



PLANNING COMMISSION WORK SESSION
Thursday, January 2, 2025 @ 6 PM
Town Hall – 2nd Floor, East Conference Room

AGENDA

CALL TO ORDER

ROLL CALL

WORK SESSION 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.
- **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 on a vacant parcel off of Royal Lane, identified by Tax Map 20A17-1-14B1. The property is zoned C-1, Community Business District
- **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.
- Data Center and Solar Discussion.

ADJOURNMENT

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.



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

2400421
RECEIVED
Main: 540.635.4236
Fax: 540.631.2727
Internet: www.frontroyalva.com

TOWN OF FRONT ROYAL
PLANNING & ZONING DEPARTMENT

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

The undersigned hereby applies for review by the Town of Front Royal Planning Commission of the Preliminary Major Subdivision Plat submitted herewith:

1. Applicant's Name Ali Billoo Phone 703-346-6254
Address 7214 Sipes Lane, Annandale VA, 22003 billshomes@hotmail.com
2. Present Owner (if other than applicant) _____
Address _____ Phone _____
3. Interest of applicant if other than owner _____

4. Name and profession of person designing preliminary plat Racey Engineering, PLLC
Joshua Turner, P.E.: Civil Engineer
Address 312 West Main Street, Luray VA, 22835 Phone 540-743-9227
5. Location of subdivision 336 West Strasburg Road, Front Royal VA, 22630

6. Total acreage 3.52 Zoning Classification R2
No. of Lots 9 Tax Map Number 20A114 23B
7. Acreage of adjoining land in same ownership (if any) 0.05853
8. Development Plans:
(A) Proposed number of dwellings. 14
(B) Length of new public roads. 340'
(C) Amount of open space. 1,780 sf

PLEASE COMPLETE REVERSE SIDE

9. Deed restrictions that apply or are contemplated. (If no restrictions, state "none", if "Yes" attach copy) none

10. Date of Sketch Plat Approval _____ (Optional)

11. Attach: (A) Two Full Size Copies of Preliminary Plat
(B) Digital Copy of Preliminary Plat
(C) One 11 x 17 Copy of Preliminary Plat
(D) Additional documents required by Section 148-310.C of the Subdivision and Land Development Ordinance.

I hereby state that all of the above information and the statements contained herein submitted with this application are true.

2/11/24
Date

[Signature]
Signature of Applicant

Designated contact for 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.

Fee \$725.00 * pd check # 3897 Date Paid 7-11-24
725.00

*Preliminary Plat fee is \$500 per plat and \$25 per lot.

1. Action of the Town Planning Commission

Date _____ Approved _____ Disapproved _____

2. Notification of approval/disapproval sent to:

Town Council _____ Date _____

Applicant _____ Date _____

3. Amount of performance bond required for approval of final plat \$ _____

Comments:

STRASBURG ROAD SUBDIVISION

FOR

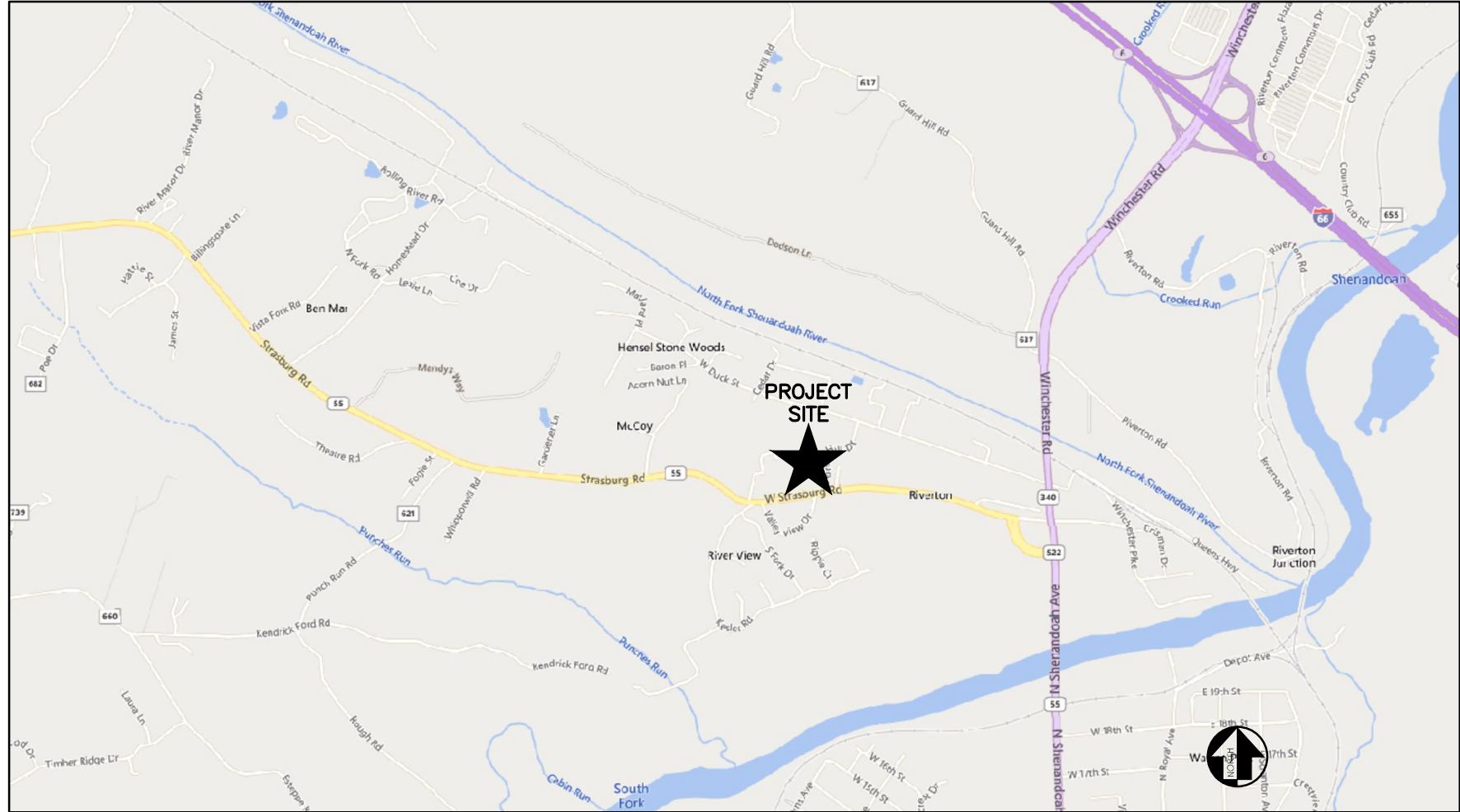
ALI BILLOO

TOWN OF FRONT ROYAL

WARREN COUNTY, VA

PROJECT SITE SUMMARY:

SITE ADDRESS:	336 W. STRASBURG ROAD FRONT ROYAL, VA 22630
OWNER/APPLICANT: ADDRESS:	ALI BILLOO 7214 SIPES LANE ANNANDALE, VA 22003 (703) 346-6254
TELEPHONE NO:	
PROJECT ENGINEER: CONTACT: ADDRESS:	RACEY ENGINEERING, PLLC JOSHUA P. TURNER, P.E. 312 WEST MAIN STREET LURAY, VIRGINIA 22835 (540) 743-9227
TELEPHONE NO:	
TAX MAP/PARCEL ID:	20A114 23B
DEED BOOK/INST NO:	INST#: 4952
PRESENT ZONING:	R2 (RESIDENTIAL)
MAG DISTRICT:	NORTH RIVER-TOWN
PROPERTY CLASS:	RESIDENTIAL
FLOOD ZONE; FEMA MAP NO.:	X; 51187C0104C
PRESENT USE: PROPOSED USE:	DWELLING SUBDIVISION
PROPERTY AREA:	3.52 ACRES
TOTAL DISTURBED AREA:	2.94 ACRES
SETBACKS:	FRONT - 30' BUILDING BACK - 10' BUILDING SIDE - 25' BUILDING
BEST MANAGEMENT PRACTICES:	[STORMTECH ISOLATOR ROW PLUS, BMP SPEC. NO. 12 - FILTERING PRACTICE] LATITUDE: 38°56'58.92" N LONGITUDE: 78°12'35.64" W



VICINITY MAP
SCALE: 1" = 2000'

PROJECT COORDINATES
38° 56' 56.35" N
78° 12' 37.02" W

PROPOSED USE:

THE PROPOSED SITE INCLUDES THE CONSTRUCTION OF A NEW SUBDIVISION CONSISTING OF 8 DUPLEX UNITS WITH ASSOCIATED PARKING, ACCESS ROADWAY, AND STORMWATER MANAGEMENT. THE ESTIMATED START TIME FOR THIS PROJECT IS MID TO LATE 2024, AND THE ESTIMATED COMPLETION TIME IS EARLY 2025. THERE IS AN EXPECTED 0.84 ACRE INCREASE IN IMPERVIOUS AREA FROM THIS PROJECT.



SINCE THE SITE DISTURBANCE IS GREATER THAN ONE (1) ACRE, A VSMP GENERAL CONSTRUCTION PERMIT IS REQUIRED. CONTRACTOR TO OBTAIN PERMIT COVERAGE NUMBER FROM THE DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) THROUGH THE VSMP PROGRAM ADMINISTRATOR. SEE "VPDES GENERAL PERMIT REQUIREMENTS" ON SHEET T101 FOR MORE INFORMATION.

TOWN 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 & ZONING	DATE
PLANNING COMMISSION CHAIR	DATE
DIRECTOR OF PUBLIC WORKS	DATE
DIRECTOR OF ENERGY SERVICES	DATE

AREA TABULATION:
TOTAL SITE AREA: 3.52 AC
NUMBER OF LOTS: 8
TOTAL STREETS: 0.38 AC / 311 LF
OPEN SPACE/Common Area: 1,780 SF
TOTAL RESIDUE: 0 SF

Sheet List Table	
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T101	PROJECT NOTES
C100	EXISTING FEATURES
C101	PLAT SHEET
C200	LAYOUT PLAN
C201	UTILITY PLAN
C202	UTILITY PROFILES
C300	GRADING PLAN
C301	STORMTECH UG-1 DETAILS
C302	STORMTECH UG-1 DETAILS
C303	ROAD AND ENTRANCE PLAN
C400	ESC NARRATIVE
C401	ESC PLAN PHASE 1
C402	ESC PLAN PHASE 2
C500	ESC DETAILS
C501	ESC DETAILS
C502	CONSTRUCTION DETAILS
C600	DRAINAGE MAP
C601	VRRM MAP
C602	DEQ COVER SHEET

No.	By	App'd	Date
1	HV	JPT	06/28/24
2	HV	JPT	10/15/24
3			
4			
5			
6			
7			
8			
9			
10			



PERMIT
REVIEW SET



CHECKED:JPT

DRAWN:HV

DESIGNED:HV

STRASBURG ROAD SUBDIVISION

COVER SHEET

ALI BILLOO
WARREN COUNTY, VA

RACEY PROJECT NUMBER: 9276 PUBLISH DATE: 10/15/2024

T100

GENERAL NOTES AND STANDARDS:

CONSTRUCTION STANDARDS

ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM WITH THESE DRAWINGS, PROJECT SPECIFICATIONS, WITH ALL CURRENT APPLICABLE CODES, AND, UNLESS OTHERWISE SPECIFIED, WITH THE LATEST REVISIONS OF THE FOLLOWING REFERENCE DOCUMENTS:

- THE COUNTY OF WARREN / TOWN OF FRONT ROYAL CONSTRUCTION STANDARDS AND SPECIFICATIONS
- VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) ROAD & BRIDGE SPECIFICATIONS
- VDOT ROAD AND BRIDGE STANDARDS
- VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH)
- VIRGINIA DEPARTMENT OF HEALTH (VDH) SPECIFICATIONS
- VIRGINIA STORMWATER MANAGEMENT HANDBOOK
- MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)
- VIRGINIA WORK AREA PROTECTION MANUAL

CONSTRUCTION NOTES

1. ALL CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE, AND LOCAL CONSTRUCTION STANDARDS AS IDENTIFIED IN THESE PLANS. THE CONTRACTOR SHALL OBTAIN ALL APPLICABLE PERMITS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING LICENSES AT THEIR EXPENSE, MAINTAIN COPIES OF THE PERMITS AND LICENSES ON-SITE AT ALL TIMES DURING CONSTRUCTION, AND SHALL BE RESPONSIBLE FOR ABIDING BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS.
2. THE CONTRACTOR SHALL MAINTAIN A SET OF CONSTRUCTION DOCUMENTS, SPECIFICATIONS, AND A STORMWATER POLLUTION PREVENTION PLAN (IF APPLICABLE) ON-SITE AT ALL TIMES DURING CONSTRUCTION. A DESIGNATED RESPONSIBLE PERSON SHALL BE AVAILABLE FOR CONTACT BY INSPECTORS OR AGENCY OFFICIALS.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE CONSTRUCTION PROJECT TO IDENTIFY ANY DISCREPANCIES, INCONSISTENCIES, OR AMBIGUITIES ARE FOUND BETWEEN THE DRAWINGS, SPECIFICATIONS, SITE CONDITIONS, OR ANY RELATIVE CODES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE ENGINEER OF ANY SUCH DISCREPANCIES, INCONSISTENCIES, OR AMBIGUITIES SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF WORK AS DEFINED BY THE DRAWINGS AND IN FULL COMPLIANCE WITH LOCAL REGULATIONS AND CODES.
4. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN ARE TO BE MADE WITHOUT PRIOR APPROVAL OF THE OWNER AND NOTIFICATION TO THE ENGINEER. NO CONSIDERATION WILL BE GIVEN TO CHARGE ORDERS FOR WHICH THE OWNER AND ENGINEER WERE NOT CONTACTED PRIOR TO CONSTRUCTION OF THE AFFECTED ITEM. DEVIATIONS FROM OR CHANGES TO THESE PLANS WILL NOT BE ALLOWED, UNLESS OTHERWISE APPROVED BY THE ENGINEER. IF THE CONTRACTOR DEVIATES FROM THE PLANS AND SPECIFICATIONS INCLUDING THE NOTES CONTAINED THEREON, WITHOUT FIRST OBTAINING WRITTEN AUTHORIZATION FOR SUCH DEVIATIONS FROM THE OWNER AND ENGINEER, IT SHALL BE RESPONSIBLE FOR THE PAYMENT OF ALL COSTS TO CORRECT ANY WORK DONE, ALL FINES OR PENALTIES ASSESSED WITH RESPECT THERETO AND ALL COMPENSATORY OR PUNITIVE DAMAGES RESULTING THEREFROM. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ALL SUCH COSTS TO CORRECT ANY SUCH WORK AND FROM ALL FINES AND PENALTIES, COMPENSATION AND PUNITIVE DAMAGES AND COSTS OF ANY NATURE RESULTING THEREFROM.
5. CONTRACTOR TO VERIFY THE PROPOSED LAYOUT WITH ITS RELATIONSHIP TO THE EXISTING SITE SURVEY. ALSO VERIFY ALL DIMENSIONS, SITE CONDITIONS, AND MATERIAL SPECIFICATIONS AND NOTIFY THE OWNER AND THE ENGINEER OF ANY ERRORS, OMISSIONS, OR DISCREPANCIES BEFORE COMMENCING OR PROCEEDING WITH WORK. CONTRACTOR SHALL NOTIFY ENGINEER AND OWNER IN WRITING IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
6. THE LOCATION OF EXISTING UTILITIES AS SHOWN IS APPROXIMATE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL PUBLIC OR PRIVATE UTILITIES WHICH LIE IN OR ADJACENT TO THE CONSTRUCTION SITE AND IS RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES ASSOCIATED WITH THE PROJECT WORK SCOPE DURING CONSTRUCTION. AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO ANY DEMOLITION, GRADING, OR CONSTRUCTION ACTIVITY THE CONTRACTOR SHALL NOTIFY "MISS UTILITY OF VIRGINIA 8811 FOR PROPER IDENTIFICATION OF EXISTING UTILITIES WITHIN THE PROJECT SITE." A CERTIFIED PRIVATE UTILITY LOCATION COMPANY SHALL BE HIRED TO IDENTIFY ANY ADDITIONAL EXISTING UTILITIES ON PRIVATE PROPERTY. IN ANY SITUATION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING, AT HIS EXPENSE, ALL EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.
7. PROPERLY SECURE THE CONSTRUCTION AREA AT ALL TIMES AGAINST UNAUTHORIZED ENTRY AND ADEQUATELY PROTECT EQUIPMENT, MATERIALS, AND COMPLETED WORK FROM THEFT AND VANDALISM. THE OWNER IS NOT RESPONSIBLE FOR THE LOSS OF ANY MATERIAL STORED AT THE SITE.
8. CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION INCLUDING THE PROTECTION OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY THROUGHOUT THE ENTIRE DURATION OF CONSTRUCTION UNTIL CLOSEOUT PROCEDURES ARE COMPLETED.
9. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL REQUEST THE MEETING WITH THE VESOP AUTHORITY AT LEAST ONE WEEK IN ADVANCE. IMMEDIATELY AFTER THE MEETING, THE CONTRACTOR SHALL BE NOT GUARANTEED, AND CONTRACTOR SHOULD PROVIDE AMPLE NOTICE FOR DESIRED MEETING TIMES.
10. ANY DAMAGE OCCURRING TO THE EXISTING SITE INFRASTRUCTURE ON THIS OR THE ADJACENT SITE DURING THE CONSTRUCTION OPERATIONS AND/OR MOBILIZATION, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL EXISTING DAMAGED ITEMS INCLUDING CONCRETE AND/OR PAVEMENT SECTIONS SHALL BE RESTORED TO THEIR ORIGINAL CONDITIONS PRIOR TO PROJECT COMPLETION AT THE EXPENSE OF THE CONTRACTOR.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING WITH MATCHING MATERIALS ANY PAVEMENT, DRIVEWAYS, WALKS, ETC., THAT MUST BE CUT OR BE DAMAGED DURING CONSTRUCTION INSIDE AND OUTSIDE OF THE LIMITS OF CONSTRUCTION.
12. THE CONTRACTOR IS RESPONSIBLE TO REMOVE ALL THE REMOVED/DAMAGED MATERIAL FROM THE PROJECT SITE, UNLESS OTHERWISE NOTED, AND DISPOSE OF THE MATERIAL IN A SAFE, LEGAL MANNER.
13. ANY AND ALL UTILITIES AND/OR OBSTRUCTIONS (POWER POLES, TELEPHONE PEDESTALS, GUY WIRES, WATER METERS, ETC.) THAT ARE REQUIRED TO BE RELOCATED OR ADJUSTED DUE TO CONSTRUCTION SHALL BE DONE SO AT THE OWNERS/DEVELOPERS EXPENSE.
14. DIMENSIONS AND RADII ARE TO FACE OF CURB AND TO OUTSIDE FACE OF BUILDINGS, WHERE APPLICABLE, UNLESS OTHERWISE INDICATED.
15. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL/BUILDING PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRY/EXIT POINTS, ELEVATIONS, PRECISE BUILDING DIMENSIONS, EXACT BUILDING UTILITY LOCATIONS.
16. SLOPES WITHIN THE LIMITS OF THE HANDICAPPED PARKING AREAS SHALL NOT EXCEED 2.0% IN ANY DIRECTION. CROSSWALKS AND SIDEWALKS SHALL HAVE A MAXIMUM CROSS SLOPE OF 2.0% AND A MAXIMUM LONGITUDINAL SLOPE OF 5.0% IN DIRECTION OF TRAVEL. SLOPES IN HANDICAP RAMPS SHALL BE BUILT IN CONFORMANCE WITH THE LATEST ADA AND LOCAL DESIGN STANDARDS, THE MORE STRINGENT SHALL APPLY.
17. ALL PAINT STRIPING, PAVEMENT MARKINGS, AND SIGNAGE SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". ALL NEW SIGNS SHALL BE MOUNTED ON GALVANIZED POSTS AND IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
18. FIRE LANE DESIGNATION AND MARKING (IF REQUIRED) IS TO BE DETERMINED BY THE LOCAL FIRE DEPARTMENT WITH JURISDICTION, PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.
19. ALL GROUND COVER AND LANDSCAPING SHALL BE PROPERLY MAINTAINED IN A HEALTHY CONDITION AT ALL TIMES. DEAD PLANT MATERIALS SHALL BE REMOVED AND REPLACED DURING THE NORMAL PLANTING SEASON.
20. ALL GRASS OR TURF AREAS THAT ARE IMPACTED OR DISTURBED BY VEHICLES, EQUIPMENT, OR ACTIVITY SHALL BE REPAIRED, REGRADED, AND RESEEDED TO THE SATISFACTION OF THE OWNER.
21. WHENEVER CONSTRUCTION OPERATIONS ENDOURCH ON THE RIGHT-OF-WAY OF ADJACENT ROADWAYS, TRAFFIC CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH LOCAL AND STATE STANDARDS.
22. NO MATERIALS OR EQUIPMENT SHALL BE STORED OR STOCKPILED WITHIN THE RIGHT-OF-WAY OF ADJACENT ROADWAYS.
23. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR COMPLETING AND IMPLEMENTING TRAFFIC CONTROL PLAN.

VPDES GENERAL PERMIT REQUIREMENTS:

1. LAND DISTURBANCE SHALL NOT COMMENCE UNTIL A REGISTRATION STATEMENT FOR THE VPDES GENERAL PERMIT FOR DISCHARGE FROM CONSTRUCTION ACTIVITIES (9VAC25-880) HAS BEEN SUBMITTED AND A PERMIT COVERAGE NUMBER FROM THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY IS PROVIDED TO THE PROGRAM ADMINISTRATOR. THIS INCLUDES THE DEVELOPMENT AND IMPLEMENTATION OF A STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
2. THE VESOP AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY AND ONE WEEK PRIOR TO FINAL INSPECTION. NO WORK ON-SITE CAN BE CONDUCTED WITHOUT FIRST HOLDING A PRE-CONSTRUCTION CONFERENCE WITH THE VESOP AUTHORITY.
3. THE FULL AND COMPLETE SWPPP SHALL BE KEPT ONSITE AT ALL TIMES DURING CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE APPROVED VERSION OF THIS DOCUMENT FROM THE OWNER OR ENGINEER PRIOR TO BEGINNING CONSTRUCTION. THE SWPPP SHALL BE COMPRISED OF THE FOLLOWING:
 - A. EROSION AND SEDIMENT CONTROL NARRATIVE AND PLAN
 - B. STORMWATER MANAGEMENT NARRATIVE AND PLAN, ALONG WITH ANY SWM CALCULATIONS, REPORTS, AND/OR SUPPORTING APPENDICES
 - C. POLLUTION PREVENTION PLAN (PPP)
 - D. ANY ADDITIONAL CONTROL MEASURES NECESSARY TO ADDRESS A TMDL PURSUANT TO 9VAC25-870-54-E OF THE CODE OF VIRGINIA.
4. THE SWPPP SHALL BE AMENDED WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION,

OR MAINTENANCE THAT HAS A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO STATE WATERS AND THAT HAS NOT BEEN PREVIOUSLY ADDRESSED IN THE SWPPP. THE SWPPP MUST BE MAINTAINED AT A CENTRAL LOCATION ONSITE. IF AN ONSITE LOCATION IS UNAVAILABLE, NOTICE OF THE SWPPP'S LOCATION MUST BE POSTED NEAR THE MAIN ENTRANCE AT THE CONSTRUCTION SITE.

