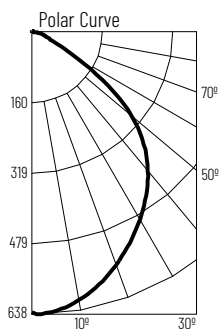
Wattage: 15.4W

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

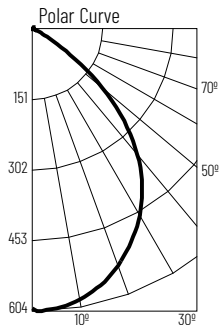
Wattage: 15.4W

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

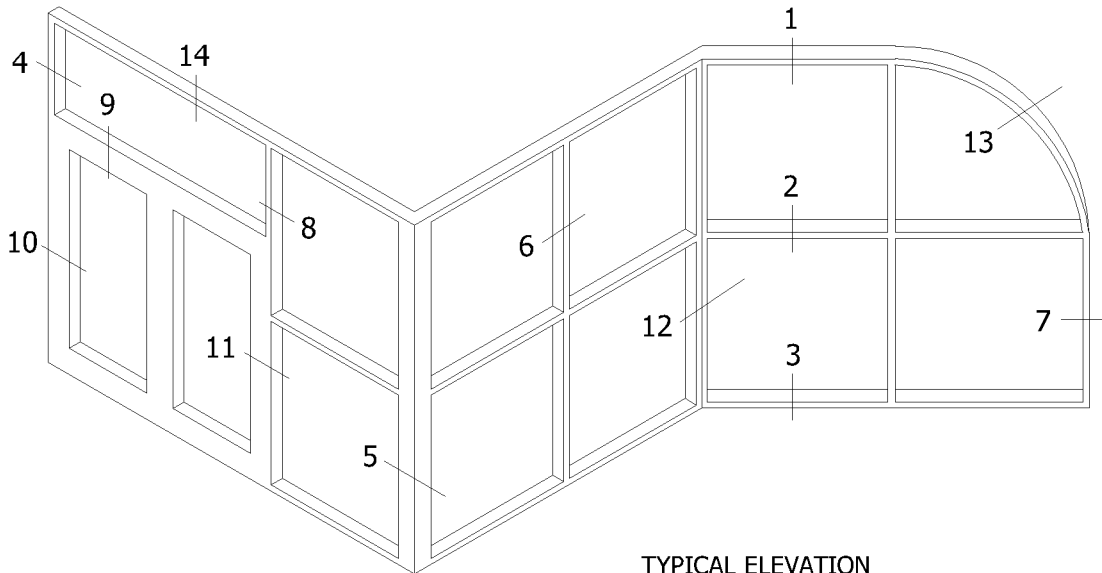
3.2 INSTALLATION

- 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

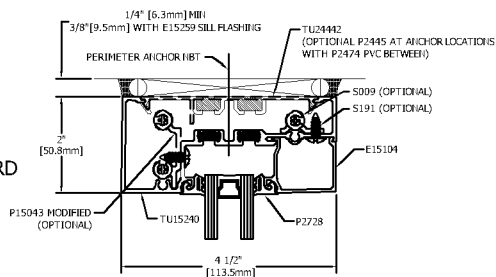
- A. Clean exposed surfaces after installation per manufacturer's recommendation
- B. Touch up minor abrasions in finish with touch up paint supplied by finish applicator

END OF SECTION

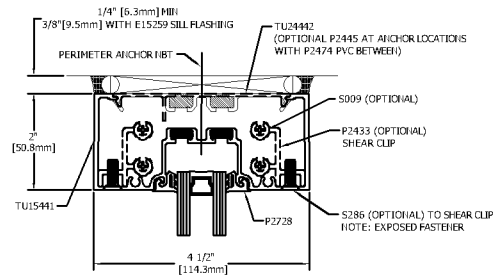


TYPICAL ELEVATION

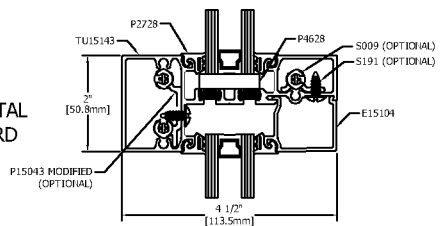
1
HEAD
STANDARD



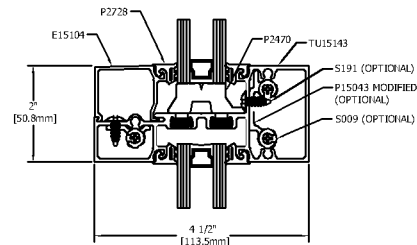
1
HEAD
STANDARD



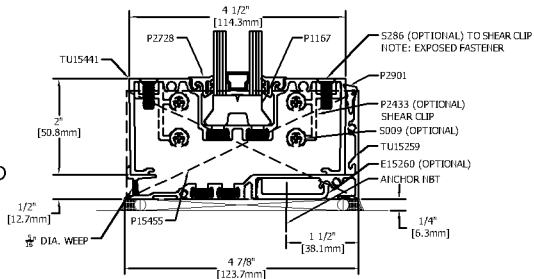
2
HORIZONTAL
STANDARD



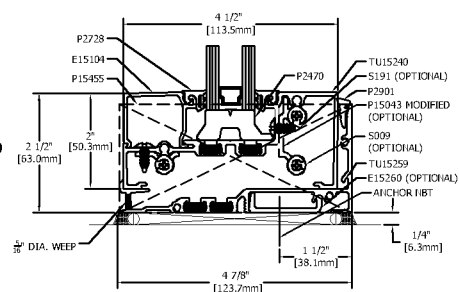
2
HORIZONTAL
STANDARD



3
SILL
STANDARD



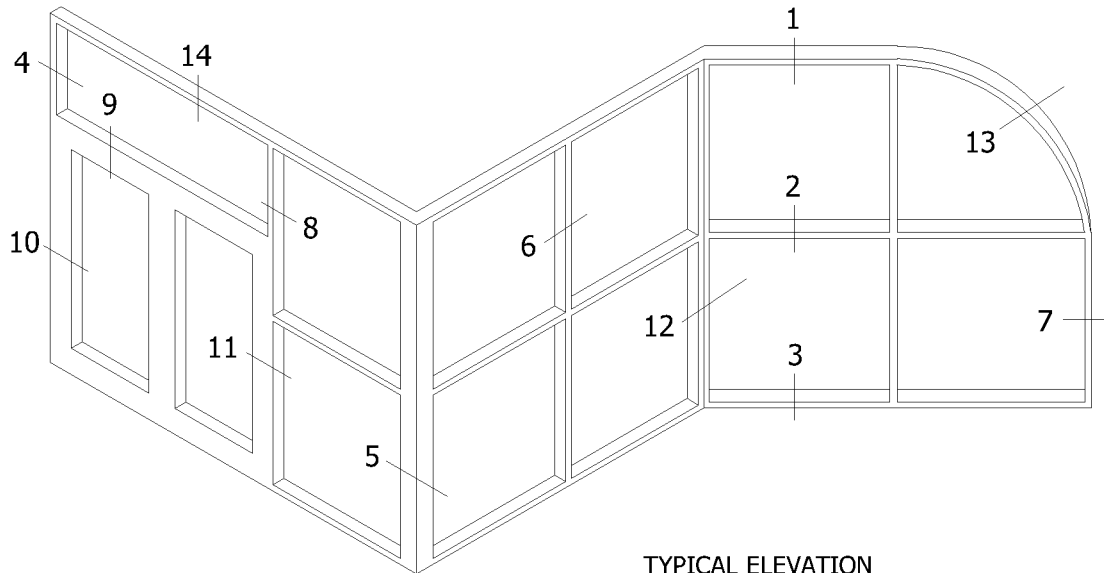
3
SILL
STANDARD



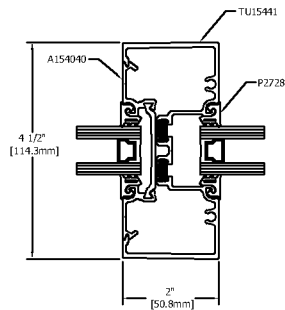
INSIDE GLAZED

OUTSIDE GLAZED

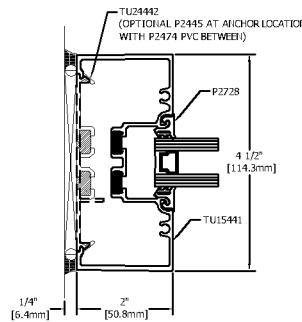
Standard Details
1/4 scale



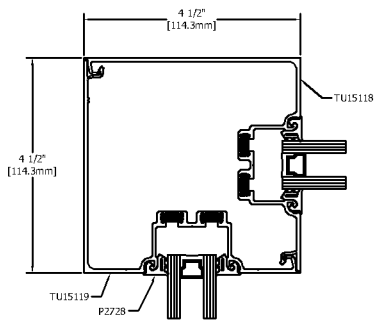
TYPICAL ELEVATION



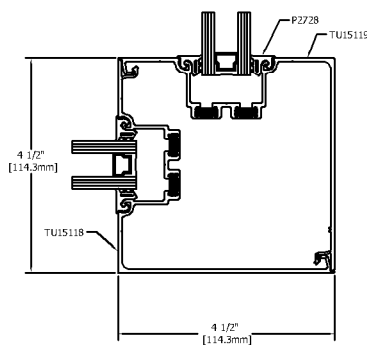
6
VERTICAL
STANDARD



7
JAMB
STANDARD



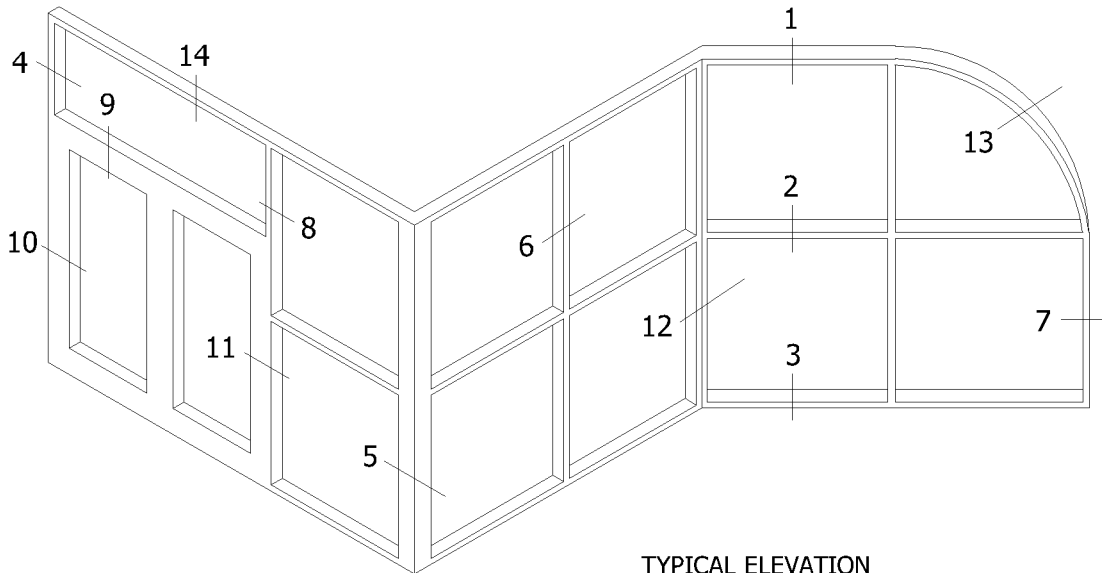
12
I.S. 90° CORNER
STANDARD



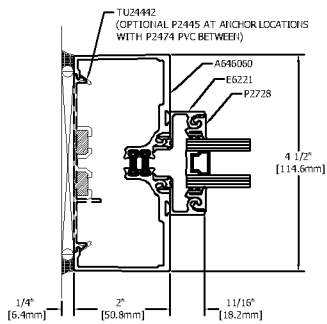
5
O.S. 90° CORNER
STANDARD

INSIDE & OUTSIDE GLAZED

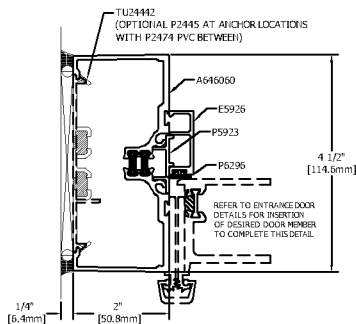
Standard Details
1/4 scale



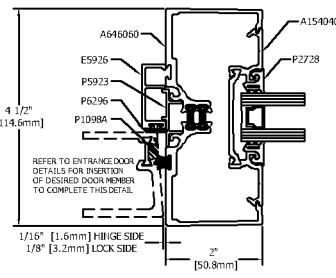
TYPICAL ELEVATION



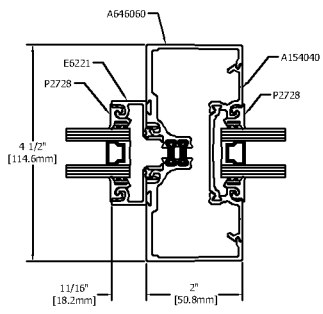
4
DOOR JAMB
TRANSOM
STANDARD



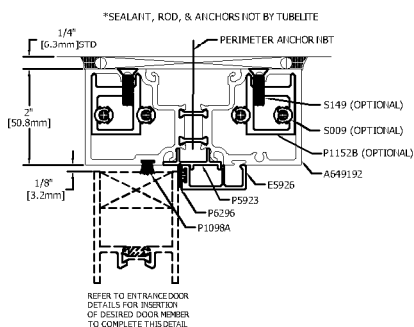
10
DOOR JAMB
STANDARD



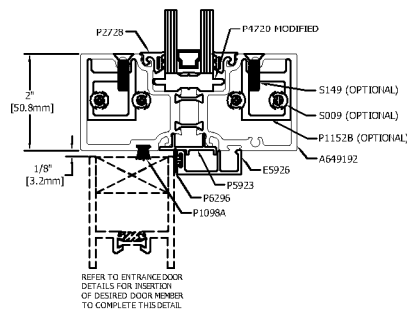
11
DOOR JAMB
STANDARD



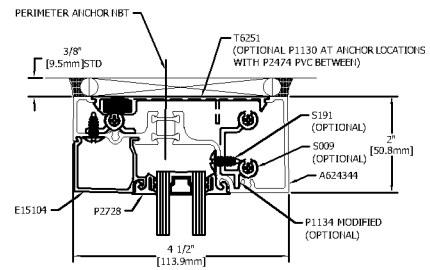
8
VERTICAL
TRANSOM
STANDARD



9
DOOR HEADER
(NON-TRANSOM)
STANDARD



9A
DOOR HEADER
STANDARD



14
DOOR TRANSOM
STANDARD

DOOR DETAILS

Standard Details
1/4 scale

NEW BUSINESS

2500022 – A request for revisions to Subdivision Plan FRSUB1521-2019 for Happy Creek Knolls, Section 4 regarding lots 4, 5, 6, 29, and 30, submitted by Maronda Homes, Inc.

**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, Virginia

Planning Commission Regular Meeting Agenda

☐ Consent Action ☒ Administrative Action ☐ Public Hearing ☐ Discussion

Agenda Item: Application #2500022

MEETING DATE: February 19, 2025

SUMMARY: A request for revisions to FRSUB1521-2019 Subdivision Plan for Happy Creek Knolls, Section 4 regarding lots 4, 5, 6, 29, and 30, Tax Map No. 20A21-3-4 submitted by Maronda Homes, Inc. to create slopes steeper than what was previously approved.

STAFF RECOMMENDATION: Staff recommend denial of the requested revisions.

DRAFT MOTION: "I move that the Planning Commission forward a recommendation of denial to the Town Council for application #2500022 for revisions to the approved Subdivision Plan FRSUB1521-2019 for Happy Creek Knolls, Section 4 regarding lots 4, 5, 6, 29, and 30, Tax Map No. 20A21-3-4 submitted by Maronda Homes, Inc."

NOTE: This is only a draft motion. Alternative motions are also welcome.

PLANNING COMMISSION ACTION:

Moved _____ Seconded _____

Neel _____ Brooks _____ Marshner _____ Marrazzo _____ Vacancy _____

☐ Approved ☐ Approved w/ Conditions ☐ Denied ☐ Other



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

**STAFF REPORT – FINAL PLAT APPROVAL MAJOR SUBDIVISION
PLANNING COMMISSION– FEBRUARY 19, 2025**

APPLICATION #:

2500022 Revision to Approved
Subdivision Plan FRSUB1521-2019 –
Happy Creek Knolls, Section 4

APPLICANT:

Amber Johnson – Maronda Homes of Virginia
LLC

SUMMARY OF REQUEST:

A request for revisions to Subdivision Plan FRSUB1521-2019 for Happy Creek Knolls, Section 4 pertaining to lots 4, 5, 6, 29, and 30, submitted by Maronda Homes, Inc. to create slopes steeper than what was previously approved.

GENERAL INFORMATION:

<i>Site Addresses</i>	1193, 1191, 1189, 1194 and 1196 Happy Ridge Drive
<i>Property Owner(s)</i>	Maronda Homes of Virginia LLC
<i>Zoning District</i>	R-1, Residential District
<i>Tax Identification</i>	20A21-3-4-4, 5, 6, 29, 30

AERIAL MAP – 1193, 1191, 1189, 1194 & 1196 Happy Ridge Drive – Warren County GIS



INFORMATION ON THE APPLICATION:

<i>SUMMARY</i>	Zoning Approval was issued on the lots on the following dates: Lot 4: September 6, 2024 Lot 5: October 23, 2024 Lot 6: September 6, 2024 Lot 29: September 17, 2024 Lot 30: September 11, 2024 The Zoning Permits were approved contingent upon the construction and completion of a retaining wall prior to the Certificate of Occupancy being issued for each lot. Town Code Section 148-315.4.a. Revision to Subdivision Design requires that any change must be approved by the Town in accordance with the procedures of this chapter prior to field changes. The extent of the revision determines whether or not the change to the plans can be approved administratively or by the Planning Commission. The prior approval was for no slope to be greater than a 3:1 ratio with retaining walls. The proposed changes, i.e. no retaining walls cannot be approved administratively. This constitutes a revision to the major site development.
<i>CONCLUSION</i>	Staff do not support approval of the amendment. Staff recommends that the Planning Commission deny the amendment in favor of the previous approval with retaining walls.

ATTACHMENTS:

1. Application
2. Slope Stability Analysis for Happy Creek Lots 4-6 TM: 20A213-4-4 to 6 and House Location Surveys Showing No Retaining Walls
3. Previous Zoning Permit Approvals and Proposed House Location Surveys Showing Required Retaining Walls for Lots 4, 5, and 6
4. Staff Slope Profile and Renderings of the Existing Properties Lots 4, 5, and 6
5. Town Consultant's Review Comments on the Slope Stability Analysis
7. Slope Stability Analysis for Happy Creek Lots 29-30 TM: 20A213-4-29 to 30 and House Location Surveys Showing No Retaining Walls
8. Previous Zoning Permit Approvals and House Location Surveys Showing Required Retaining Walls for Lots 29 and 30
9. Staff Slope Profile and Renderings of the Existing Properties Lots 29 and 30
10. Town Consultant's Review Comments on the Slope Stability Analysis
11. Town Code Chapter 148-860 Environmental Improvements
12. Previously Approved Subdivision Plan Pages 1, 2, 5 and 6



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 FRSUB1521-2019

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 [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



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

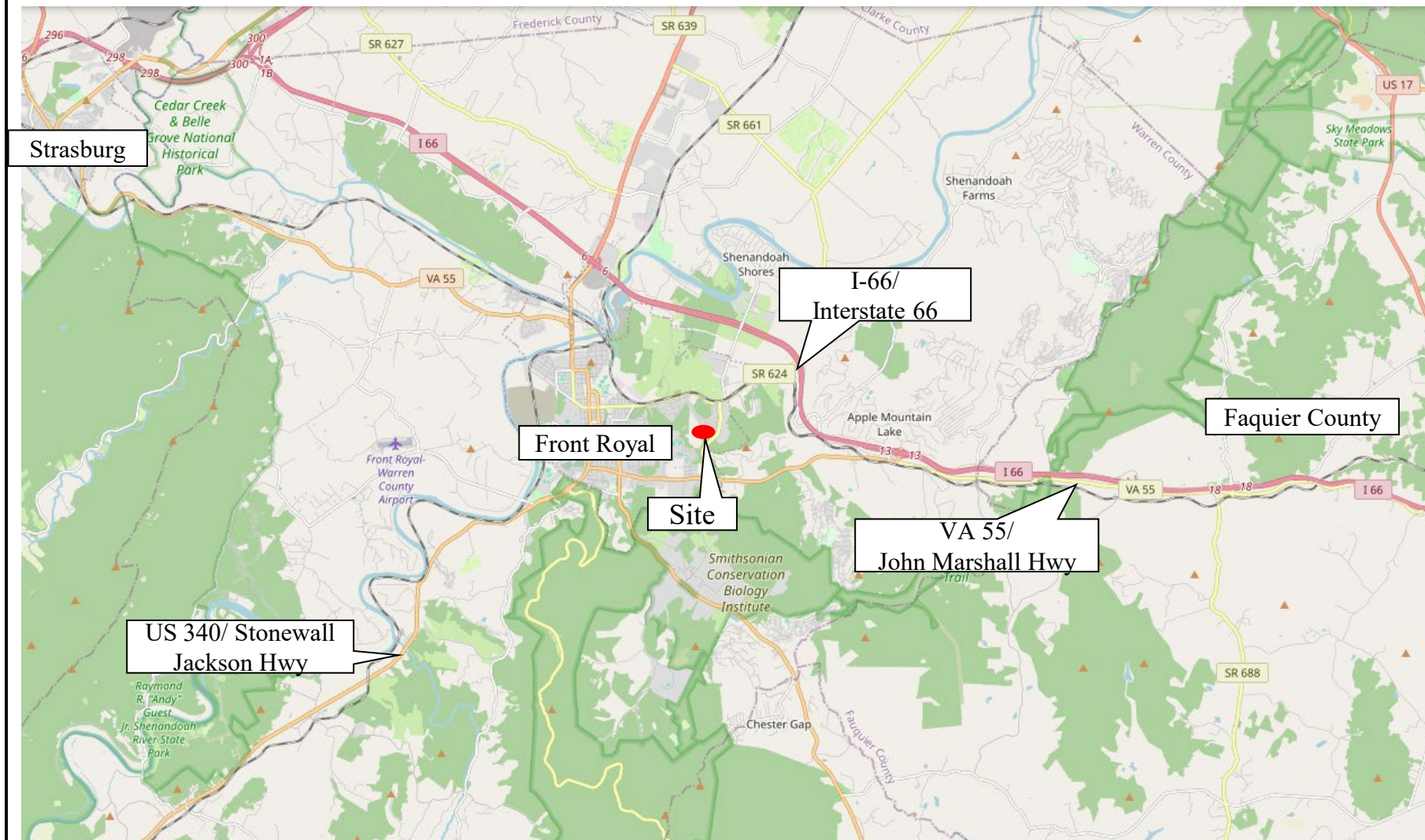
SCE #: 24-0367V

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

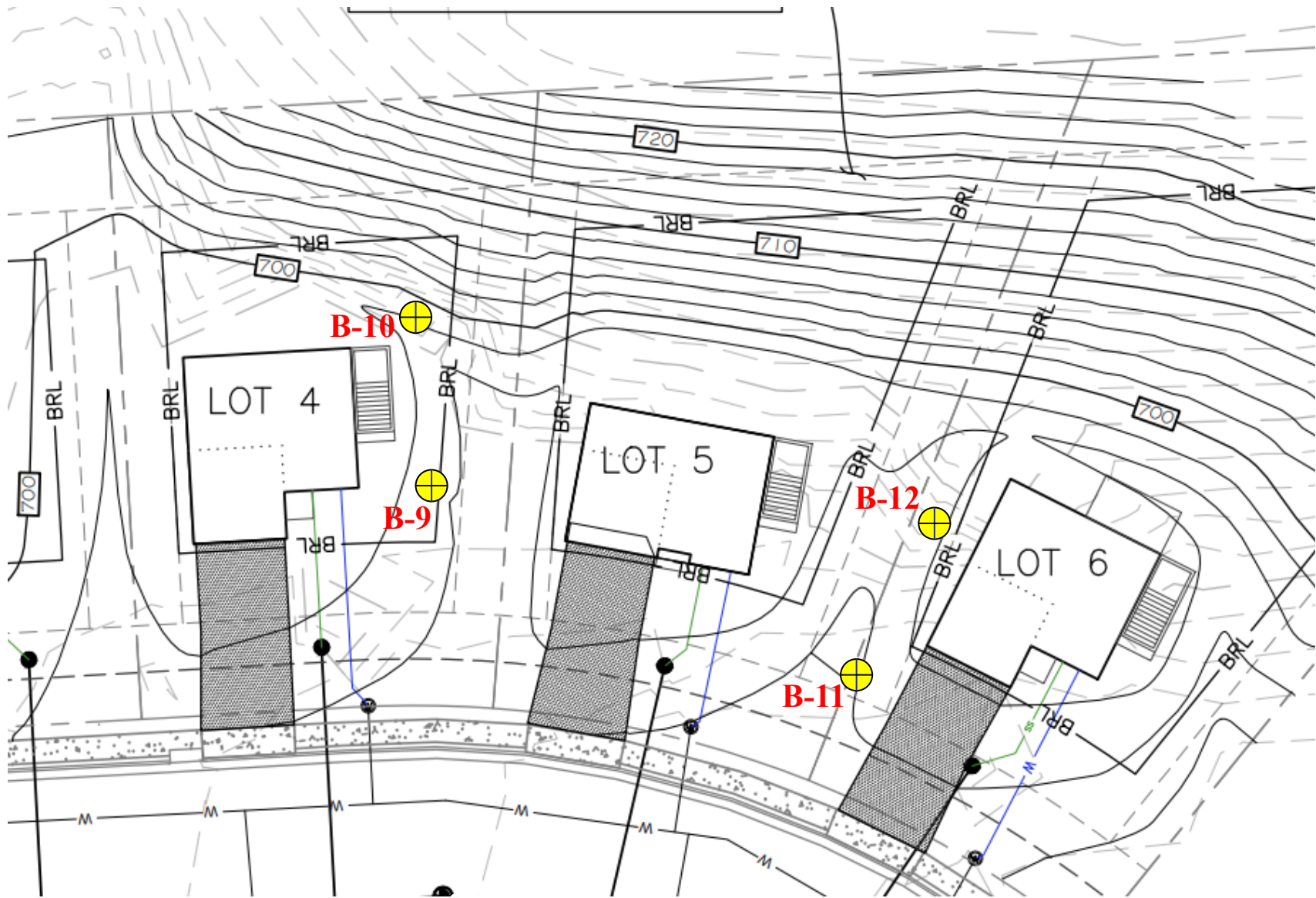
TM: 20A213-4-4 to -6, Warren County, 22630

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.				
			1.80	700.20	58	5-19-16-10 (35)	
			SILT (ML): very stiff; red and yellow; moist; Natural.				
			4.00	698.00	100	7-10-9 (19)	
5	697		SILT with sand (ML): stiff; red and yellow; moist; Natural Pockets of clayey material.				
			9.50	692.50	100	4-4-7 (11)	
10	692		Lean CLAY (CL): stiff; purplish-gray; moist; Natural.				
			13.50	688.50	83	5-8-9 (17)	
15	687		Sandy SILT (ML): very stiff; yellow and red; moist; Natural.				
			19.50	682.50	83	4-9-13 (22)	
20	682		SILT (ML): very stiff; yellow; moist; Natural.				
			23.50	678.50	89	8-11-13 (24)	
25	677		Sandy SILT (ML): very stiff; yellow; moist; Natural.				60
			28.50	673.50			
			29.50	672.50	89	8-9-10 (19)	
30	672		30.00 Lean CLAY with sand (CL): very stiff; yellow; moist; Natural. Terminated at 30.00 ft.	672.00			