5. RETAIN A COPY OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION ON SITE AND ADHERE TO THE STANDARDS LISTED AT ALL TIMES.

6. PRIOR TO ANY LAND DISTURBING ACTIVITY, CONTRACTOR SHALL PROVIDE THE NAME, CERTIFICATION INFORMATION, AND CONTACT INFORMATION OF THE DESIGNATED RESPONSIBLE LAND DISTURBER (RLD) TO THE APPROPRIATE AUTHORITY.

DEMOLITION NOTES:

1. PRIOR TO STARTING ANY DEMOLITION CONTRACTOR IS SHALL ENSURE THAT COPIES OF ALL APPLICABLE PERMITS AND APPROVALS ARE MAINTAINED ON SITE AND AVAILABLE FOR REVIEW. CONTRACTOR ALSO SHALL HAVE COMPLETED THE PRE-CONSTRUCTION CONFERENCE.
2. CONTRACTOR SHALL INSTALL THE REQUIRED SOIL EROSION AND SEDIMENT CONTROL AND/OR TREE PROTECTION MEASURES PRIOR TO SITE DISTURBANCE.
3. CONTRACTOR SHALL LOCATE (VERTICALLY AND HORIZONTALLY) ALL UTILITIES AND SERVICES, INCLUDING, BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER, OPTIC CABLE, ETC. WITHIN THE LIMITS OF DISTURBANCE. THE CONTRACTOR SHALL USE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL THE UNDERGROUND UTILITIES.
4. CONTRACTOR SHALL CONTACT THE APPLICABLE UTILITY SERVICE PROVIDER AND SHALL BE RESPONSIBLE FOR THE COORDINATION REGARDING UTILITY DEMOLITION REQUIRED FOR THE PROJECT. THE CONTRACTOR SHALL PROVIDE THE OWNER WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTION AND UTILITY COMPANY REQUIREMENTS.
5. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES & ADJACENT LANDOWNERS/BUSINESSES REGARDING ANY WORKING SCHEDULES, PEAK HOURS, OR ON WEEKENDS WHICH MAY BE REQUIRED TO MINIMIZE THE IMPACT ON THE ADJACENT PROPERTY OWNERS/TENANTS.
6. CONTRACTOR SHALL PROCEED WITH THE DEMOLITION IN A SYSTEMATIC AND SAFE MANNER, FOLLOWING ALL REQUIREMENTS, TO ENSURE THE SAFETY OF THE PUBLIC AND ALL PARTIES INVOLVED.
7. THE CONTRACTOR SHALL PROVIDE ALL THE "MEANS AND METHODS" NECESSARY TO PREVENT MOVEMENT, SETTLEMENT OR COLLAPSE OF EXISTING STRUCTURES, AND ANY OTHER IMPROVEMENTS THAT ARE REMAINING ON OR OFF SITE. THE DEMOLITION CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS OF DAMAGE TO ALL ITEMS THAT ARE TO REMAIN AS A RESULT OF THEIR ACTIVITIES.
8. IN THE ABSENCE OF SPECIFICATIONS, THE CONTRACTOR SHALL PERFORM EARTH MOVEMENT ACTIVITIES, DEMOLITION AND REMOVAL OF ALL FOUNDATION WALLS, FOOTINGS, AND OTHER MATERIALS WITHIN THE LIMITS OF DISTURBANCE WITH DIRECTION BY OWNER'S STRUCTURAL OR GEOTECHNICAL ENGINEER.
9. CONTRACTOR SHALL CONDUCT DEMOLITION ACTIVITIES IN SUCH A MANNER TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, SIDEWALKS, WALKWAYS, AND OTHER ADJACENT UTILITIES. STREET CLOSURE PERMITS MUST BE RECEIVED FROM THE APPROPRIATE GOVERNMENTAL AUTHORITY.
10. USE DUST CONTROL MEASURES TO LIMIT AIRBORNE DUST DURING DEMOLITION IN ACCORDANCE WITH FEDERAL, STATE, AND/OR LOCAL STANDARDS. AFTER THE DEMOLITION IS COMPLETE, ADJACENT STRUCTURES AND IMPROVEMENTS SHALL BE CLEANED OF ALL DUST AND DEBRIS CAUSED BY THE DEMOLITION OPERATIONS. THE CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL ADJACENT AREAS TO THEIR "PRE-DEMOLITION" CONDITION.
11. CONTRACTOR IS RESPONSIBLE TO SAFEGUARD SITE AS NECESSARY TO PERFORM THE DEMOLITION IN SUCH A MANNER AS TO PREVENT THE ENTRY OF UNAUTHORIZED PERSONS AT ANY TIME.
12. THIS DEMOLITION PLAN IS INTENDED TO IDENTIFY THOSE EXISTING ITEMS/CONDITIONS WHICH ARE TO BE REMOVED. IT IS NOT INTENDED TO PROVIDE DIRECTION OTHER THAN THAT ALL METHODS AND MEANS ARE TO BE IN ACCORDANCE WITH STATE AND LOCAL JURISDICTIONAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OSHA AND OTHER SAFETY PRECAUTIONS NECESSARY TO PROVIDE A SAFE WORK SITE.
13. DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE. ALL DEMOLITION WASTES AND DEBRIS (SOLID WASTE) SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL LAWS AND APPLICABLE CODES.

GRADING AND EARTHWORK NOTES:

1. ALL MATERIALS USED FOR FILL OR BACK-FILL SHALL BE FREE OF WOOD, ROOTS, OR ANY OTHER NON-COMPACTIBLE SOIL TYPE MATERIAL. UNSATISFACTORY MATERIALS ALSO INCLUDE MAN-MADE FILLS AND REFUSE DEBRIS DERIVED FROM ANY SOURCE.
2. SATISFACTORY MATERIAL FOR USE AS FILL FOR THIS PROJECT (UNLESS OTHERWISE SPECIFIED) INCLUDE FILL CLASSIFIED AS: GM, GP, GM, GP, SM, SP, SC, ML, AND CL GROUPS. THE MOISTURE CONTENT SHALL BE CONTROLLED WITHIN PLUS OR MINUS 2 PERCENTAGE POINTS OF OPTIMUM TO FACILITATE COMPACTION. GENERALLY, UNSATISFACTORY MATERIALS INCLUDE MATERIALS CLASSIFIED IN ASTM D-2487 AS PT, CH, MH, OR OH, AND ANY SOIL TOO WET TO FACILITATE COMPACTION. CH AND MH SOILS MAY BE USED SUBJECT TO APPROVAL BY A PROFESSIONAL GEOTECHNICAL ENGINEER.
3. MATERIALS USED TO CONSTRUCT EMBANKMENTS FOR ANY PURPOSE, BACK-FILL AROUND DRAINAGE STRUCTURES OR IN UTILITY TRENCHES OR ANY OTHER DEPRESSION REQUIRING FILL OR BACK-FILL SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AS SET FORTH IN ASTM STANDARD D-1557. PRIOR TO ANY OPERATIONS INVOLVING FILLING OR BACKFILLING, SUBMIT THE RESULTS OF THE PROCTOR TEST TOGETHER WITH A CERTIFICATION THAT THE SOIL TESTED IS REPRESENTATIVE OF THE MATERIALS TO BE USED ON THE PROJECT. TESTS SHALL BE CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER.
4. EMBANKMENT FILL AND TRENCH BACK-FILL SHALL BE PLACED IN LIFTS AT A MAXIMUM UN-COMPACTED DEPTH OF 8-INCHES AND 6-INCHES, RESPECTIVELY. DENSITY TESTS SHALL BE CONDUCTED AT THE FOLLOWING MINIMUM FREQUENCIES:
 - EMBANKMENTS FOR ROADS, STREETS, DAMS, ETC: ONE TEST PER LIFT PER 10,000 SQUARE FEET.
 - BACK-FILL AROUND STRUCTURES AND IN TRENCHES: ONE TEST PER LIFT PER 500 LINEAL FEET.
5. THE BUILDING'S STRUCTURAL ENGINEER SHALL DETERMINE SUITABLE SOILS TO BE USED AS FILL UNDER THE BUILDING PAD AND/OR ANY MODIFICATIONS OR TREATMENTS THE SOIL MUST UNDERGO PRIOR TO USE AS FILL.

PAVEMENT AND DRAINAGE NOTES:

1. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM WITH THE STANDARDS AND SPECIFICATIONS OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION'S, LATEST EDITION, EXCEPT WHERE TOWN OF FRONT ROYAL STANDARDS ARE APPLICABLE.
2. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES HAVING UNDERGROUND UTILITIES ON SITE OR IN RIGHT-OF-WAY PRIOR TO EXCAVATION. CONTRACTOR SHALL CONTACT UTILITY LOCATING COMPANY AND LOCATE ALL UTILITIES PRIOR TO GRADING START.
3. ALL STORM SEWER SHALL BE DUAL WALL HDPE PIPE WITH SMOOTH INTERIOR AND CORRUGATED EXTERIOR WALLS, EXCEPT AS NOTED. MINIMUM COVER IN PAVED AREAS SHALL BE 2' UNLESS OTHERWISE NOTED.
4. STORM DRAIN PIPE AND FLARED END SECTIONS ARE TO BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR HDPE PIPE AND END SECTIONS, OR SECTION 302 OF VDOT ROAD AND BRIDGE SPECIFICATIONS AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION C-76 FOR REINFORCED CONCRETE CULVERT AND STORM DRAIN PIPE.
5. CONCRETE DRAINAGE STRUCTURES MAY BE EITHER PRECAST OR CAST-IN-PLACE. ALL SHALL BE VDOT STANDARD (PER SECTION 100 OF THE ROAD AND BRIDGE STANDARDS).
6. ALL EXISTING STORM SEWER PIPES, DROP INLETS, AND CURB INLETS BEING UTILIZED BY A PART OF THE DRAINAGE SYSTEM SHALL BE CLEANED OF ERODED MATERIAL AT ALL STAGES OF CONSTRUCTION, AS DIRECTED BY THE ENGINEER. THE COST INCIDENTAL TO THIS IS TO BE INCLUDED IN THE CONTRACT PRICE FOR THE OTHER DRAINAGE ITEMS.
7. ALL STORM SEWER SHALL HAVE A MINIMUM OF 6" AGGREGATE BEDDING MATERIAL.
8. FOR STORM SEWER LINES WITH OVER 8' OF COVER, REFER TO THE MANUFACTURERS GUIDELINES FOR PROPER BACKFILL.
9. DRAIN BASINS AND INLINE DRAINS SHALL BE NYLOPLAST OR APPROVED EQUAL.
10. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (H20) LOADING (UNLESS OTHERWISE NOTED) AND BE INSTALLED ACCORDINGLY.
11. STORM SEWER PIPES AS SHOWN ON THE PLANS ARE MEASURED FROM THE CENTERLINE OF EACH STRUCTURE AND INVERT ELEVATIONS ARE ESTABLISHED BASED ON THIS CENTER LINE DISTANCE. LENGTH CALL OUTS FOR PIPES WITH FLARED END SECTIONS WILL BE MEASURED TO THE JOINT. CONTRACTOR SHALL LOCATE ALL END SECTIONS TO MATCH THE BANK SLOPE AND THE PIPE SLOPE SHALL BE ADJUSTED AS NECESSARY.
12. ALL DROP INLETS AND CURB INLETS SHALL HAVE VDOT STD. IS-1 SHAPING AND ST-1 STEPS, WHERE APPLICABLE.
13. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
14. BOOT CONNECTIONS SHALL BE PROVIDED FOR ALL PLASTIC PIPES THAT TIE INTO A CONCRETE STRUCTURE.
15. ALL STORM SEWER PIPES, MANHOLES, AND CURB INLETS SHALL BE CLEANED OF DEBRIS AND ERODED MATERIALS AT THE LAST STAGES OF CONSTRUCTION.
16. THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL DITCHES, PIPES, AND OTHER DRAINAGE STRUCTURES FREE FROM OBSTRUCTION UNTIL WORK IS ACCEPTED BY THE OWNER. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES CAUSED BY FAILURE TO MAINTAIN DRAINAGE STRUCTURE IN OPERABLE CONDITIONS.
17. ALL CURB AND GUTTER SHALL BE VDOT STANDARD, EXCEPT AS NOTED.

18. THE PAVEMENT DESIGN IS SUBJECT TO CHANGE DUE TO SOIL CONDITIONS AT THE TIME OF CONSTRUCTION, AS DETERMINED BY THE INSPECTORS FOR THE OWNER OR THE LOCALITY.
19. ANY NECESSARY PAVEMENT WIDENING BETWEEN THE EXISTING PAVEMENT AND PROPOSED IMPROVEMENTS IS THE RESPONSIBILITY OF THE CONTRACTOR.
20. WHERE PAVEMENT IS BEING REMOVED, THE CONTRACTOR SHALL REMOVE AGGREGATE BASE MATERIAL TO SUB-GRADE.
21. EXISTING PAVEMENT AND OTHER SURFACES DISTURBED BY CONTRACTOR (WHICH ARE NOT TO BE REMOVED) SHALL BE REPAIRED TO LIKE-NEW CONDITION.
22. IN ACCORDANCE WITH HANDICAP ACCESSIBILITY REQUIREMENTS, ALL APPLICABLE CODES AND REQUIREMENTS FOR ACCESSIBILITY FOR DISABLED PERSONS SHALL BE STRICTLY COMPLIED WITH.
23. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE SO THAT RUNOFF WILL DRAIN BY GRAVITY FLOW ACROSS NEW PAVEMENT AREAS TO NEW OR EXISTING DRAINAGE INLETS OR SHEET FLOW OVERLAND.
24. ALL UNSUITABLE MATERIAL UNDER STRUCTURES AND/OR PAVED AREAS SHALL BE DISPOSED OF OFFSITE AT THE CONTRACTOR'S EXPENSE.
25. AFTER PLACEMENT OF SUBGRADE AND PRIOR TO PLACEMENT OF PAVEMENT, CONTRACTOR SHALL TEST AND OBSERVE PAVEMENT AREAS FOR EVIDENCE OF PONDING. ALL AREAS SHALL ADEQUATELY DRAIN TOWARDS STRUCTURE TO CONVEY STORM RUNOFF. CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER AND ENGINEER IF ANY DISCREPANCIES ARE DISCOVERED.
26. WHEN TYING INTO EXISTING PAVEMENT, THE CONTRACTOR SHALL NEATLY SAW CUT TO A STRAIGHT LINE THE EXISTING PAVEMENT, AND ALL PAVING ON THE NEW PAVEMENT SIDE OF THE CUT SHALL BE COMPLETELY REMOVED AND REPLACED WITH SPECIFIED MATERIAL. THE CUT LINE SHALL BE FULL-DEPTH AND COATED WITH TACK COAT TO FURNISH A BOND BETWEEN THE EXISTING SURFACE COURSE AND THE NEW SURFACE COURSE.
27. WHEN TYING TO EXISTING CURB/GUTTER, THE CONTRACTOR SHALL NEATLY SAW CUT THE EXISTING PAVEMENT AND IT SHALL BE REMOVED FOR A DISTANCE OF 2'0" FROM FACE OF THE CURB AND 2'0" FROM THE EDGE OF CURB AND GUTTER AND THE SUBGRADE, BASE COURSE, AND PAVING SHALL BE REPLACED WITH NEW PRODUCTS.

GENERAL UTILITY NOTES:

1. NOTHING ON THESE CONTRACT DRAWINGS SHALL BE CONSTRUED AS A GUARANTEE THAT UTILITIES INDICATED AS EXISTING ARE IN THE LOCATION INDICATED OR THAT THEY ACTUALLY EXIST, OR THAT OTHER EXISTING UTILITIES ARE NOT WITHIN THE AREA OF OPERATIONS. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL MAKE ALL NECESSARY INVESTIGATIONS TO DETERMINE THE EXISTENCE, LOCATIONS, AND ELEVATIONS OF EXISTING UTILITIES IN THE WORK AREA. CONTACT THE ENGINEER IMMEDIATELY IF LOCATION OR ELEVATION IS DIFFERENT FROM THAT SHOWN ON THE PLANS. IF THERE APPEARS TO BE A CONFLICT, OR UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON THE PLANS TO PERMIT REVISIONS.
2. CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN HEREON AND ANY OTHER EXISTING UTILITIES NOT SHOWN ON THESE PLANS. IF A UTILITY IS DAMAGED DURING CONSTRUCTION, STOP WORK IMMEDIATELY AND NOTIFY THE ENGINEER. DAMAGE TO UTILITIES (INCLUDING UNDERGROUND) OR PROPERTY OF OTHERS BY CONTRACTOR DURING CONSTRUCTION SHALL BE REPAIRED TO PRE-CONSTRUCTION CONDITIONS BY CONTRACTOR AT NO COST TO OWNER.
3. THE CONTRACTOR SHALL PROVIDE THE TOWN OF FRONT ROYAL A MINIMUM OF 96 HOURS NOTIFICATION PRIOR TO ANY INTERRUPTION OF WATER SERVICES, SEWER SERVICES, STREET TRAFFIC, OR STORM WATER. AND THE WORK SHALL CONFORM TO THE LATEST STANDARDS AND SPECIFICATIONS OF THE TOWN OF FRONT ROYAL.
4. THE CONTRACTOR SHALL COORDINATE WATER, SEWER, AND STORM WATER CONNECTIONS/CONSTRUCTION WITH THE TOWN OF FRONT ROYAL FOR PURPOSES OF ON-SITE INSPECTION.
5. THE CONTRACTOR SHALL CONTACT THE APPLICABLE UTILITY SERVICE PROVIDER REQUIREMENTS AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY DEMOLITION AS IDENTIFIED OR REQUIRED FOR PROJECT. THE CONTRACTOR SHALL PROVIDE THE OWNER WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTION AND UTILITY COMPANY REQUIREMENTS.
6. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES/SERVICES WITH THE INDIVIDUAL COMPANIES TO AVOID CONFLICTS AND ENSURE PROPER DEPTHS ARE ACHIEVED. THE JURISDICTION UTILITY REQUIREMENTS SHALL ALSO BE MET, AS WELL AS COORDINATING THE UTILITY TIE-INS/CONNECTIONS PRIOR TO CONNECTING TO THE EXISTING UTILITY/SERVICE. WHERE CONFLICTS EXIST WITH THESE SITE PLANS, ENGINEER IS TO BE NOTIFIED PRIOR TO CONSTRUCTION TO RESOLVE.
7. THE CONTRACTOR SHALL PERFORM WHATEVER TEST EXCAVATION OR OTHER INVESTIGATION IS NECESSARY TO VERIFY TIE-INS, INVERTS, CROSSINGS, LOCATIONS AND CLEARANCES, AND SHALL REPORT IMMEDIATELY ANY DISCREPANCIES TO THE ENGINEER.
8. ALL PROPOSED UTILITIES ARE TO BE INSTALLED UNDERGROUND. ALL OF THESE UTILITIES (WATER, SANITARY SEWER, OVERHEAD ELECTRIC, ETC.) SHALL BE INSTALLED IN ACCORDANCE WITH THE TOWN OF FRONT ROYAL COMMENCING ANY PAVING OPERATIONS WHERE SUCH UTILITIES ARE WITHIN THE LIMITS OF PAVEMENT.
9. ALL EXCAVATION FOR UNDERGROUND PIPE INSTALLATION MUST COMPLY WITH OSHA STANDARDS FOR THE CONSTRUCTION INDUSTRY. (29 CFR PART 1926).
10. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES AND THE MEP ENGINEERS ON THE REQUIREMENTS FOR UNDERGROUND ELECTRICAL SERVICES, GAS SERVICES, COMMUNICATION SERVICES AND OTHER UTILITIES NOT DETAILED ON THE CIVIL PLANS.
11. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH SECTION 59.1-406, ET SEQ. OF THE CODE OF VIRGINIA (OVERHEAD) VOLTAGE LINES SAFETY ACT.
12. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF SITE PLAN DOCUMENTS AND ARCHITECTURAL DESIGN FOR EXACT BUILDING UTILITY CONNECTION LOCATIONS, DOOR ACCESS, AND EXTERIOR GRADING. THE UTILITY SERVICE SIZES ARE TO BE DETERMINED BY THE ARCHITECT.
13. MAINTAIN A MINIMUM OF 18" OF VERTICAL CLEARANCE BETWEEN STORM, SANITARY, AND ALL UTILITIES (UNLESS OTHERWISE NOTED).
14. CROSS CONNECTION CONTROL AND BACK FLOW PREVENTION SHALL BE IN ACCORDANCE WITH THE VA UNIFORM STATEWIDE BUILDING CODE.
15. ALL CLEANOUTS AND VAULTS WITHIN VEHICULAR AREAS SHALL BE TRAFFIC BEARING.
16. CONTRACTOR SHALL SAW CUT, REMOVE, AND REPLACE ASPHALT PAVEMENT AS NECESSARY TO INSTALL UNDERGROUND ELECTRIC, TELEPHONE, SANITARY SEWER, WATER, AND COMMUNICATION CONDUITS.
17. UNDERGROUND UTILITIES INSTALLED ON PRIVATE PROPERTY OR IN PRIVATE UTILITY EASEMENTS AND BUILDING RELATED STORM DRAINS SHALL BE DESIGNED AND INSTALLED PER THE CURRENT EDITION OF THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE.
18. THE RIM ELEVATIONS OF EXISTING MANHOLES, INLET STRUCTURES, AND SANITARY CLEANOUT TOPS SHALL STANDARDS. IF REQUIRED, TO MATCH PROPOSED GRADES IN ACCORDANCE WITH ALL APPLICABLE STANDARDS.
19. BRACING OF UTILITY POLES MAY BE REQUIRED BY UTILITY COMPANIES WHEN TRENCHING OR EXCAVATION IS IN CLOSE PROXIMITY TO THE POLES. THE COST OF BRACING POLES WILL BE BORNE BY THE CONTRACTOR. THERE IS NO SEPARATE PAY ITEM FOR THIS WORK. THE COST IS INCIDENTAL TO THE VARIOUS PAY ITEMS FOR INSTALLATION OF PIPE.

WATER AND SANITARY SEWER NOTES:

1. ALL CONSTRUCTION MATERIALS AND INSTALLATION SHALL CONFORM TO THE LATEST STANDARDS AND SPECIFICATIONS OF THE TOWN OF FRONT ROYAL OR THE VDOT ROAD AND BRIDGE STANDARDS, THE MOST STRINGENT SHALL APPLY.
2. WATER LINES WITHIN THE RIGHT-OF-WAY SHALL BE SDR-18 PVC CONFORMING TO THE APPLICABLE ASTM, AWWA, ANSI, OR OTHER APPROPRIATE STANDARD.
3. ONSITE WATER MAINS (3" AND LARGER) SHALL BE 6" CLASS 52 DUCTILE IRON PRESSURE PIPE.
4. DUCTILE IRON PIPE SHALL BE OF THE MECHANICAL JOINT OR RESTRAINED JOINT VARIETY, CONFORMING TO ANSI 21-51 (AWWA C151, LATEST REVISION) WITH A MINIMUM THICKNESS CLASS OF 52 FOR ALL PIPE DIAMETERS. ALL FITTINGS SHALL BE MECHANICAL JOINT, DUCTILE IRON IN ACCORDANCE WITH AWWA SPECIFICATIONS C110/C111, LATEST REVISIONS, WITH A MINIMUM PRESSURE RATING OF 250 POUNDS PER SQUARE INCH.
5. ONSITE WATER LINES (2" AND SMALLER) SHALL BE TYPE K COPPER.
6. MINIMUM COVER OVER TOP OF DOMESTIC WATER PIPE MUST BE 42 INCHES.
7. DOMESTIC WATER LINES SHALL BE BACTERIA TESTED. ALL WATER LINES SHALL BE TESTED AT 200 PSI IN ACCORDANCE WITH NFPA 24, NFPA 13 AND ALL OTHER LOCAL AND STATE REQUIREMENTS.
8. SANITARY SEWER LINES SHALL BE DUCTILE IRON OR SDR-26 PVC CONFORMING TO THE APPLICABLE ASTM, AWWA, ANSI, OR OTHER APPROPRIATE STANDARD.
9. MINIMUM COVER OVER TOP OF SEWER PIPE MUST BE 48 INCHES.
10. WATER AND SANITARY LINES SHALL BE INSTALLED WITH A MINIMUM OF 6" OF BEDDING STONE AS INDICATED IN THE STANDARD DETAILS.
11. CONTRACTOR SHALL LOCATE AND UNCOVER ALL SEWER MANHOLES OR WATER VALVE BOXES AFTER PAVING AND TO ADJUST THEM TO THE FINAL GRADE. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR CLEANING OUT SEWER MAINS FOR FINAL INSPECTION, IF NECESSARY.
12. FINAL ACCEPTANCE BY THE OWNER AND THE TOWN OF FRONT ROYAL SHALL NOT BE MADE UNTIL ALL WORK SHOWN ON APPROVED UTILITY PLANS IS COMPLETED INCLUDING PAVING, GRADING, AND ALL REQUIRED ADJUSTMENTS.
13. THE OWNER OR THEIR REPRESENTATIVES AND THE TOWN OF FRONT ROYAL WILL INSPECT ALL WATER AND SANITARY SEWER LINES, CONNECTIONS, AND APPURTENANCES THERETO, AS SHOWN ON THE APPROVED UTILITY PLANS.

REQUIRED SHOP DRAWING SUBMITTALS:

1. IF NOTED WITHIN THE PLANS OR REQUIRED FOR THE PROJECT, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER COMPLETE SHOP DRAWING SUBMITTAL PACKAGES FOR REVIEW AND APPROVAL. THE REQUIRED SUBMITTALS INCLUDE BUT ARE NOT LIMITED TO: DETENTION SYSTEMS, RETAINING WALLS, SHORING, STORMWATER QUALITY DEVICES OR MEASURES.

VIRGINIA RUNOFF REDUCTION METHOD (VRRM) DESIGN DISCLAIMER:

THE METHODOLOGY OF THE VIRGINIA RUNOFF REDUCTION METHOD (VRRM) IS CONTINGENT UPON THE UNDERSTANDING THAT ALL PROPOSED BMP'S WILL BE MAINTAINED AND REMAIN FULLY FUNCTIONAL THROUGHOUT THE LIFE OF THE DEVELOPMENT (FOREVER). THE PLANS, SEQUENCE OF CONSTRUCTION, DETAILS, AND MAINTENANCE PROCEDURES PROPOSED IN THIS PLAN SET HAVE BEEN PROVIDED TO ENSURE THE PROPOSED BMP'S ARE PROPERLY INSTALLED AND MAINTAINED. THE ENGINEER-OF-RECORD IS NOT RESPONSIBLE FOR ANY DAMAGE OF DOWNSTREAM PROPERTIES OR WATERWAYS DUE TO THE STRUCTURAL AND/OR NON-STRUCTURAL BMP'S NOT FULLY SERVICED AND CONTINUALLY MAINTAINED AS SPECIFIED IN THE BMP SPECIFICATIONS AND MAINTENANCE PROCEDURES PROVIDED IN THIS PLAN SET AND ADDITIONAL REQUIREMENTS FROM DEQ, THE LOCALITY, AND OTHER AGENCIES.

ELECTRIC SERVICE CONDUIT NOTES:

1. ALL INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE.
2. WHEN INSTALLING UNDERGROUND CONDUIT, IT IS MANDATORY THAT THE PVC CONDUIT BE INSPECTED BY THE ENERGY SERVICES DEPARTMENT BEFORE IT IS COVERED. (INSPECTION FEE REQUIRED)
3. CONDUIT MUST BE AT LEAST 3" IN DIAMETER FOR SINGLE PHASE INSTALLATION AND AT LEAST 4" IN DIAMETER FOR THREE-PHASE INSTALLATION.
4. SCHEDULE 40 THICKNESS ON THE RUNS AND SCHEDULE 80 THICKNESS ON THE LONG SWEEP NINETY-DEGREE ELBOWS.
5. THE MINIMUM DEPTH OF CONDUIT MUST BE AT LEAST THREE (3) FEET DEEP AT FINAL GRADE. IF NOT ATTAINABLE, CONCRETE ENCASEMENT OF CONDUIT IS POSSIBLE WITH PERMISSION FROM THE TOWN.
6. ALL JOINTS SHALL BE GLUED TOGETHER.
7. SLIP JOINTS SHALL BE INSTALLED BETWEEN THE LAST ELBOW AND THE BOTTOM OF THE METER BOX.
8. A PULL ROPE MUST ALSO BE INSTALLED.

LEGEND	EXISTING	PROPOSED
PROPERTY LINE	---	---
BUILDING RESTRICTION LINE		---BRL---
CONTOUR (1' INTERVAL)	---500---	---500---
CULVERT PIPE	---ST---	---ST---
WATER LINE	---W---	---W---
SANITARY SEWER LINE	---S---	---S---
UNDERGROUND ELECTRIC LINE	---UGE---	---UGE---
OVERHEAD ELECTRIC	---+---	---+---
STORM DRAIN PIPING	---ST---	---ST---
LIMITS OF DISTURBANCE	---	---LOD---
CENTER OF ROAD	---	---
GAS LINE	---GAS---	---GAS---
LANDSCAPE BUFFER LINE	---	---
FENCE (1)	---	---
FENCE (2)	---	---
CURB & GUTTER	---	---
GRAVEL AREA	---	---
ASPHALT AREA	---	---
CONCRETE AREA	---	---
LANDSCAPED AREA	---	---
TREE LINE	---	---
IRON PIN/ROD	○	○
MANHOLE (UNSPECIFIED)	Ⓜ	Ⓜ
STORM MANHOLE	Ⓢ	Ⓢ
SEWER MANHOLE	Ⓢ	Ⓢ
WATER METER	Ⓢ	Ⓢ
HYDRANT	Ⓢ	Ⓢ
WATER VALVE/WATER VALVE BOX	Ⓢ	Ⓢ
CLEANOUT	Ⓢ	Ⓢ
GRATE INLET	Ⓢ	Ⓢ
GAS VALVE	Ⓢ	Ⓢ
TELEPHONE PEDESTAL	Ⓢ	Ⓢ
UTILITY POLE	Ⓢ	Ⓢ
LIGHT POLE	Ⓢ	Ⓢ
SIGN	Ⓢ	Ⓢ
GUIDE WIRE	Ⓢ	Ⓢ

No.	Submittal / Revision	By	Date
1	1ST SUBMITTAL TOWN	HY	06/28/24
2	2ND SUBMITTAL TOWN	HY	10/15/24

PERMIT
REVIEW SET

RACEY
ENGINEERING, PLLC

312 WEST MAIN ST. - P.O. BOX 387
LURAY, VA 22835
PH: (440) 743-8227 • FAX: (440) 743-6118

STRASBURG ROAD SUBDIVISION

PROJECT NOTES

ALI BILLOO

WARREN COUNTY, VA

PUBLISH DATE: 10/15/2024

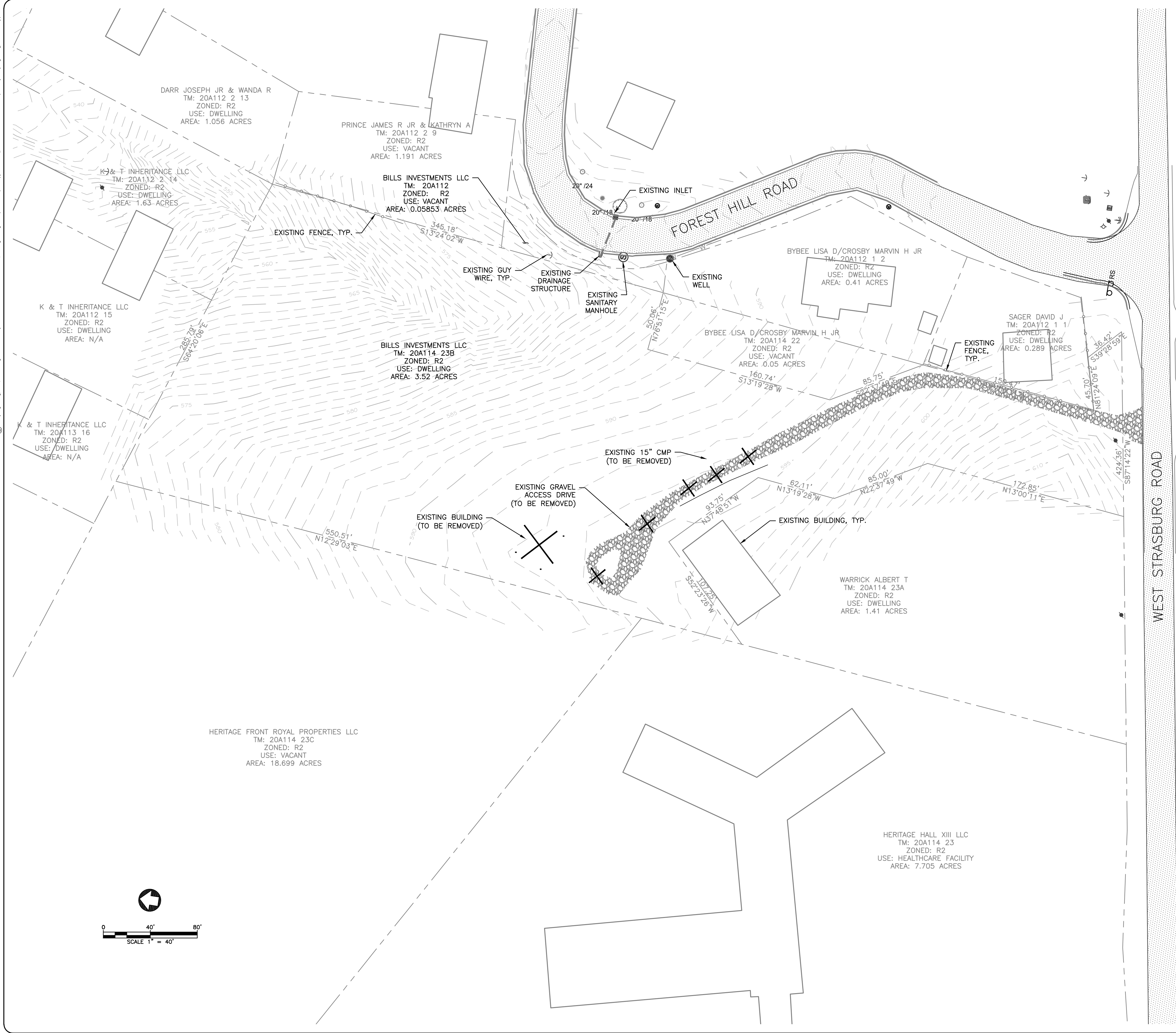
RACEY PROJECT NUMBER: 9276

CHECKED:JPT

DRAWN:HV

DESIGNED:HV

T101



SURVEY SOURCE AND INFORMATION:

SOURCE: THIS TOPOGRAPHIC SURVEY WAS COMPLETED BY RACEY ENGINEERING, PLLC ON OR BEFORE FEBRUARY 9, 2024, FROM ACTUAL CONVENTIONAL AND RTK GPS SURVEY METHODS FROM RACEY ENGINEERING, PLLC ESTABLISHED CONTROL. THIS MAP MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

HORIZONTAL AND VERTICAL DATUM: VA NAD83, NAVD88 BASED UPON GPS OBSERVATION PERFORMED BY RACEY ENGINEERING, PLLC.

CONTOUR INTERVAL: 1 FT.

THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE COMMITMENT OR TITLE REPORT AND DOES NOT THEREFORE, NECESSARILY INDICATE ALL EASEMENTS AND ENCUMBRANCES ON THE PROPERTY THAT MIGHT BE DISCLOSED IN A TITLE SEARCH.

UTILITIES SHOWN HEREON ARE BASED ON VISIBLE, PHYSICAL EVIDENCE. UNDERGROUND UTILITIES WERE NOT MARKED AS PART OF THIS PROJECT. IT SHALL BE THE RESPONSIBILITY OF THE OWNER/CONTRACTOR TO HAVE UTILITIES MARKED PRIOR TO LAND DISTURBANCE OF ANY KIND. SEE SHEET T101 FOR MORE INFORMATION.

PROPERTY LINES SHOWN HEREON ARE COMPILED FROM RECORD PLAT (DEED BOOK 306, PAGE 41) AND TOWN/COUNTY GIS OVERLAY.

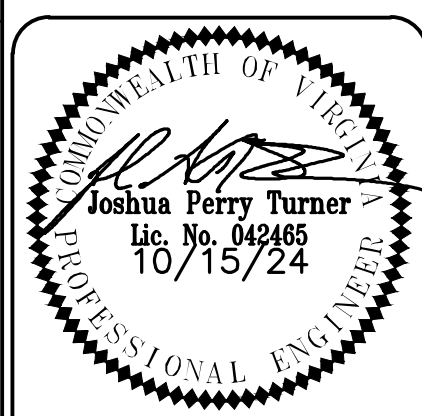
RACEY ENGINEERING, PLLC MAY PROVIDE BENCHMARKS FOR THE CONSTRUCTION OF THE IMPROVEMENTS SHOWN ON THESE PLANS. ALL OTHER EXISTING ELEVATIONS ARE FOR REFERENCE TO EXISTING CONDITIONS ONLY. DO NOT USE SPOT ELEVATIONS, FINISH FLOOR ELEVATIONS, ELEVATIONS ON MANHOLES, ELEVATIONS ON SURVEY NAILS, SURVEY HUBS, CONTROL POINTS (HORIZONTAL POINTS PROVIDED) OR ANY OTHER POINTS FOR CONSTRUCTION OTHER THAN THE PROVIDED BENCHMARKS. FAILURE TO UTILIZE AND VERIFY THE PROVIDED BENCHMARKS COULD RESULT IN DAMAGES AND ADDITIONAL COST THAT ARE THE CONTRACTOR'S RESPONSIBILITY.

DEMOLITION NOTES:

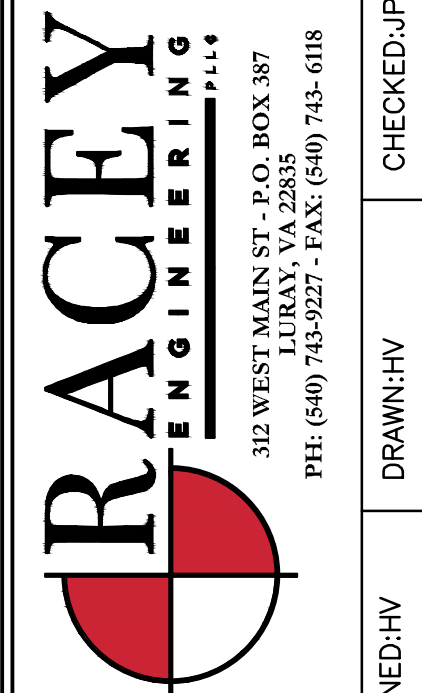
- PRIOR TO STARTING ANY DEMOLITION CONTRACTOR IS SHALL ENSURE THAT COPIES OF ALL APPLICABLE PERMITS AND APPROVALS ARE MAINTAINED ON SITE AND AVAILABLE FOR REVIEW. CONTRACTOR ALSO SHALL HAVE COMPLETED THE PRE-CONSTRUCTION CONFERENCE.
- CONTRACTOR SHALL INSTALL THE REQUIRED SOIL EROSION AND SEDIMENT CONTROL AND/OR TREE PROTECTION MEASURES PRIOR TO SITE DISTURBANCE.
- CONTRACTOR SHALL LOCATE (VERTICALLY AND HORIZONTALLY) ALL UTILITIES AND SERVICES, INCLUDING, BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN THE LIMITS OF DISTURBANCE. THE CONTRACTOR SHALL USE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL THE UNDERGROUND UTILITIES.
- CONTRACTOR SHALL CONTACT THE APPLICABLE UTILITY SERVICE PROVIDER AND SHALL BE RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY DEMOLITION REQUIRED FOR THE PROJECT. THE CONTRACTOR SHALL PROVIDE THE OWNER WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTION AND UTILITY COMPANY REQUIREMENTS.
- CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES & ADJACENT LANDOWNERS/BUSINESSES REGARDING WORKING "OFF-PEAK" HOURS OR ON WEEKENDS WHICH MAY BE REQUIRED TO MINIMIZE THE IMPACT ON THE ADJACENT PROPERTY OWNERS/TENANTS.
- CONTRACTOR SHALL PROCEED WITH THE DEMOLITION IN A SYSTEMATIC AND SAFE MANNER, FOLLOWING ALL OSHA REQUIREMENTS, TO ENSURE THE SAFETY OF THE PUBLIC AND ALL PARTIES INVOLVED.
- THE CONTRACTOR SHALL PROVIDE ALL THE "MEANS AND METHODS" NECESSARY TO PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF EXISTING STRUCTURES, AND ANY OTHER IMPROVEMENTS THAT ARE REMAINING ON OR OFF SITE.
- THE DEMOLITION CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS OF DAMAGE TO ALL ITEMS THAT ARE TO REMAIN AS A RESULT OF THEIR ACTIVITIES.
- IN THE ABSENCE OF SPECIFICATIONS, THE CONTRACTOR SHALL PERFORM EARTH MOVEMENT ACTIVITIES, DEMOLITION AND REMOVAL OF ALL FOUNDATION WALLS, FOOTINGS, AND OTHER MATERIALS WITHIN THE LIMITS OF DISTURBANCE WITH DIRECTION BY OWNER'S STRUCTURAL OR GEOTECHNICAL ENGINEER.
- CONTRACTOR SHALL CONDUCT DEMOLITION ACTIVITIES IN SUCH A MANNER TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, SIDEWALKS, WALKWAYS, AND OTHER ADJACENT FACILITIES. STREET CLOSURE PERMITS MUST BE RECEIVED FROM THE APPROPRIATE GOVERNMENTAL AUTHORITY.
- USE DUST CONTROL MEASURES TO LIMIT AIRBORNE DUST DURING DEMOLITION IN ACCORDANCE WITH FEDERAL, STATE, AND/OR LOCAL STANDARDS. AFTER THE DEMOLITION IS COMPLETE, ADJACENT STRUCTURES AND IMPROVEMENTS SHALL BE CLEANED OF ALL DUST AND DEBRIS CAUSED BY THE DEMOLITION OPERATIONS. THE CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL ADJACENT AREAS TO THEIR "PRE-DEMOLITION" CONDITION.
- CONTRACTOR IS RESPONSIBLE TO SAFEGUARD SITE AS NECESSARY TO PERFORM THE DEMOLITION IN SUCH A MANNER AS TO PREVENT THE ENTRY OF UNAUTHORIZED PERSONS AT ANY TIME.
- THIS DEMOLITION PLAN IS INTENDED TO IDENTIFY THOSE EXISTING ITEMS/CONDITIONS WHICH ARE TO BE REMOVED. IT IS NOT INTENDED TO PROVIDE DIRECTION OTHER THAN THAT ALL METHODS AND MEANS ARE TO BE IN ACCORDANCE WITH STATE, FEDERAL, LOCAL, AND JURISDICTIONAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OSHA AND OTHER SAFETY PRECAUTIONS NECESSARY TO PROVIDE A SAFE WORK SITE.
- DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE. ALL DEMOLITION WASTES AND DEBRIS (SOLID WASTE) SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL LAWS AND APPLICABLE CODES.