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
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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

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
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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

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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]



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GRAIN SIZE DISTRIBUTION

CLIENT Mr. Marty Rhodes

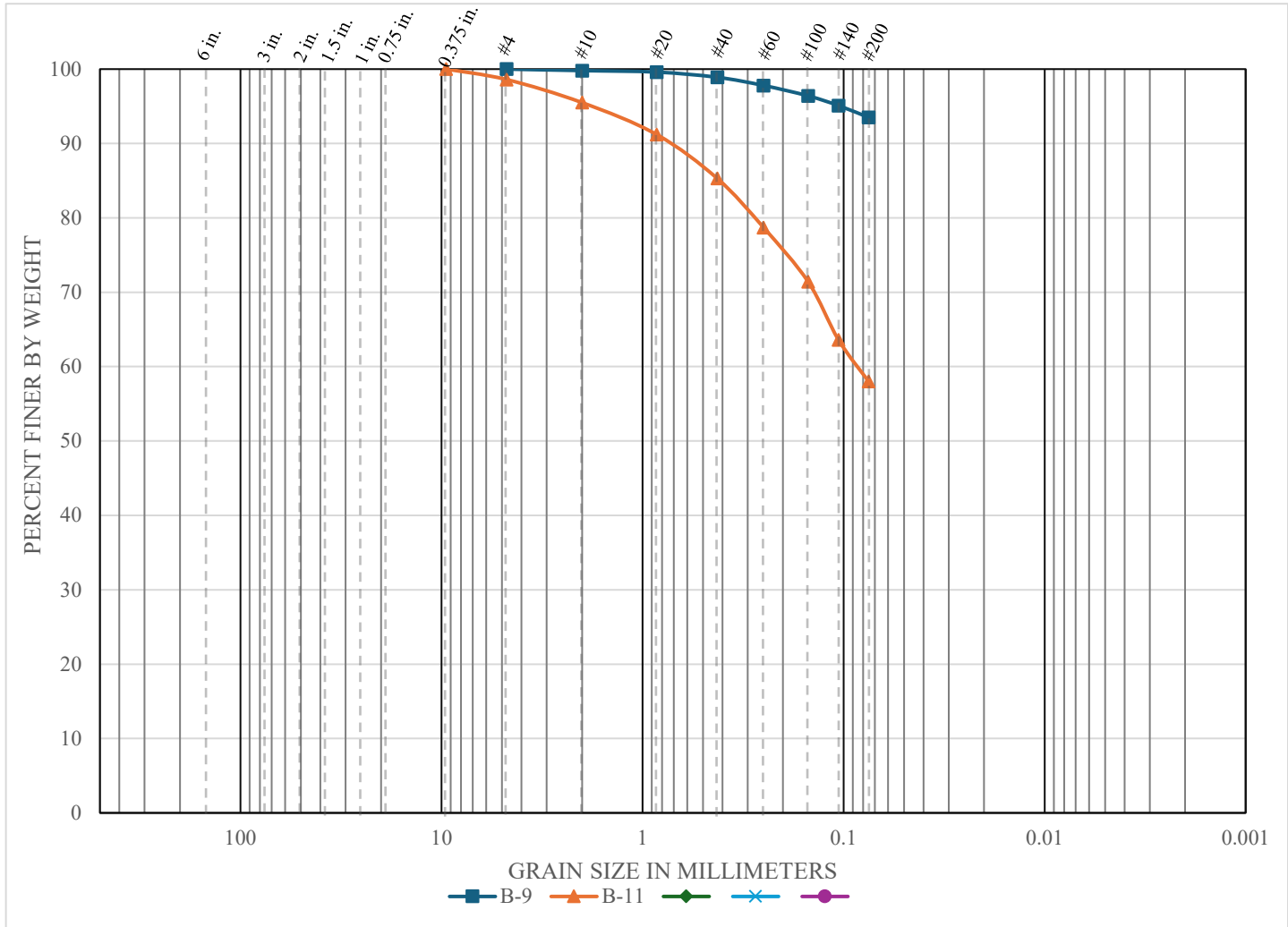
PROJECT NAME

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

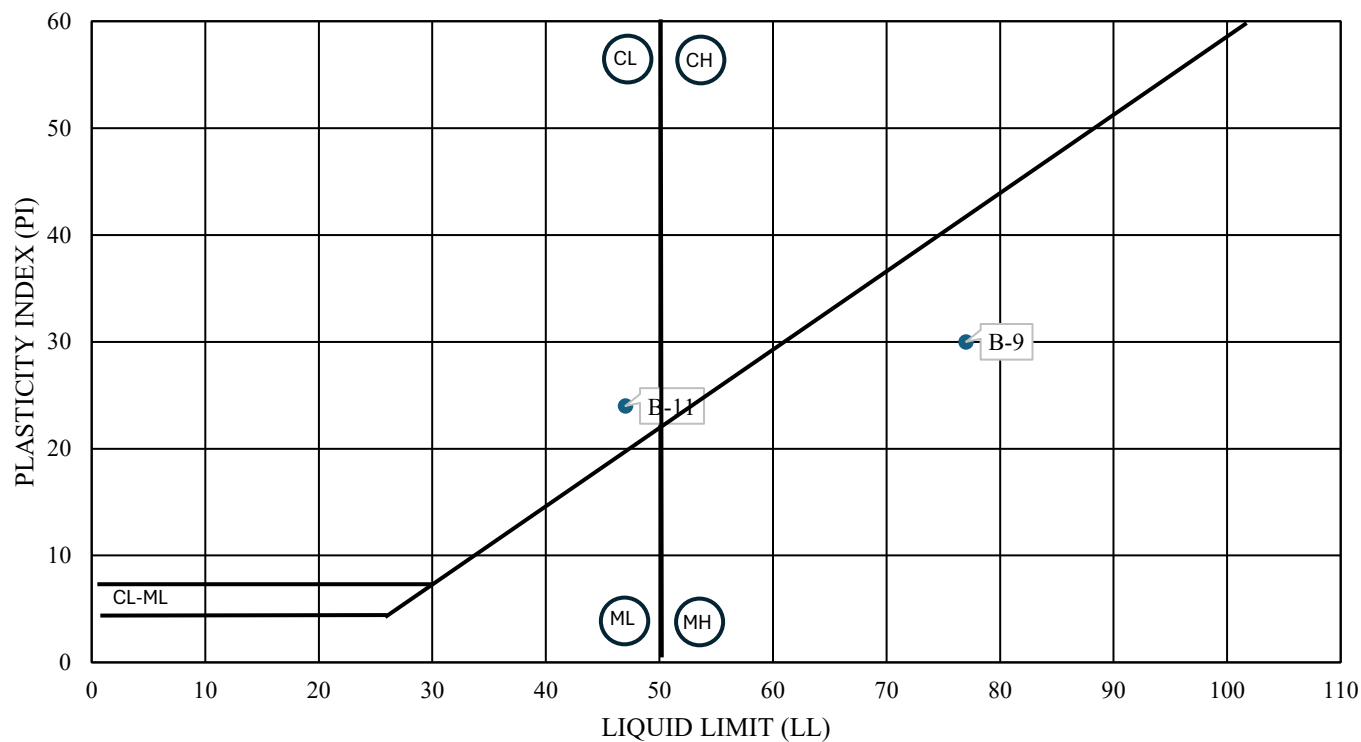
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Happy Creek Knolls

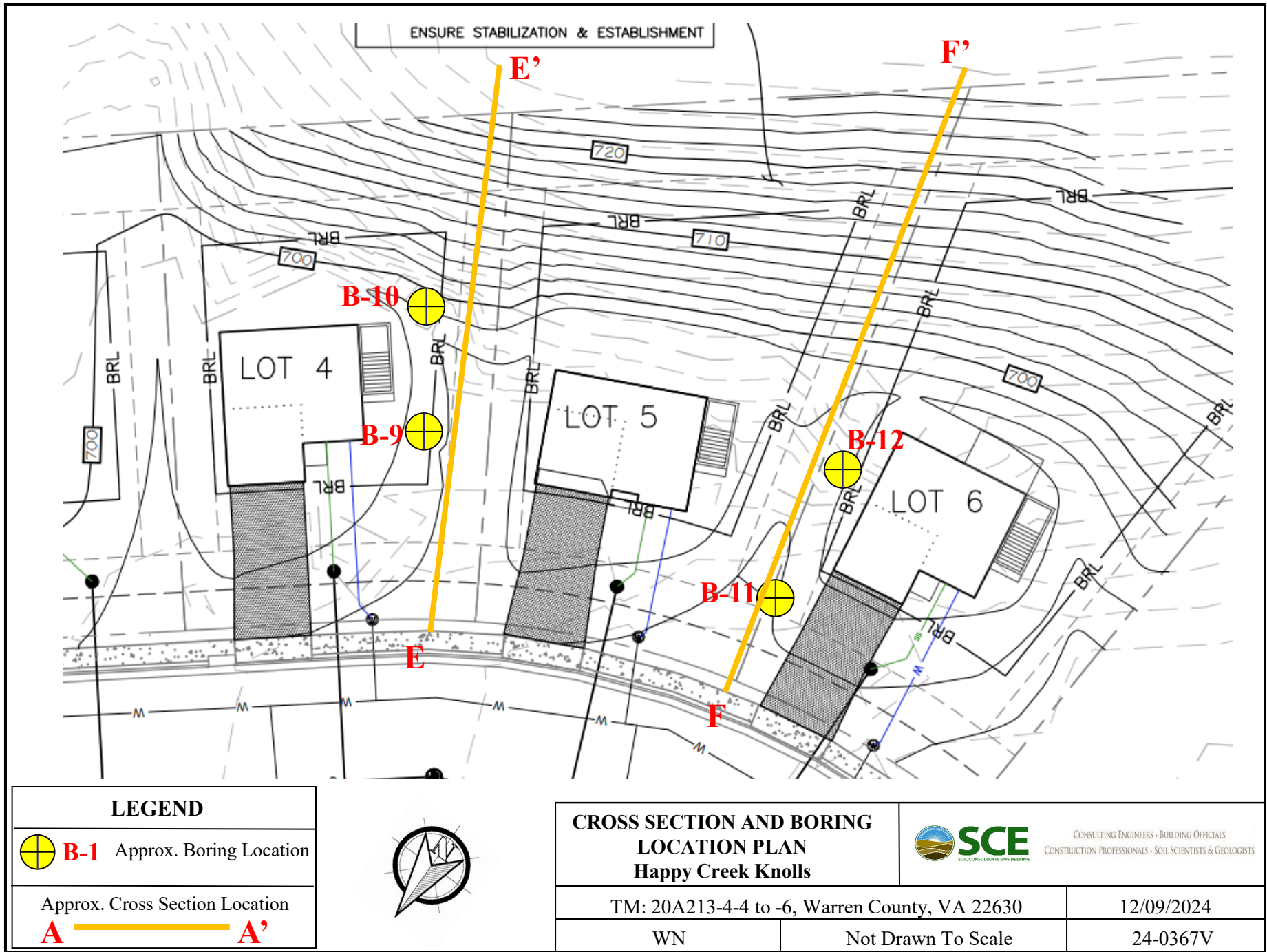
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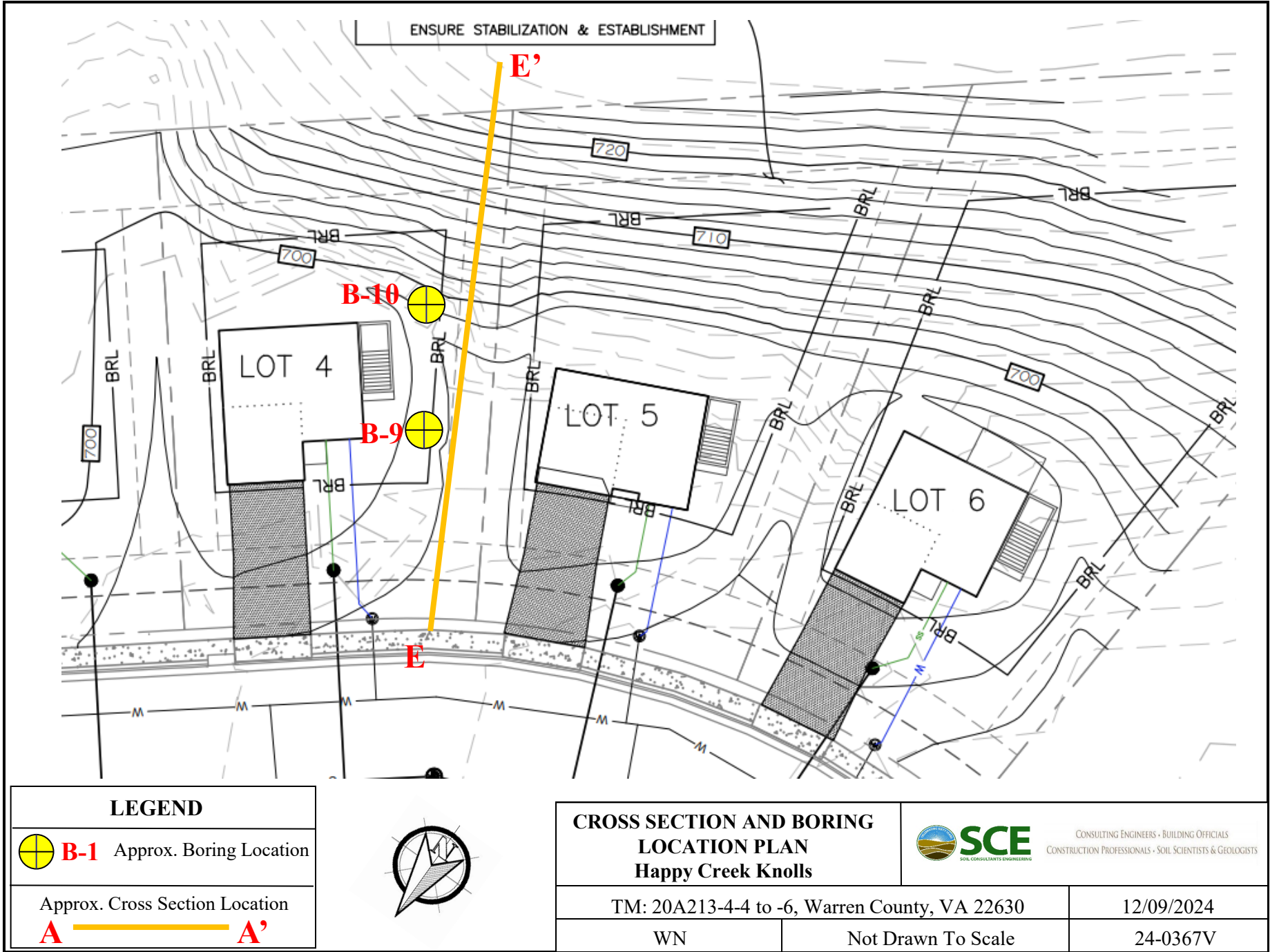
PROJECT LOCATION

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

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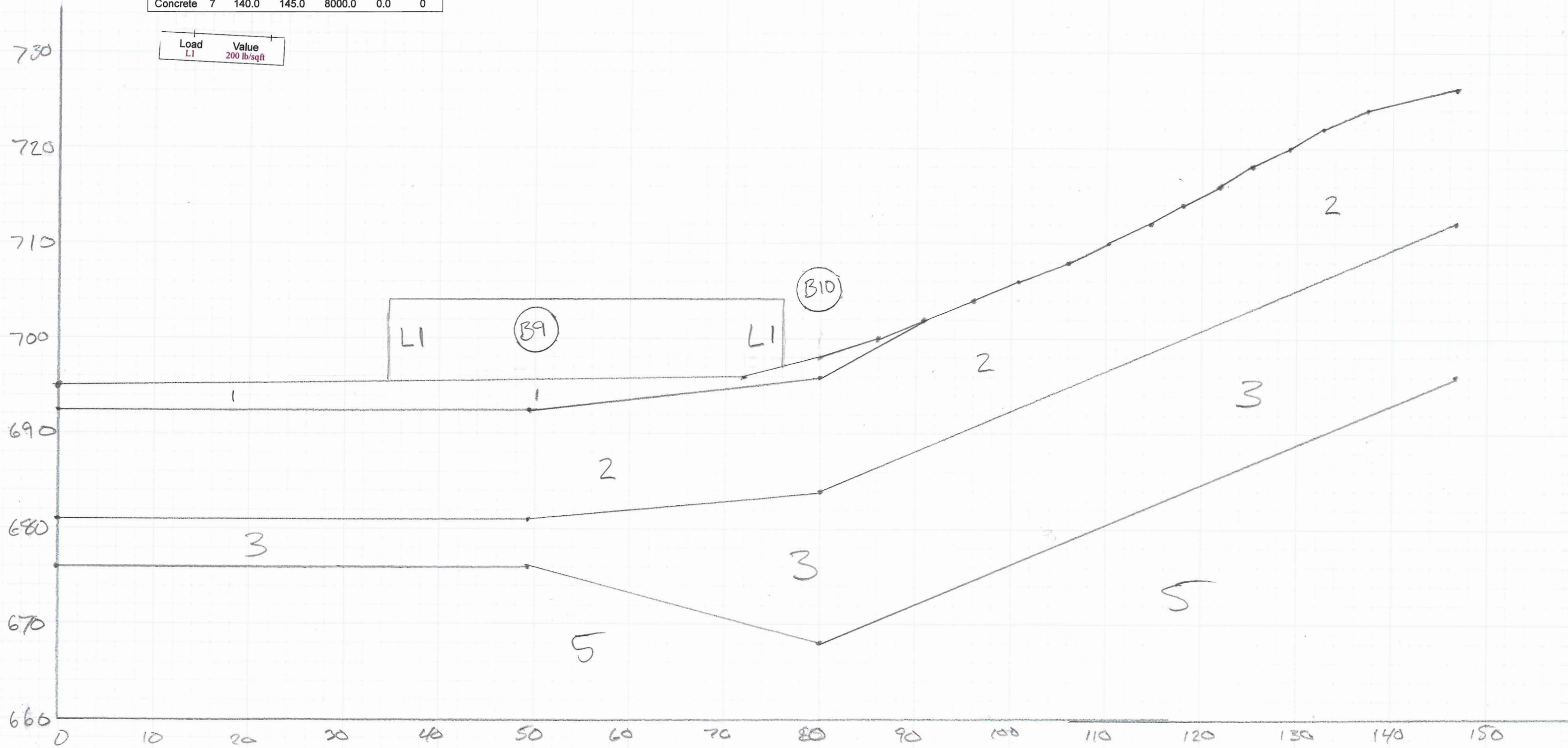
SLOPE STABILITY ANALYSIS





24-0367V Happy_Creek_Lot_4_E-E'

Soil Desc.	Soil Type	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



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

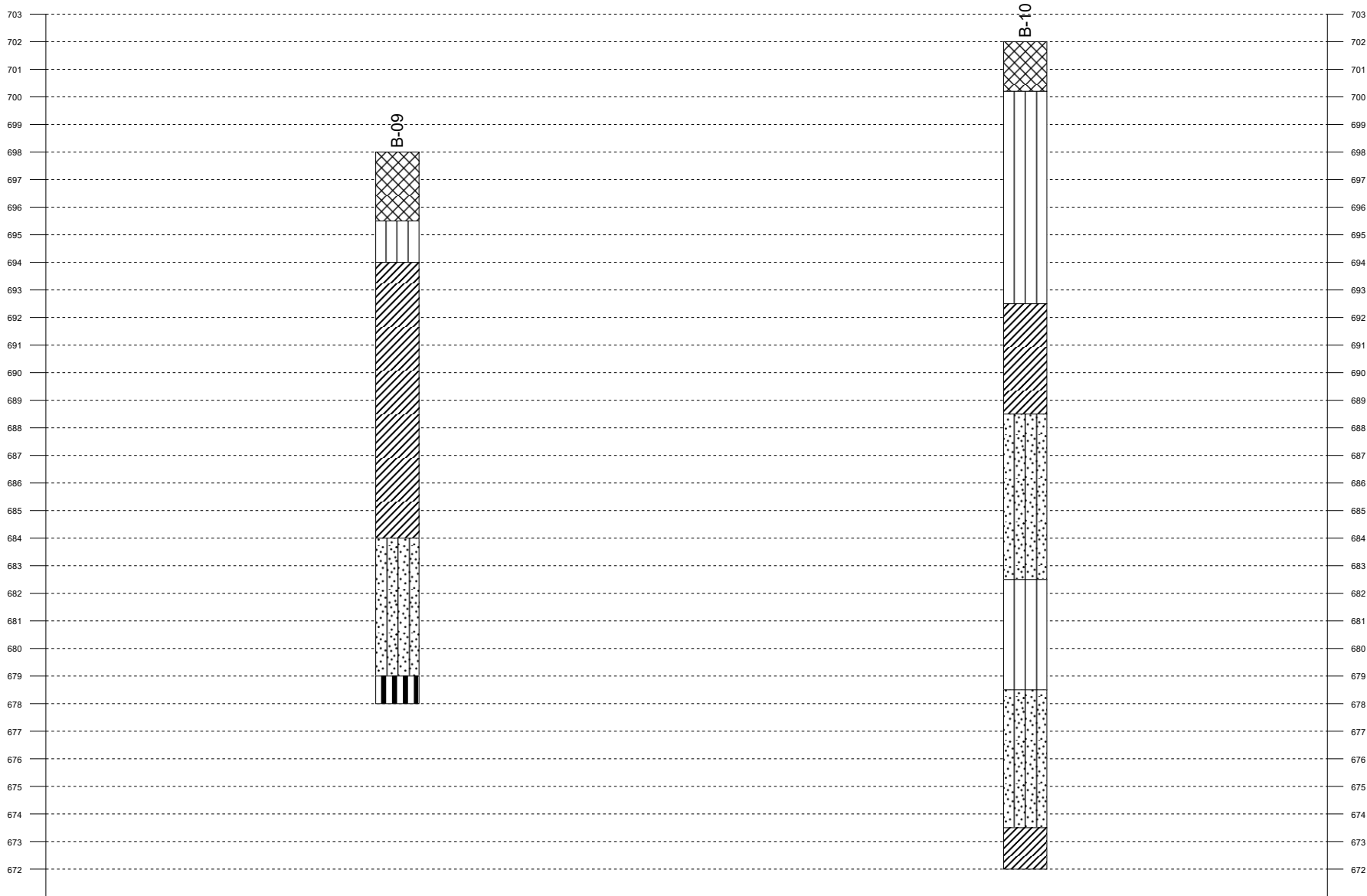
 FILL

 ML

 CL

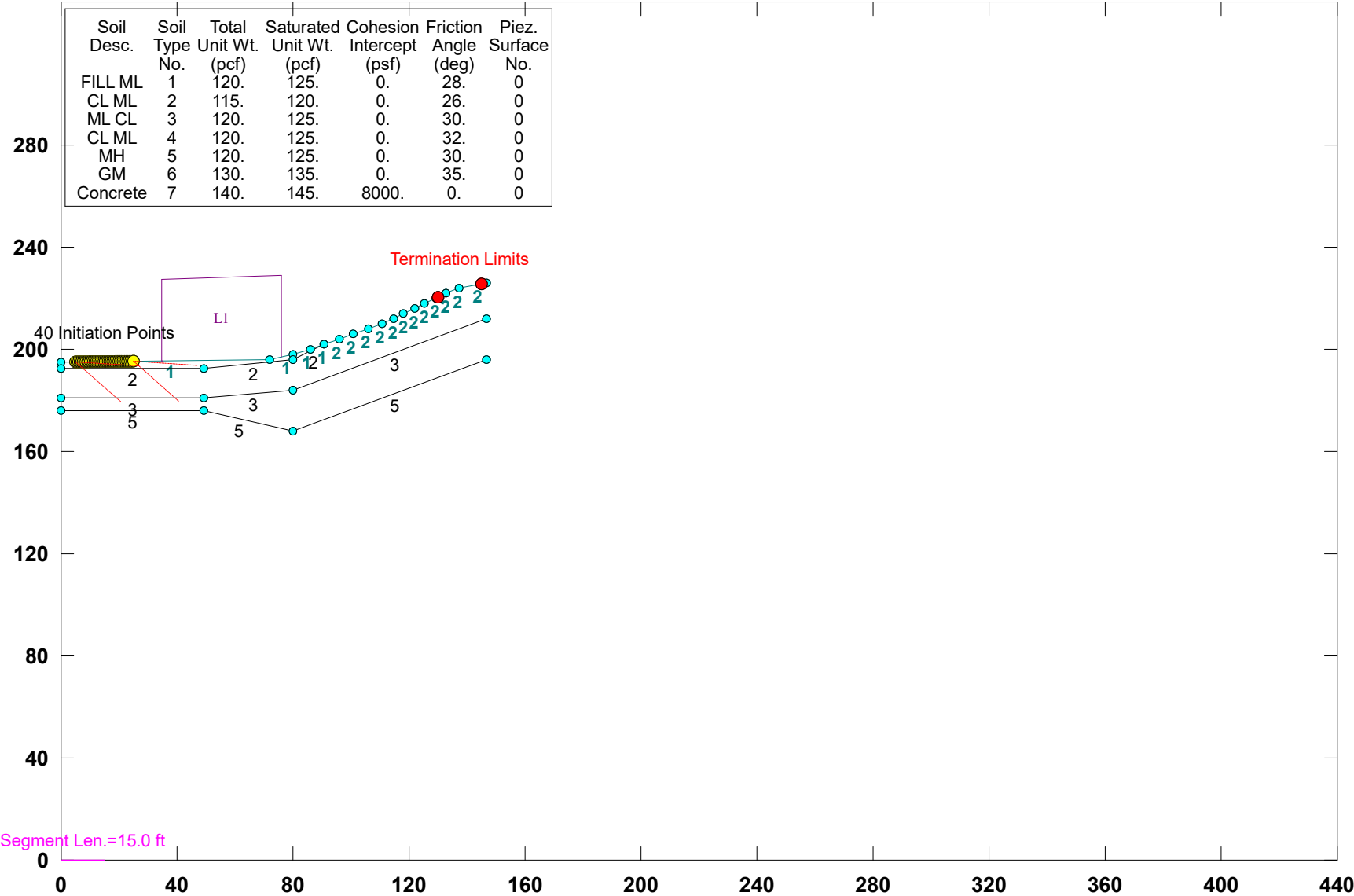
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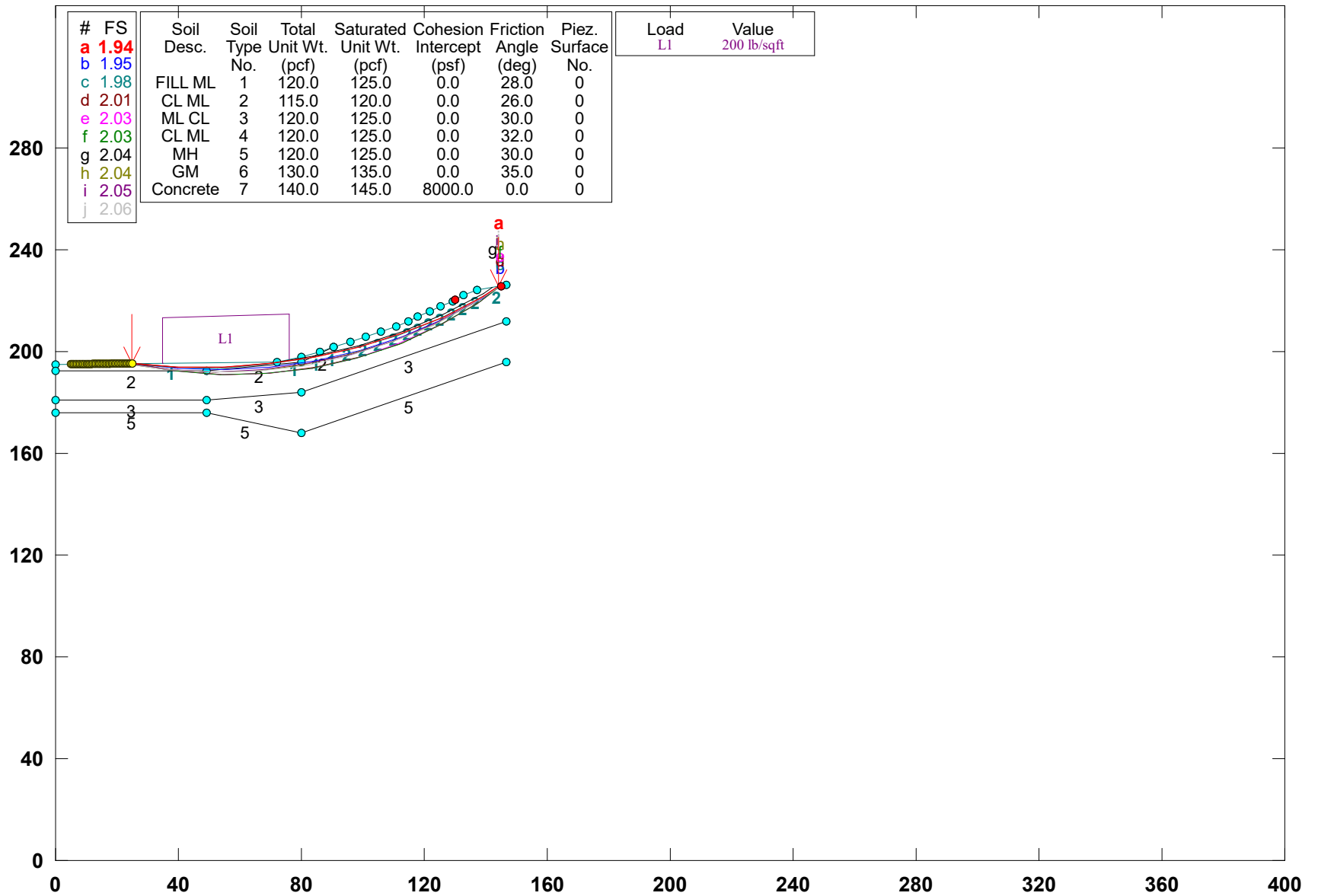
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24-0367V_Happy_Creek_Lot_4_E-E'