✕ TO BE REMOVED

No.	Submital	Revision	By	App'd	Date
1	1ST SUBMITTAL TOWN		HV	JPT	06/28/24
2	2ND SUBMITTAL TOWN		HV	JPT	10/15/24



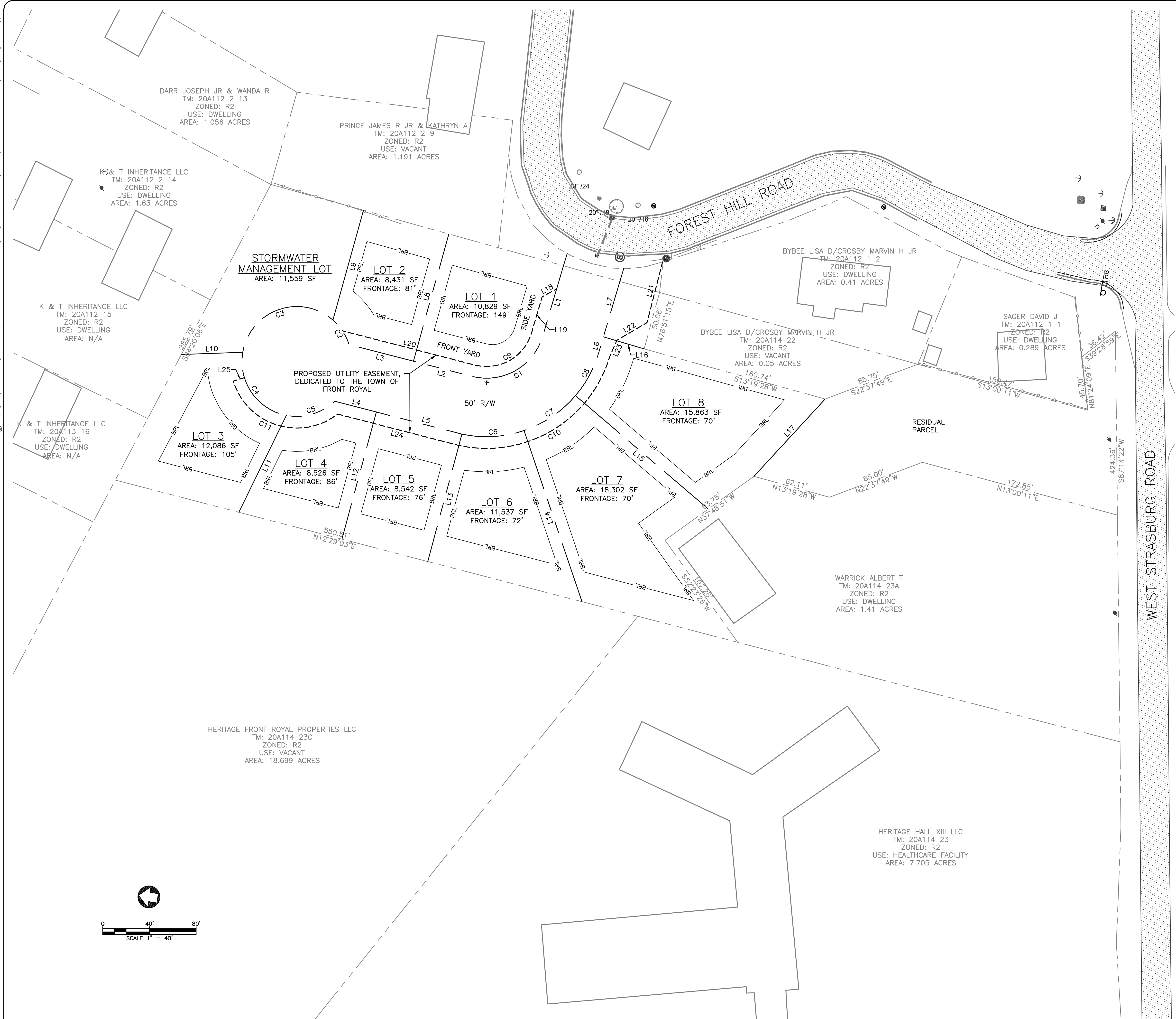
PERMIT
REVIEW SET



STRASBURG ROAD SUBDIVISION
EXISTING FEATURES
ALI BILLOO
WARREN COUNTY, VA

RACEY PROJECT NUMBER: 9276
PUBLISH DATE: 10/15/2024

C100



PARCEL LINE DATA		
SEGMENT	LENGTH	DIRECTION
L1	62.96'	S82° 30' 26"E
L2	51.79'	S5° 28' 51"W
L3	56.89'	S5° 28' 51"W
L4	36.80'	N5° 28' 49"E
L5	75.67'	N5° 28' 49"E
L6	14.36'	N82° 30' 26"W
L7	61.08'	N82° 30' 26"W
L8	113.03'	S83° 28' 50"E
L9	97.52'	N83° 25' 14"W
L10	52.49'	S11° 06' 00"E
L11	92.32'	N72° 52' 29"W
L12	112.67'	S83° 51' 58"E
L13	112.83'	N83° 57' 50"W
L14	154.58'	N62° 18' 59"E
L15	149.44'	S31° 27' 54"E
L16	36.31'	N7° 29' 34"E
L17	89.96'	S56° 20' 11"E
L18	14.14'	S37° 30' 26"E
L19	32.33'	S82° 30' 26"E
L20	117.17'	S5° 28' 51"W
L21	53.58'	S84° 31' 11"E
L22	29.85'	S39° 31' 11"E
L23	14.94'	S75° 12' 18"E
L24	107.47'	S5° 28' 49"W
L25	10.00'	N26° 10' 45"W

PARCEL CURVE DATA						
SEGMENT	LENGTH	RADIUS	CENTRAL ANGLE	TANGENT LENGTH	CHORD LENGTH	CHORD BEARING
C1	76.78'	50.00'	87.99°	48.27'	69.46	S38° 30' 48.57"E
C2	25.48'	47.00'	31.07°	13.06'	25.17	S47° 37' 13.45"W
C3	99.61'	47.00'	121.44°	83.82'	81.98	S28° 38' 07.81"E
C4	72.67'	47.00'	88.60°	45.86'	65.64	N46° 20' 42.31"E
C5	44.80'	47.00'	54.61°	24.26'	43.12	N25° 15' 36.18"W
C6	53.94'	100.07'	30.88°	27.64'	53.29	N12° 18' 14.48"W
C7	53.85'	100.23'	30.78°	27.59'	53.20	N43° 07' 26.36"W
C8	41.84'	100.39'	23.88°	21.23'	41.53	N70° 31' 16.46"W
C9	61.43'	40.00'	87.99°	38.62'	55.57	S38° 30' 48.74"E
C10	164.78'	110.13'	85.73°	102.21'	149.84	S39° 37' 07.72"E
C11	110.04'	57.00'	110.62°	82.34'	93.73	S08° 30' 40.19"W

CURRENT ZONING - R2
TAX MAP NUMBER: 20A114-23B

PER ZONING ORDINANCE:
FRONT SETBACK: 30'
SIDE SETBACK: 10'
REAR SETBACK: 25'
MINIMUM FRONTAGE: 70'
MINIMUM LOT SIZE: 8,000 SF

CORNER LOTS:
FRONT SETBACK: 30'
SIDE SETBACK: 10'
ROAD-ADJACENT SETBACK: 25'
REAR SETBACK: 25'
MINIMUM FRONTAGE: 100'

STRASBURG ROAD SUBDIVISION

PLAT SHEET

ALI BILLOO

WARREN COUNTY, VA

DATE: 10/15/2024

PUBLISH DATE: 10/15/2024

PROJECT NUMBER: 9276

C101

DESIGNED:HV

DRAWN:HV

CHECKED:JPT

PERMIT REVIEW SET

COMMONWEALTH OF VIRGINIA

Professional Engineer

Joshua Perry Turner

Lic. No. 042465

10/15/24

By

App'd

Date

1ST SUBMITTAL TOWN

2ND SUBMITTAL TOWN

10/15/24

10/15/24

SEGMENT

LENGTH

DIRECTION

L1

62.96'

S82° 30' 26"E

L2

51.79'

S5° 28' 51"W

L3

56.89'

S5° 28' 51"W

L4

36.80'

N5° 28' 49"E

L5

75.67'

N5° 28' 49"E

L6

14.36'

N82° 30' 26"W

L7

61.08'

N82° 30' 26"W

L8

113.03'

S83° 28' 50"E

L9

97.52'

N83° 25' 14"W

L10

52.49'

S11° 06' 00"E

L11

92.32'

N72° 52' 29"W

L12

112.67'

S83° 51' 58"E

L13

112.83'

N83° 57' 50"W

L14

154.58'

N62° 18' 59"E

L15

149.44'

S31° 27' 54"E

L16

36.31'

N7° 29' 34"E

L17

89.96'

S56° 20' 11"E

L18

14.14'

S37° 30' 26"E

L19

32.33'

S82° 30' 26"E

L20

117.17'

S5° 28' 51"W

L21

53.58'

S84° 31' 11"E

L22

29.85'

S39° 31' 11"E

L23

14.94'

S75° 12' 18"E

L24

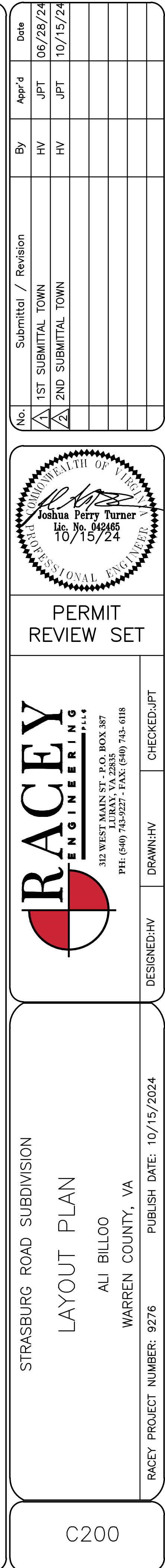
107.47'

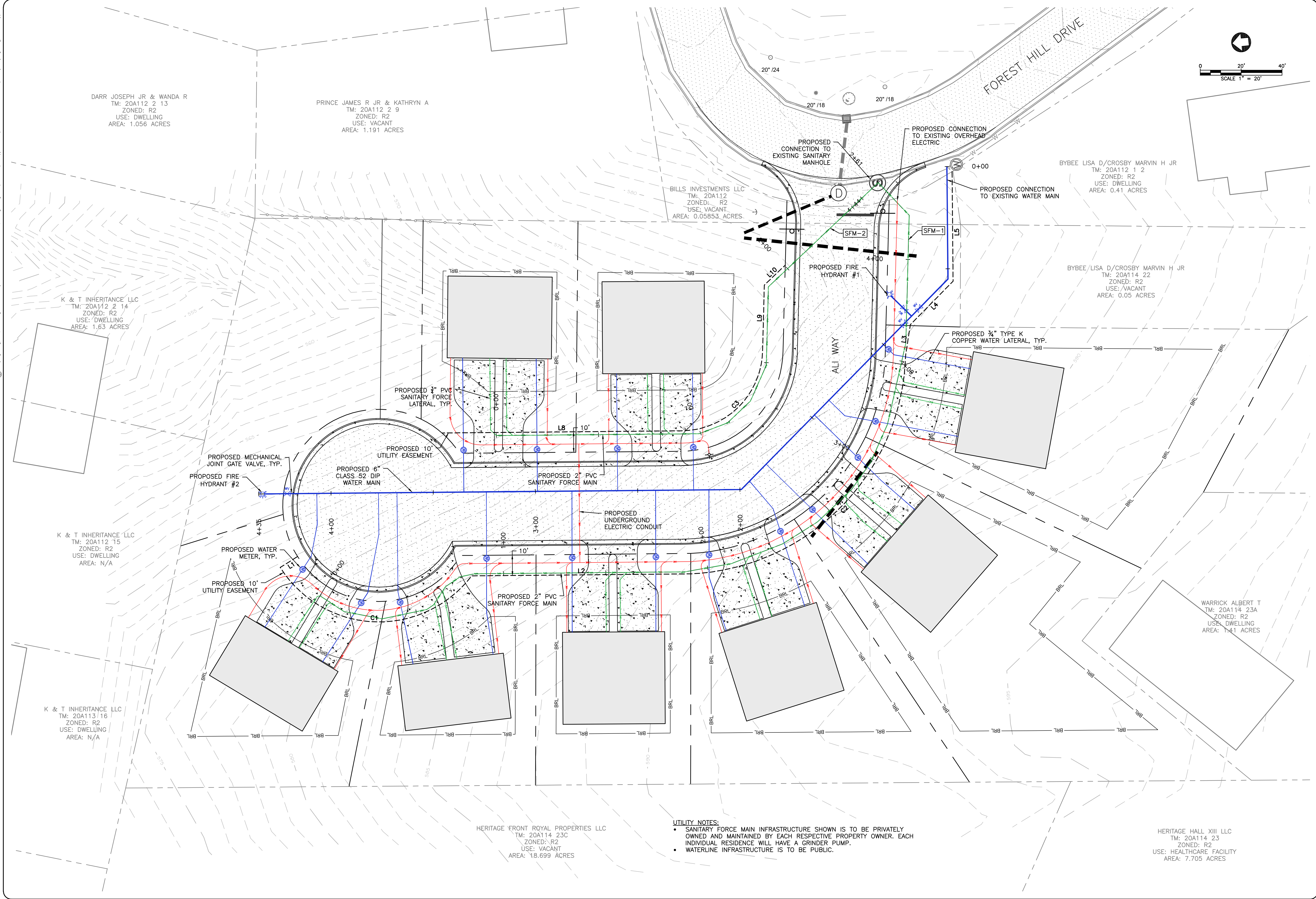
S5° 28' 49"W

L25

10.00'

N26° 10' 45"W





No.	Submittal / Revision	By	App'd	Date
1	1ST SUBMITTAL TOWN	HV	JPT	06/28/24
2	2ND SUBMITTAL TOWN	HV	JPT	10/15/24

PERMIT REVIEW SET

312 WEST MAIN ST. - P.O. BOX 387
LURAY, VA 22835
PH: (540) 743-5227 • FAX: (540) 743-6118

STRASBURG ROAD SUBDIVISION

UTILITY PLAN

ALI BILLOO

WARREN COUNTY, VA

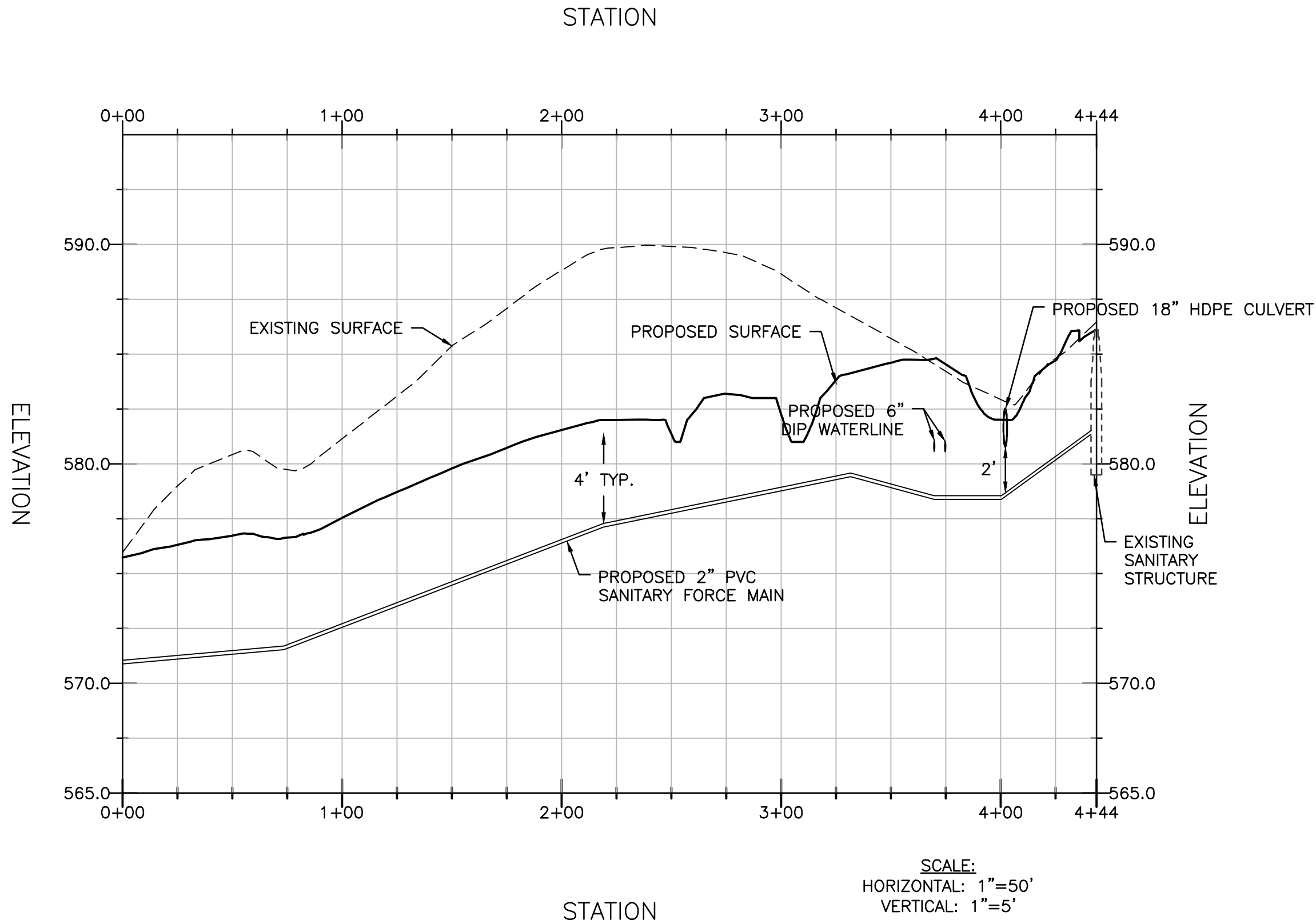
RACEY PROJECT NUMBER: 9276

PUBLISH DATE: 10/15/2024

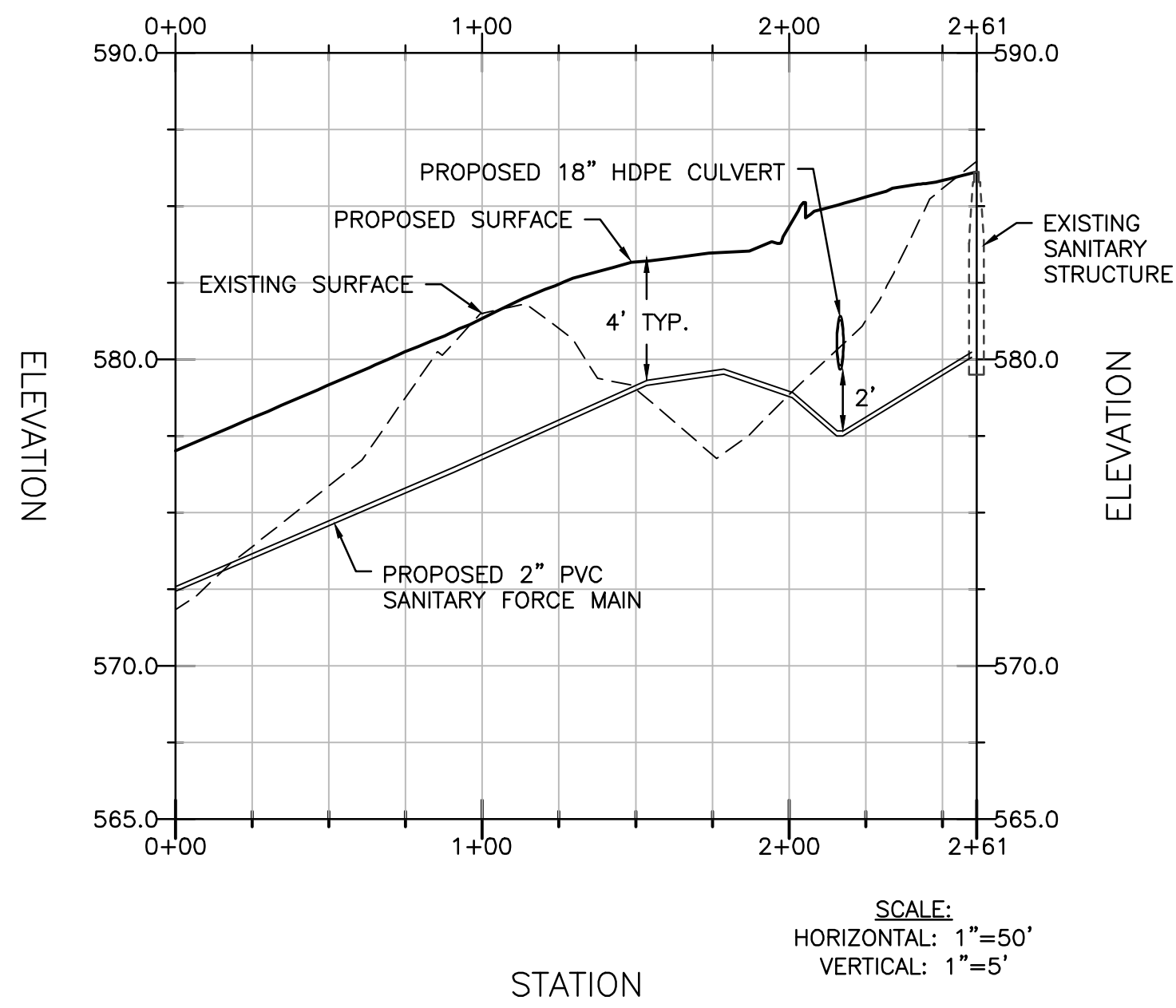
C201

P:\2022\9276 - Ali Billoo - Strasburg Road Subdivision - 20A114-23B-Civil\8. DESIGN\4. DWG\CIVIL\COMPOSITE P:\2022\9276 - Ali Billoo - Strasburg Road Subdivision - 20A114-23B-Civil\8. DESIGN\4. DWG\CIVIL\COMPOSITE

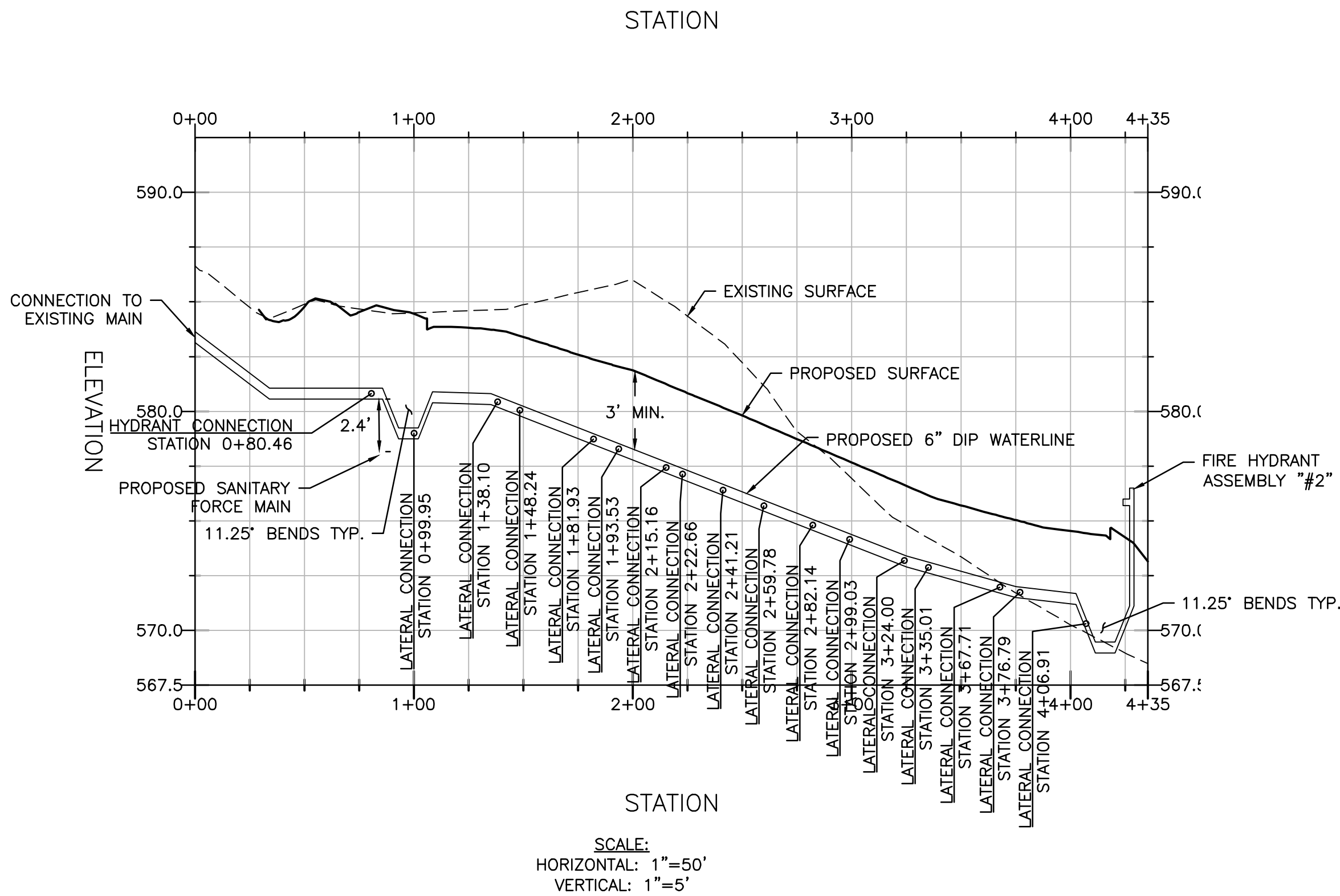
SANITARY SEWER SFM-1 PROFILE



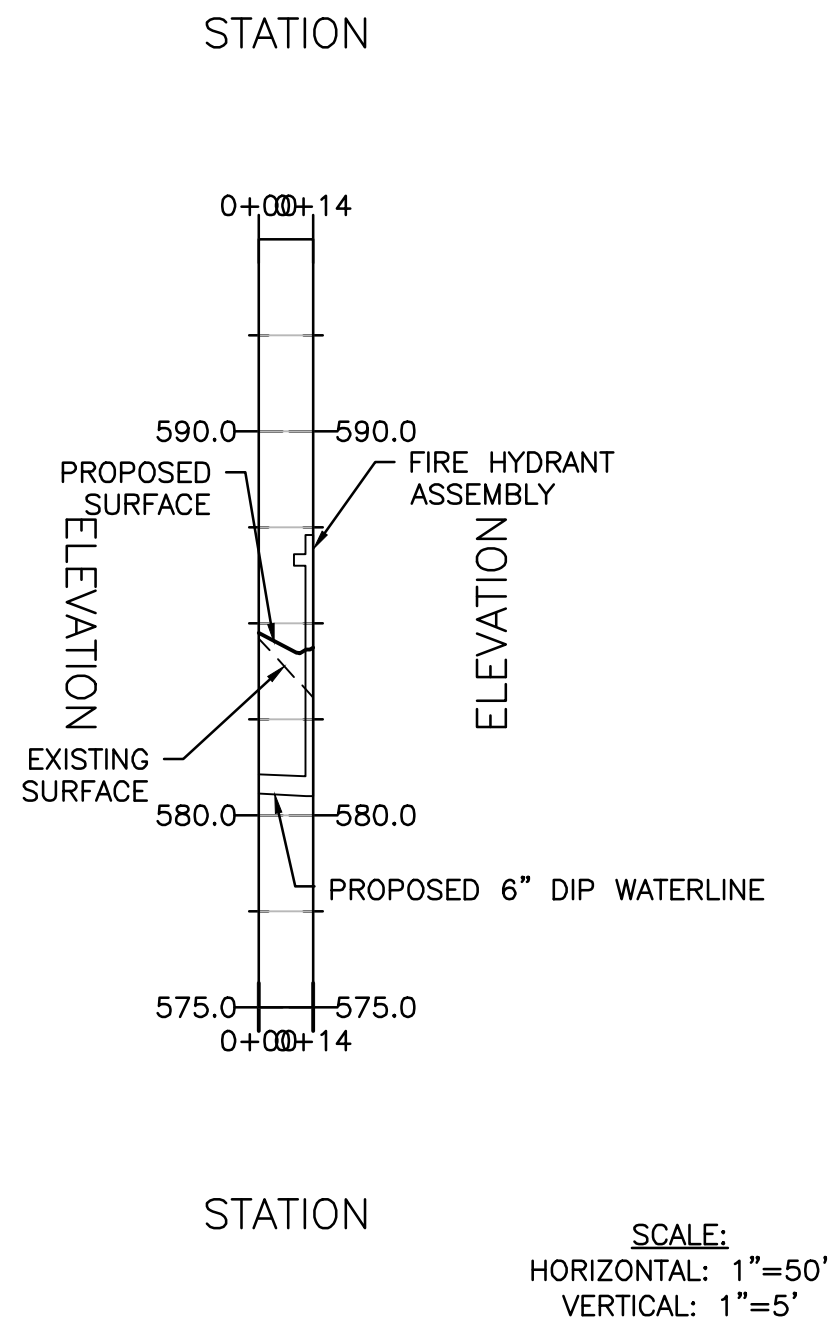
SANITARY SEWER SFM-2 PROFILE



WATER MAIN PROFILE



FIRE HYDRANT #1



No.	By	Submittal / Revision	App'r'd	Date
1	HV	1ST SUBMITTAL TOWN	JPT	06/28/24
2	HV	2ND SUBMITTAL TOWN	JPT	10/15/24



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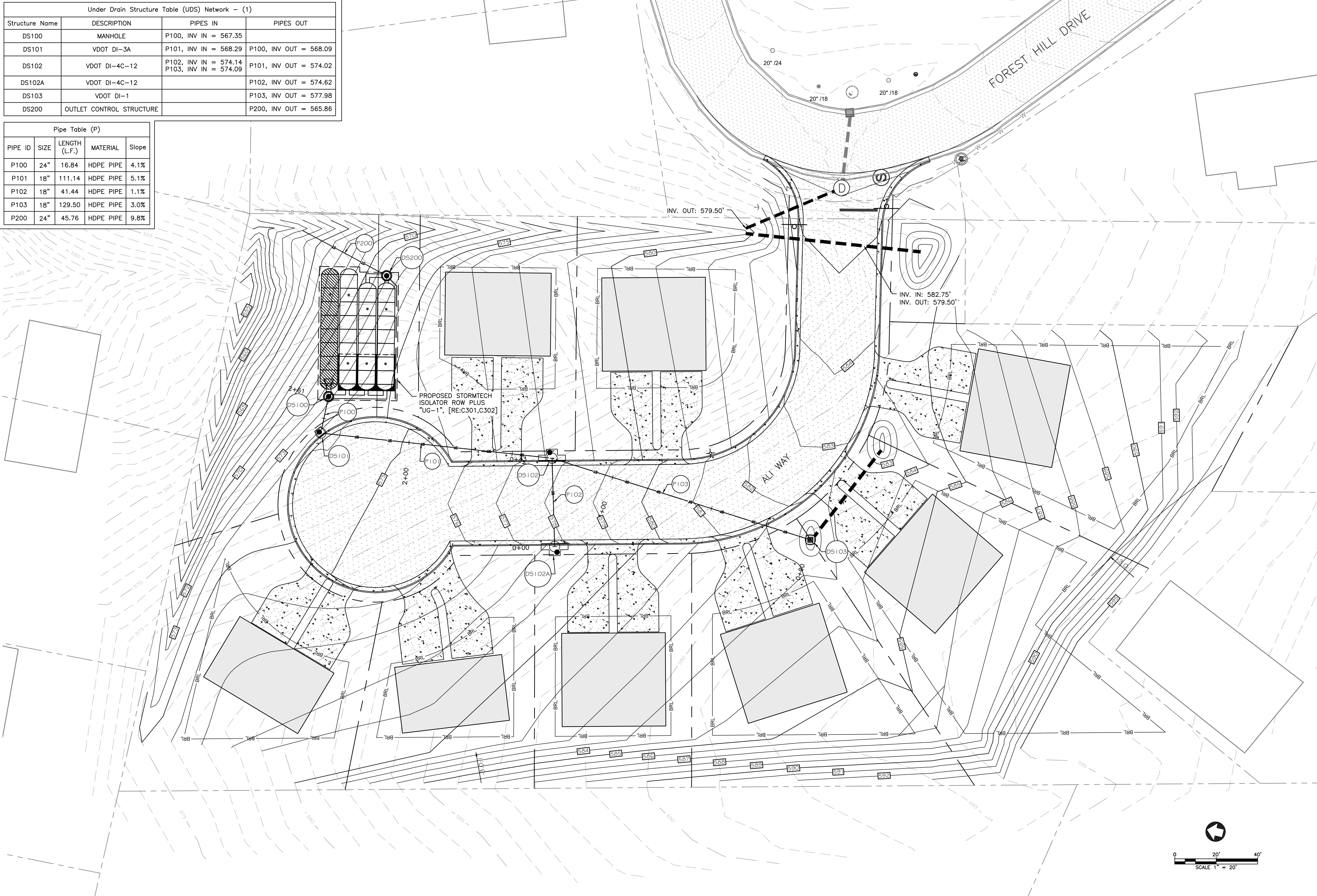


STRASBURG ROAD SUBDIVISION
UTILITY PROFILES
ALI BILLOO
WARREN COUNTY, VA
RACEY PROJECT NUMBER: 9276
PUBLISH DATE: 10/15/2024

C202

Under Drain Structure Table (UDS) Network - (1)			
Structure Name	DESCRIPTION	PIPES IN	PIPES OUT
DS100	MANHOLE	P100, INV IN = 567.35	
DS101	VDOT DI-3A	P101, INV IN = 568.29	P100, INV OUT = 568.09
DS102	VDOT DI-4C-12	P102, INV IN = 574.14 P103, INV IN = 574.09	P101, INV OUT = 574.02
DS102A	VDOT DI-4C-12		P102, INV OUT = 574.62
DS103	VDOT DI-1		P103, INV OUT = 577.98
DS200	OUTLET CONTROL STRUCTURE		P200, INV OUT = 565.86

Pipe Table (P)				
PIPE ID	SIZE	LENGTH (L.F.)	MATERIAL	Slope
P100	24"	16.84	HDPE PIPE	4.1%
P101	18"	111.14	HDPE PIPE	5.1%
P102	18"	41.44	HDPE PIPE	1.1%
P103	18"	129.50	HDPE PIPE	3.0%
P200	24"	45.76	HDPE PIPE	9.8%



STRASBURG ROAD SUBDIVISION

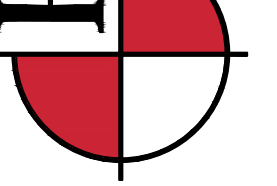
GRADING PLAN

ALI BILLOO

WARREN COUNTY, VA

RACEY PROJECT NUMBER: 9276

PUBLISH DATE: 10/15/2024

**RACEY**
ENGINEERING, PLLC

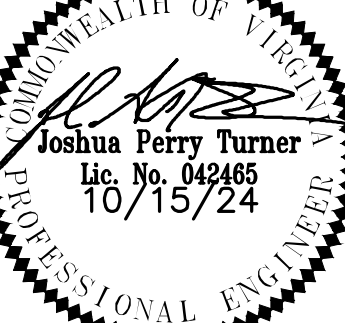
312 WEST MAIN ST. P.O. BOX 387
LURAY, VA 22835
PH: (540) 743-5227 • FAX: (540) 743-6118

DESIGNED:HV

DRAWN:HV

CHECKED:JPT

PERMIT
REVIEW SET



Joshua Perry Turner
Lic. No. 042465
10/15/24
PROFESSIONAL ENGINEER

No.	Submittal / Revision	By	App'd	Date
1	1ST SUBMITTAL TOWN	HV	JPT	06/28/24
2	2ND SUBMITTAL TOWN	HV	JPT	10/15/24

C300

ACCEPTABLE FILL MATERIALS: STORMTECH MC-7200 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE (B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145 ¹ A-1, A-2, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE (A LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE ²	N/AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE ²	N/AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57

PLEASE NOTE:

- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
- STORMTECH COMPACTION REQUIREMENTS ARE MET FOR A LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD CONDITIONS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
- ONCE LAYER 'C' IS PLACED, INITIAL FILL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEERS DISCRETION.
- WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".

ADS GEOSYNTHETICS 6017 NON-WOVEN GEOTEXTILE ALL AROUND CLEAN, CRUSHED, ANGULAR STONE IN A & B LAYERS

PAVEMENT LAYER (DESIGNED BY SITE DESIGN ENGINEER)

"TO BOTTOM OF FLEXIBLE PAVEMENT" FOR UNPAVED INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR. INCREASES COVER TO 307 (760 mm)

"THIS CROSS SECTION DETAIL REPRESENTS MINIMUM REQUIREMENTS FOR INSTALLATION. PLEASE SEE THE LAYOUT SHEET(S) FOR PROJECT SPECIFIC REQUIREMENTS."

DEPTH OF STONE TO BE DETERMINED BY SITE DESIGN ENGINEER 9" (230 mm) MIN

NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 60x101
- MC-7200 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2418/27 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT²/IN. THE ASD IS DEFINED IN SECTION 6.2.6 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

9276 - FRONT ROYAL SUBDIVISION

FRONT ROYAL, VA, USA

DATE: _____ PROJECT # _____

DESIGNER: _____

CHECKED: _____

DATE: _____ DRAWN BY: _____

DESCRIPTION: _____

StormTech®
Chamber System

888-892-2984 | WWW.STORMTECH.COM

4640 TREWMAN BLVD
FARMERSVILLE, OHIO 43026
1-800-733-4773

ADS

SHEET 3 OF 2

COVER PIPE CONNECTION TO END CAP WITH ADS GEOSYNTHETICS 601T NON-WOVEN GEOTEXTILE

STORMTECH HIGHLY RECOMMENDS FLEXSTORM INSERTS IN ANY UPSTREAM STRUCTURES WITH OPEN GRATES

SUMP DEPTH TBD BY SITE DESIGN ENGINEER (24" (600 mm) MIN RECOMMENDED)

INSTALL FLAMP ON 24" (600 mm) ACCESS PIPE PART #: MCFLAMP

MC-7200 CHAMBER

OPTIONAL INSPECTION PORT

MC-7200 END CAP

24" (600 mm) HDPE ACCESS PIPE REQUIRED USE FACTORY PARTIAL CUT END CAP PART #: MC7200IEPP24B OR MC7200IEPP24BW

ONE LAYER OF ADSPLUS125 WOVEN GEOTEXTILE BETWEEN FOUNDATION STONE AND CHAMBERS 10.5" (3.1 m) MIN WIDE CONTINUOUS FABRIC WITHOUT SEAMS

MC-7200 ISOLATOR ROW PLUG DETAIL

NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT

A. INSPECTION PORTS (IF PRESENT)

A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN

A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED

A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG

A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)

A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

B. ALL ISOLATOR PLUS ROWS

B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS

B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE

i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY

ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE

B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS

A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED

B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN

C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.

2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

12" (300 mm) MIN WIDTH

8" (200 mm) MIN THICKNESS OF ASPHALT OVERLAY AND CONCRETE COLLAR

NYLOPLAST 8" LOCKING SOLID COVER AND FRAME

CONCRETE COLLAR (ASPHALT OVERLAY NOT REQUIRED FOR GREENSPACE OR NON-TRAFFIC APPLICATIONS)

8" NYLOPLAST UNIVERSAL DRAIN BODY (PART# Z70BAGHPYKT) OR TRAFFIC RATED BOX W/SOLID LOCKING COVER

4" (100 mm) SDR 35 PIPE

ASPHALT OVERLAY FOR TRAFFIC APPLICATIONS

CONCRETE COLLAR

STORMTECH CHAMBER

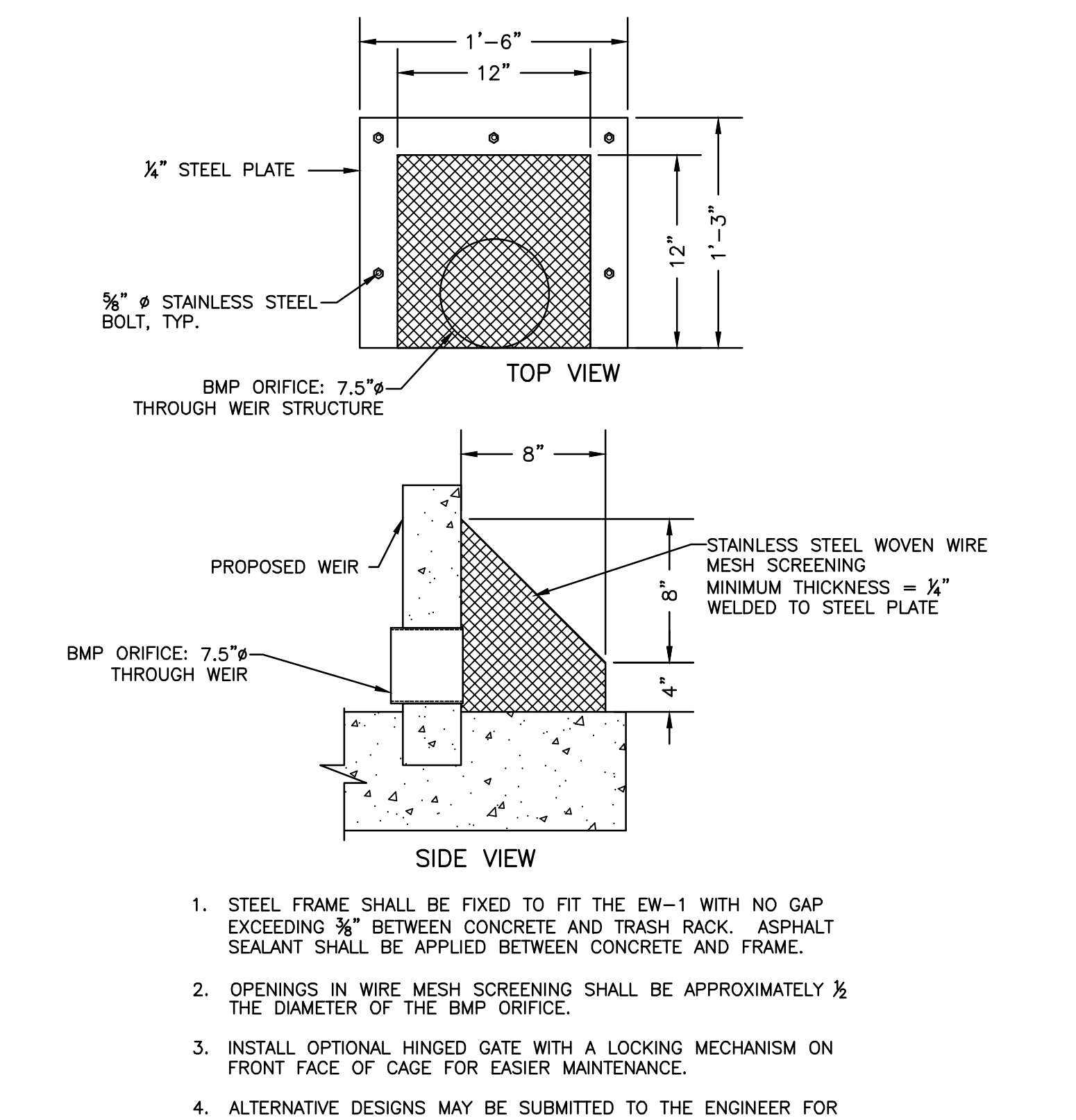
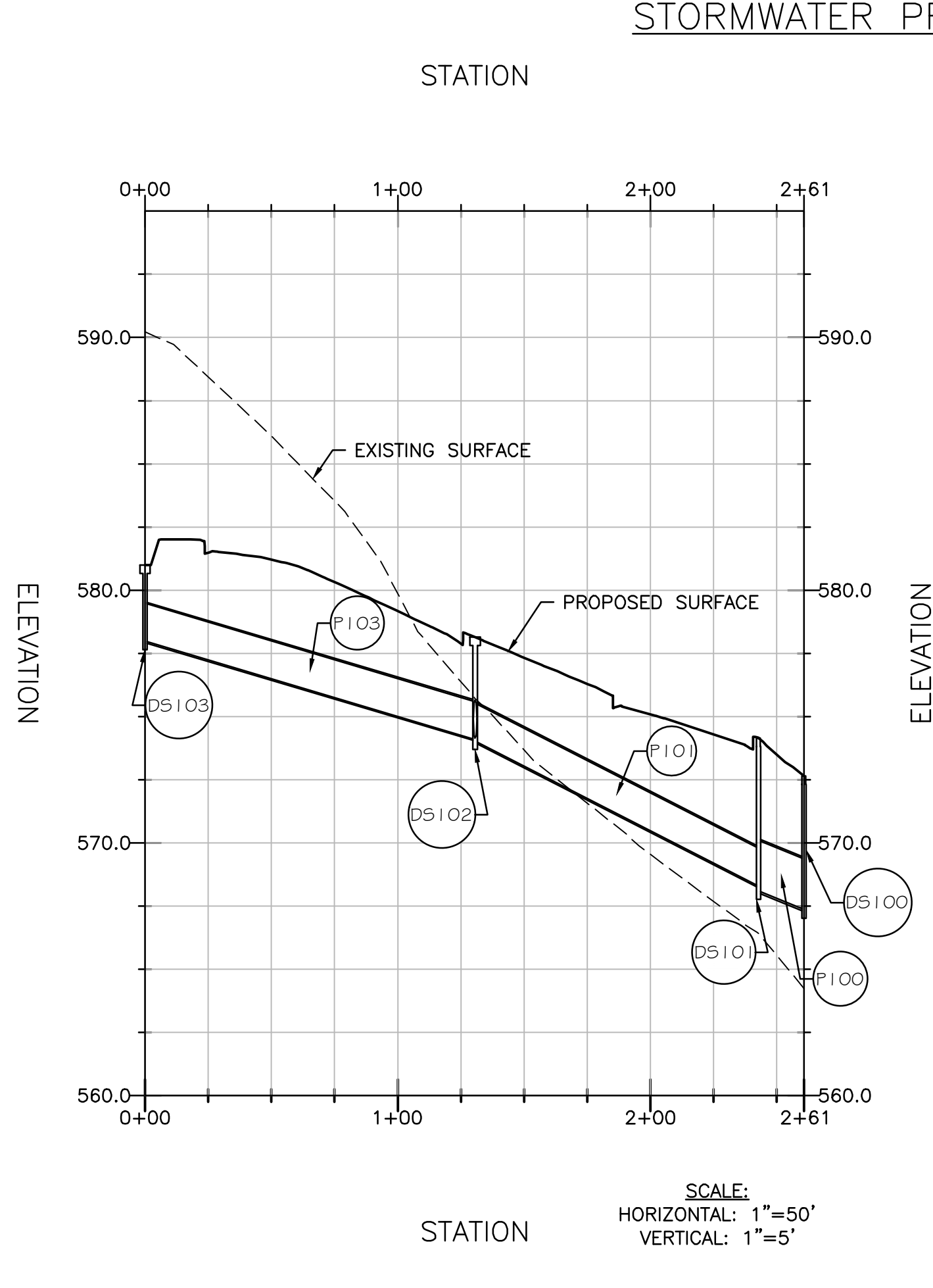
4" (100 mm) INSERTA TEE TO BE CENTERED ON CORRUGATION VALLEY

NOTE: INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION VALLEY.