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**** 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

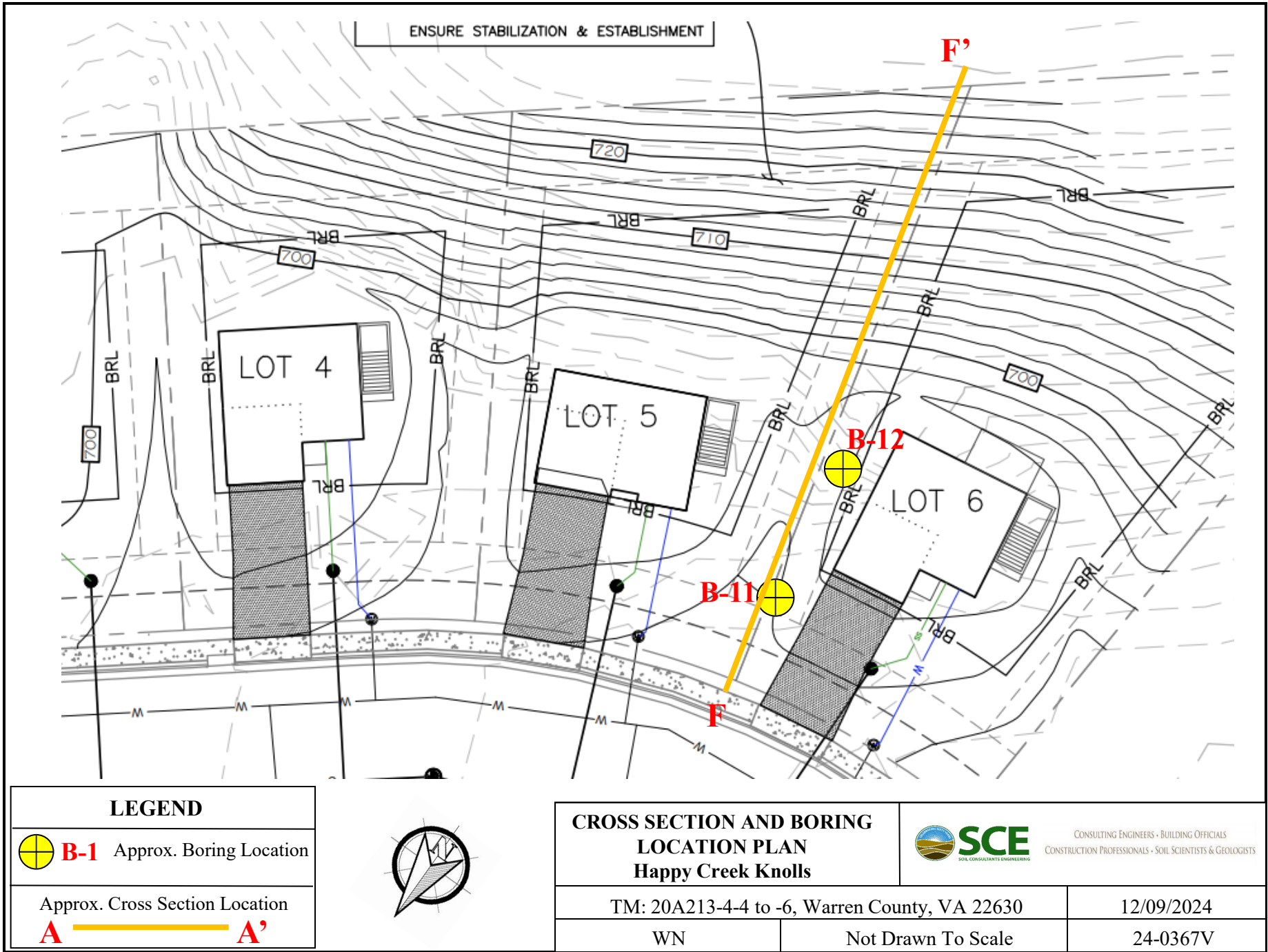
Point No.	X-Surf (ft)	Y-Surf (ft)
1	22.44	195.31
2	37.24	192.92
3	52.22	192.09
4	67.20	192.85
5	82.02	195.19
6	96.51	199.07
7	110.51	204.45
8	123.87	211.28
9	136.43	219.47
10	143.64	225.35

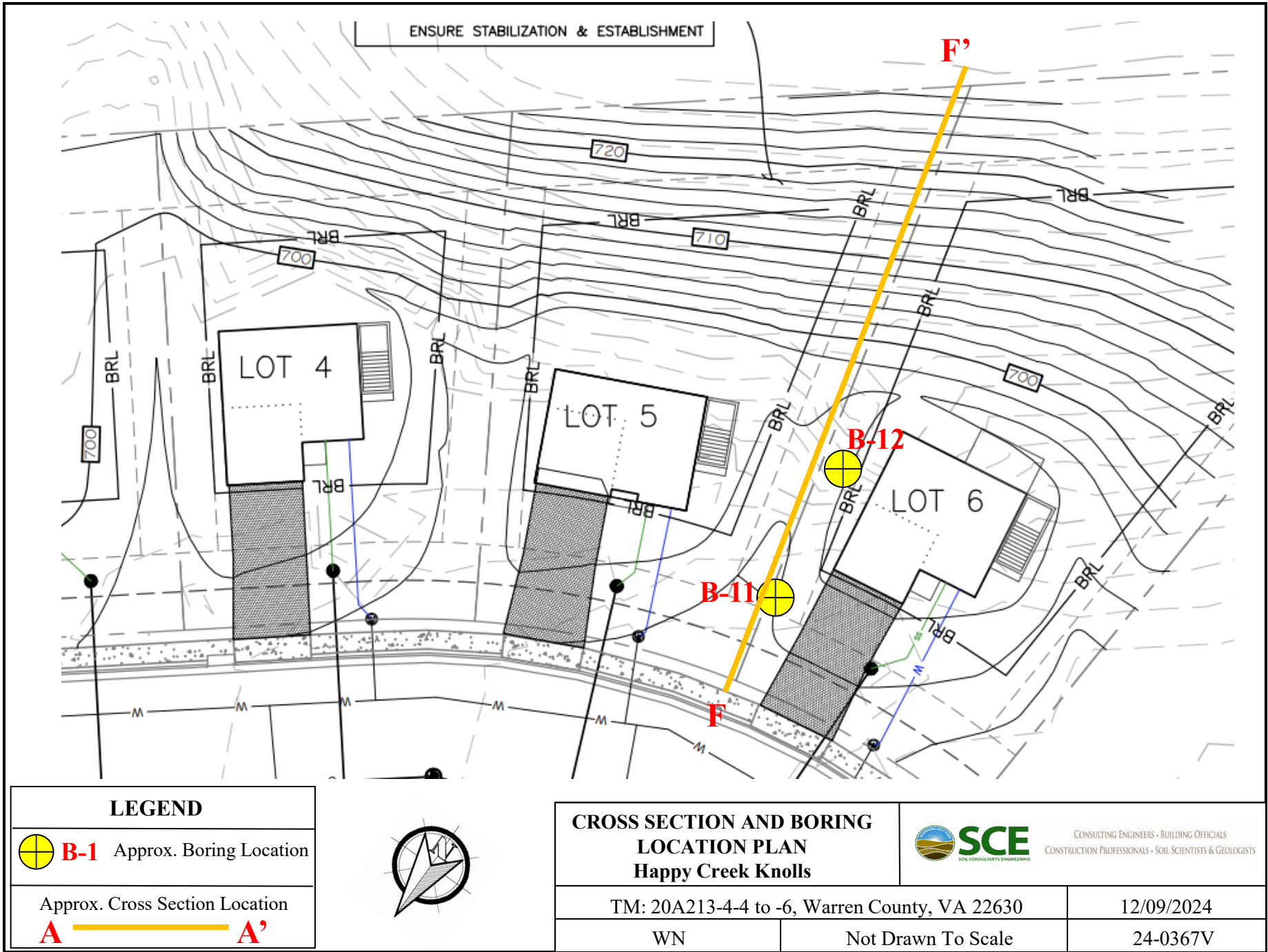
Circle Center At X = 52.5 ; Y = 334.4 and Radius, 142.3
 *** 2.049 ***

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 ***







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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

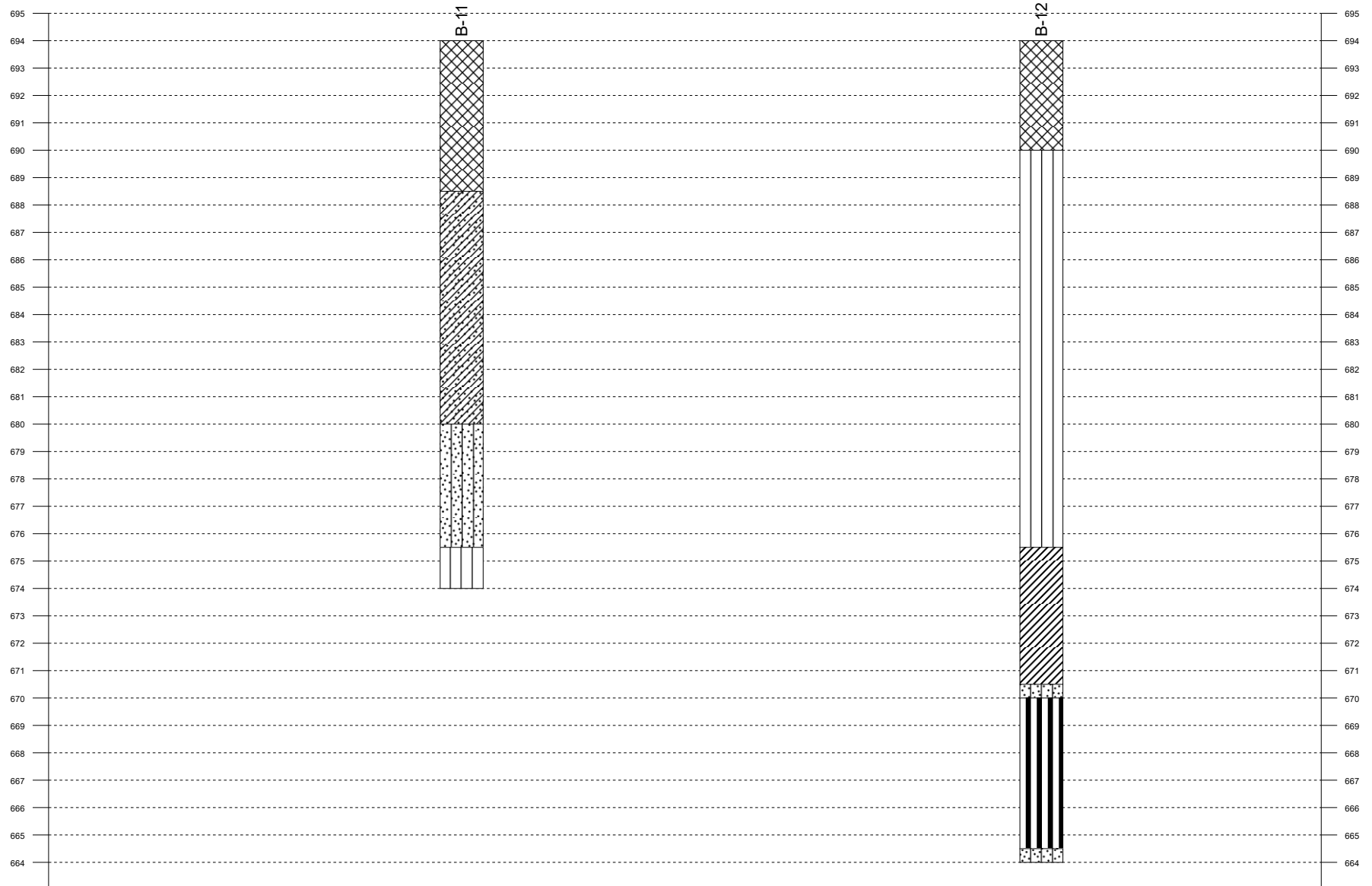
PROJECT NUMBER 24-0367V

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

HORIZONTAL SCALE 1:173

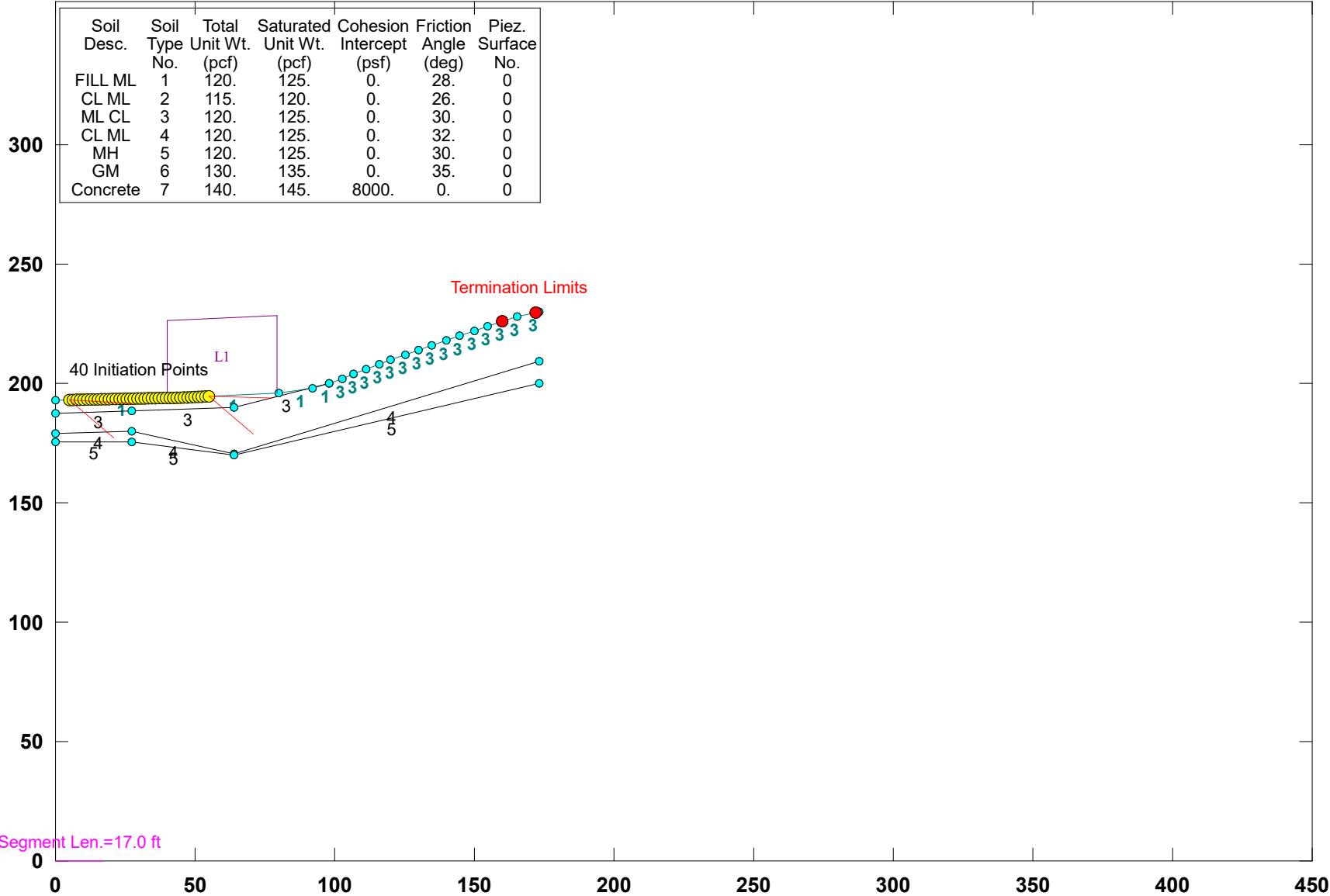
Legend Key

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



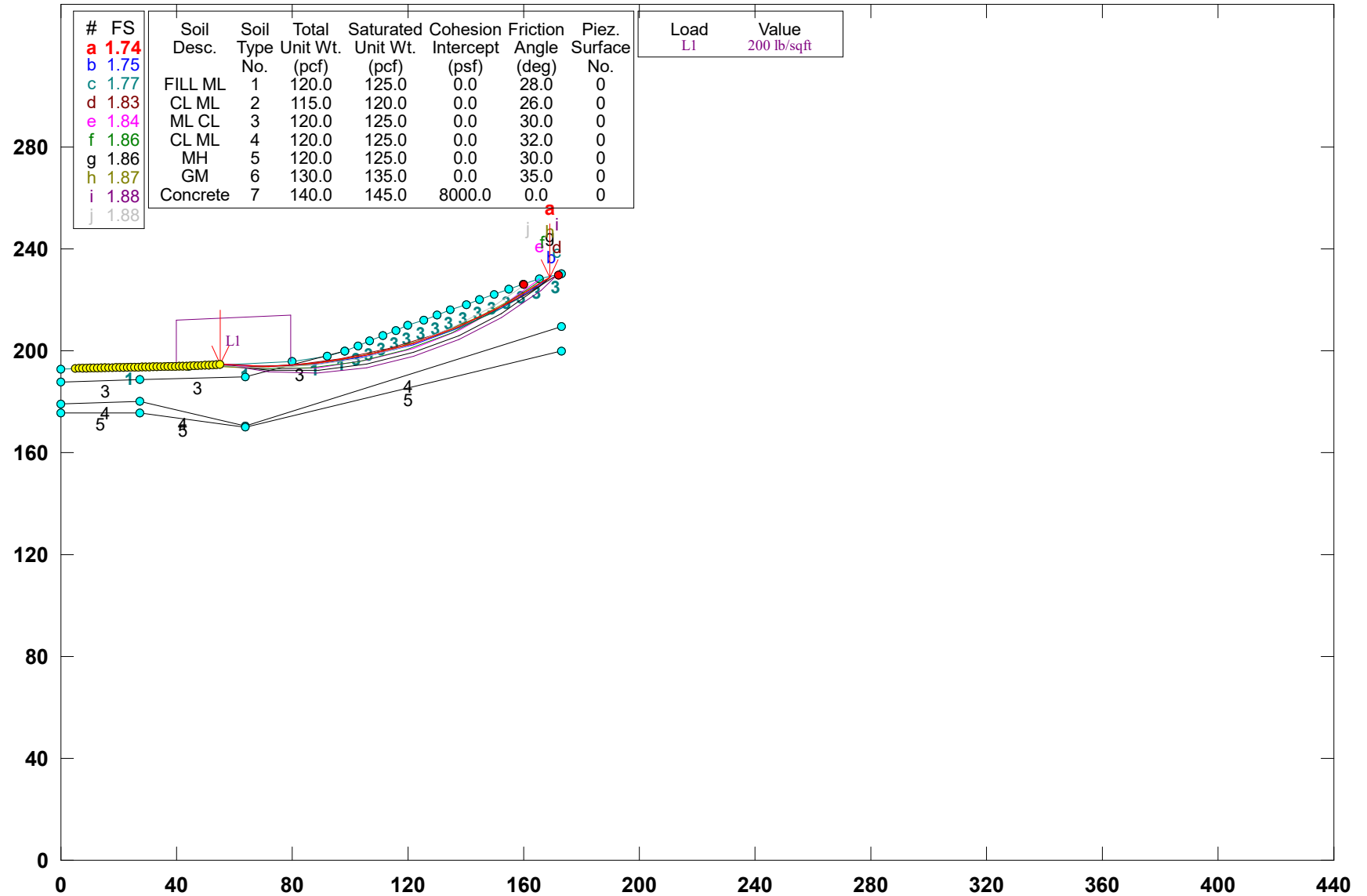
24-0367V_Happy_Creek_Lot_6_F-F'

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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

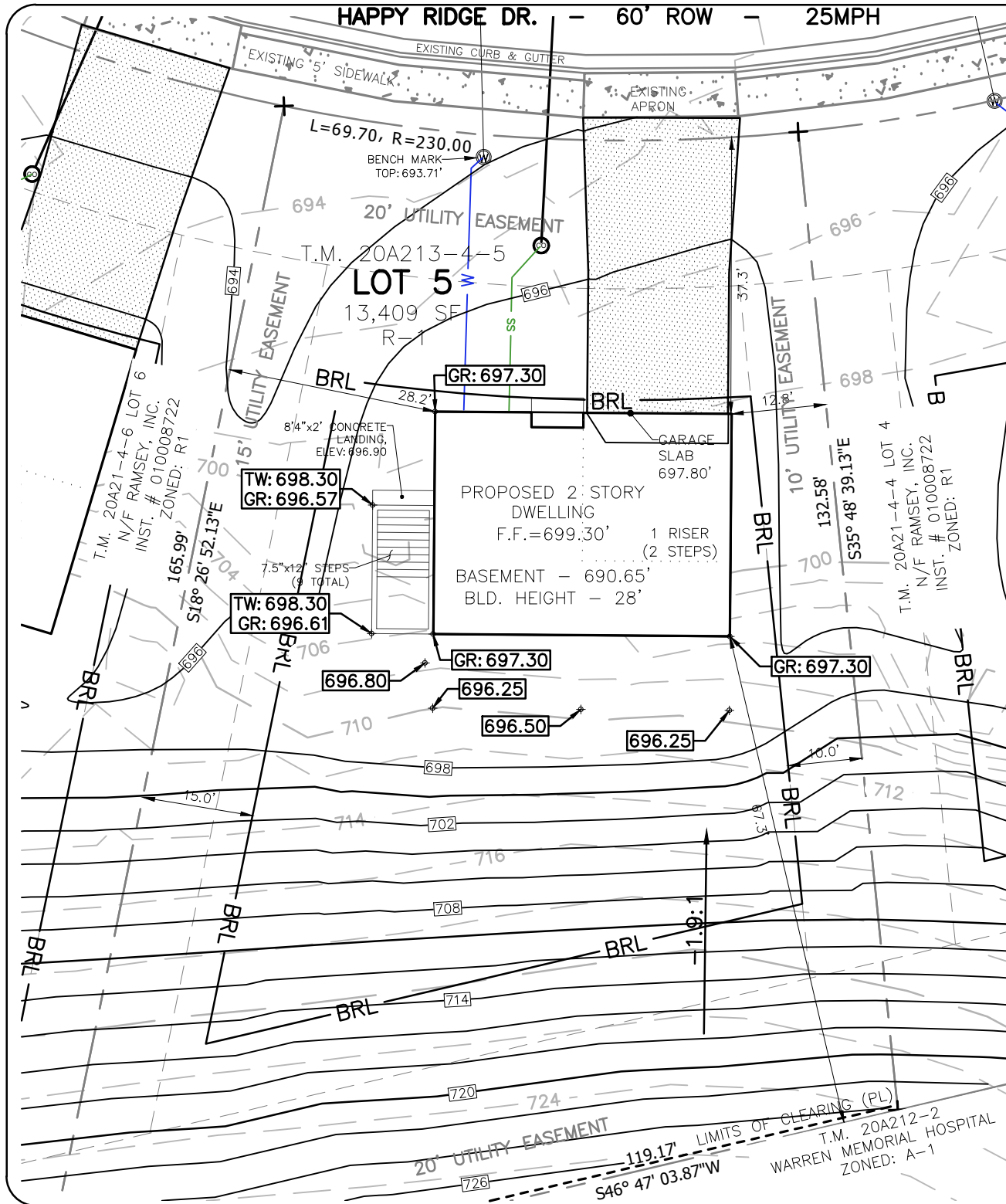
Circle Center At X = 83.2 ; Y = 313.3 and Radius, 122.0
 *** 1.880 ***

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.