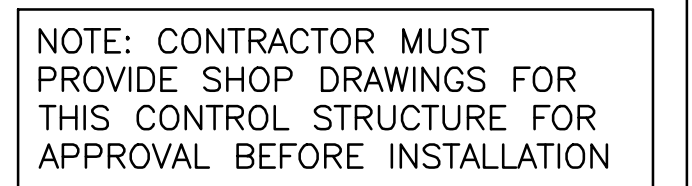
4" PVC INSPECTION PORT DETAIL (MC SERIES CHAMBER)

NTS

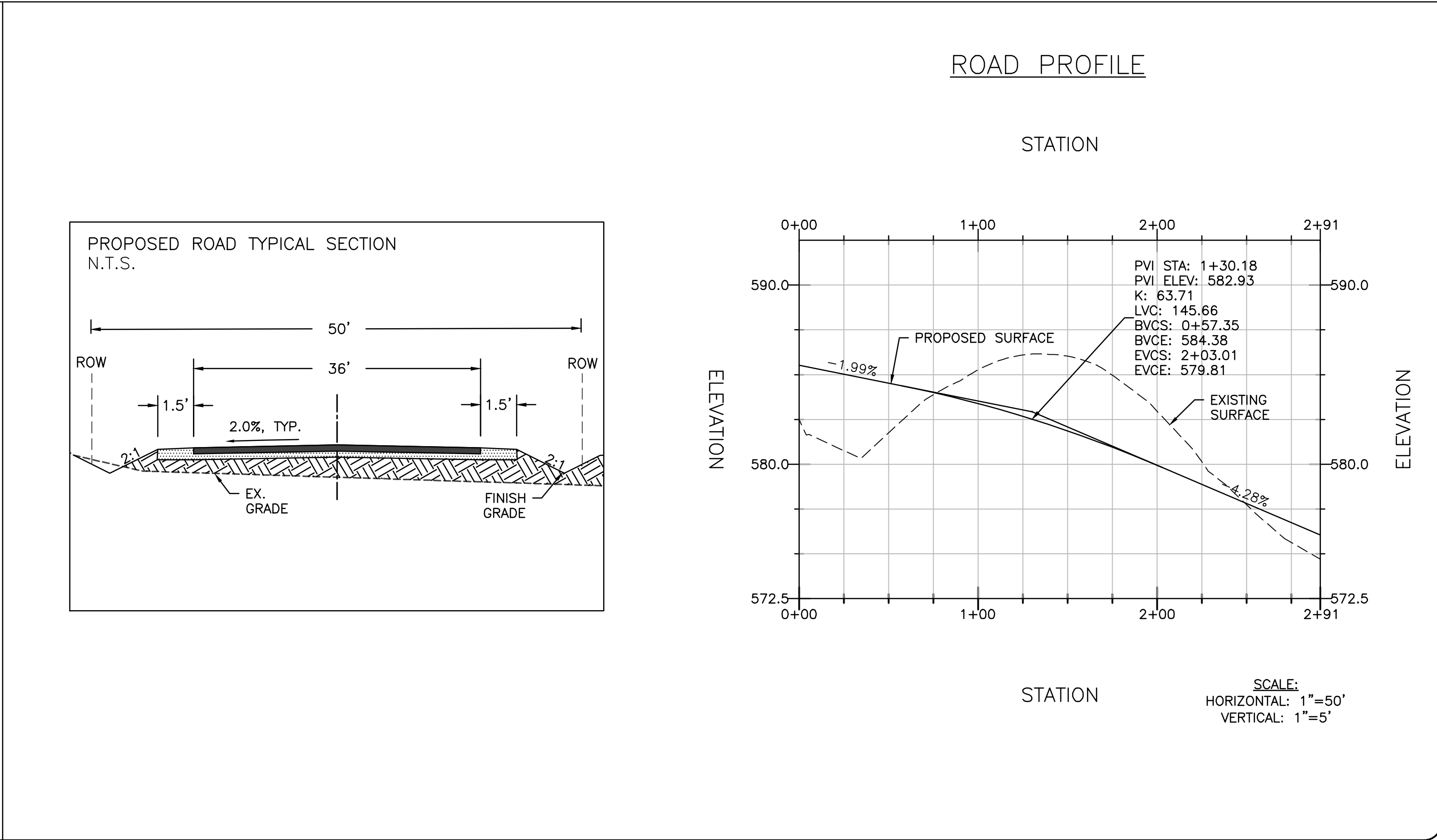
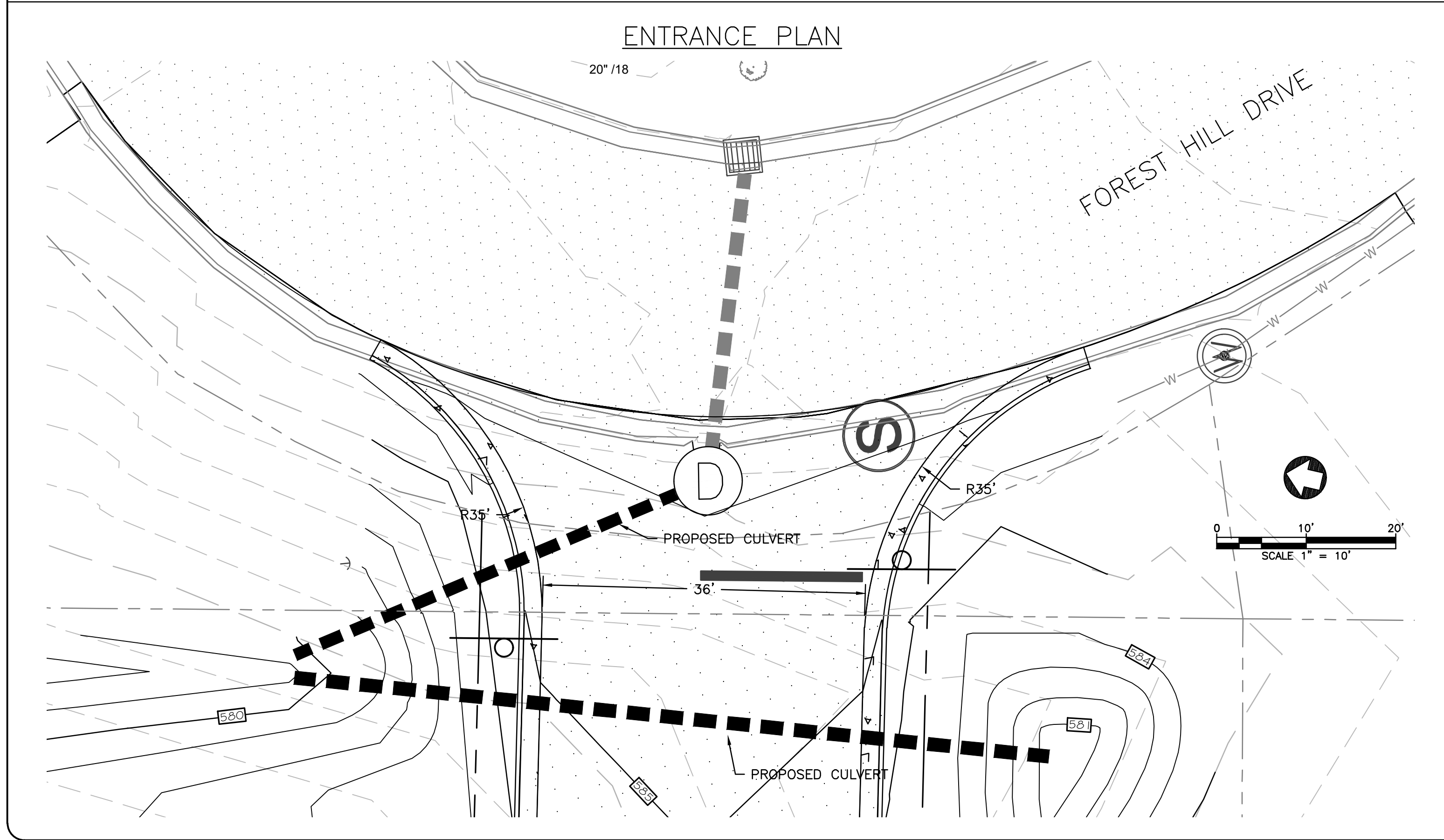
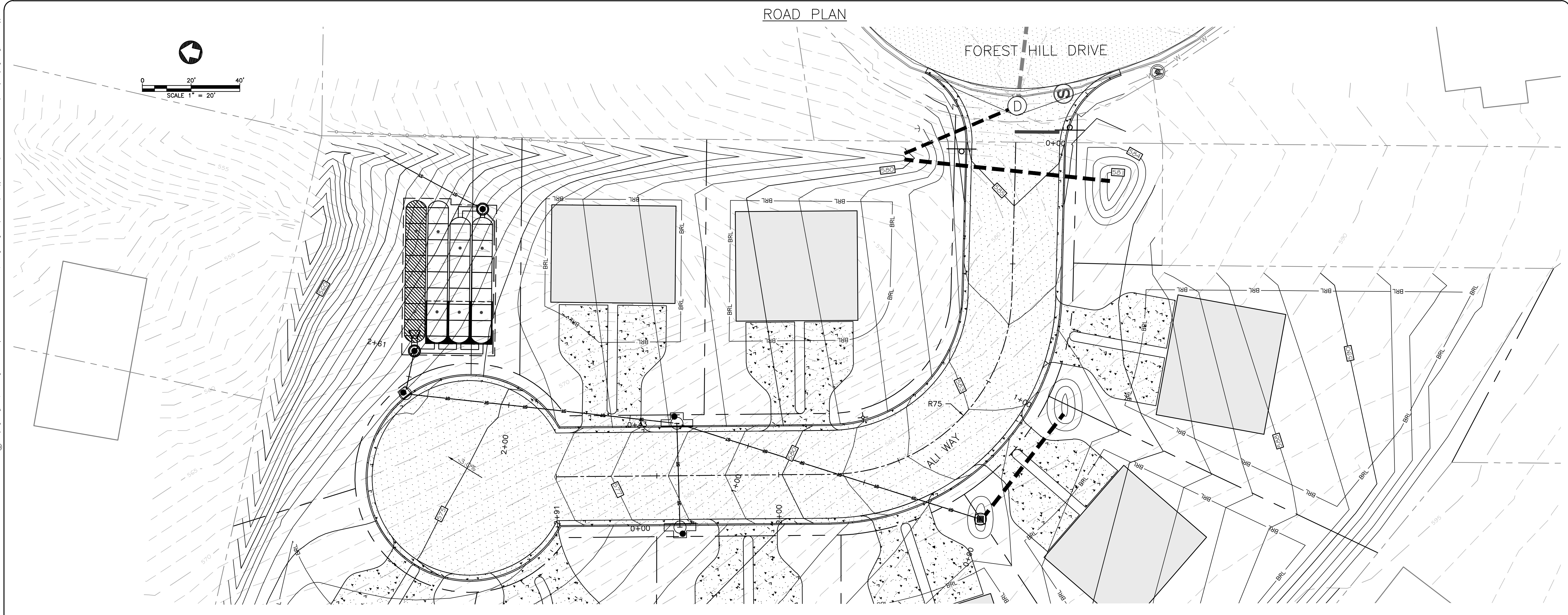
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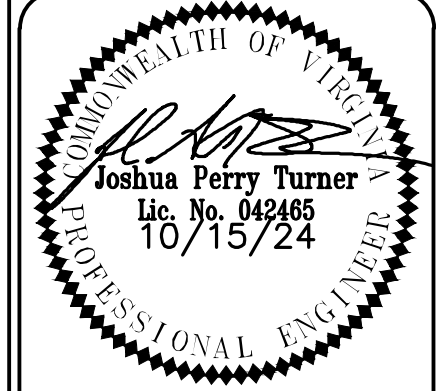
ISOLATOR ROW SIZING:
UG-1 FIRST 1" RAIN: 0.83 CFS
CHAMBERS REQUIRED: 1.84
CHAMBERS PROVIDED: 2



P:\2022\9276 - Ali Biloo - Strasburg Road Subdivision - 20A114-23B-Civil\8. DESIGN\4. DWG\CIVIL\COMPOSITE
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No.	Submittal / Revision	By	App'd	Date
1	1ST SUBMITTAL TOWN	HV	JPT	06/28/24
2	2ND SUBMITTAL TOWN	HV	JPT	10/15/24



PERMIT
REVIEW SET

RACEY
ENGINEERING, PLLC

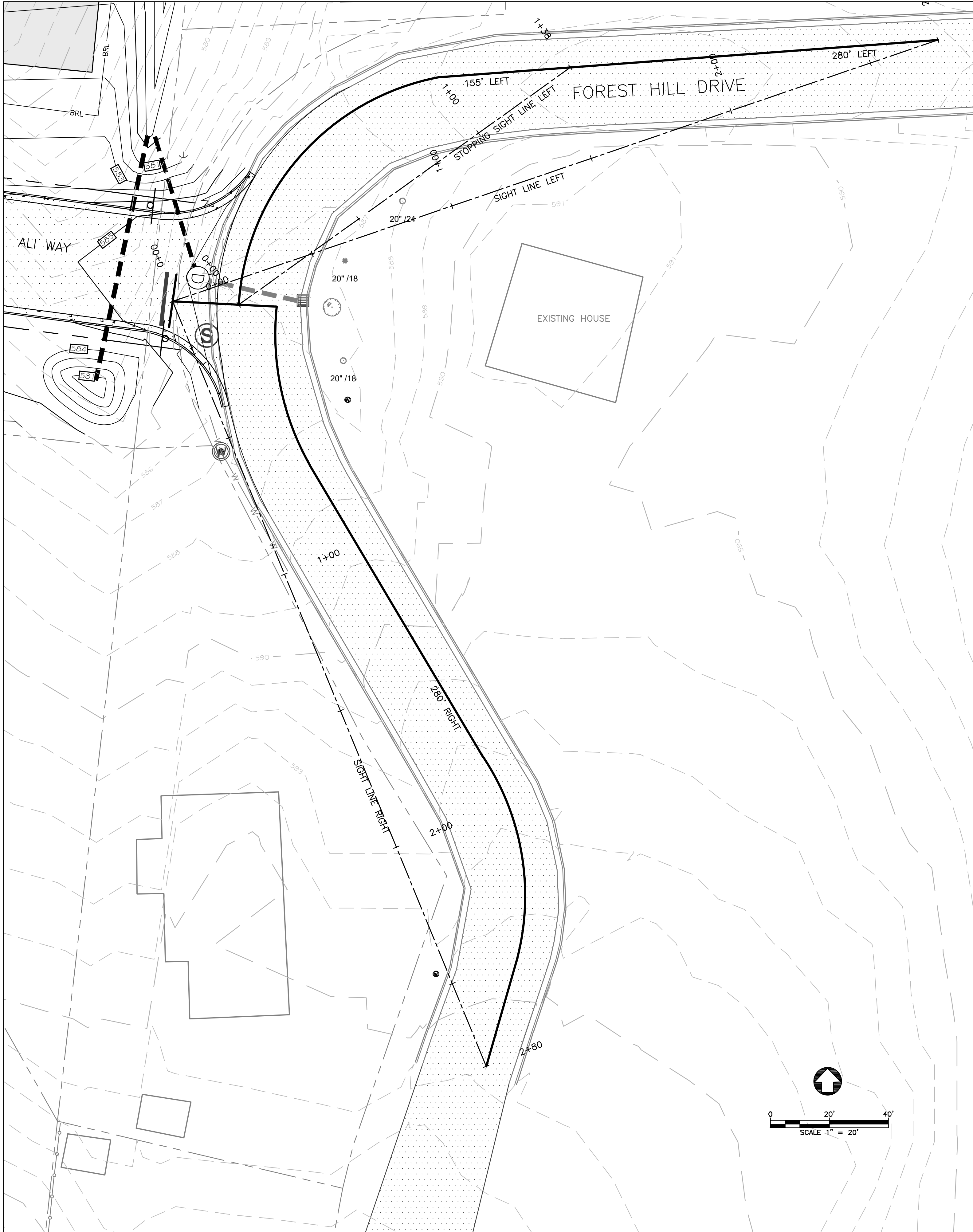
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LURAY, VA 22835
PH: (540) 743-5227 • FAX: (540) 743-6118

DESIGNED:HV DRAWN:HV CHECKED:JPT

STRASBURG ROAD SUBDIVISION
ROAD AND ENTRANCE PLAN
ALI BILLOO
WARREN COUNTY, VA
RACEY PROJECT NUMBER: 9276
PUBLISH DATE: 10/15/2024

C303

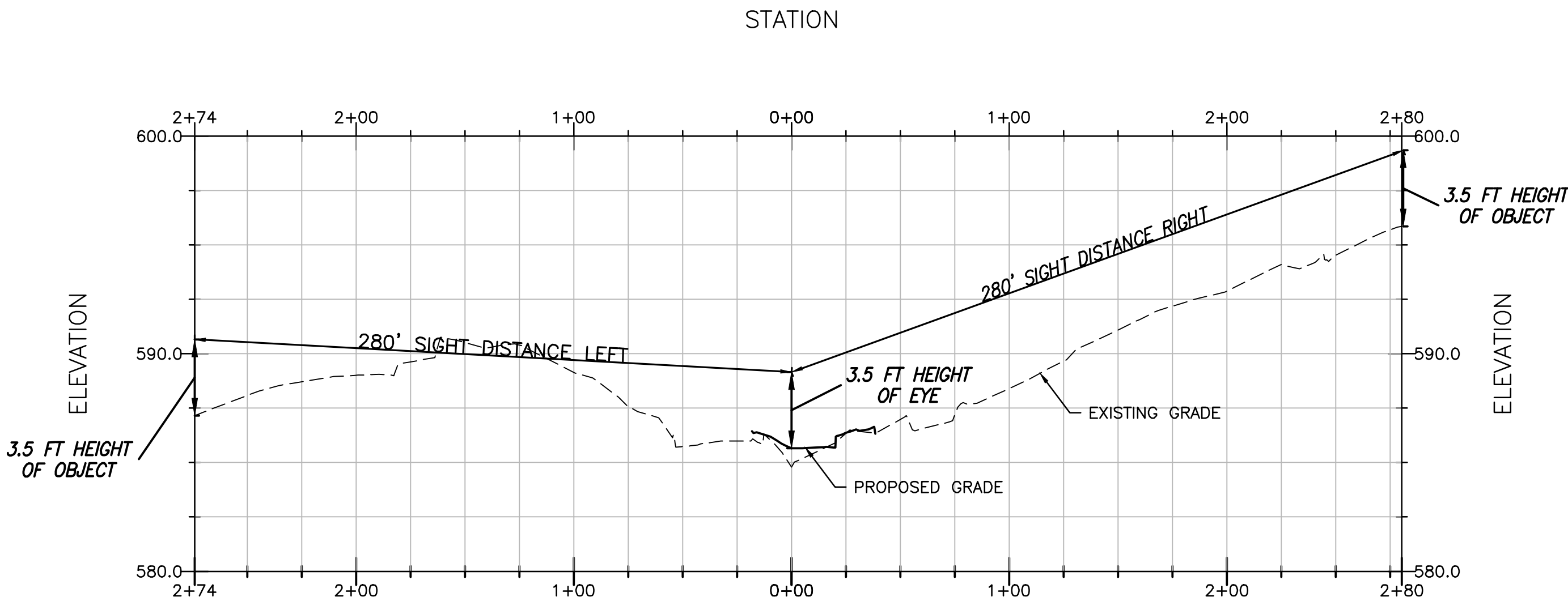
SIGHT DISTANCE PLAN VIEW:



TRIPS GENERATED FROM DEVELOPEMENT:

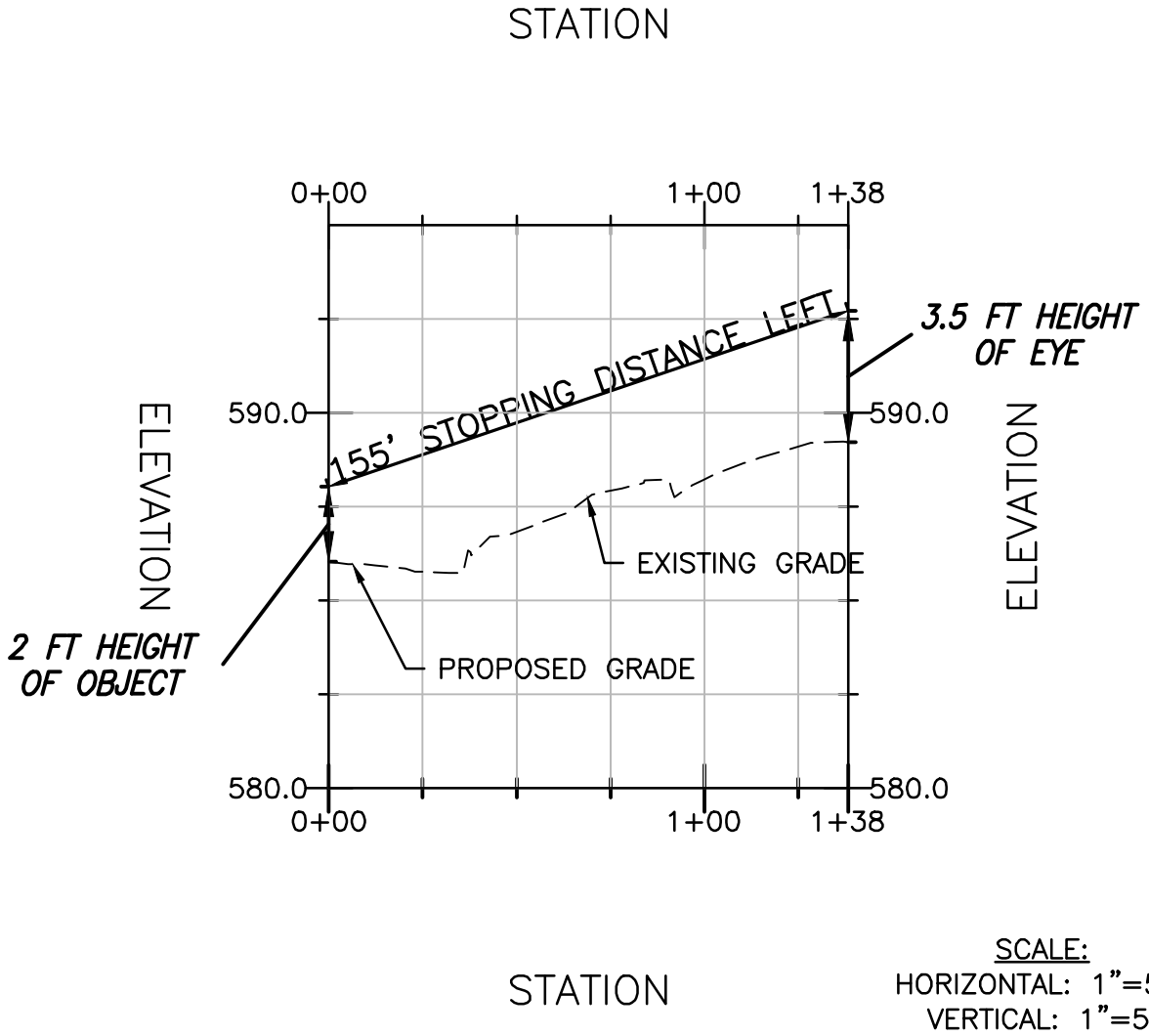
DWELLING UNITS PROPOSED: 16
CARS ASSUMED PER DWELLING UNIT: 2 (PER TOWN CODE 148-870)
WEEKDAY PEAK HOUR TRIPS/CAR: 6.02 (PER ITE TRIP GENERATION MANUAL, CODE 210)
PROPOSED ADT: 193
*PER VDOT 24VAC30-155, A TRAFFIC IMPACT ANALYSIS IS NOT WARRENTED

SIGHT DISTANCE PROFILE VIEW:



SPEED LIMIT: 25 MPH
SIGHT DISTANCE LEFT: REQUIRED = 280' PROVIDED = 175'
SIGHT DISTANCE RIGHT: REQUIRED = 280' PROVIDED = 280'
SIGHT DISTANCE LEFT < 280' → USE STOPPING DISTANCE (155')

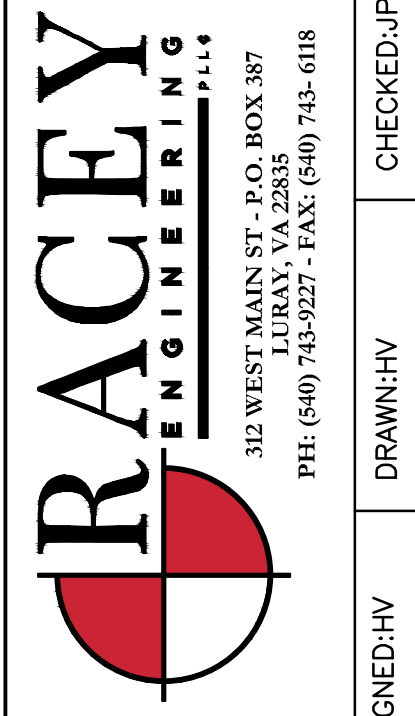
STOPPING DISTANCE LEFT PROFILE VIEW:



No.	Submittal / Revision	By	App'd	Date
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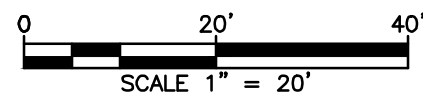


STRASBURG ROAD SUBDIVISION
SIGHT DISTANCE AND TRAFFIC IMPACT
ALI BILLOO
WARREN COUNTY, VA
RACEY PROJECT NUMBER: 9276
PUBLISH DATE: 10/15/2024

C304

SEDIMENT TRAP CALCULATIONS			
ELEVATION	AREA (SF)	INCR. VOLUME (CY)	CUMMULATIVE VOLUME (CY)
555	152	0	0
558	886	57.67	57.67
559	1,252	39.59	97.26
560	1,674	54.19	151.44
561	2,171	71.20	222.65
562	2,745	91.04	313.69

SEDIMENT TRAP DRAINAGE AREA		2.33 AC
REQUIRED WET STORAGE	156.11 CY	
REQUIRED DRY STORAGE	156.11 CY	
REQUIRED OUTLET WEIR LENGTH	13.98 FT	
CLEANOUT ELEVATION	558.51 FT	
WET STORAGE ELEVATION	560.07 FT	
DRY STORAGE ELEVATION	561.98 FT	
TOP OF EMBANKMENT ELEVATION	562 FT	
EMBANKMENT TOP WIDTH	4.5 FT	
CUT/FILL SLOPES (X:1)	2:1	
BOTTOM DIMENSIONS (APPROX.)	25'x14'	



PROPOSED LOD = 2.94 AC (127,959 SF)

PHASE 1 - SEQUENCE OF CONSTRUCTION

1. STAKE LOD AND SET ALL PERIMETER CONTROLS (CE, DD, SF, ETC).
2. INSTALL SEDIMENT TRAP.
3. BEGIN CLEARING & GRUBBING SITE.
4. ONCE SITE IS CLEARED, TEMPORARY STABILIZE ALL DENUDED AREAS.

SEDIMENT TRAP
DRAINAGE AREA:
2.33 AC

SOIL BOUNDARY LINE, TYP.

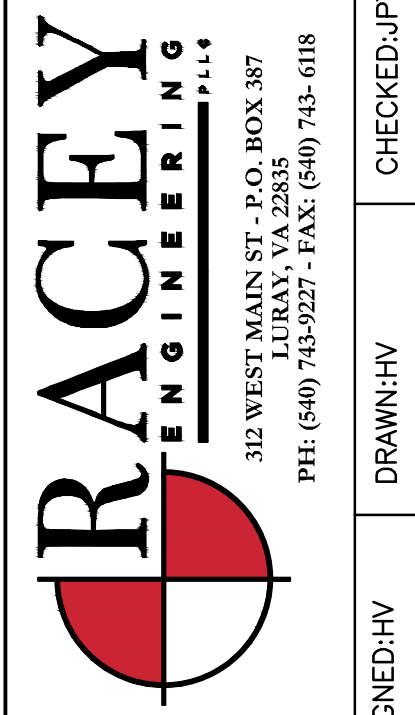
EROSION & SEDIMENT CONTROL LEGEND

NO.	KEY	SYMBOL	DESCRIPTION
3.02	CE		STONE CONSTRUCTION ENTRANCE
3.05	SF		SILT FENCE (WITH WIRE SUPPORT)
3.07	IP		STORM DRAIN INLET PROTECTION
3.08	CIP		CULVERT INLET PROTECTION
3.09	DD		DIVERSION DIKE
3.11	RWD		RIGHT OF WAY DIVERSION
3.13	ST		SEDIMENT TRAP
3.17	SCC		STORMWATER CONVEYANCE CHANNEL
3.18	OP		OUTLET PROTECTION
3.20	CD		ROCK CHECK DAM
3.32	PS		PERMANENT SEEDING
3.35	MU		MULCHING
			LOD LIMITS OF DISTURBANCE
			810 EXISTING CONTOURS (1' INTERVAL)
			810 PROPOSED CONTOURS (1' INTERVAL)

No.	Submital / Revision	By	App'd	Date
1	1ST SUBMITTAL TOWN	HV	JPT	06/28/24
2	2ND SUBMITTAL TOWN	HV	JPT	10/15/24



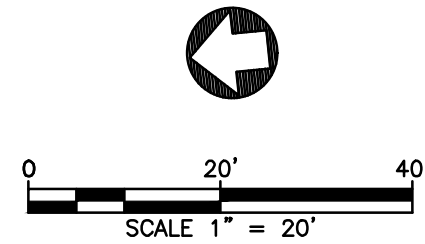
PERMIT
REVIEW SET



STRASBURG ROAD SUBDIVISION	RACEY PROJECT NUMBER: 9276	DESIGNED:HV	DRAWN:HV	CHECKED:JPT
ESC PLAN PHASE 1	ALI BILLOO			
WARREN COUNTY, VA	PUBLISH DATE: 10/15/2024			

C401

P:\2022\9276 - Ali Billoo - Strasburg Road Subdivision - 20A114-23B-Civil\8. DESIGN\4. DWG\CIVIL\COMPOSITE
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PROPOSED LOD = 2.94 AC (127,959 SF)

PHASE 2 - SEQUENCE OF CONSTRUCTION

1. CONTINUE CONSTRUCTION AND GRADING OPERATIONS.
2. THE ENTIRE SITE IS TO BE STABILIZED PRIOR TO THE CONVERSION OF THE SEDIMENT TRAP.
3. ONCE SITE IS STABILIZED, DETENTION CAN BE INSTALLED AND SEDIMENT TRAP CAN BE REMOVED. SILT FENCE IS TO REMAIN FOR THE DURATION OF THE PROJECT.
4. WHEN THE ENTIRE SITE HAS BEEN PERMANENTLY STABILIZED AND APPROVED, THE PERIMETER CONTROLS MAY BE REMOVED.

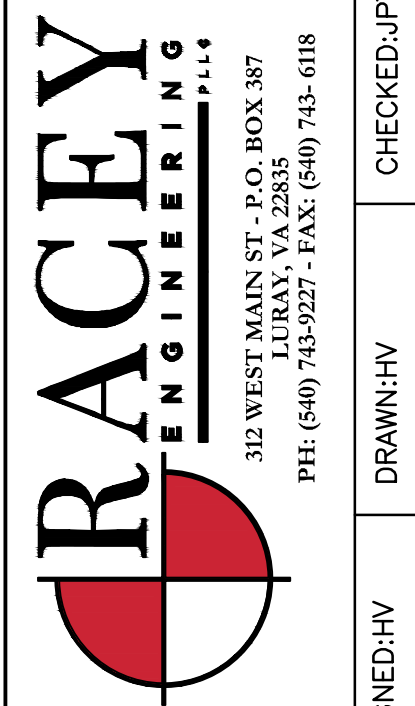
EROSION & SEDIMENT CONTROL LEGEND

NO.	KEY	SYMBOL	DESCRIPTION
3.02	CE		STONE CONSTRUCTION ENTRANCE
3.05	SF		SILT FENCE (WITH WIRE SUPPORT)
3.07	IP		STORM DRAIN INLET PROTECTION
3.08	CIP		CULVERT INLET PROTECTION
3.09	DD		DIVERSION DIKE
3.11	RWD		RIGHT OF WAY DIVERSION
3.13	ST		SEDIMENT TRAP
3.17	SCC		STORMWATER CONVEYANCE CHANNEL
3.18	OP		OUTLET PROTECTION
3.20	CD		ROCK CHECK DAM
3.32	PS		PERMANENT SEEDING
3.35	MU		MULCHING
			— LOD — LIMITS OF DISTURBANCE
			- - - 810 - - - EXISTING CONTOURS (1' INTERVAL)
			810 PROPOSED CONTOURS (1' INTERVAL)

No.	Submital / Revision	By	App'd	Date
1	1ST SUBMITTAL TOWN	HV	JPT	06/28/24
2	2ND SUBMITTAL TOWN	HV	JPT	10/15/24

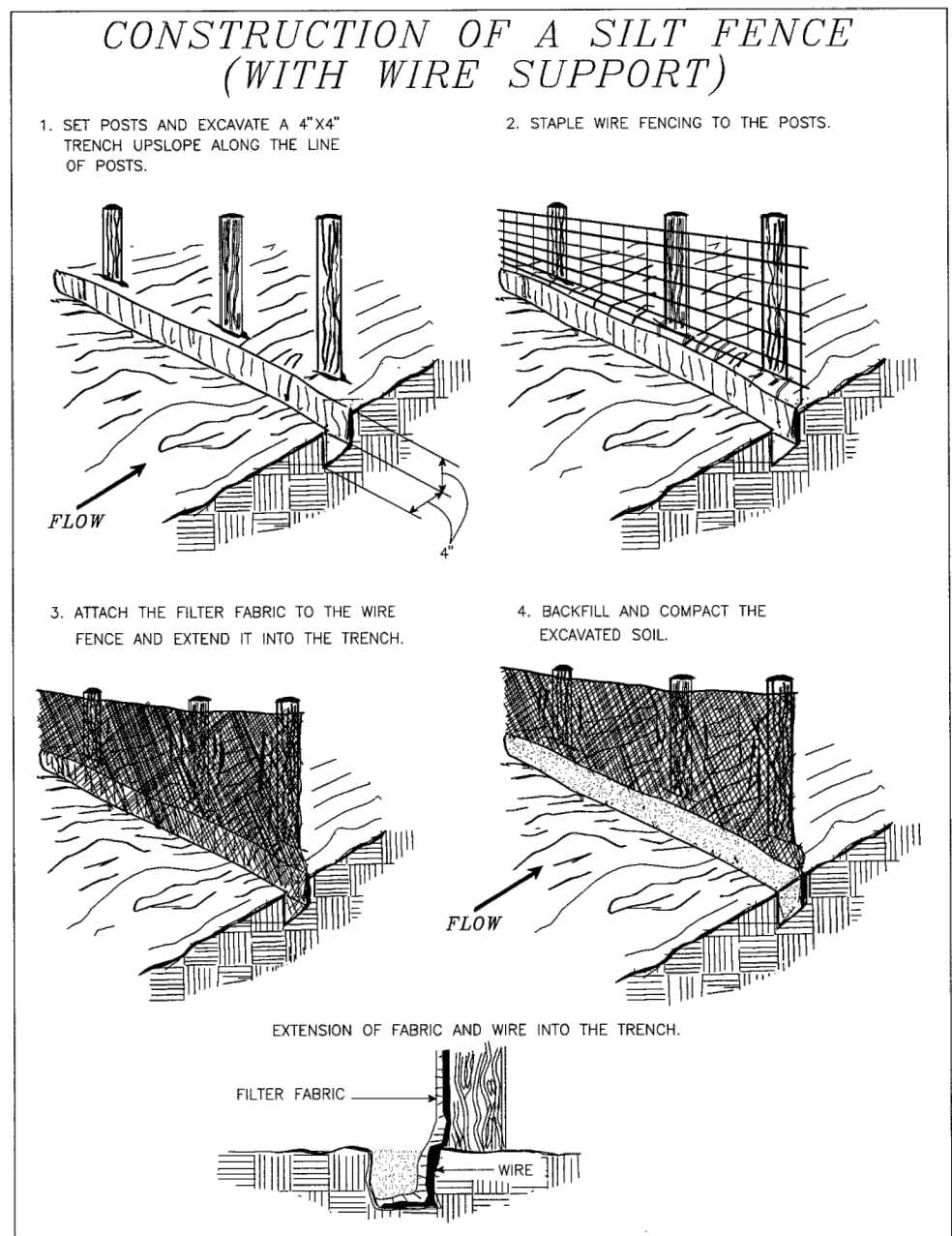


PERMIT
REVIEW SET



STRASBURG ROAD SUBDIVISION
ESC PLAN PHASE 2
ALI BILLOO
WARREN COUNTY, VA
RACEY PROJECT NUMBER: 9276
PUBLISH DATE: 10/15/2024

C402



Source: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherwood and Wyant

Plate 3.05-1

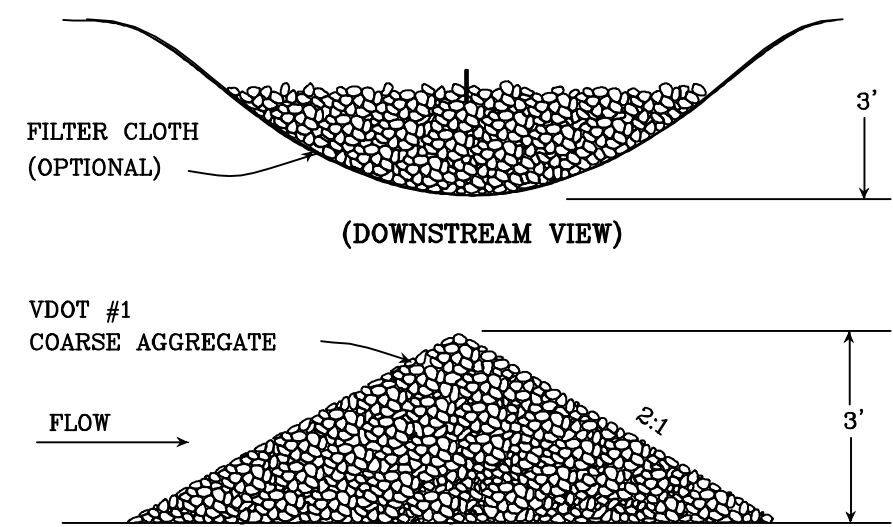
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SILT FENCE - WITHOUT WIRE SUPPORT

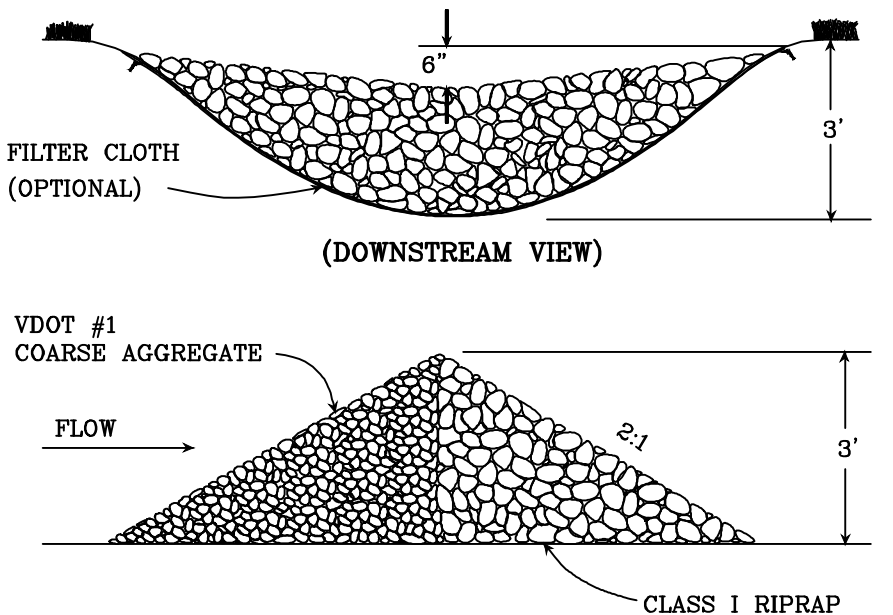
N.T.S. - SOURCE: VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK - PLATE 3.05-2

ROCK CHECK DAM

2 ACRES OR LESS OF DRAINAGE AREA:



2-10 ACRES OF DRAINAGE AREA:

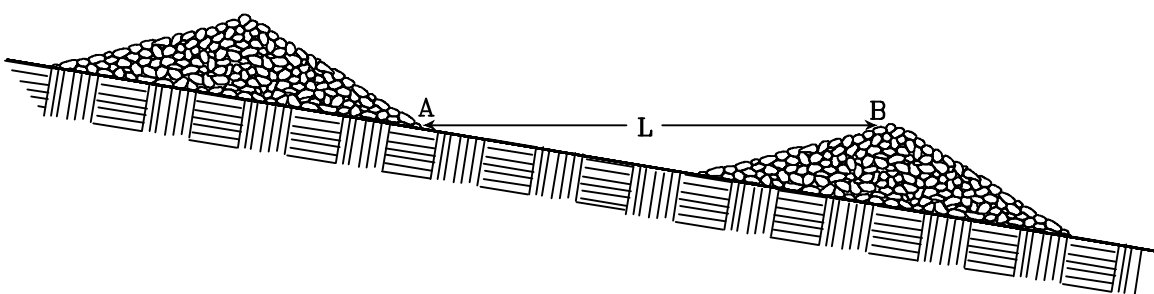


SOURCE: VA. DSWC

PLATE. 3.20-1

SPACING BETWEEN CHECK DAMS

L = THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION



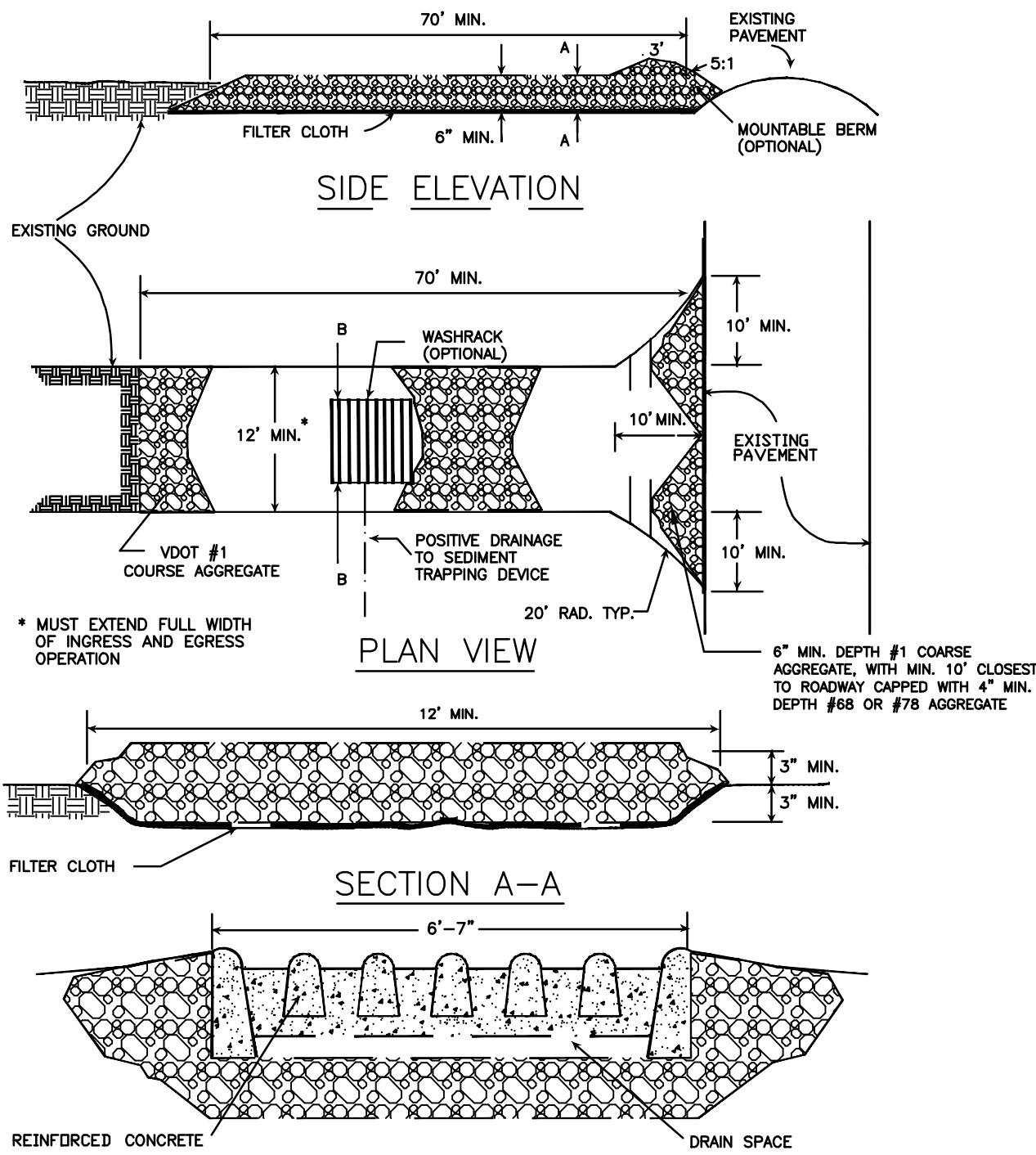
SOURCE: VA. DSWC

PLATE. 3.20-2

2

ROCK CHECK DAM

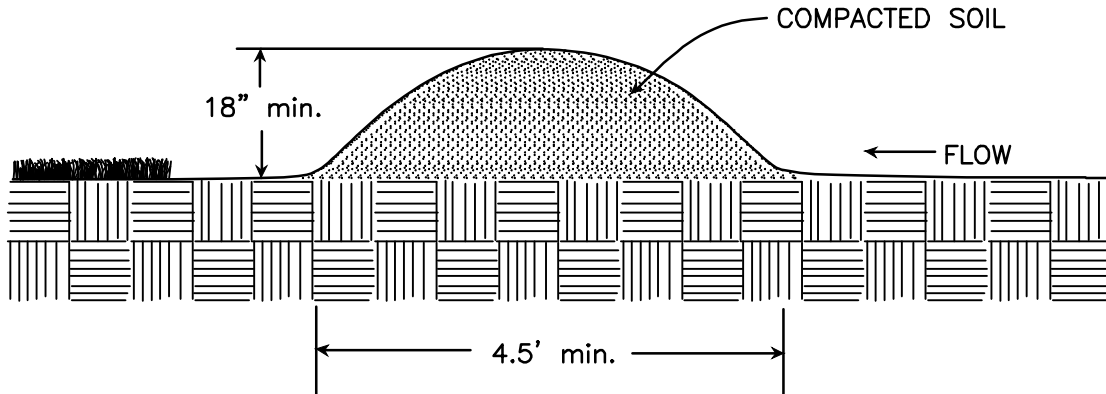
N.T.S. - SOURCE: VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK - PLATE 3.20