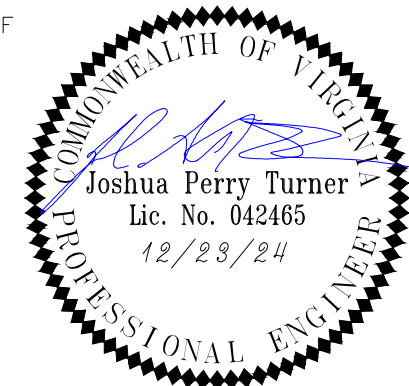
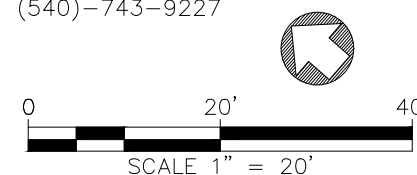
DERIVATION OF TITLE TO: RAMSEY, INC. PER INST. #010008722

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

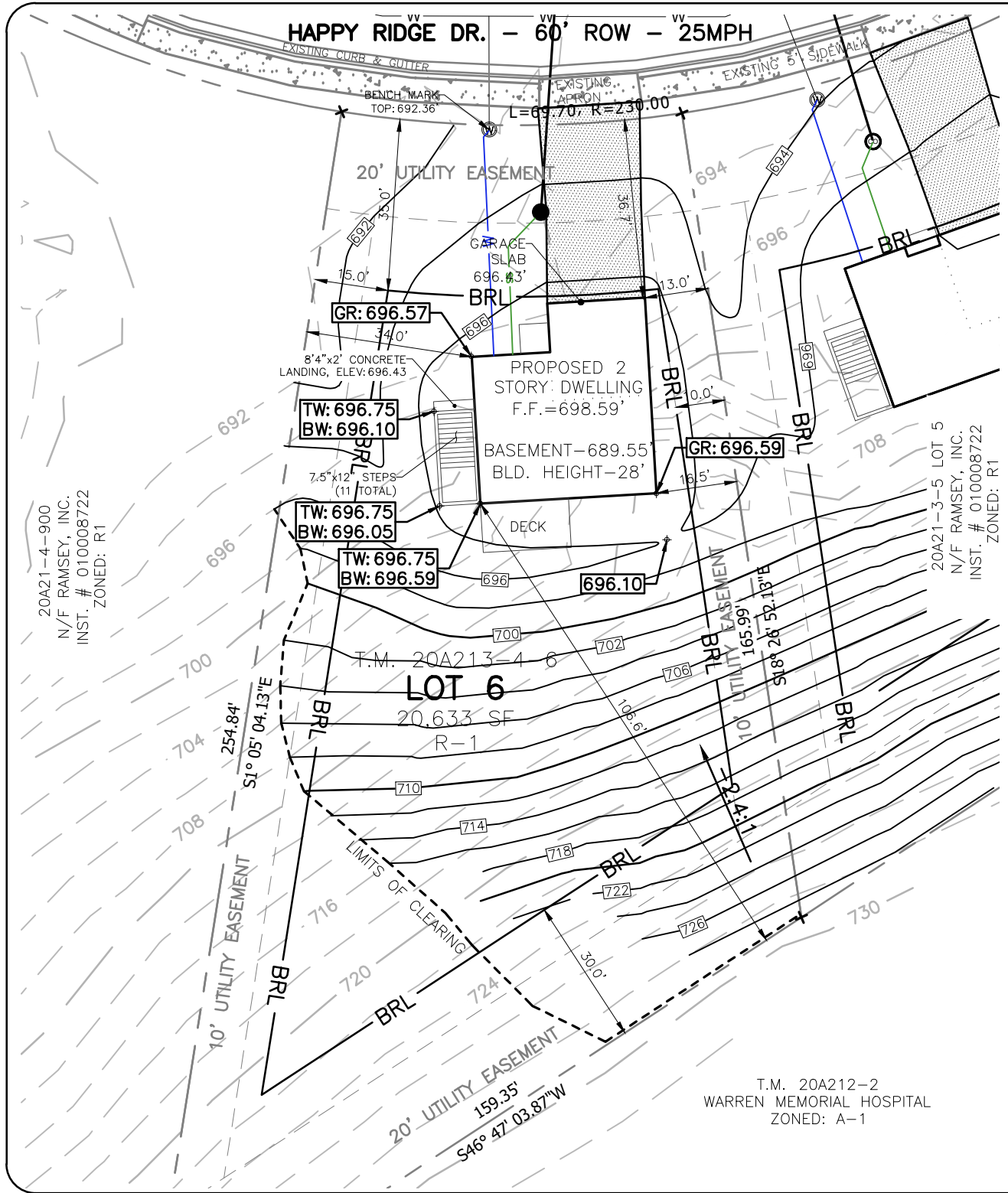
DRIVEWAY APRON AND DRIVEWAY SURFACE TO BE PAVED OR CONCRETE
AND IN CONFORMANCE WITH TOWN STANDARD (RC-5).

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	JPT
12/23/24			ZEW	JPT
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 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.

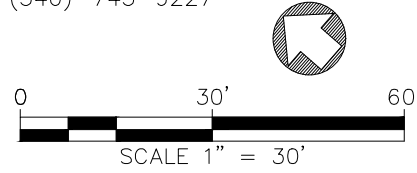
DERIVATION OF TITLE TO: RAMSEY, INC. PER INST. #010008722

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: 1,316 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'

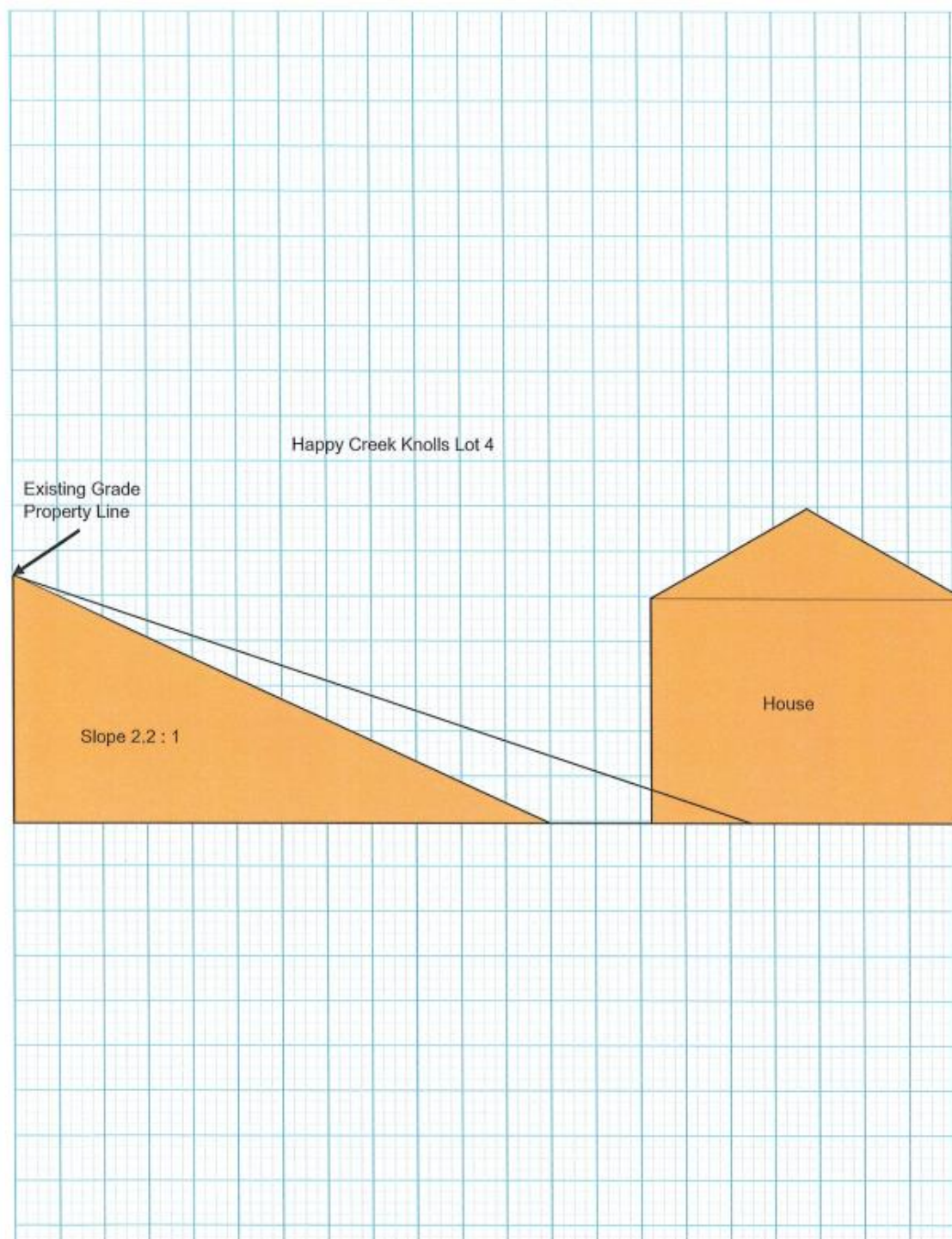
PRO. 10089

Town of Front Royal 102 E. Main Street Front Royal, VA 22630 540-635-4236 Permit Number: 2400399 Zoning Approval APPROVED  	
Job Location: 1193 HAPPY RIDGE DR City, State, Zip: FRONT ROYAL, VA 22630 Tax Map #: 20A213 4 4 Square Feet: [Square Feet] Valuation: Status: Approved Pending Payment Request Description: New Residential Single-Family Dwelling - Detached	FOR ZONING Plan Type: Zoning - Major Construction - New Single Family Detached Work Class: Project: District: Front Royal Completion Date: 09/06/2024
Company Name: Maronda Homes Applicant Name: Johnson, Amber Address: 7051 Heathcote Village Way Suite 255 City, State, Zip: Gainesville VA 20155 Phone: (703) 753-7020 / Cell: 540-935-6077-Amber Johnson Email: permittingva@maronda.com	Owner: MARONDA HOMES OF VIRGINIA LLC Address: 7051 HEATHCOTE VILLAGE WAY SUITE 255 City, State, Zip: GAINESVILLE , VA 20155 Phone: (703) 753-7020 Email: permittingva@maronda.com
REVIEW INFORMATION	
Department of Planning and Zoning Review Approved for the Location to construct an SFD. NEW ADDRESS is 1193 Happy Ridge Drive. Rear Yard RETAINING WALL SHALL BE CONSTRUCTED & COMPLETED PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY. Rear of the Lot Tree Plantings required are as follows: five (5) 3" caliper White Pines (Pinus strobus), one (1) 2" caliper Thornless Honey Locust (Gleditsia triacanthos) and one (1) 2" caliper Red Maple (Acer rubrum "Red Sunset"). Street Tree Plantings required are as follows: one (1) 2" caliper Pin Oak (Quercus palustris). Please consult the Happy Creek Knolls Section 4 approved Landscape Plan for planting locations. A WARREN COUNTY BUILDING PERMIT IS REQUIRED.	Pass/Fail Approved
Department of Planning and Zoning Review - Utility System Development & Energy Services Charges are DUE at the time of permit issuance. - A FOUNDATION LOCATION SURVEY is required. - A FINAL ZONING COMPLIANCE INSPECTION IS REQUIRED prior to final occupancy and use. - Call Planning & Zoning to schedule Final Compliance inspection (540) 635-4236. Final Compliance to include but not limited to: house numbers posted, landscaping, seed and straw. - All Site work shall be constructed per the approved house location survey, including but not limited to parking, grading and landscaping. - Any changes must be approved by Planning & Zoning. - It is the APPLICANT'S RESPONSIBILITY to obtain necessary permits from Warren County Building Inspections.	Pass/Fail Complete

Town of Front Royal 102 E. Main Street Front Royal, VA 22630 540-635-4236 Permit Number: 2400598 Zoning Approval APPROVED   	
Job Location: 1191 HAPPY RIDGE DR City, State, Zip: FRONT ROYAL, VA 22630 Tax Map #: 20A213 4 5 Square Feet: [Square Feet] Valuation: Status: Approved Pending Payment	FOR ZONING Plan Type: Zoning - Major Construction - New Single Family Detached Work Class: Project: District: Front Royal Completion Date: 10/23/2024
Request Description: New Residential Single-Family Dwelling - Detached	
Company Name: Maronda Homes Applicant Name: Johnson, Amber Address: 7051 Heathcote Village Way Suite 255 City, State, Zip: Gainesville VA 20155 Phone: (703) 753-7020 / Cell: 540-935-6077-Amber Johnson Email: permittingva@maronda.com	Owner: MARONDA HOMES OF VIRGINIA LLC Address: 7051 HEATHCOTE VILLAGE WAY SUITE #255 City, State, Zip: GAINESVILLE , VA 20155 Phone: (703) 753-7020 Email: permittingva@maronda.com
REVIEW INFORMATION	
Department of Planning and Zoning Review Approved for the Location to construct an SFD. NEW ADDRESS is 1191Happy Ridge Drive. The Rear Yard RETAINING WALLS SHALL BE CONSTRUCTED & COMPLETED PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY. Rear of the Lot Tree Plantings required are as follows: six (6) 3" caliper White Pines (Pinus strobus), one (1) 2" caliper Red "Sunset" Maple (Acer rubrum "red sunset") and one (1) 2" caliper Pin Oak (Quercus palustris) for a Total of eight (8) Trees. Please consult the Happy Creek Knolls Section 4 approved Landscape Plan for planting locations. A WARREN COUNTY BUILDING PERMIT IS REQUIRED.	Pass/Fail Approved
Department of Planning and Zoning Review - Utility System Development & Energy Services Charges are DUE at the time of permit issuance. - A FOUNDATION LOCATION SURVEY is required. - A FINAL ZONING COMPLIANCE INSPECTION IS REQUIRED prior to final occupancy and use. - Call Planning & Zoning to schedule Final Compliance inspection (540) 635-4236. Final Compliance to include but not limited to: house numbers posted, landscaping, seed and straw. - All Site work shall be constructed per the approved house location survey, including but not limited to parking, grading and landscaping. - Any changes must be approved by Planning & Zoning. - It is the APPLICANT'S RESPONSIBILITY to obtain necessary permits from Warren County Building Inspections.	Complete

REVIEW INFORMATION		Pass/Fail
Department of Planning and Zoning Review	Approved for the Location to construct an SFD. NEW ADDRESS is 1189 Happy Ridge Drive. Rear Yard RETAINING WALL SHALL BE CONSTRUCTED & COMPLETED PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY. Rear of the Lot Tree Plantings required are as follows: seventeen (17) 3" caliper White Pines (<i>Pinus strobus</i>), one (1) 2" caliper Thornless Honey Locust (<i>Gleditsia triacanthos</i>) and one (1) 2" caliper Pin Oak (<i>Quercus palustris</i>). Street Tree Plantings required are as follows: one (1) 2" caliper Thornless Honey Locust (<i>Gleditsia triacanthos</i>). Please consult the Happy Creek Knolls Section 4 approved Landscape Plan for planting locations. A WARREN COUNTY BUILDING PERMIT IS REQUIRED.	Approved
Department of Planning and Zoning Review	- Utility System Development & Energy Services Charges are DUE at the time of permit issuance. - A FOUNDATION LOCATION SURVEY is required. - A FINAL ZONING COMPLIANCE INSPECTION IS REQUIRED prior to final occupancy and use. - Call Planning & Zoning to schedule Final Compliance inspection (540) 635-4236. Final Compliance to include but not limited to: house numbers posted, landscaping, seed and straw. - All Site work shall be constructed per the approved house location survey, including but not limited to parking, grading and landscaping. - Any changes must be approved by Planning & Zoning. - It is the APPLICANT'S RESPONSIBILITY to obtain necessary permits from Warren County Building Inspections.	Complete

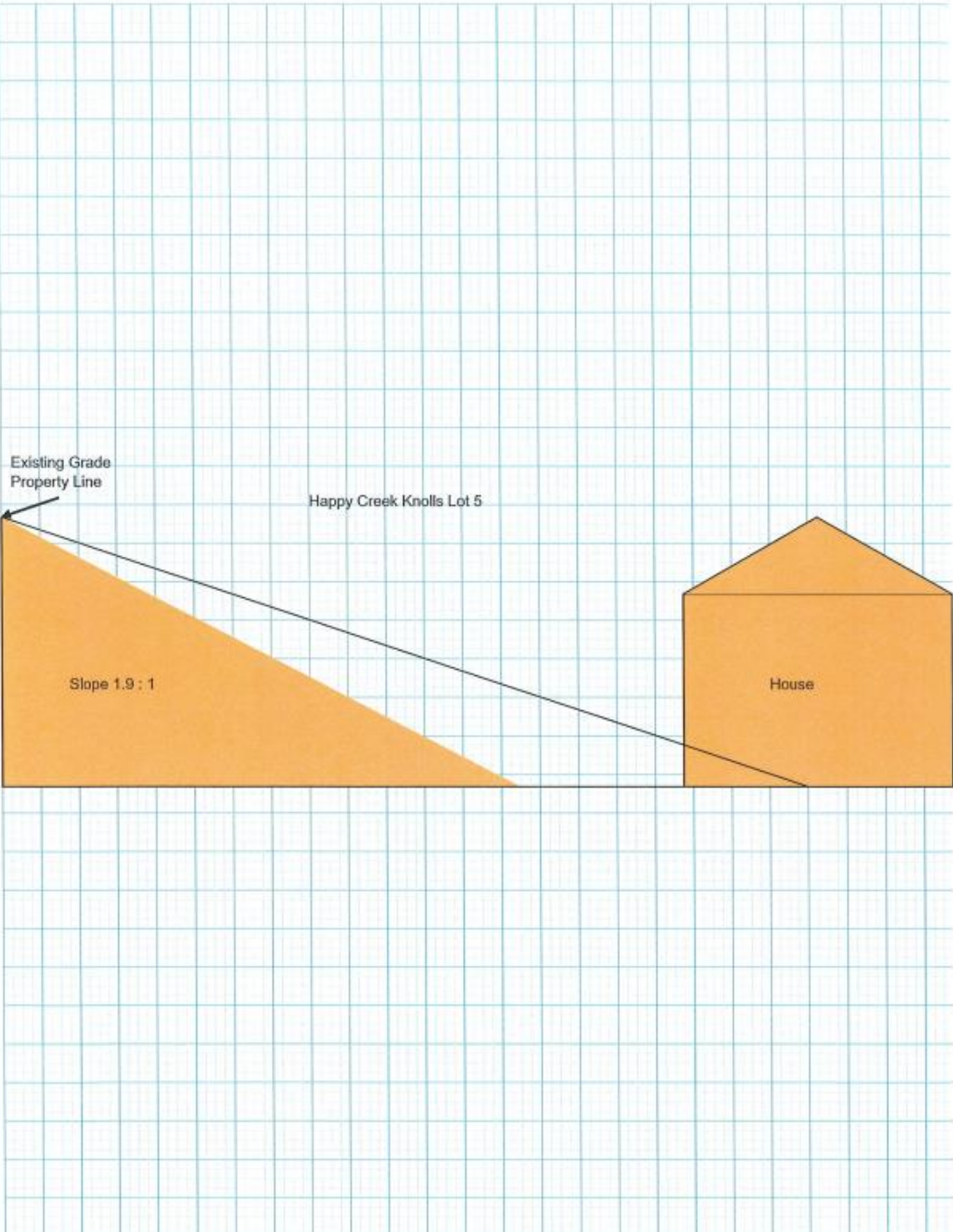
LOT 4



LOT 4



LOT 5



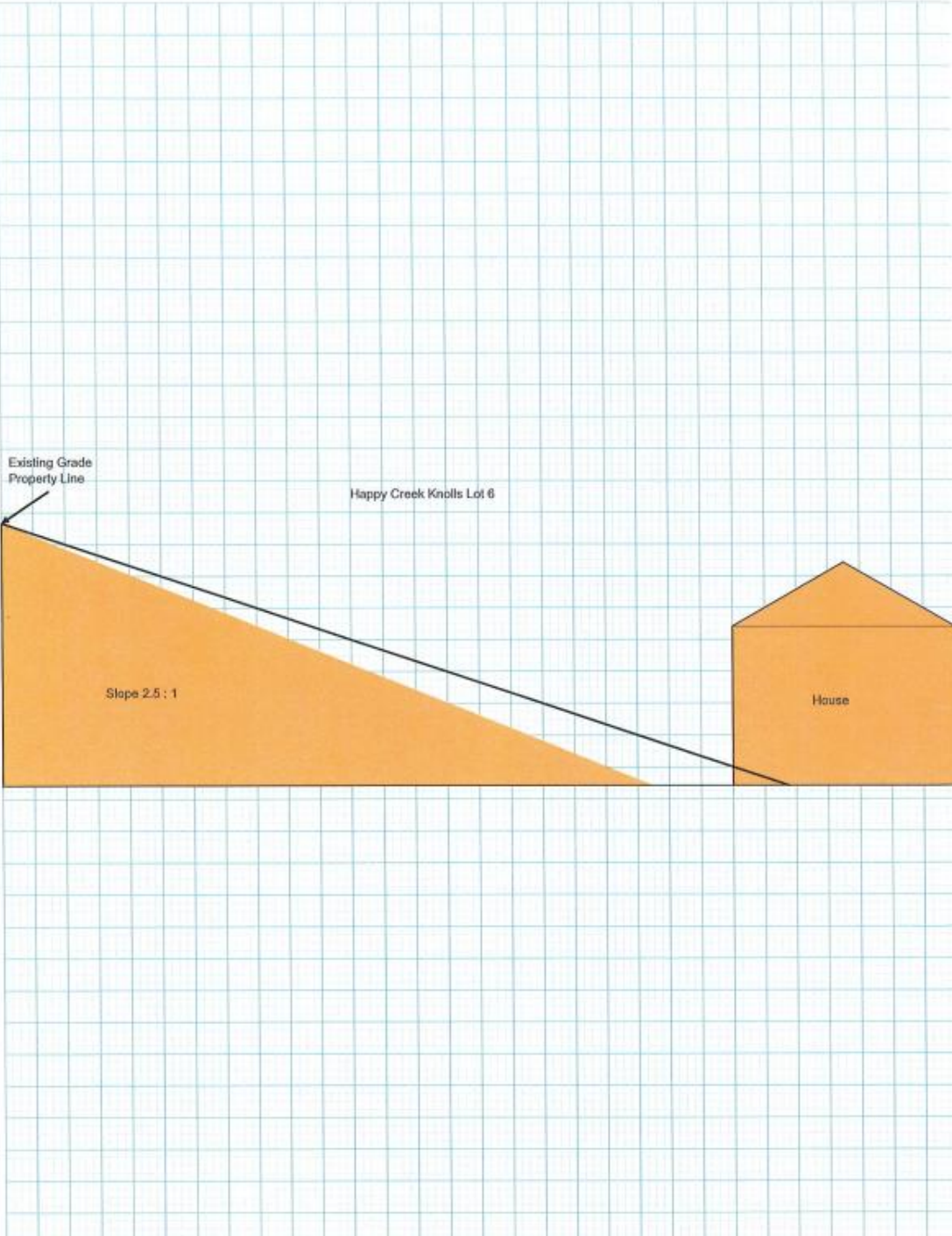
LOT 5



LOT 5



LOT 6



LOT 6



LOT 6



LOT 6



LOT'S 4, 5, & 6



LOT'S 4, 5 & 6



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 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

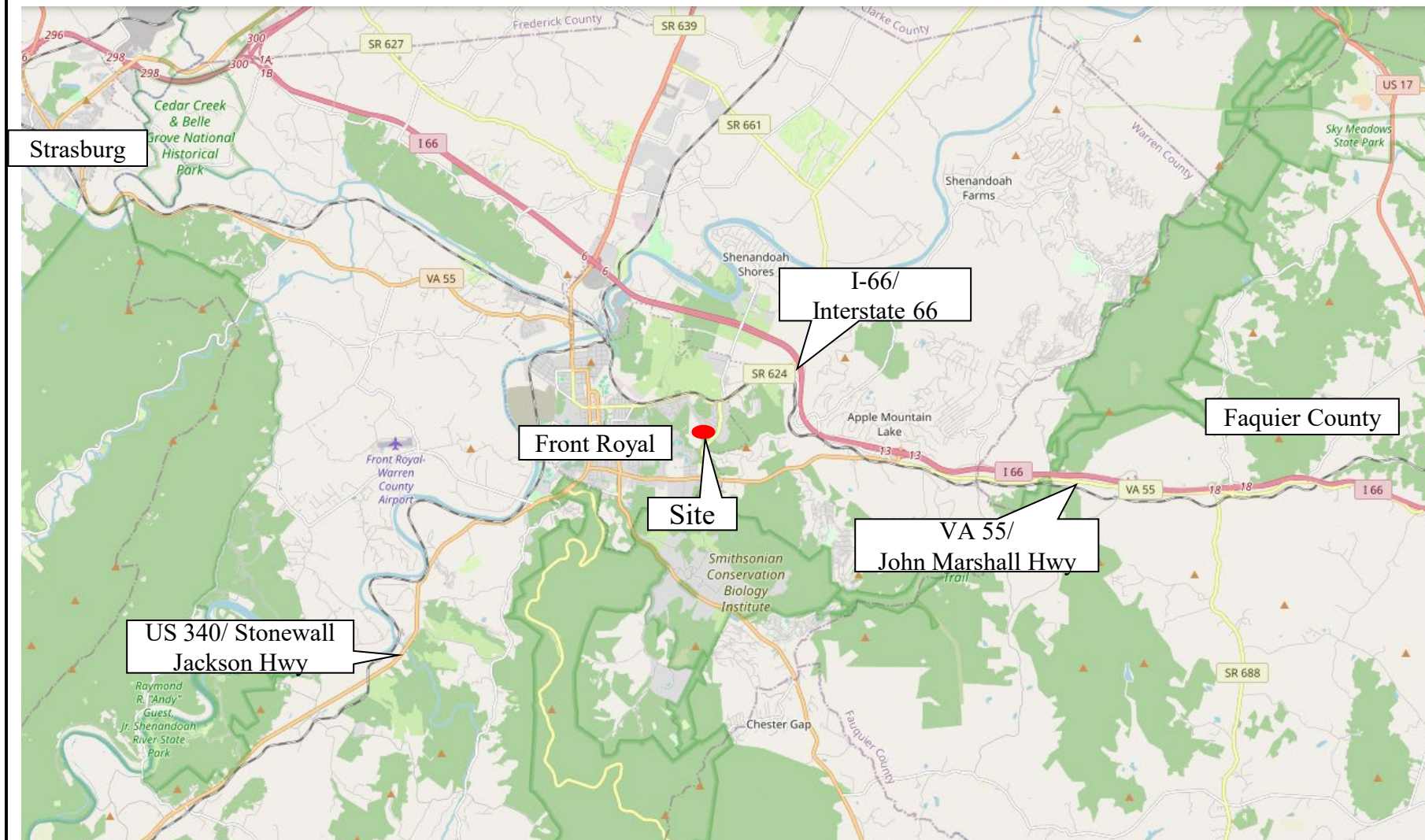
SCE #: 24-0367V

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

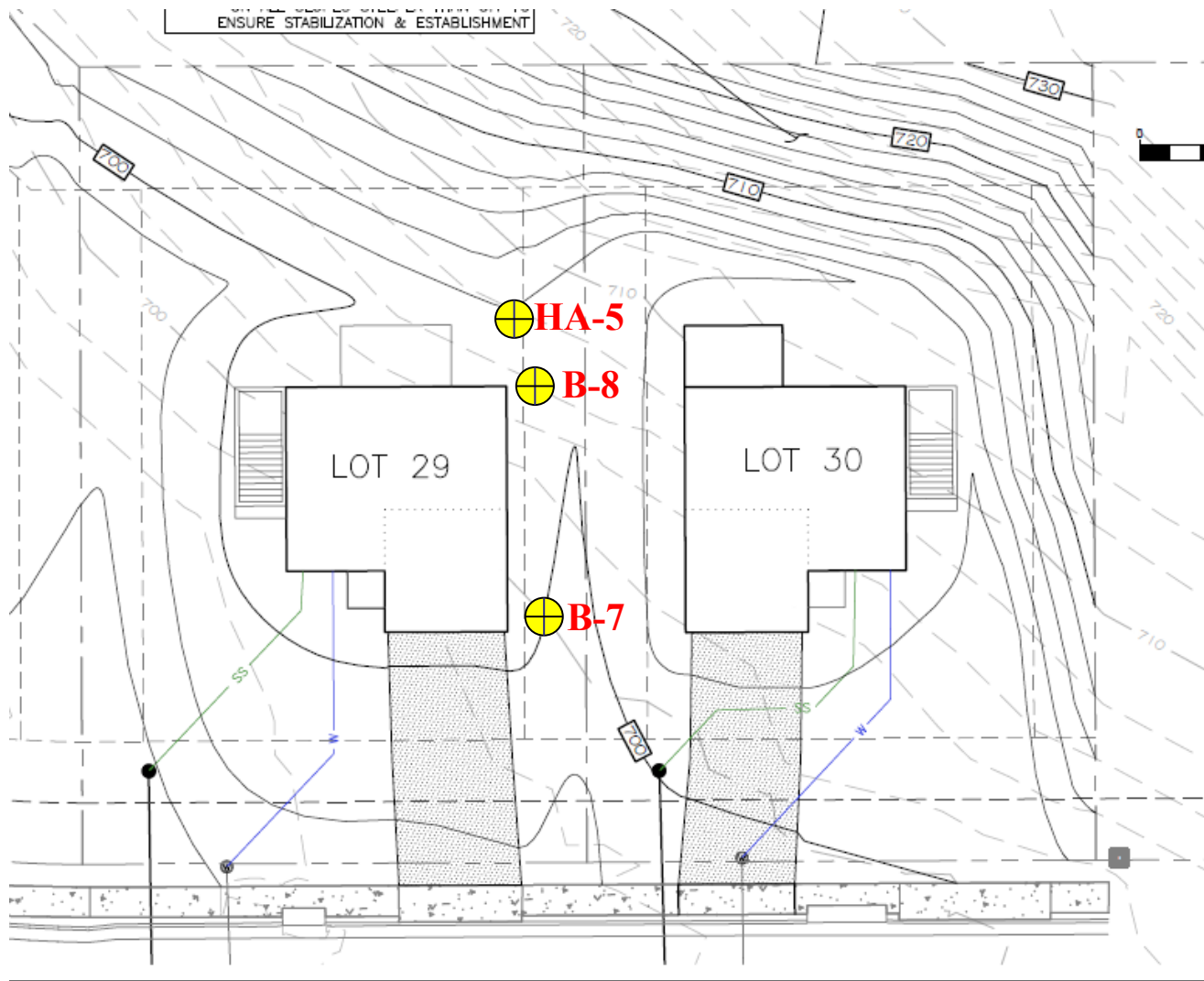
TM: 20A213-4-29 to -30, Warren County, 22630

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

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 inch
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 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								
			3.40 Sandy SILT (ML): stiff; red and yellow; moist; Natural.		100	5-6-6-8 (12)					
			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.								
10	690										
			- 6.0-inch layer of Sandy SILT at 13.5 ft		83	7-8-13 (21)	39	58	38	20	94
15	685										
			- 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.								

NOTES

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

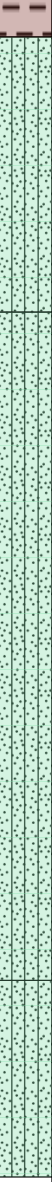
▽ AFTER DRILLING N/A

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		

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)
			Approximately 2.0-Inch Organic Surface Layer	707.80	12-19-30/1 (R)
			Sandy SILT (ML): very stiff; brown; moist; few gravel, trace organics; Natural.		
				706.40	13-17-15 (32)
			Sandy SILT (ML): very stiff; yellowish-red; moist; trace gravel; Natural.		
					17-18-16 (34)
					9-12-15 (27)
5	703		Sandy SILT (ML): stiff; yellowish-red; moist; trace gravel; Natural.	703.00	
			Terminated at 6.00 ft.	702.00	

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

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

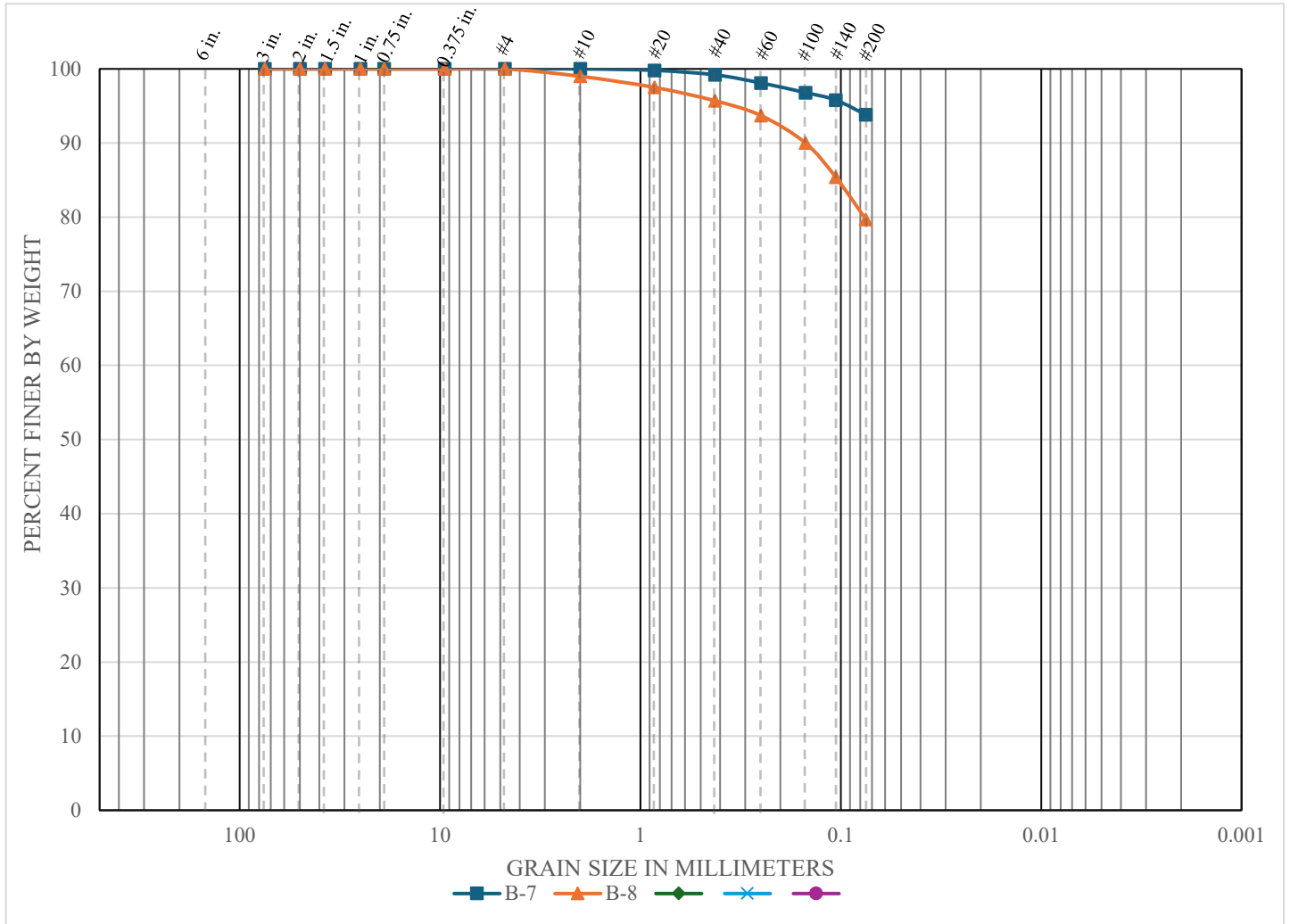
PROJECT NAME

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

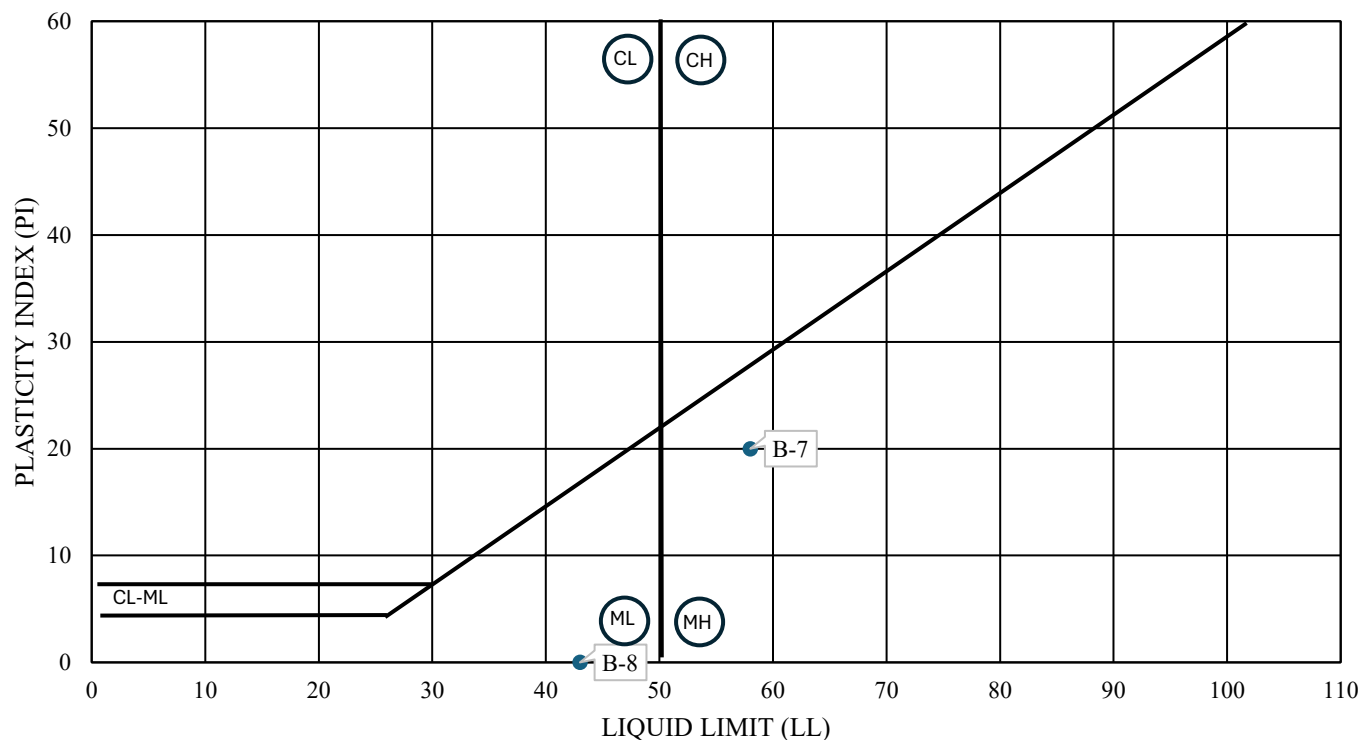
PROJECT NAME

Happy Creek Knolls

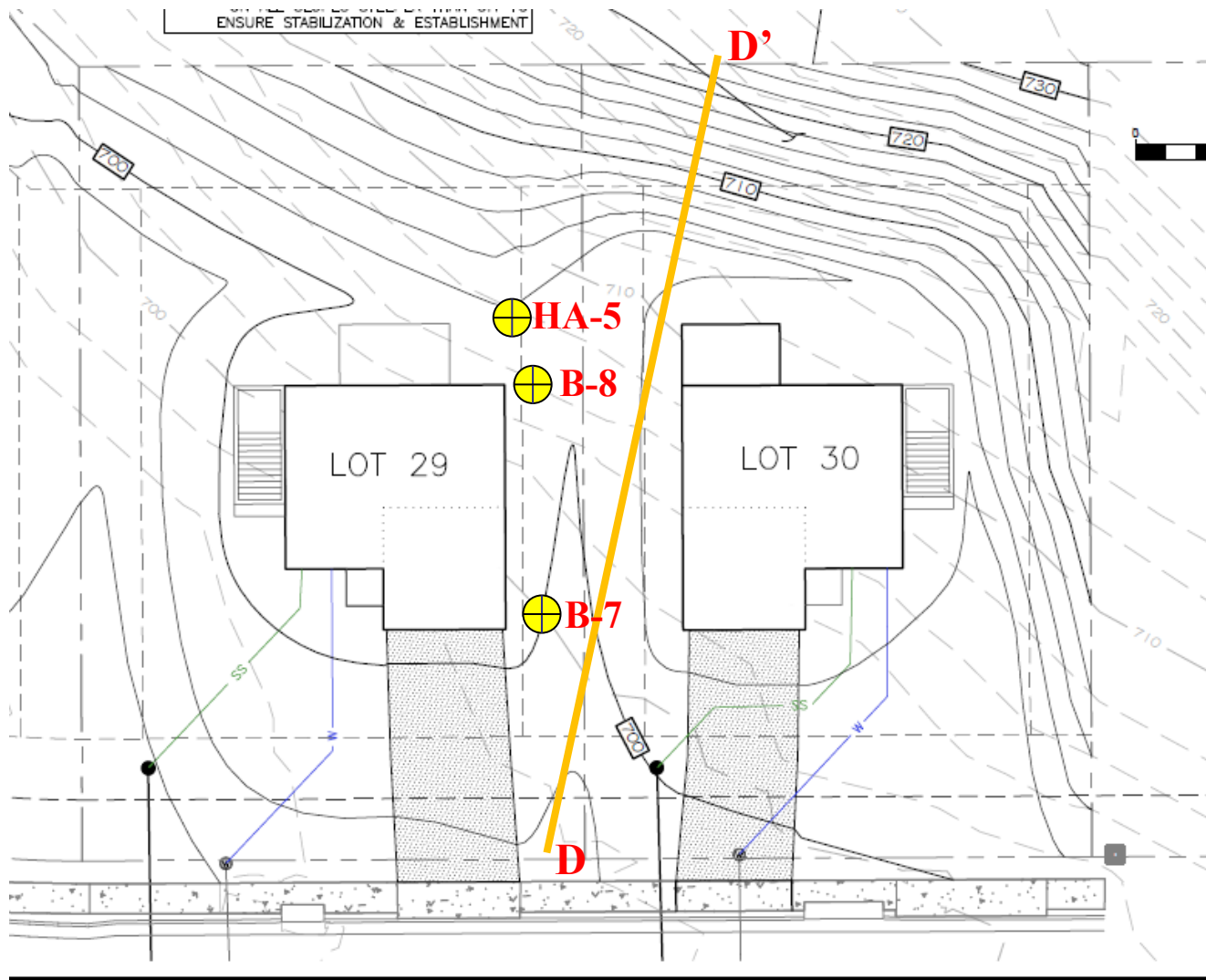
PROJECT NUMBER 24-0367V

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

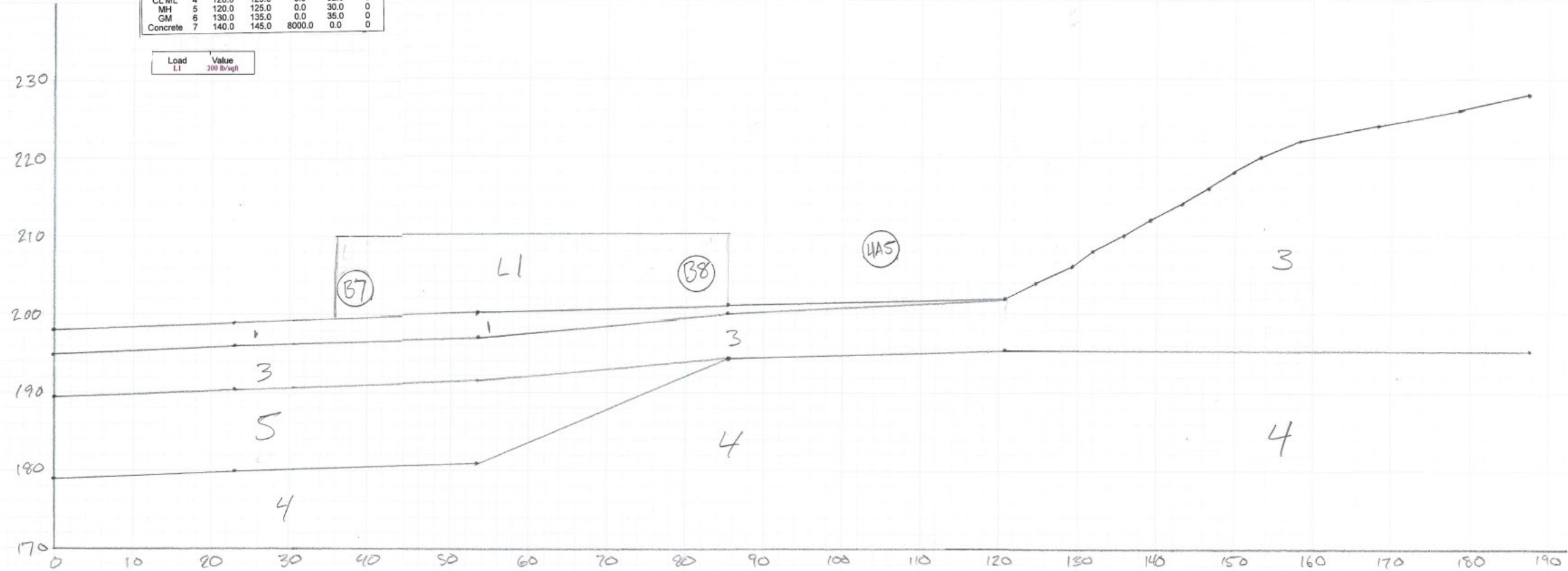
Not Drawn To Scale

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





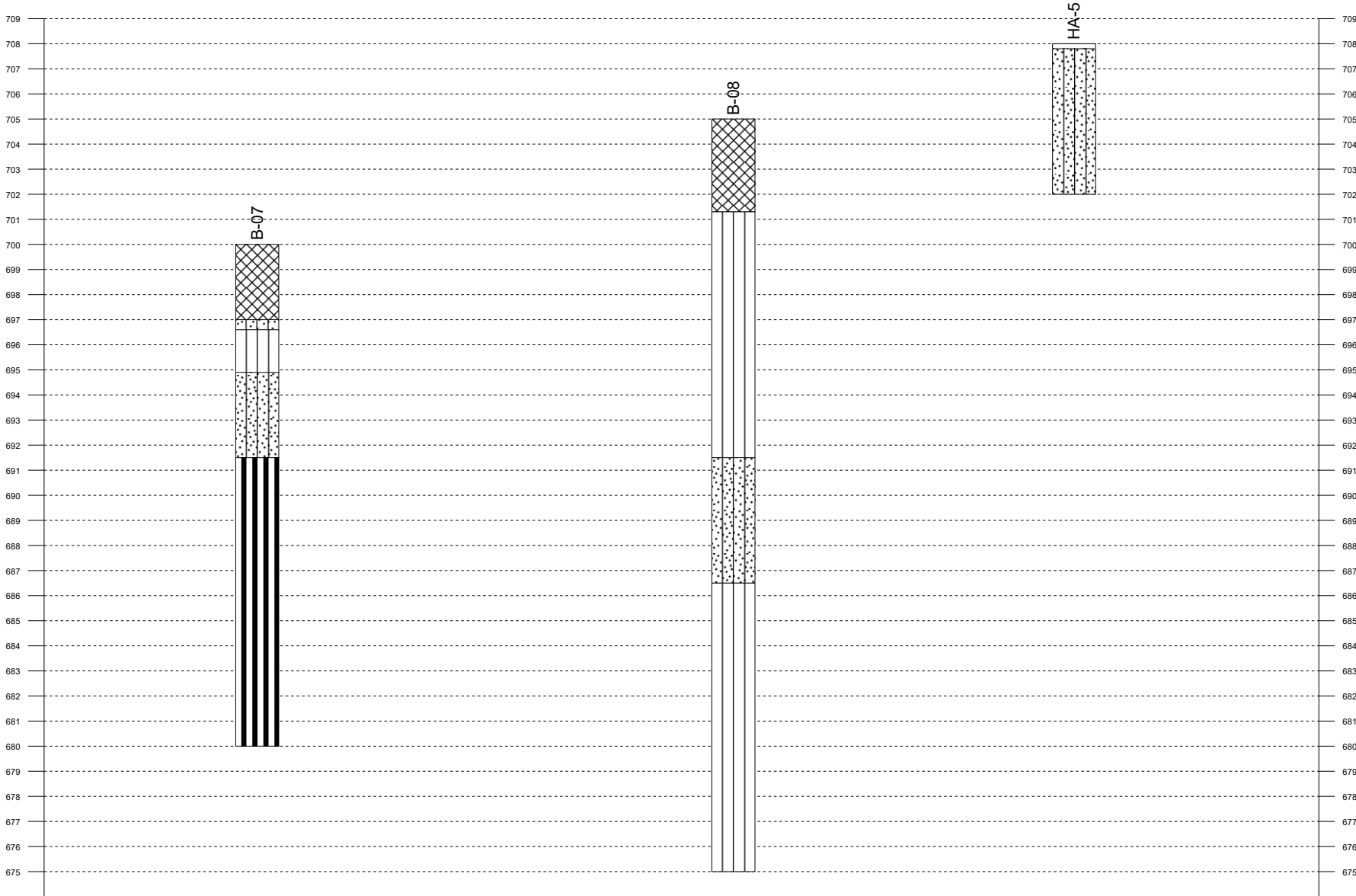
CLIENT Mr. Marty Rhodes
PROJECT NUMBER 24-0367V

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

VERTICAL SCALE 1:70
HORIZONTAL SCALE 1:246

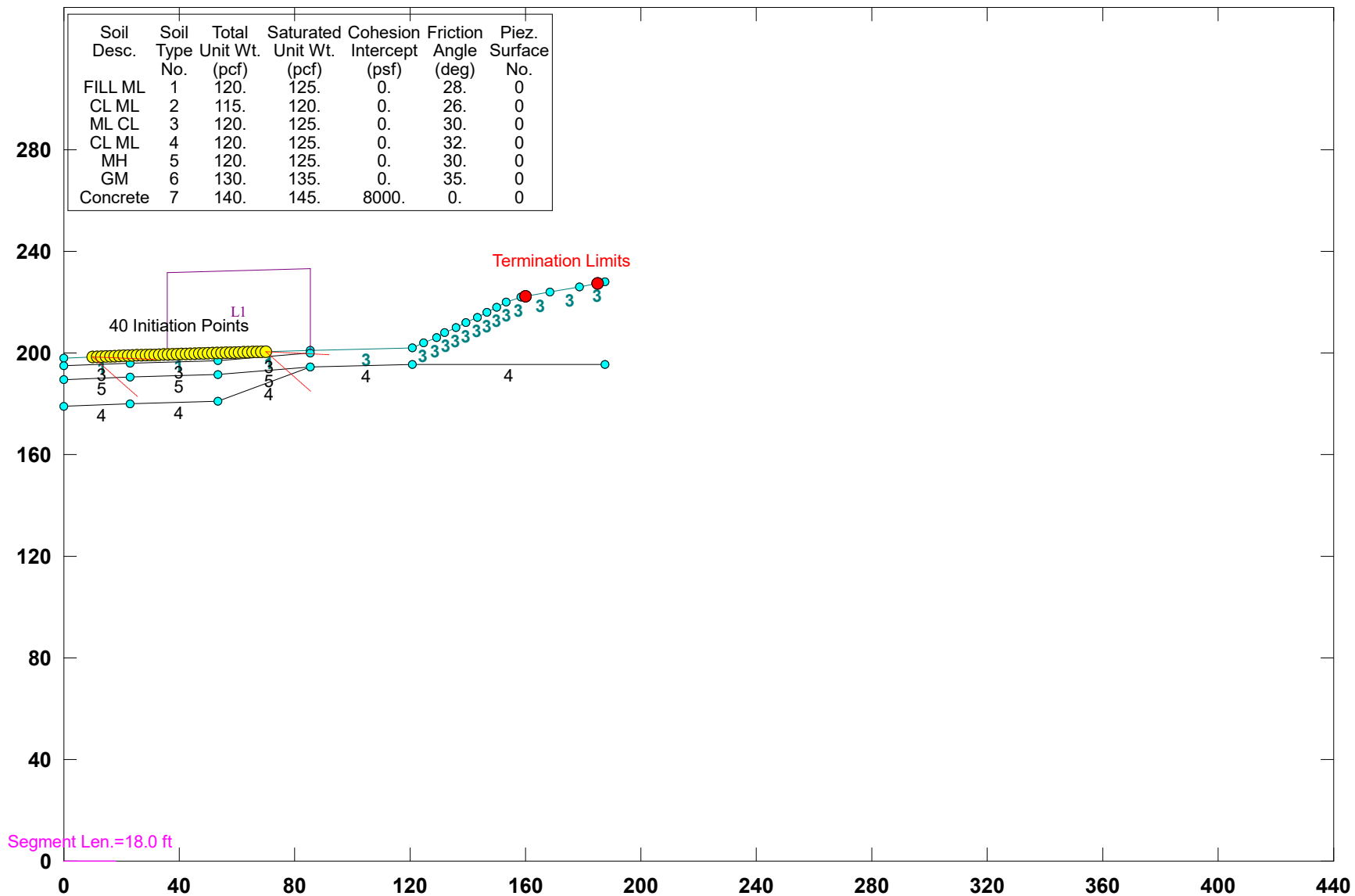
Legend Key

- OL
- MLS
- FILL
- ML
- MH



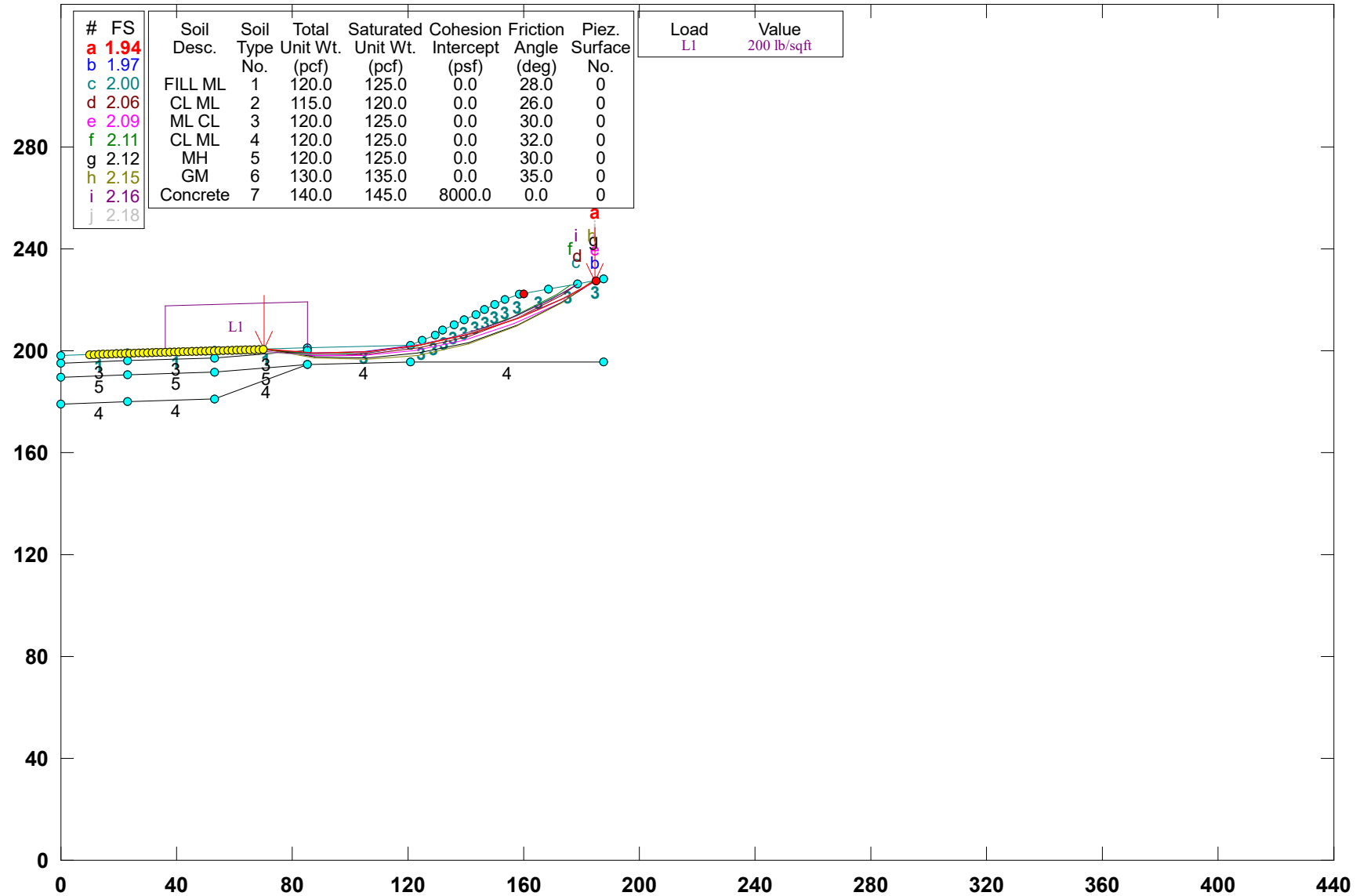
24-0367V_Happy_Creek_Lot_29_D-D'

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 FSmin=1.94

Safety Factors Are Calculated By The Modified Bishop Method

**** 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

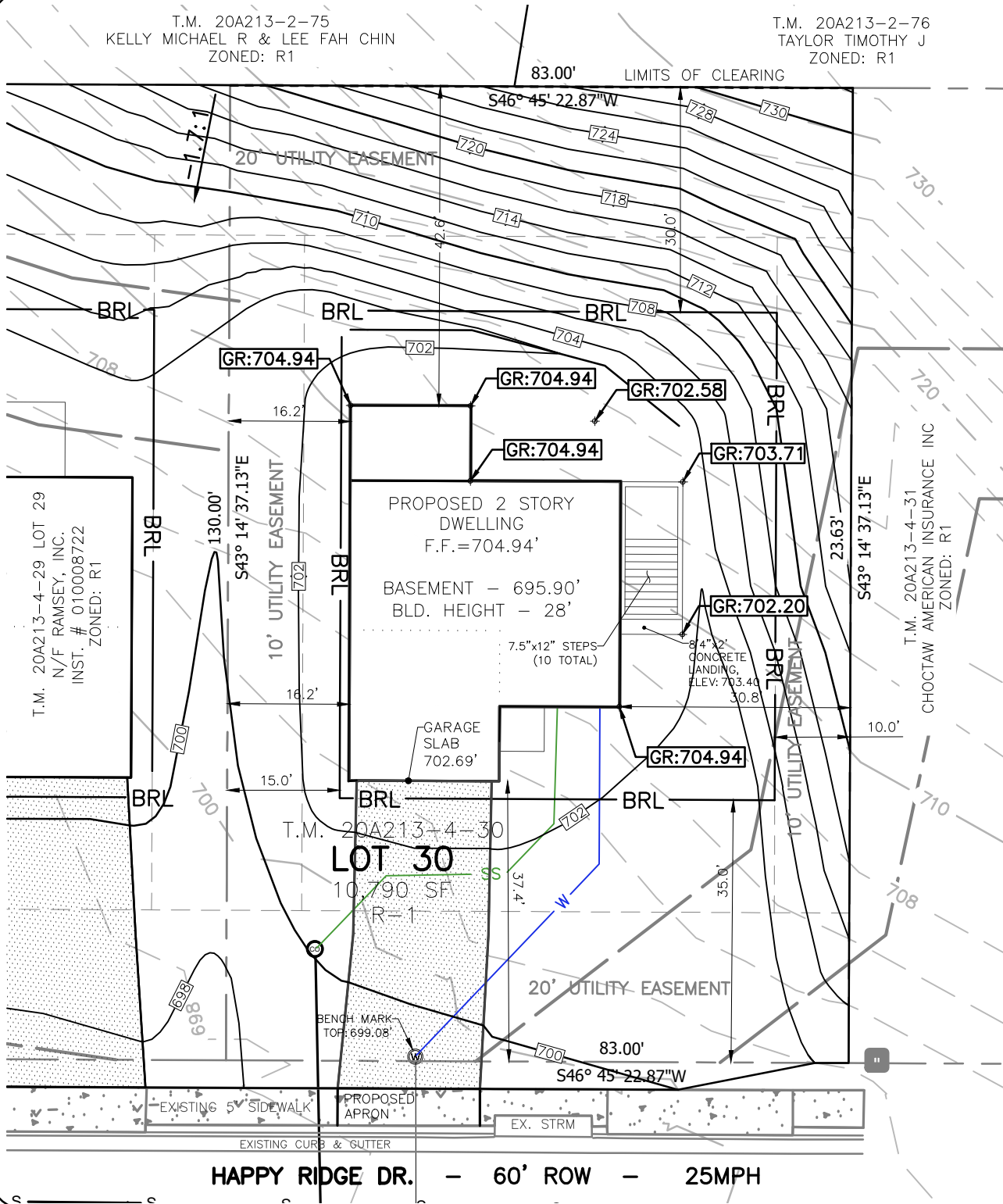
Circle Center At X = 90.0 ; Y = 355.2 and Radius, 156.8
 *** 2.164 ***

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 ---
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.

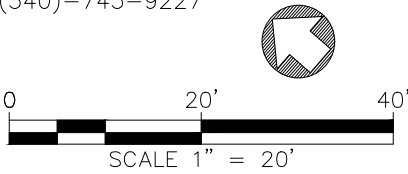
DERIVATION OF TITLE TO: RAMSEY, INC. PER INST. #010008722

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: 1,440 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

1194 Happy Ridge Drive
Lot 29

Town of Front Royal
102 E. Main Street
Front Royal, VA 22630
540-635-4236
Permit Number: 2400535

Zoning Approval

APPROVED



Job Location: 1194 HAPPY RIDGE DR
City, State, Zip: FRONT ROYAL, VA 22630
Tax Map #: 20A213 4 29
Square Feet: [Square Feet]
Valuation:
Status: Approved Pending Payment

FOR ZONING

Plan Type: Zoning - Major Construction - New Single Family Detached
Work Class:
Project:
District: Front Royal
Completion Date: 09/17/2024

Request Description: New Residential Single-Family Dwelling - Detached

Company Name: Maronda Homes
Applicant Name: Johnson, Amber
Address: 7051 Heathcote Village Way Suite 255
City, State, Zip: Gainesville VA 20155
Phone: (703) 753-7020 / Cell: 540-935-6077-Amber Johnson
Email: permittingva@maronda.com

Owner: MARONDA HOMES OF VIRGINIA LLC
Address: 7051 HEATHCOTE VILLAGE WAY SUITE 255
City, State, Zip: GAINESVILLE, VA 20155
Phone: (703) 753-7020
Email: permittingva@maronda.com

REVIEW INFORMATION		Pass/Fail
Department of Planning and Zoning Review Approved for the Location to construct a Single-Family Dwelling (SFD). NEW ADDRESS is 1194 Happy Ridge Drive. Rear Yard RETAINING WALL SHALL BE CONSTRUCTED & COMPLETED PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY. Rear of the Lot Tree Plantings required are as follows: four (4) 3" caliper White Pines (Pinus strobus), one (1) 2" caliper Pin Oak (Quercus palustris) and one (1) 2" caliper Red Maple (Acer rubrum "Red Sunset"). Street Tree Plantings required are as follows: one (1) 2" caliper Thornless Honey Locust (Gleditsia triacanthos). Please consult the Happy Creek Knolls Section 4 approved Landscape Plan for planting locations. A WARREN COUNTY BUILDING PERMIT IS REQUIRED.		Approved
Department of Planning and Zoning Review - Utility System Development & Energy Services Charges are DUE at the time of permit issuance. - A FOUNDATION LOCATION SURVEY is required. - A FINAL ZONING COMPLIANCE INSPECTION IS REQUIRED prior to final occupancy and use. - Call Planning & Zoning to schedule Final Compliance inspection (540) 635-4236. Final Compliance to include but not limited to: house numbers posted, landscaping, seed and straw. - All Site work shall be constructed per the approved house location survey, including but not limited to parking, grading and landscaping. - Any changes must be approved by Planning & Zoning. - It is the APPLICANT'S RESPONSIBILITY to obtain necessary permits from Warren County Building Inspections.		Complete

1196 Happy Ridge Drive
Lot 30

Zoning Approval

APPROVED



Town of Front Royal

102 E. Main Street

Front Royal, VA 22630

540-635-4236

Permit Number: 2400435

Job Location: 1196 HAPPY RIDGE DR
City, State, Zip: FRONT ROYAL, VA 22630
Tax Map #: 20A213 4 30
Square Feet: [Square Feet]
Valuation:
Status: Approved Pending Payment

FOR ZONING

Plan Type: Zoning - Major Construction - New Single Family Detached
Work Class:
Project:
District: Front Royal
Completion Date: 09/11/2024

Request Description: New Residential Single-Family Dwelling Detached

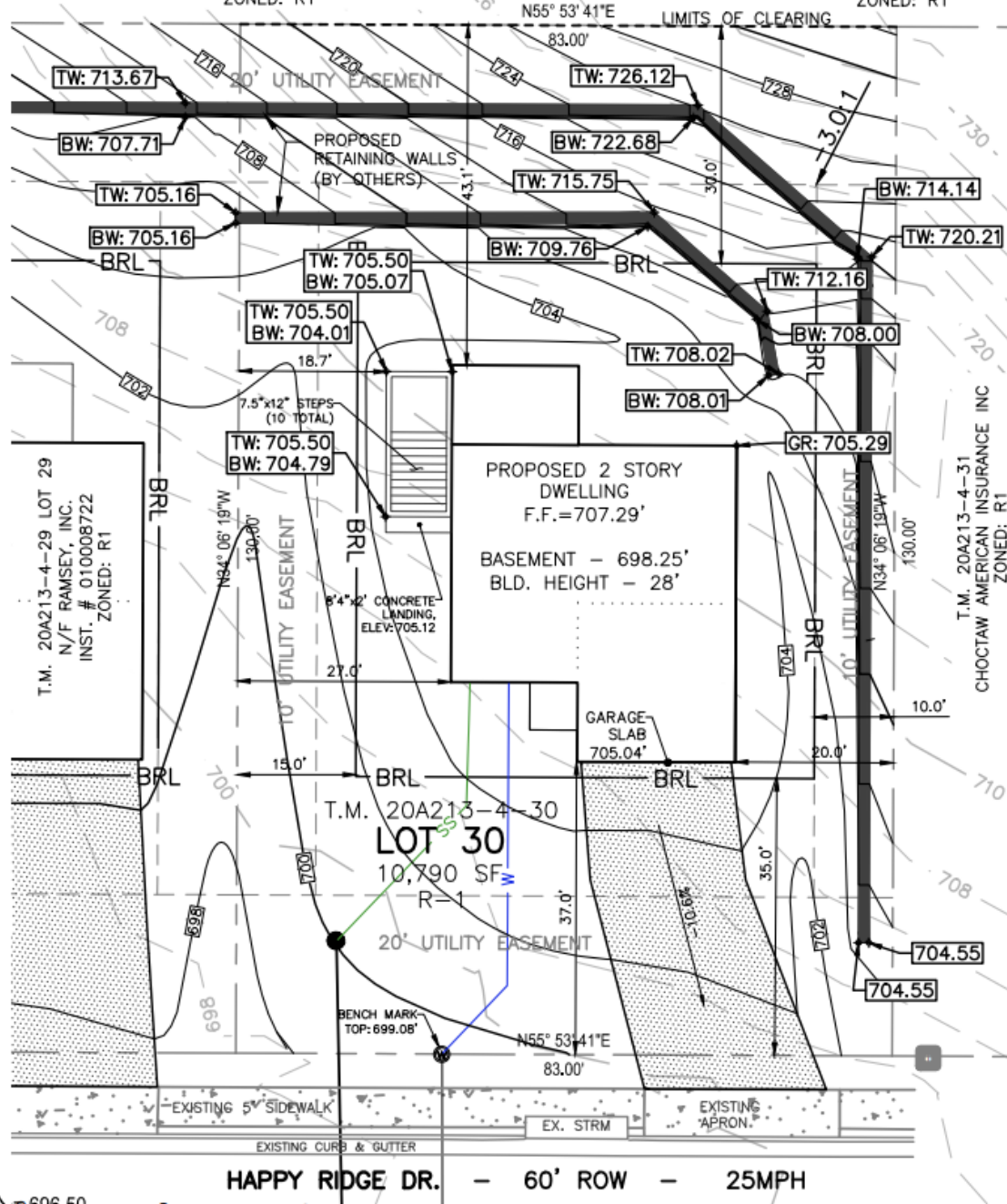
Company Name: Maronda Homes of Virginia LLC
Applicant Name: Johnson, Amber
Address: 7051 Heathcote Village Way Suite #255
City, State, Zip: Gainesville VA 20155
Phone: (540) 935-6077
Email: permittingva@maronda.com

Owner: MARONDA HOMES OF VIRGINIA LLC
Address: 7051 HEATHCOTE VILLAGE WAY SUITE #255
City, State, Zip: GAINESVILLE, VA 20155
Phone:
Email:

REVIEW INFORMATION		Pass/Fail
Department of Planning and Zoning Review	Approved for the Location to construct an SFD. NEW ADDRESS is 1196 Happy Ridge Drive. Rear and Side Yard RETAINING WALLS SHALL BE CONSTRUCTED & COMPLETED PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY. Street Tree Plantings require one (1) 2" caliper Red Maple (Acer rubrum "Red Sunset"), Rear of the Lot Tree Plantings required are as follows: five (5) 3" caliper White Pines (Pinus strobus), one (1) 2" caliper Red Maple (Acer rubrum "Red Sunset") and one (1) 2" caliper Pin Oak (Quercus palustris). Please consult the Happy Creek Knolls Section 4 approved Landscape Plan for planting locations. A WARREN COUNTY BUILDING PERMIT IS REQUIRED.	Approved
Department of Planning and Zoning Review	- Utility System Development & Energy Services Charges are DUE at the time of permit issuance. - A FOUNDATION LOCATION SURVEY is required. - A FINAL ZONING COMPLIANCE INSPECTION IS REQUIRED prior to final occupancy and use. - Call Planning & Zoning to schedule Final Compliance inspection (540) 635-4236. Final Compliance to include but not limited to: house numbers posted, landscaping, seed and straw. - All Site work shall be constructed per the approved house location survey, including but not limited to parking, grading and landscaping. - Any changes must be approved by Planning & Zoning. - It is the APPLICANT'S RESPONSIBILITY to obtain necessary permits from Warren County Building Inspections.	Complete

T.M. 20A213-2-75
KELLY MICHAEL R & LEE FAH CHIN
ZONED: R1

T.M. 20A213-2-76
TAYLOR TIMOTHY J
ZONED: R1



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) ---
EX. SANITARY CLEANOUT --- (S) ---

*THIS PLAT DOES NOT
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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
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ADJACENT LOT GRADING AND
HOUSE LOCATION IS
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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.

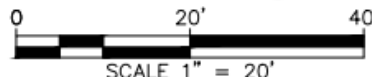
DERIVATION OF TITLE TO: RAMSEY, INC. PER INST. #010008722

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

DRIVEWAY APRON AND DRIVEWAY SURFACE TO BE PAVED OR CONCRETE
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BUILDING FOOTPRINT AREA: 1,440 SF
AREA OF DISTURBANCE: 10,790 SF

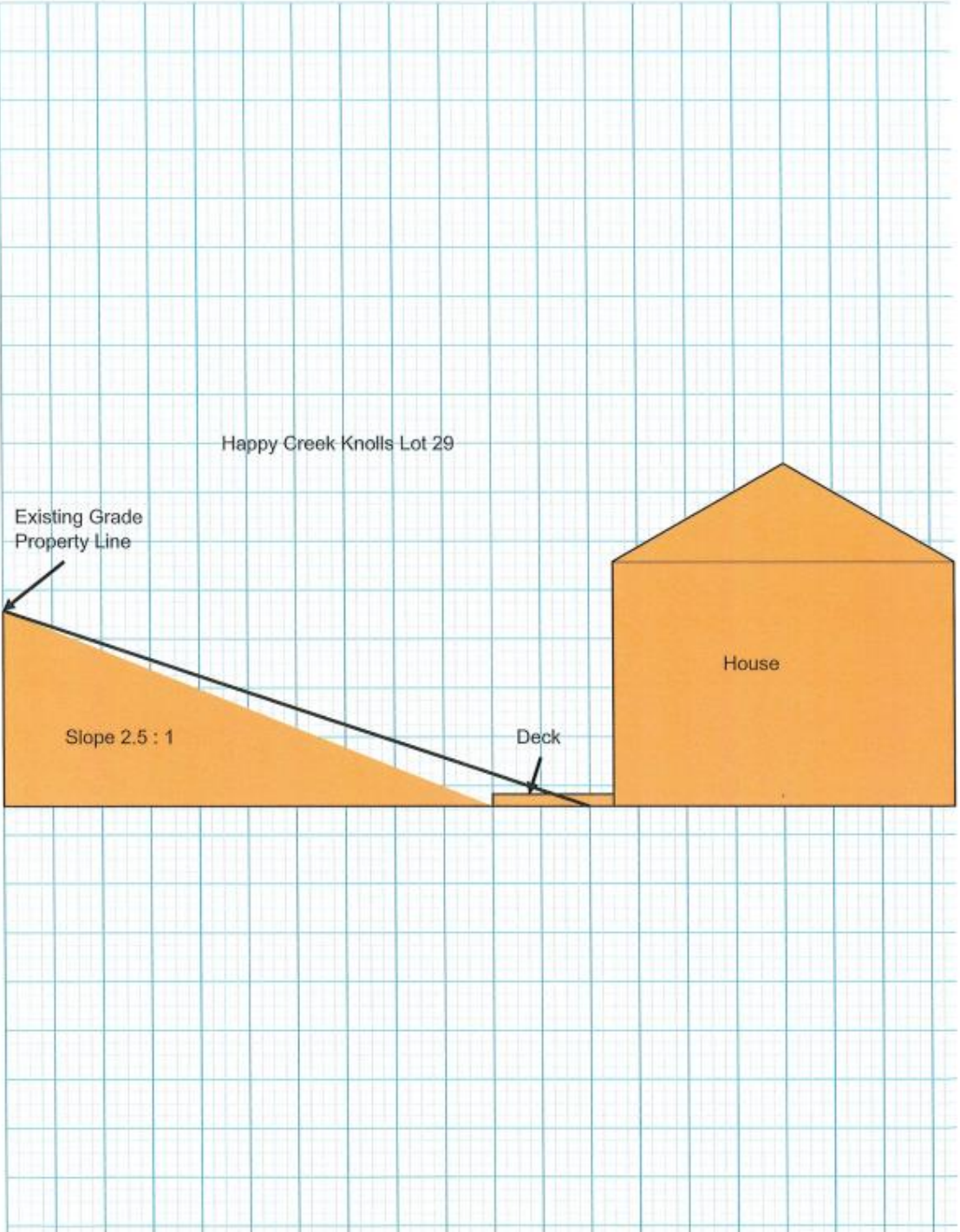
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LURAY, VA 22835
(540)-743-9227



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

DATE:	DESCRIPTION:		DRAWN/CHECK	
	1ST SUB GRADING PLAN	2ND SUB GRADING PLAN	BSR	JPT
07/19/24				
09/09/24				
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				

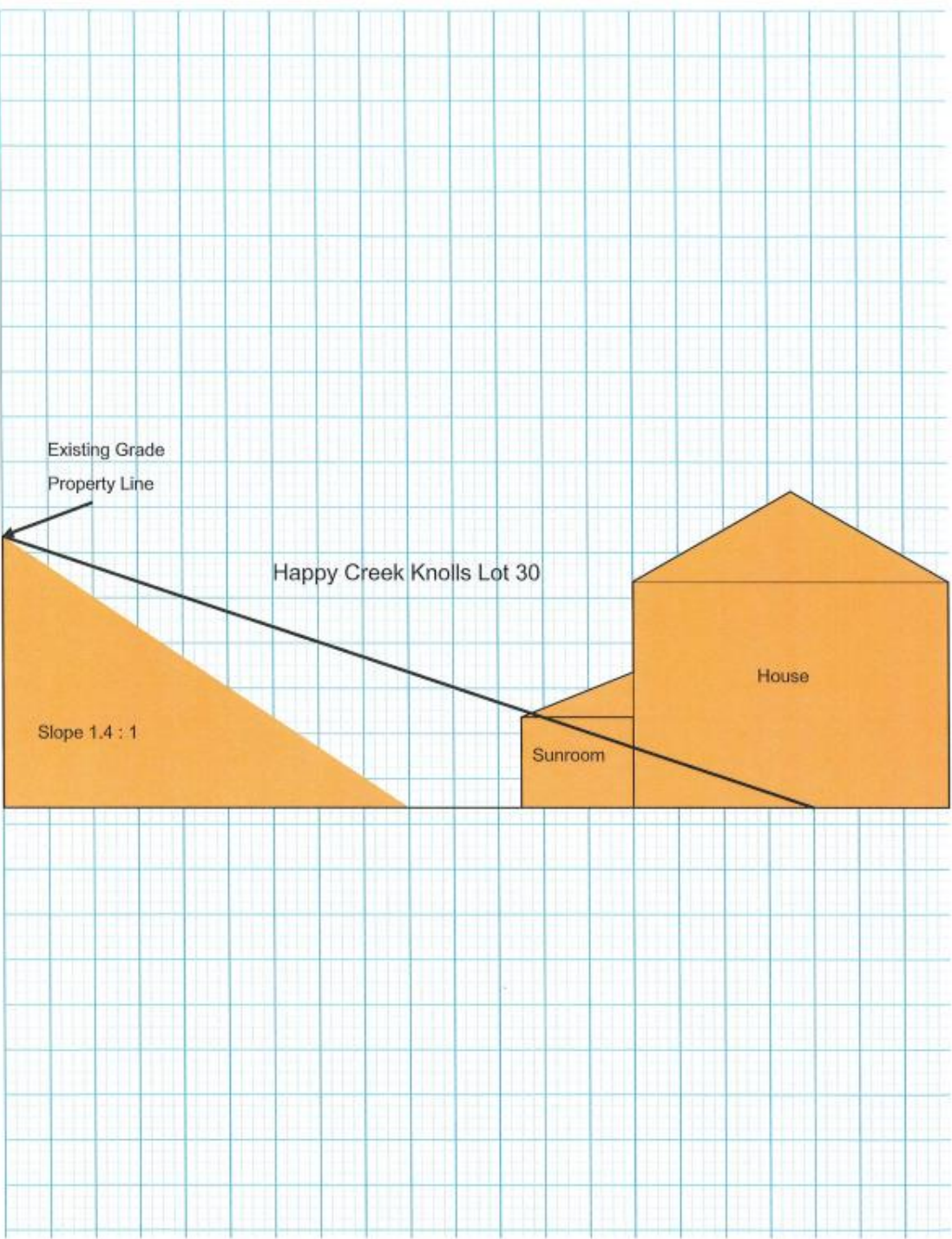
LOT 29



LOT 29



LOT 30



LOT 30



LOT 30



LOT 30



LOT 30



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



148-860 - ENVIRONMENTAL IMPROVEMENTS

A. Steep Slopes.

1. *Purpose:* Steep slopes, when developed, require more grading and land disturbance than development of flat to gently sloping topographical areas. Therefore, the purpose of this section is to establish protective regulations to:

- a. Minimize soil disturbance on steep or critical slopes due to the potential for erosion problems;
- b. Assist in the prevention of soil erosion from stormwater runoff, protect downstream buildings and yards from water and soil intrusion, and protect the Town's surface and groundwater resources from siltation and contamination;
- c. Promote stable building sites that prevent soil erosion and are structurally sound so as to maintain slope stability;
- d. Promote accessibility for fire and rescue apparatus;
- e. Maintain the visual and environmental resources that are part of the character of Front Royal; and
- f. Encourage innovative development in Front Royal by providing the flexibility necessary to produce environmentally sensitive subdivisions which direct building, parking and street locations to terrain more suitable to development while maximizing conservation of the original slopes, native cover, prominent land forms, rocky outcrops, natural open space, wildlife habitat and scenic resources.

2. *Applicability:* All proposed subdivisions which result in the creation of an additional building lot or lots with the exception of boundary line adjustments, must submit a plan, in addition to any required subdivision development, street construction or erosion & sediment control plan, identifying predevelopment areas of steep slope. Clear cutting or grading for the purpose of altering predevelopment slopes shall not be permitted.

3. *Establishment of Steep Slope Areas:* The predevelopment slopes shall be computed by rise over run from naturally occurring contour lines based on topographic information showing two-foot contour intervals and based on NAVD 88 vertical datum. The topographic data may be field run or from aerial photography, provided the information is current and the contouring method provides the precision expected for the contour interval used.

a. *Identification of Steep Slope Areas:* Steep slopes areas are classified into one (1) of the following two (2) categories:

[1] All areas of slope between fifteen percent (15%) and twenty-five percent (25%) which contain highly erodible, highly permeable or shrink-swell soils. Determination of soils which are highly erodible, highly permeable or shrink-swell shall be based on the USDA Soil Conservation Service Soil Survey of Warren County, Virginia, or based on soils analysis prepared by a geotechnical engineer or other appropriate licensed professional.

[2] All areas of slope greater than twenty-five percent (25%).

b. *Minimum Size of Steep Slope Area:* Steep slope standards do not apply to isolated steep slope areas that are less than five thousand (5,000) square feet in land area. For the purposes of this

provision, the entire contiguous area of the steep slopes shall be included in the minimum size calculations, regardless of the number of individual lots or different land ownerships involved.

4. *Creation of Slope Overlays:* The plan identifying steep slopes and critical slopes must include overlays over the entire tract involved identifying by color coding the following:

- a. All areas of slope between fifteen percent (15%) to twenty-five percent (25%) which contain highly erodible, highly permeable or shrink-swell soils.
- b. All areas of slope greater than twenty-five percent (25%).

5. *Plan Requirements:* An overlot grading plan, prepared by a professional licensed by the State of Virginia to prepare such a plan, for the development, management, stabilization and preservation of steep slope areas shall be prepared in accordance with the detail requirements of Town Code Section 148 and upon submission of a report by a certified soil or geotechnical engineer, and/or other appropriate licensed professional, indicating if and how the steep slope may be safely developed.

The final subdivision plat showing any lot or portion of any lot located within a steep slope overlay area must contain a note stating that the property shown hereon is subject to the provisions of Section 148-42, Steep Slopes, of the Town of Front Royal Subdivision Ordinance, in accordance with the conditions shown on the approved overlot grading plan and/or geotechnical report filed with the applicable and appropriate subdivision application.

6. *Building Site Requirements:* In addition to the requirements of the grading plan described herein, the plan shall include the following standards:

- a. Site development shall be designed in a manner that requires a minimum amount of alteration to the steep slope.
- b. Existing vegetation shall be preserved to the maximum extent possible.
- c. No finished slopes are to be created with a final grade greater than fifteen percent (15%) unless deemed feasible by a geotechnical report.
- d. Residential driveway grades exceeding ten percent (10%) are not recommended. Residential driveway grades greater than ten percent (10%) shall be constructed in conformance with Virginia Department of Transportation's (VDOT) standard CG-9 or other applicable entrance detail requirements. Commercial or industrial driveway grades shall be constructed in conformance with VDOT standard CG-11 or other applicable entrance detail requirements. All driveways shall have a nonerodable surface treatment, such as asphalt or concrete pavement. Side slopes for driveway cuts shall not exceed twenty-five percent (25%), (4:1) unless deemed feasible by a geotechnical report.
- e. Use of retaining wall is encouraged to reduce the steepness of man-made slopes and to provide planting pockets conducive to vegetation and landscaping. All retaining walls shall require an engineered design with the exception of non-tiered retaining walls with level backfill and no surcharge loading with a height of twenty-four (24) inches, (2.0 feet) or less from the finished grade. Retaining walls shall not exceed seventy-two (72) inches, (6.0 feet) in height from the finished

grade, however, the Town Council, at its discretion, may waive the maximum height requirement for retaining walls located within non-residentially zoned areas. This provision is not intended to preclude a structure's foundation or basement wall or the creation of a walkout basement.

f. Landscaping and plantings shall be in accordance with Town Standards.

7. As-Built Plan Required: A post construction as-built survey of the approved steep slope overlaid grading plan shall be required prior to the issuance of an approved occupancy permit. The as-built drawings shall clearly show any changes or variations from the approved design, and if deemed significant by the Director, may require any such change or variation be brought into compliance with the approved plan. The as-built information shall be shown on the original plan and include the following:

a. Horizontal variations greater than one (1.0) foot should be shown dimensionally or through plus stations. Horizontal variations greater than five (5.0) feet should also show the graphic relocation of the object. Vertical elevation variations greater than 0.1 feet shall be provided for all shown design elevations.

b. All as-built information shall be shown on the original plan either as blocked in or drawn in a different text style or font from that as shown on the original plan.

c. Each sheet of the plan shall contain the words "AS-BUILT" in bold text on or near the title block.

d. Date, plan legend, bar scale and north arrow.

e. Retaining walls. Indicate type and show elevations of the top of wall and the lowest adjacent finished grade.

f. Curb cut, driveway and material. Centerline grade of driveway with spot elevations.

g. Spot elevations of graded areas to determine grade of finished slope. Highlight all areas of finished slopes exceeding design grade by more than one percent (1%).

h. Horizontal location with dimensions of all structures with dimensions including porches, decks, garages, etc. Show vertical elevations of first floor and basement floor.

i. Horizontal and vertical location of roof drains, foundation drains and other drainage outlets. Locations of utility services.

j. Location of required plantings.

k. The final as-built plan must be stamped by Licensed Land Surveyor or Professional Engineer and include certification that the as-built plan is substantially in conformance with the original plan. If a geotechnical report is used, the appropriate licensed professional must certify that the as-built is in conformance with the report.

GENERAL NOTES:

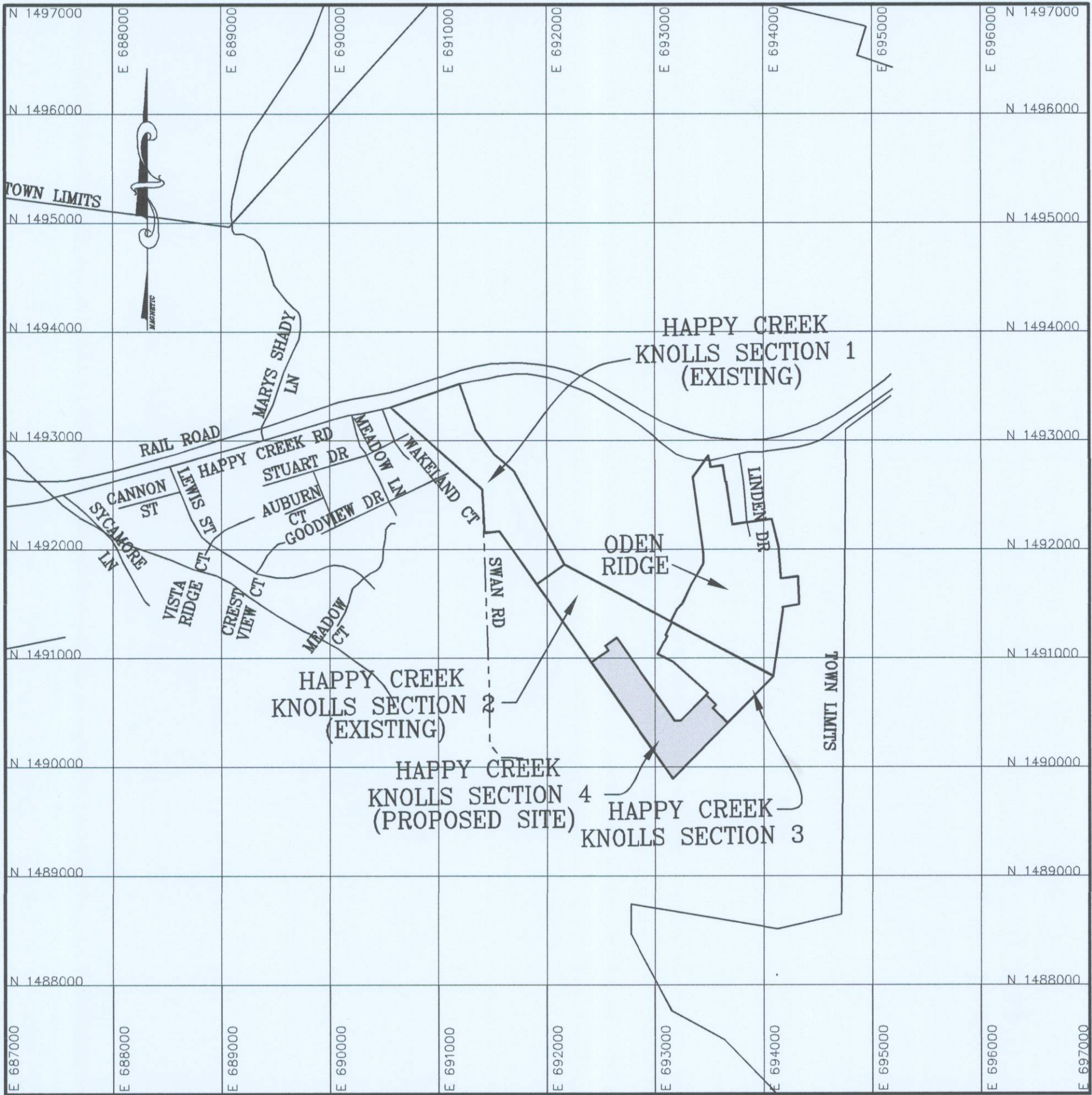
1. BOUNDARY AND NORTH MERIDIAN INFORMATION AS SHOWN HEREON ARE BASED ON A RECORD PLAT OF HAPPY CREEK KNOLLS, SECTION 1 AS RECORDED IN INSTRUMENT 01-0009421 AMONG THE LAND RECORDS OF WARREN COUNTY, VIRGINIA.
2. THESE PLANS HAVE BEEN PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND DO NOT NECESSARILY 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: 11/12/21 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, 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.

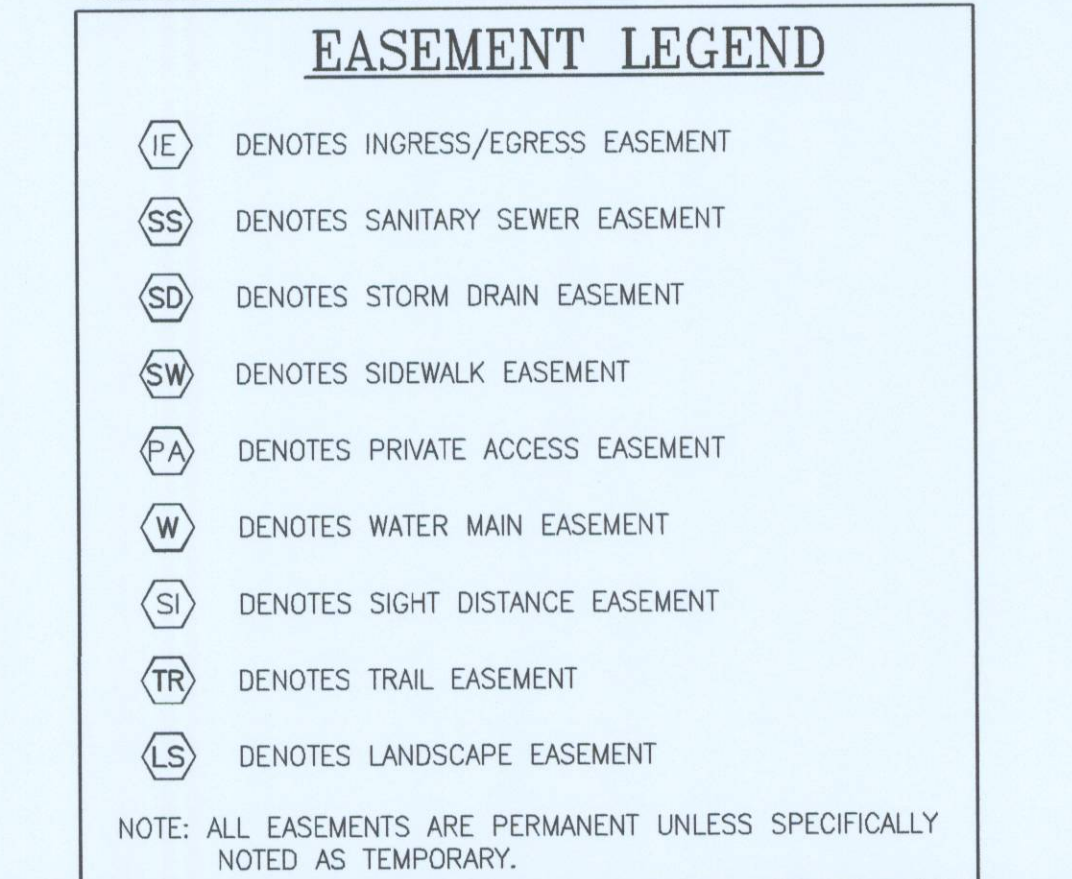
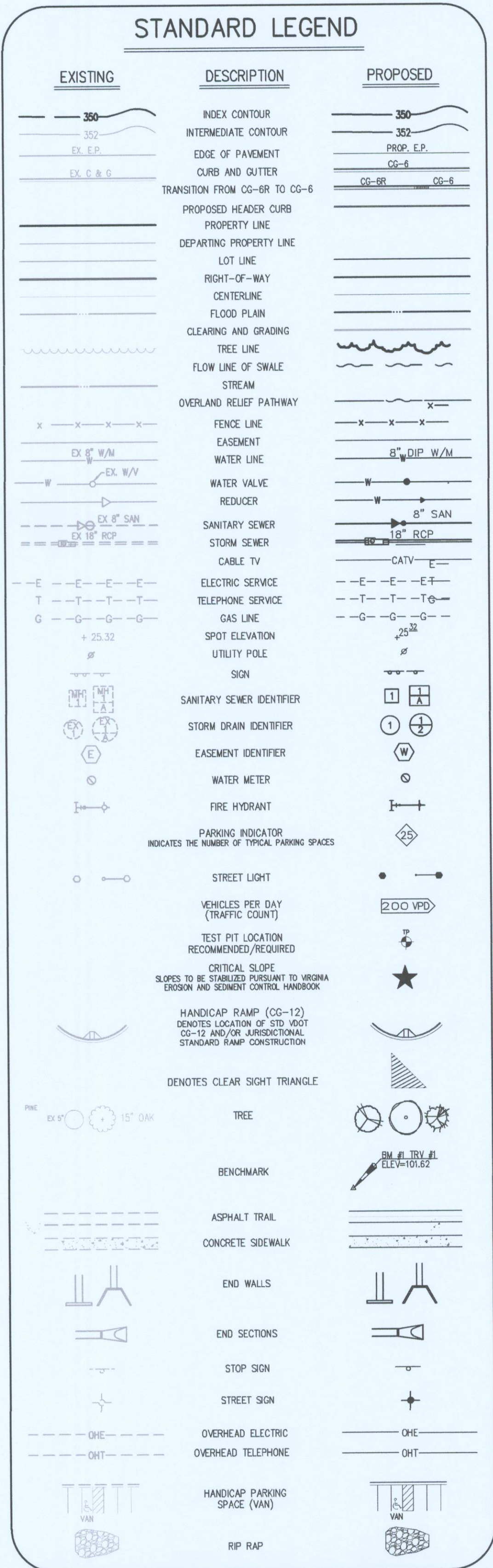
COVER SHEET
HAPPY CREEK KNOLLS
SECTION 4
FINAL SUBDIVISION PLAN
TOWN OF FRONT ROYAL
WARREN COUNTY, VIRGINIA

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 subgrade 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.

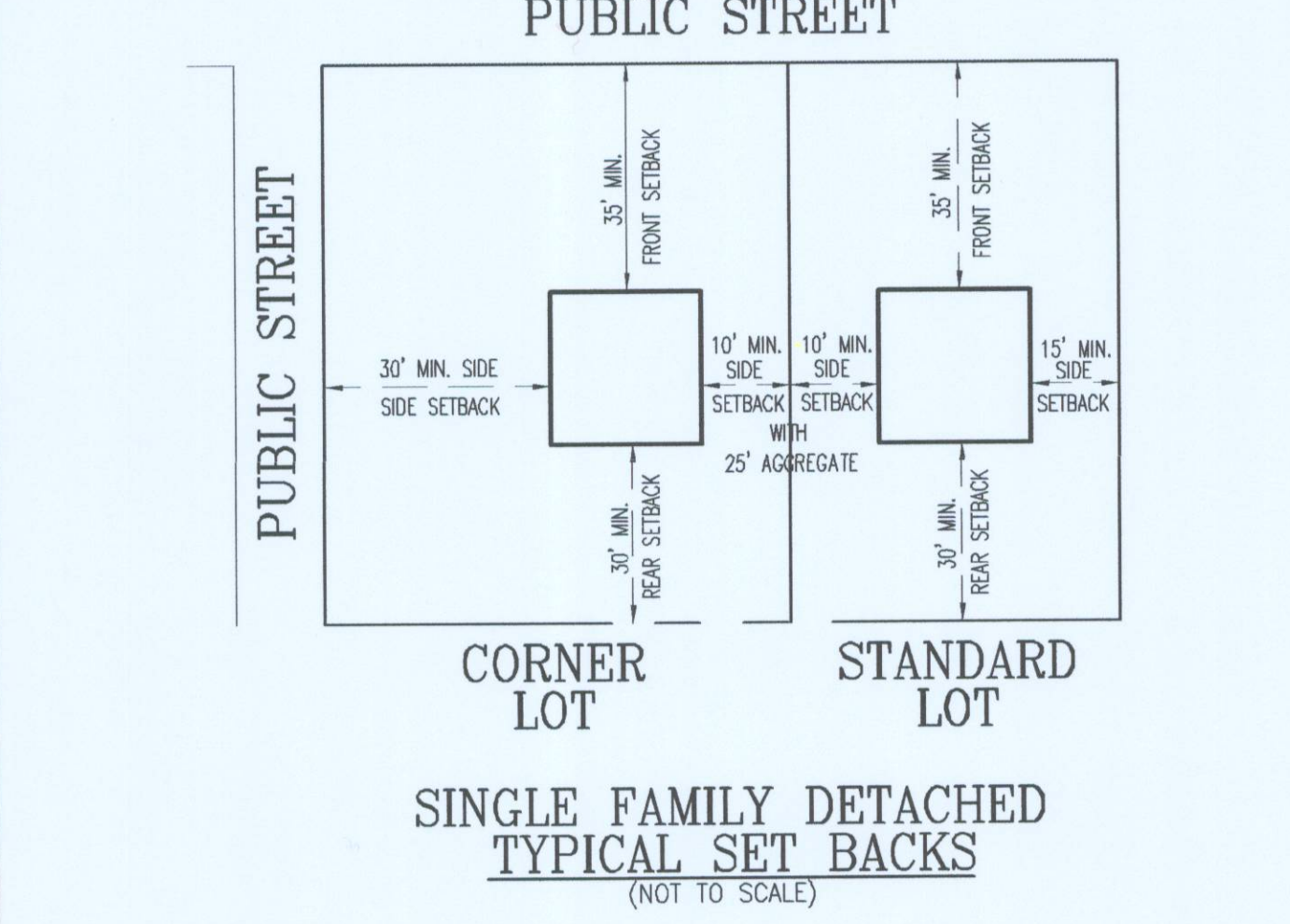
- TOWN OF FRONT ROYAL GENERAL NOTES
- FOR TECHNICAL SPECIFICATIONS AND DETAILS REFER TO THE TOWN OF FRONT ROYAL WATER AND SEWER STANDARDS AND SPECIFICATIONS, LATEST EDITION. ALL CONSTRUCTION SHALL BE IN ACCORDANCE TO THESE SPECIFICATIONS. ANY DEVIATIONS OR CHANGES SHALL BE SUBMITTED IN WRITING TO THE 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 BARE 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.

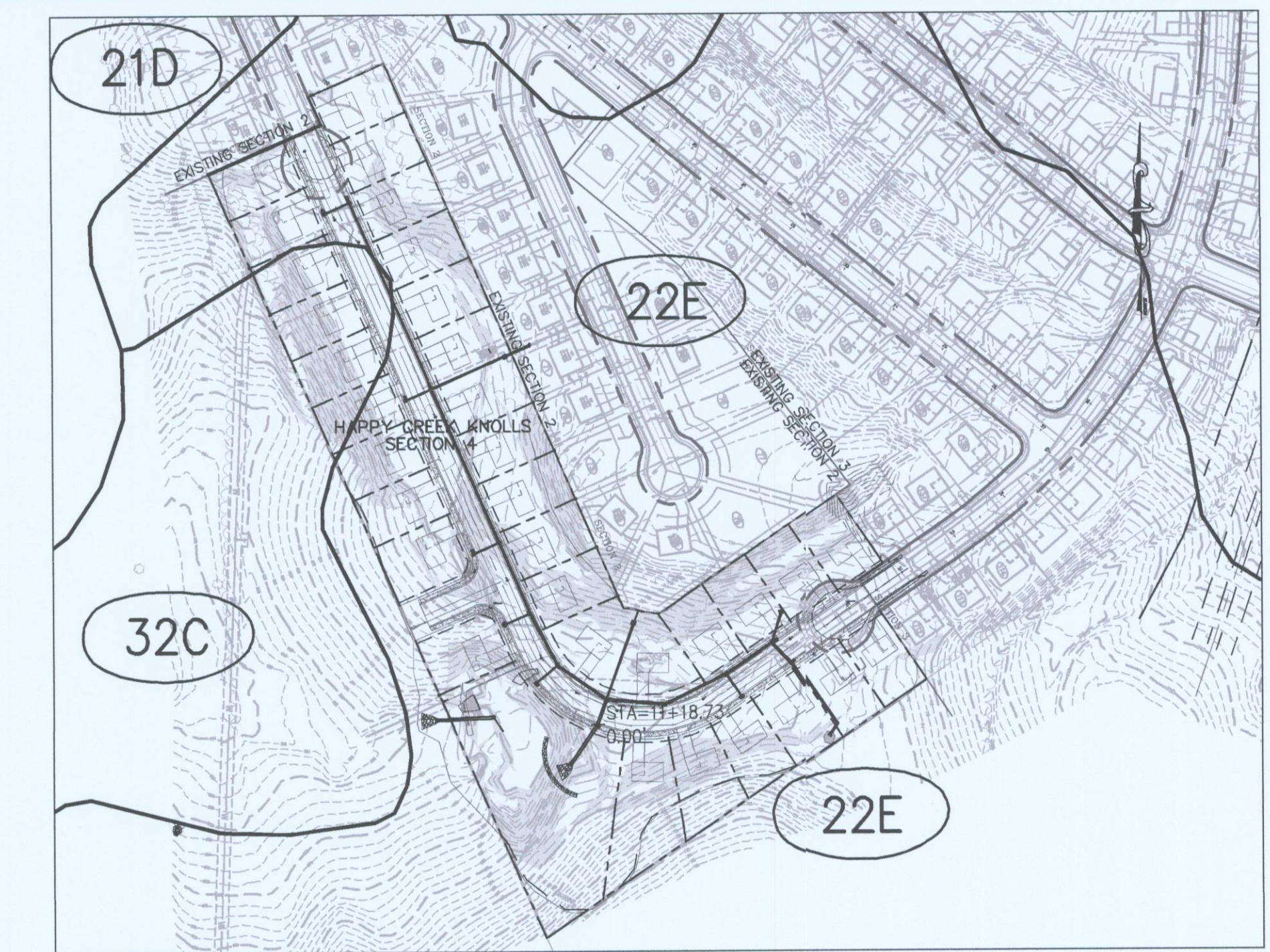
A. OF THE TWO (2) SIDES OF A CORNER LOT, THE FRONT SHALL BE DEEMED TO BE THE SHORTEST OF THE TWO (2) SIDES FRONTING ON STREETS.

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.



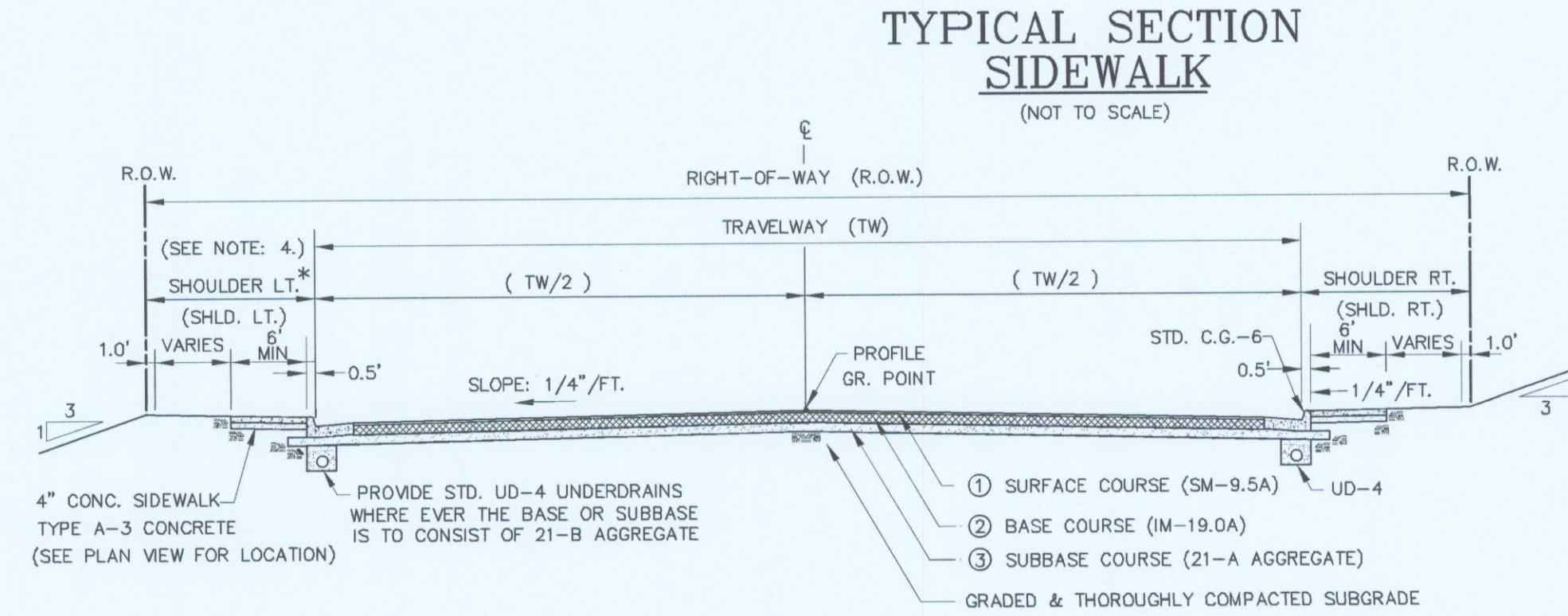
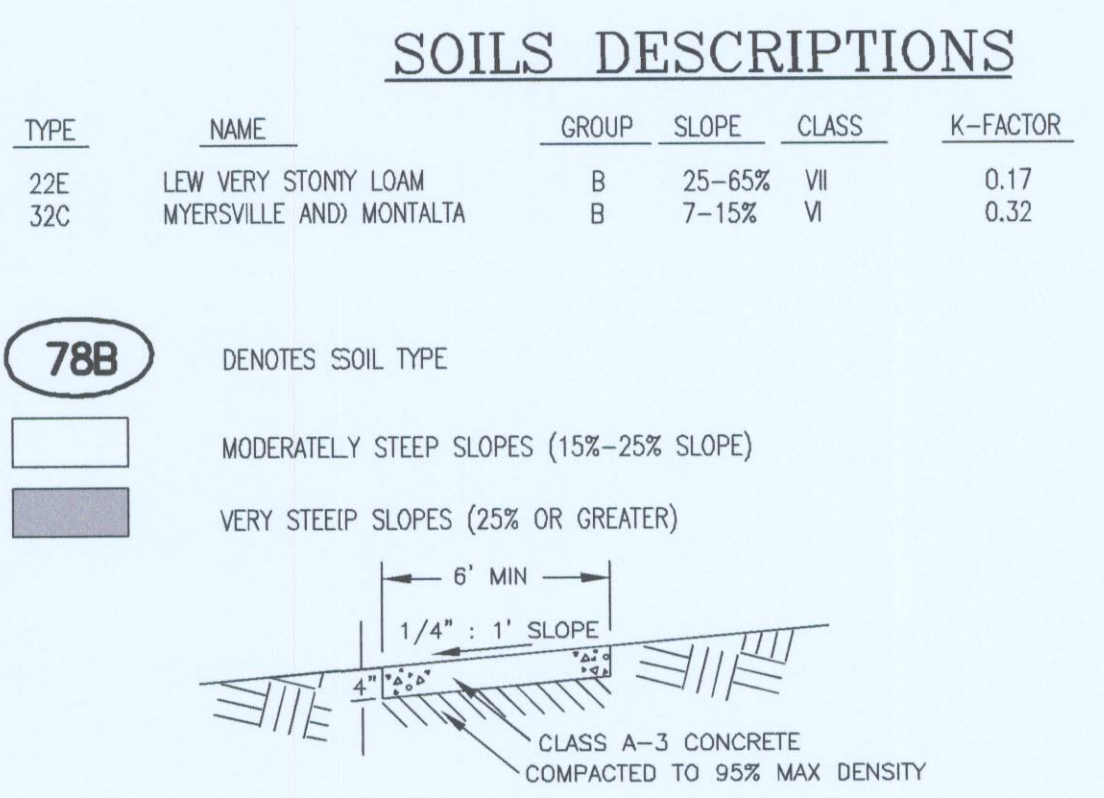
- ROADWAY NOTES:
- SUBBASE DEPTH IS BASED ON A C.B.R. VALUE OF 6, BASED ON AN ACTUAL DETERMINATION PER SOIL TESTS (OR) AN ESTIMATE WHICH WILL BE REVISED ONCE THE SOIL TESTS OF SUBGRADE ARE PERFORMED.
 - A SMOOTHING GRADE SHALL BE MAINTAINED FROM THE CENTERLINE OF THE EXISTING ROAD TO THE PROPOSED CURB 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)

HAPPY CREEK KNOLLS SECTION 4 LOT TABULATION		
LOT #	LOT AREA (FT ²)	LOT AREA (ACRES)
1	10,374.97	0.238
2	10,371.85	0.238
3	10,368.73	0.238
4	10,921.77	0.251
5	13,409.14	0.308
6	20,632.84	0.474
7	13,026.39	0.299
8	10,545.86	0.242
9	10,563.41	0.243
10	10,560.96	0.243
11	10,598.51	0.243
12	10,616.06	0.244
13	10,633.61	0.244
14	10,651.16	0.245
15	10,668.71	0.245
16	10,795.67	0.248
17	10,795.42	0.248
18	10,794.86	0.248
19	10,794.29	0.248
20	10,793.73	0.248
21	10,793.17	0.248
22	10,792.60	0.248
23	10,792.04	0.248
24	10,791.47	0.248
25	10,790.91	0.248
26	10,790.35	0.248
27	12,859.23	0.296
28	13,073.76	0.300
29	10,790.24	0.248
30	10,790.00	0.248
31	10,790.00	0.248
32	10,790.00	0.248
33	12,967.73	0.298
Total	374,769.43	8.604

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



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

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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 V:
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

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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. 0332903
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 COUNTY 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

SHEET **6** OF **33**

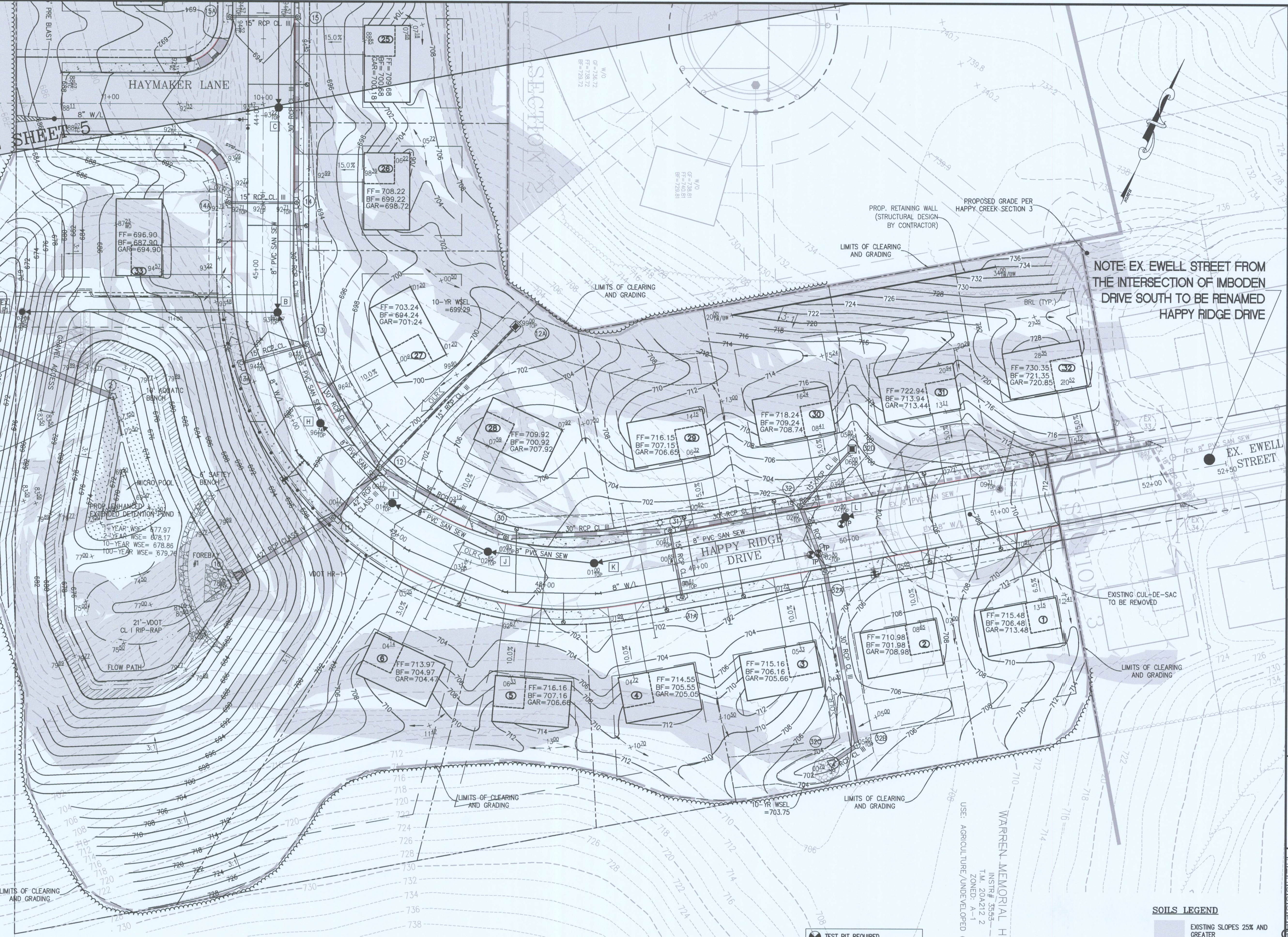
22.5' X 26' CL. 1 RIPRAP (2.5' DEEP)
EX. SANITARY SEWER
EX. SANITARY EASEMENT

VARIABLE WIDTH DRAINAGE EASEMENT
INSTRUMENT # 210004424

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

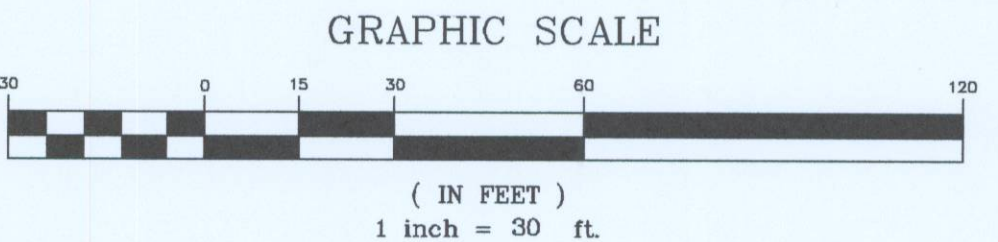
HEPTAD LLC
INSTR. # 49351
T.M. 20A212 Z
ZONED: PUD

VARIABLE WIDTH DRAINAGE EASEMENT
INSTRUMENT # 210004424



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.

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



NEW BUSINESS

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, Virginia

Planning Commission Regular Meeting Agenda

☐ Consent Action ☒ Administrative Action ☐ Public Hearing ☐ Discussion

Agenda Item: Application #2500023 for Final Plat Approval Major Subdivision

MEETING DATE: February 19, 2025

SUMMARY: The application for review is 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 containing sixteen (16) dwelling units, one (1) stormwater management lot, and a residue lot located at 336 W. Strasburg Road. The eight lots can be developed as duplexes by right since the property is zoned R-2, Residential District.

STAFF RECOMMENDATION: Staff supports approval of the Final Subdivision Plat. Staff has reviewed the plat for compliance with Town Code and attests to its conformance with Town standards.

DRAFT MOTION: "I move that the Planning Commission forward a recommendation of approval to Town Council for Final Subdivision Plat application #2500023 located at 336 W. Strasburg Road, identified by tax map number 20A11-4-23B.

NOTE: This is only a draft motion. Alternative motions are also welcome.

PLANNING COMMISSION ACTION:

Moved _____ Seconded _____

Neel _____ Brooks _____ Marshner _____ Marrazzo _____ Vacancy _____

☐ Approved ☐ Approved w/ Conditions ☐ Denied ☐ Other



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

**STAFF REPORT – FINAL PLAT APPROVAL MAJOR SUBDIVISION
PLANNING COMMISSION– FEBRUARY 19, 2025**

APPLICATION #:

Final Plat Approval Major Subdivision
#2500023

APPLICANT:

Ali Billoo

SUMMARY OF REQUEST:

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.

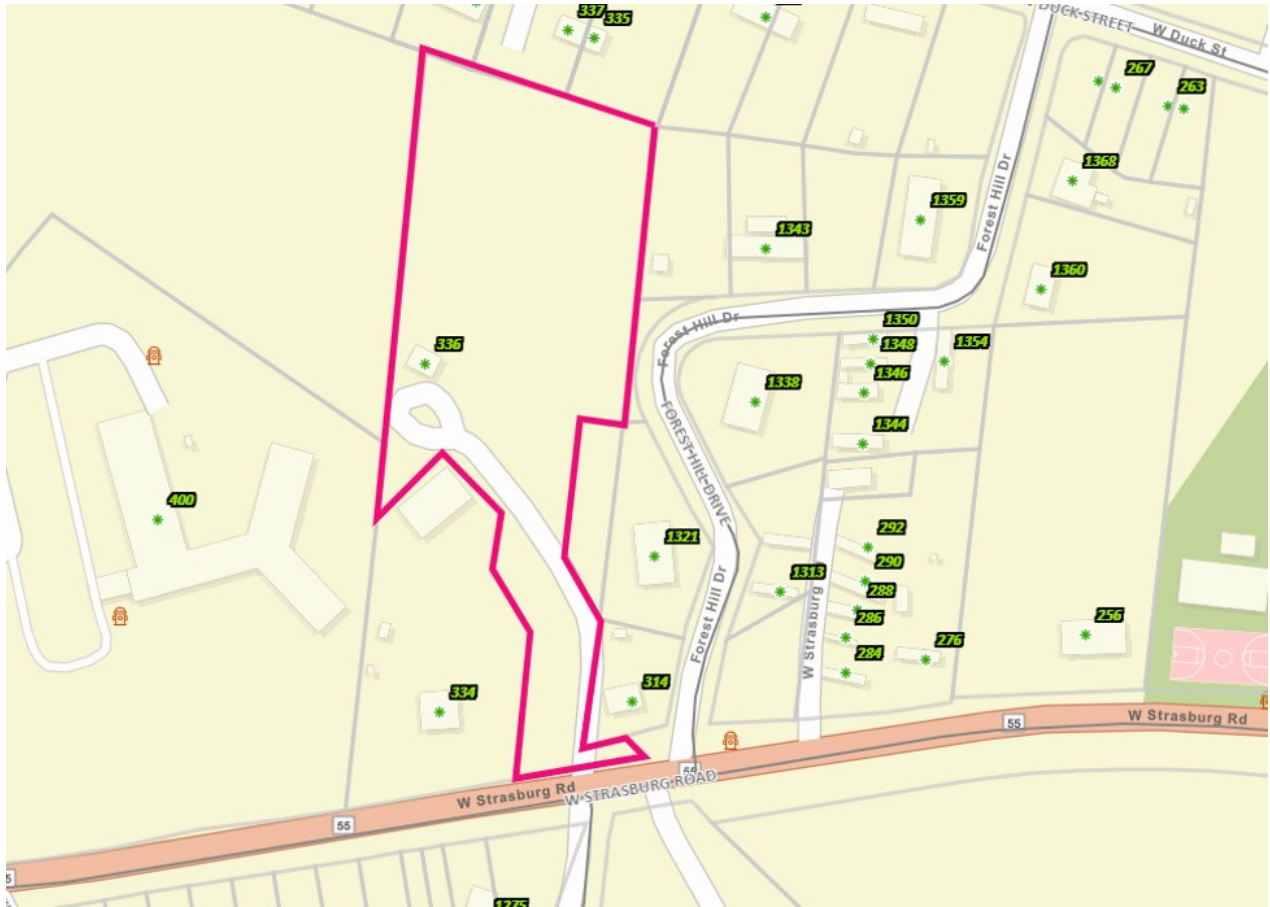
GENERAL INFORMATION:

<i>Site Addresses</i>	336 W. Strasburg Road
<i>Property Owner(s)</i>	Ali Billoo
<i>Zoning District</i>	R-2, Residential District
<i>Tax Identification</i>	20A11-4-23B
<i>Location</i>	The subject property is located northeast of the intersection of Forrest Hill Drive and Strasburg Road.
<i>Existing Use</i>	Single Family Dwelling
<i>Proposed Use</i>	Duplex development of eight (8) structures composed of sixteen (16) dwelling units.

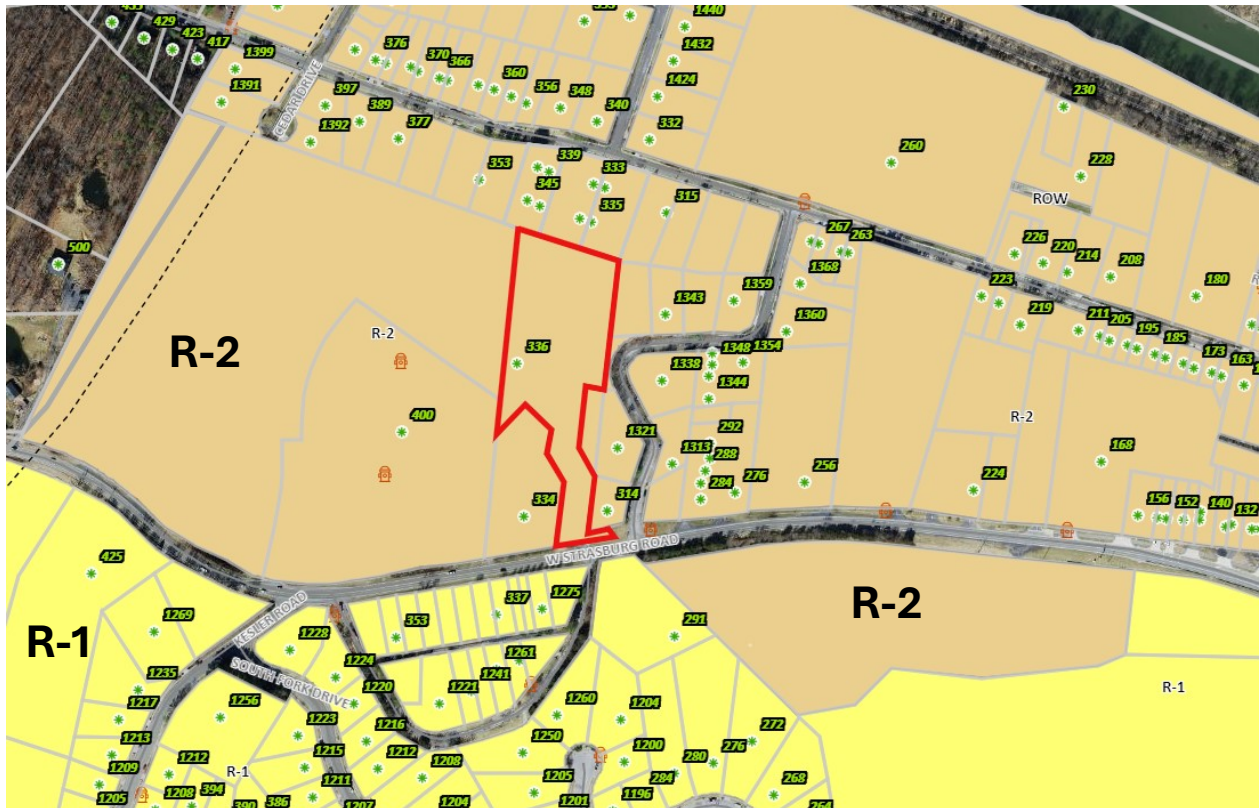
AERIAL MAP – 336 W. Strasburg Road – Warren County GIS



VICINITY MAP – 336 W. Strasburg Road – Warren County GIS



ZONING MAP – 336 W. Strasburg Road – Warren County GIS



1k. LEGEND

Iron Pipe Found	1"
Iron Rod Found	1"
Iron Rod Set	1"
Adjoining	
Property Line	
Road Centerline	
Setback	
Utility Easement	

1k. VICINITY MAP
3" = 1000'

1k. 1. 200007 - RECORD OF DEED NO. 200007, AS RECORDED IN DEED BOOK 306, PAGE 41, AS FOUND AMONG THE LAND RECORDS OF WARREN COUNTY, VIRGINIA, AND A FIELD SURVEY DONE BY NADY ENGINEERING.

1k. 2. THE SURVEY PROPERTY IS CURRENTLY IN THE NAME OF "RACEY INVESTMENTS, LLC," A VIRGINIA LIMITED LIABILITY COMPANY, AS RECORDED IN INSTRUMENT NO. 20060852 AS FOUND AMONG THE LAND RECORDS OF WARREN COUNTY, VIRGINIA.

1k. 3. THE SURVEY WAS DONE WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT, THEREFORE ALL SETBACKS, EASEMENTS, ENCUMBRANCES AND RESTRICTIONS MAY NOT BE ACCURATE HEREON.

1k. 4. THE SURVEY PROPERTY IS LOCATED ON FLOOD INSURANCE RATE MAP, NUMBER 580C, FAVEL BEAC, DATED 04/08/2006 AND IS IN ZONE "X".

1k. 5. ALL PROPERTY CORNERS NOT LABELED ARE TO BE SET AT THE TIME OF RECORDED.

1k. 6. THE FINAL PLAT IS SUBSTANTIALLY IN ACCORDANCE WITH THE APPROVED PRELIMINARY PLAN.

1k. 7. THE MAP NUMBER 2006-01A-008 IS CURRENTLY ZONED RESIDENTIAL (R-10).

1k. 8. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 7

SUMMARY

Staff has reviewed the plat for compliance with Town Code and attests to its conformance with Town standards.

Town Code, Chapter 148, Section 310, specifies that “(a) Preliminary Plan is required for all proposed major subdivisions. The Preliminary Plan review process includes review and approval of the subdivision design before submission of a Subdivision Plan and Final Plats. The Planning Commission has approval authority for Preliminary Plans. The Planning Commission approved the Preliminary Plan at the August 21, 2024 regular meeting. The Preliminary Plan approval is effective beginning September 13, 2024. The Preliminary Plan shall be valid for a period of five (5) years, provided the subdivider (i) submits a final subdivision plat for all or a portion of the property within one (1) year of

PRELIMINARY SUBDIVISION PLAN

<i>FINAL SUBDIVISION PLAT</i>	such approval or such longer period as may be prescribed by the commission, and (ii) thereafter diligently pursues approval of the final subdivision plat. Town Code 148-315 of the Town Code requires major subdivisions to obtain approval of a subdivision plan and final plats within thirty-six (36) months of approval of the preliminary plan. This will be the current step in the process for approval of this subdivision prior to recordation of the lots and development. Unlike Preliminary Plans, Subdivision Plans and Final Plats require approval by Town Council. In addition, bonding is required.
<i>CONCLUSION</i>	Staff supports approval of the Final Subdivision Plat.

ATTACHMENTS: 1) Application and supporting documentation.



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 Billar 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) 1.2
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.

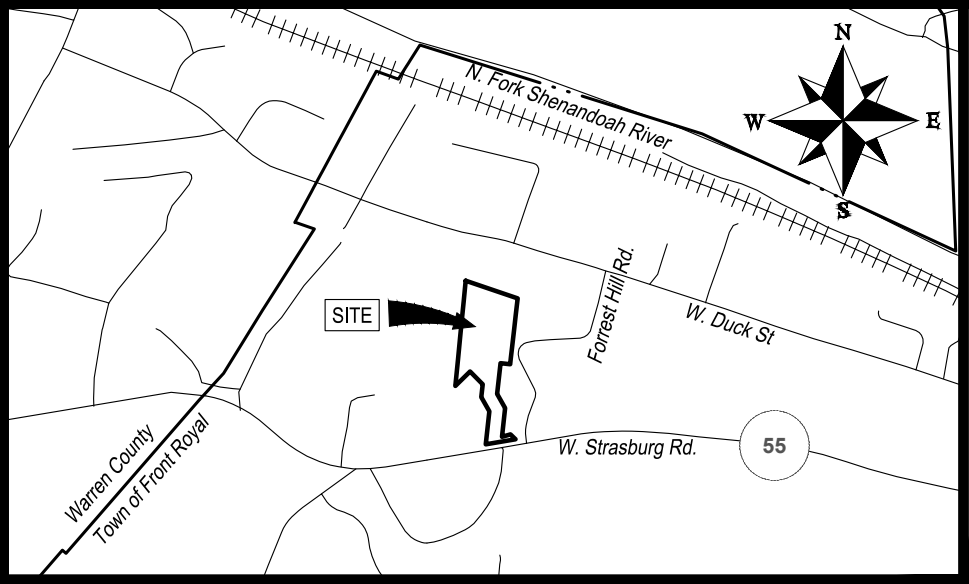
- ☒Y ☐N ☐N/A 10. The location, number and area (square feet or acres) of proposed lots and parcels (both residential and non-residential).
- ☒Y ☐N ☐N/A 11. All dimensions, angular and linear, for locating boundary lines, lots, parcels, streets, street centerlines, alleys, and easements (public and private). 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

1c.

2b.

8

Line Table		
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'

SURVEYORS CERTIFICATE

7

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

1a.

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

1l.

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

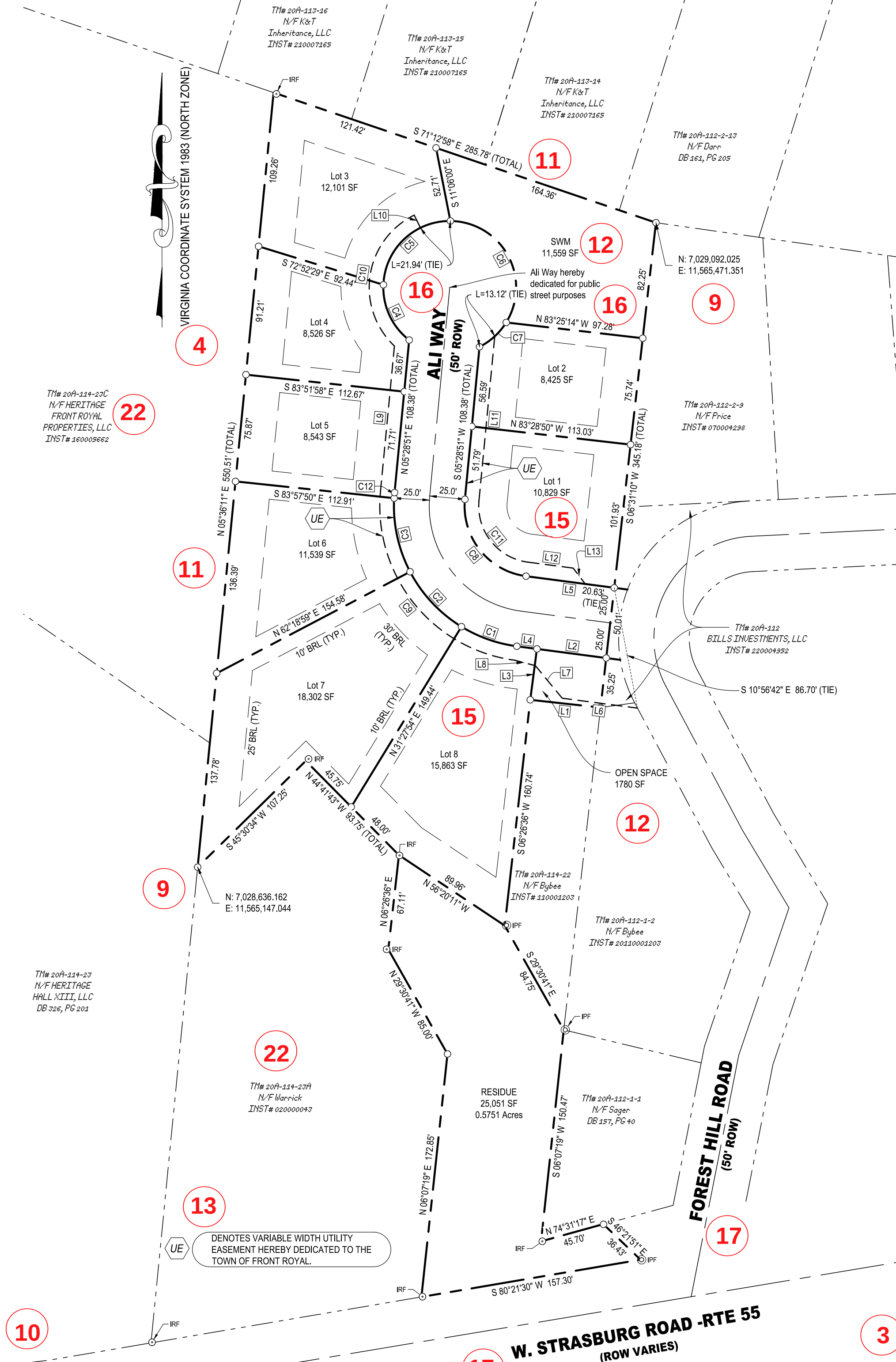
Director of Planning & Zoning

Date

1i.

Area Tabulation				
Lots	Original		New	
	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

2a.

2c.

2d.

PLAT SHOWING A FINAL SUBDIVISION ON THE LANDS OF

STRASBURG ROAD SUBDIVISION

TM# 20A-114-23B

INST# 220004952

NORTH RIVER-TOWN MAGISTERIAL DISTRICT

TOWN OF FRONT ROYAL

WARREN COUNTY, VIRGINIA

JANUARY 21, 2025

2b.

RACEY PROJECT #

9276

2e.

SHEET NO.

1 of 1

1b.



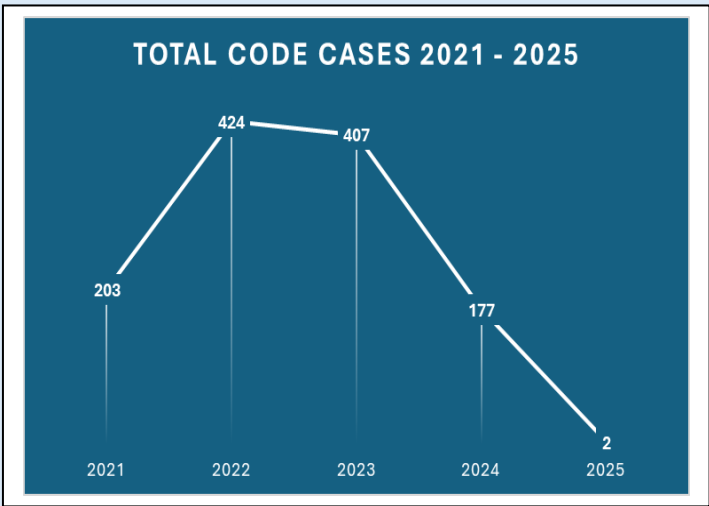
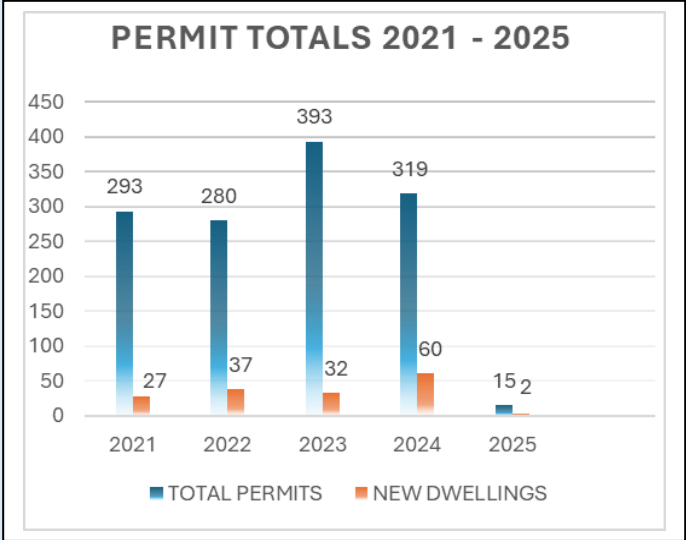
1d.

312 WEST MAIN ST
LURAY, VA 22835
PH: (540) 743-9227 - FAX: (540) 743-6118

JANUARY MONTHLY REPORT

GENERAL INDICATORS

	2021	2022	2023	2024	2025	JANUARY
Zoning Permits	293	280	393	319	15	15
New Dwelling Units	27	37	32	60	2	2
New Code Enforcement Cases Open	203	424	407	177	2	2
Code Enforcement Cases in Compliance/Closed		361	378	112	2	2
Code Enforcement Inspections	--	--	--	388	3	3
Land Use Applications	29	56	36	45	2	2
Code Amendments	7	2	4	1	0	0
Sign Permits	47	41	62	42	3	3
Business Licenses	172	155	148	129	13	13
Short-Term Rentals	1	13	5	5	0	0
Administrative Variance	--	--	4	1	0	0
COA Administrative Review	--	--	39	18	2	2
COA Board Review	--	--	11	15	0	0
Solicitor/Itinerant Merchant	--	--	10	27	1	1
Urban Agriculture	--	--	18	11	0	0
Alley Vacation	--	--	5	2	0	0
Right of Way Utilization Permits			46	105	1	1
Walk-Ins to Planning & Zoning	--	--	--	2606	150	150



SPECIAL PROJECTS UPDATES/NEWS

- **Chapter 175 and 148 Rewrite:** A rough draft of Chapter 175 was distributed to the Planning Commission August 7, 2024 and is currently in review.
- **Capital Improvement Plan (CIP):** Work has begun on the 2025-2029 CIP.
- Staff is reviewing application forms; the goal is to roll out new forms with the new ordinance.

- **BAR** – The Board of Architectural Review held one (1) regular meeting in January. The BAR approved a COA application for exterior renovations at 207 S. Royal Avenue, a COA application for a building to house an outdoor pizza oven at 201/205 S. Royal Avenue, and a COA application for exterior renovations to house the future kitchen for a restaurant located behind 201 and 205 S. Royal Avenue at 10 W. Stonewall Drive.
- **BZA** - The Board of Zoning Appeals did not meet in January.

- **PC** – In January the Planning Commission (PC) held one (1) regular meeting and one (1) work session. At their regular meeting the PC recommended approval of a Special Use Permit Application for multi-family apartments off of Royal Lane and a Rezoning Application for parcels located on W. Strasburg Road from C-1, Community Business District to R-3, Residential District. In addition, the PC approved a request for preliminary plan approval for a major subdivision containing nine (9) lots and sixteen (16) dwelling units located at 336 W. Strasburg Road. At their work session the PC discussed the applications metioned above and held a brief discussion on data centers and solar.
-