3

TEMPORARY STONE CONSTRUCTION ENTRANCE

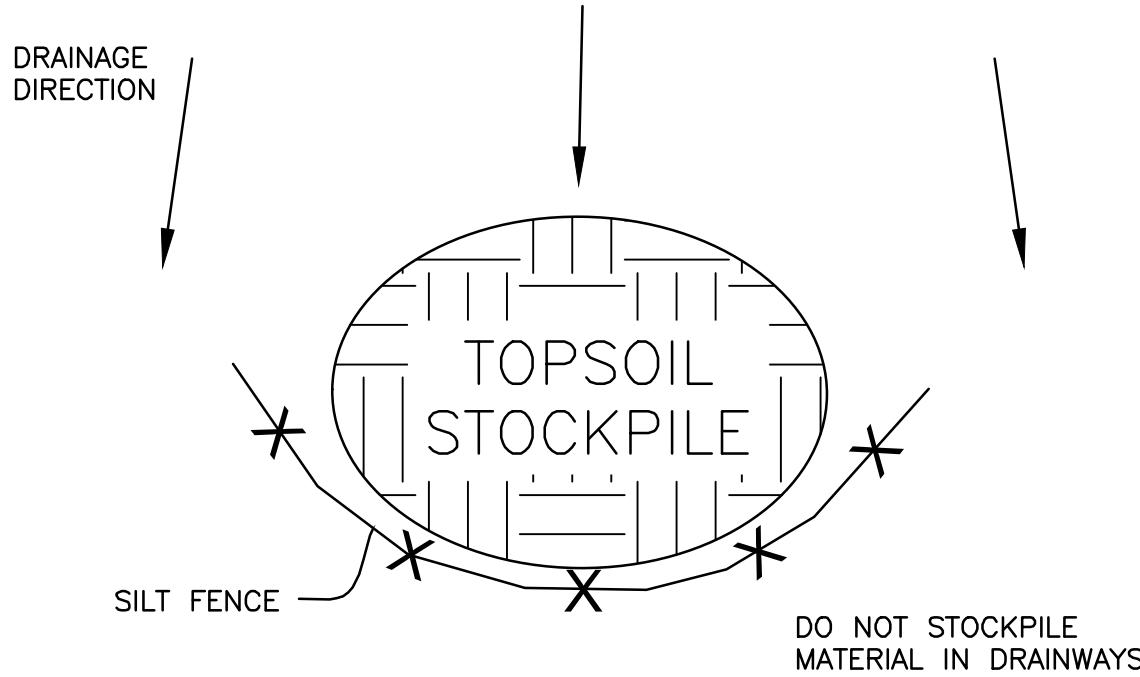
N.T.S. - SOURCE: VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK - PLATE 3.02-1



4

TEMPORARY DIVERSION DIKE

N.T.S. - SOURCE: VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK - PLATE 3.09-1



5

MATERIAL STOCKPILE

N.T.S.

Table C-SSM-09-2 Liming		
Liming Requirements for Temporary Sites		
pH Test	Recommended Application of Agricultural Limestone	
below 4.2	3 tons per acre	
4.2 to 5.2	2 tons per acre	
5.2 to 6	1 ton per acre	

Source: Va. DSWC

Table C-SSM-09-3 Plant Material for Temporary Seeding		
Acceptable Temporary Seeding Plant Materials "Quick Reference for all Regions"		
Planting Dates	Species	Rate (pounds per acre)
Sept. 1 - Feb. 15	50/50 Mix of annual ryegrass (<i>Lolium multi-florum</i>) & cereal (winter) rye (<i>Secale cereale</i>)	50 - 100
Feb. 16 - Apr. 30*	Annual ryegrass (<i>Lolium multi-florum</i>)	60 - 100
May 1* - Aug. 31	German millet (<i>Setaria italica</i>)	50

* The shift date for annual rye to German millet should be April 15 for the Piedmont and Coastal Plain, rather than May 1.

Table C-SSM-09-4 Temporary Seeding Applications									
Temporary Seeding Plant Materials, Seeding Rates, and Dates									
Species	Seeding Rate lbs./acre	North ^a					South ^b		
		lbs./1,000 ft ²	3/1	5/1	8/15	2/15	5/1	9/1	11/15
Oats (<i>Avena sativa</i>)	50 - 100	2.0	X	-	-	X	-	-	
Rye ^d (<i>Secale cereale</i>)	50 - 110	2.5	X	-	X	X	-	X	
German millet (<i>Setaria italica</i>)	50	1.0	-	X*	-	-	X*	-	
Annual ryegrass ^e (<i>Lolium multi-florum</i>)	60	1.5	X*	-	X	X*	-	X	

Korean Lespedeza^f (*Lespedeza stipulacea*) 25 1.5 X X - X X - Warm-season annual legume. Tolerates acid soils. May only be used in a mix with another grass (e.g., annual or cereal rye); it is not suitable as a pure seeding for this purpose.

- a. Northern Piedmont and Mountain regions. See Figure C-ENV-01-1 and Figure C-ENV-01-2.
- b. Southern Piedmont and Coastal Plain.
- c. May be used as a cover crop with spring seeding.
- d. May be used as a cover crop with fall seeding.
- Xe May not be planted between these dates.
- f May be planted between these dates.

* The shift date for annual rye to German millet should be April 15 for the Piedmont and Coastal Plain, rather than May 1.

6

TEMPORARY SEEDING

Table C-SSM-10-6 Suggested and Example Site-Specific Seeding Mixtures for Appalachian/Mountain Area			
Site Condition	Seed Mix		Application Rate (pounds per acre)
Minimum-Care Lawn Commercial or Residential	Turf-Type Tall Fescue	90-100%	150 - 200
	Improved Perennial Ryegrass*	0-10%	
	Kentucky Bluegrass	0-10%	
High-Maintenance Lawn	Bluegrass - minimum of three to five varieties from VCI list for use in Virginia		125
	Improved VCI Turf-Type Tall Fescue		150 - 200
General Slope (3H:1V or less)	Tall Fescue****		50 - 75
	Red Top and/or Hard Fescue		10 - 20
	White Clover and/or Birdsfoot Trefoil***		10 - 20
	Seasonal Nurse Crop **		30 - 40
	Tall Fescue****		50 - 75
Low-Maintenance Slope (> 3:1) or Inaccessible Area***	Red Top or Hard Fescue		10 - 20
	Annual Lespedeza		10 - 15
	White Clover and/or Birdsfoot Trefoil***		10 - 20
	Seasonal Nurse/Cover Crop**		30 - 40

* Perennial ryegrass will germinate faster and at lower soil temperatures than fescue, thereby providing cover and erosion resistance for seedbed.

** Use seasonal nurse crop in accordance with seeding dates as stated below:

March 1 through May 15 - annual/cereal rye

May 16 through August 15 - foxtail/German millet

August 16 through February 28 - annual/cereal rye

*** All legume seed must be properly inoculated. Legumes recommended unless periodic N fertilization maintenance intended.

Flatpea at 20 lbs/acre may be utilized where warranted. All legume seed must be properly inoculated. Weeping lovegrass may also be included in any slope or low-maintenance mixture during warmer seeding periods; add 10 to 20 lbs/acre in mixes.

**** Increase seeding rate if Kentucky 31 is used rather than VCI/VCI improved varieties.

Note: Seed mixes are suggested and subject to modification based on site-specific conditions by an agronomist or other qualified revegetation professionals. All seed rates expressed as PLS (Pure Live Seed; see Table C-SSM-10-9).

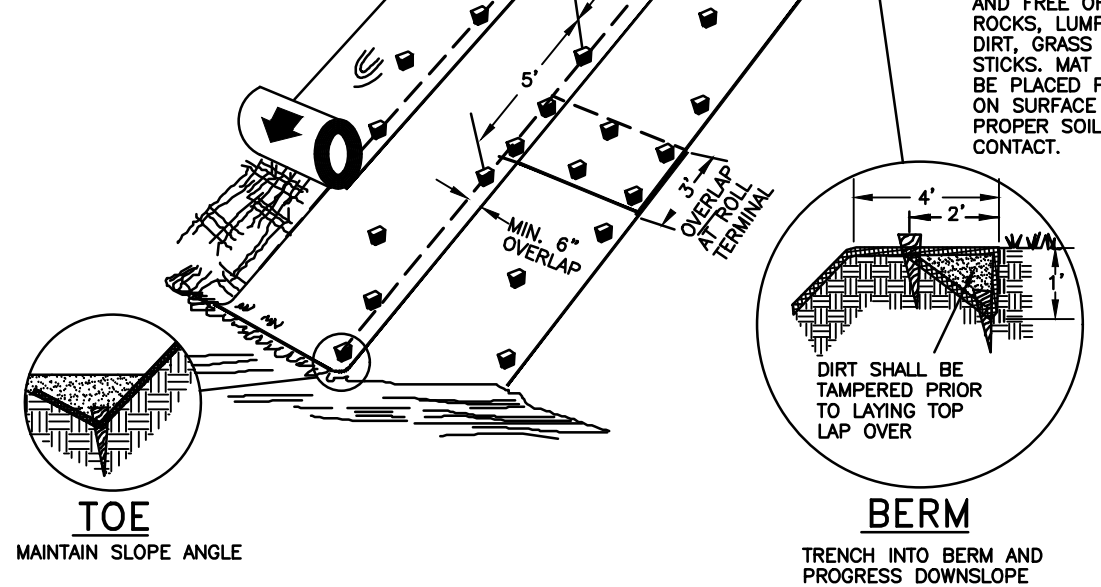
7

PERMANENT SEEDING

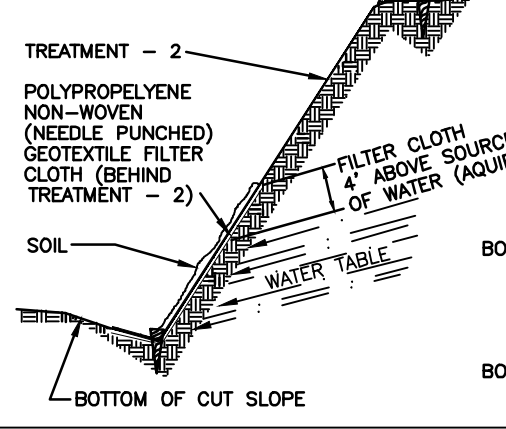
TYPICAL TREATMENT - 2 SOIL STABILIZATION MATTING SLOPE INSTALLATION

FILL SLOPE SECTION

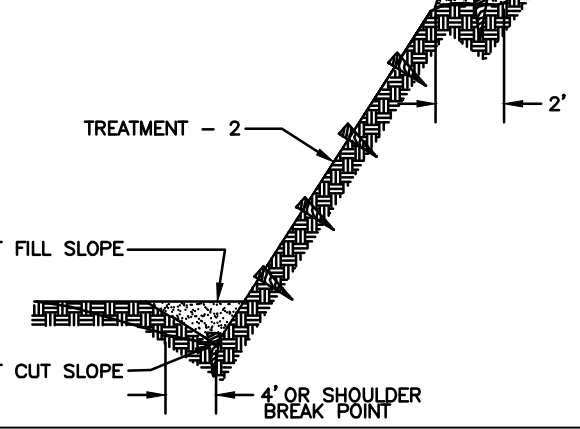
SOIL STABILIZATION MATS SHOULD BE INSTALLED VERTICALLY DOWNSLOPE FOR BEST RESULTS.



SLOPE LINING (WET SLOPE)



SLOPE LINING (DRY SLOPE)



SOURCE: VDOT ROAD AND BRIDGE STANDARDS

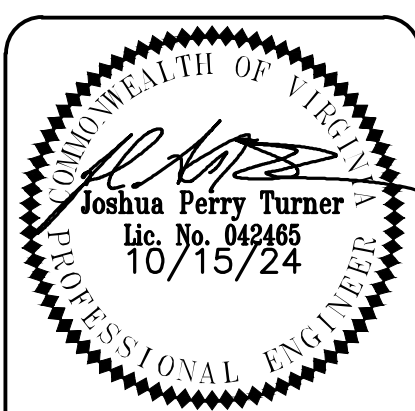
PLATE: 3.36-5

8

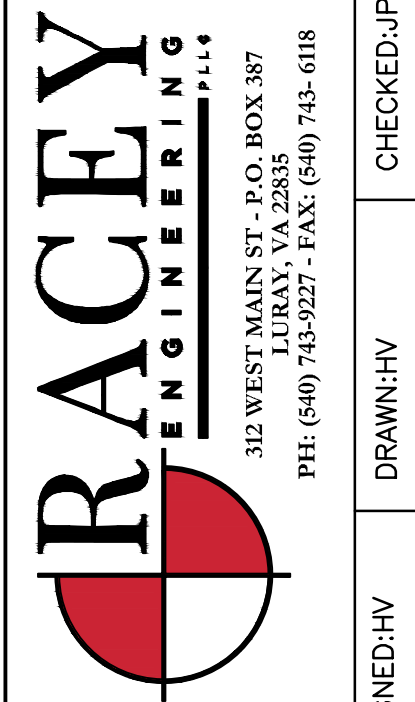
EC-3 STABILIZATION MATTING

N.T.S. - SOURCE: VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK - PLATE 3.36-5

Date	06/28/24
App'd	JPT
By	HV
Submital / Revision	
1ST SUBMITAL TOWN	
2ND SUBMITAL TOWN	
No.	



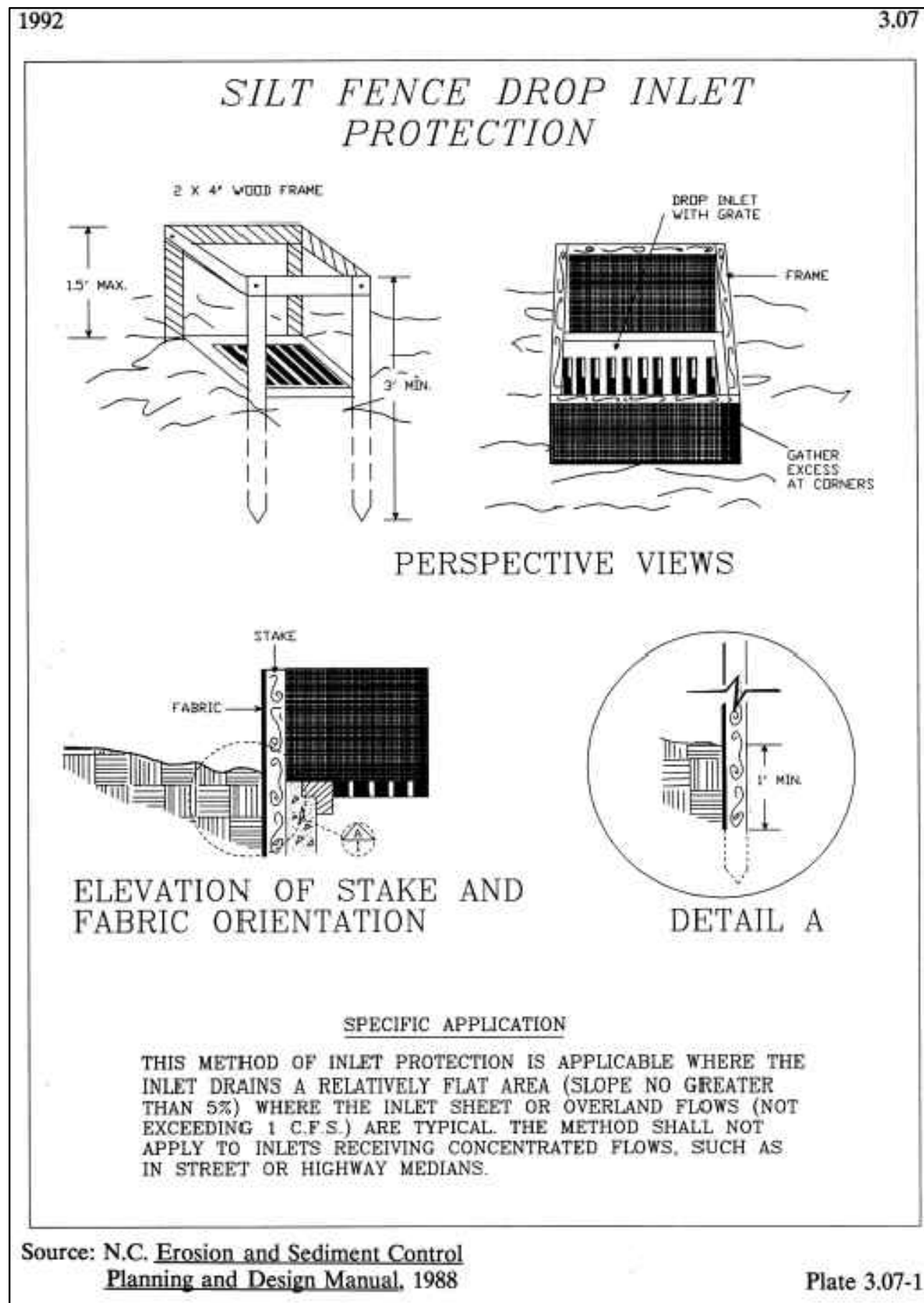
PERMIT REVIEW SET



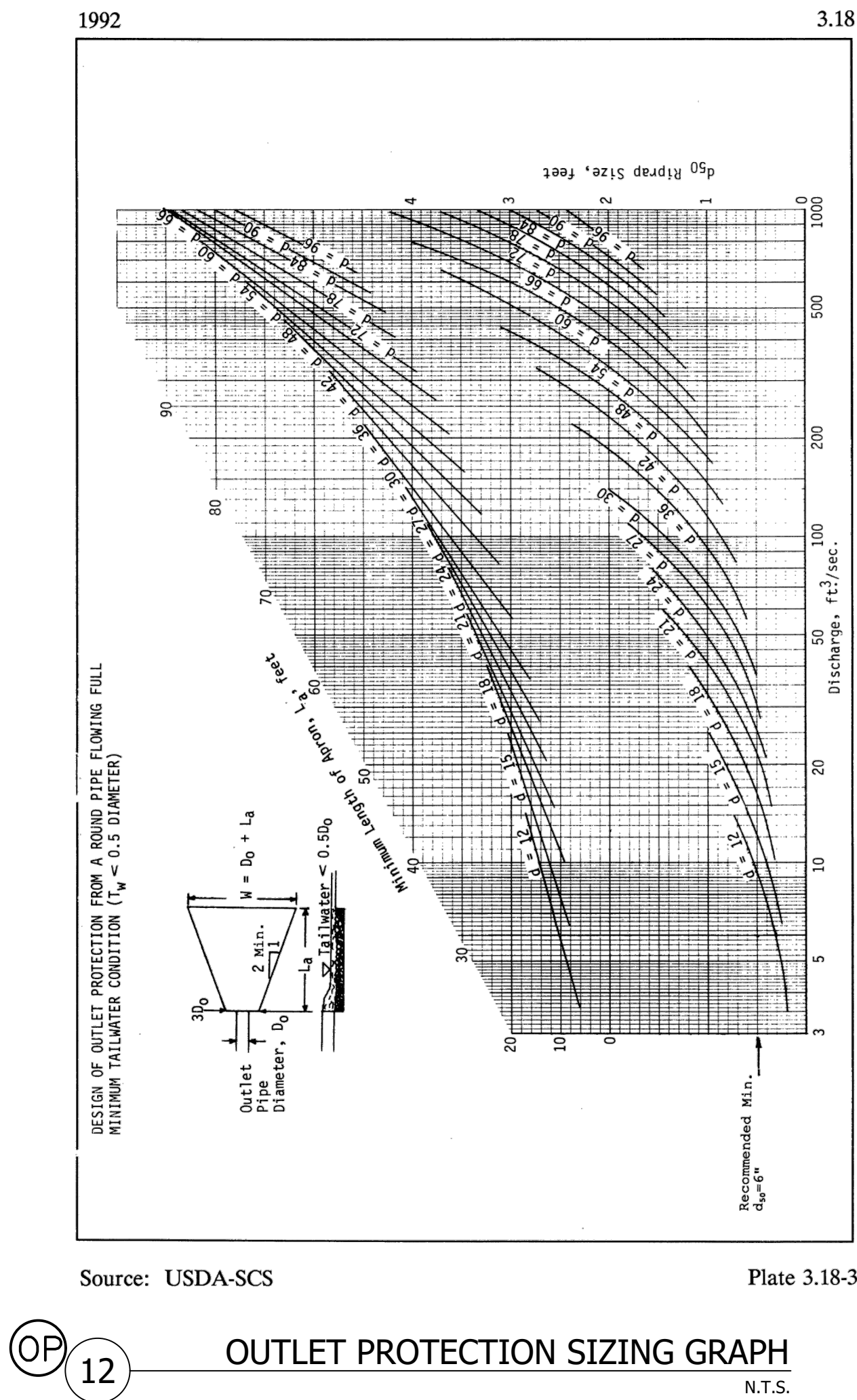
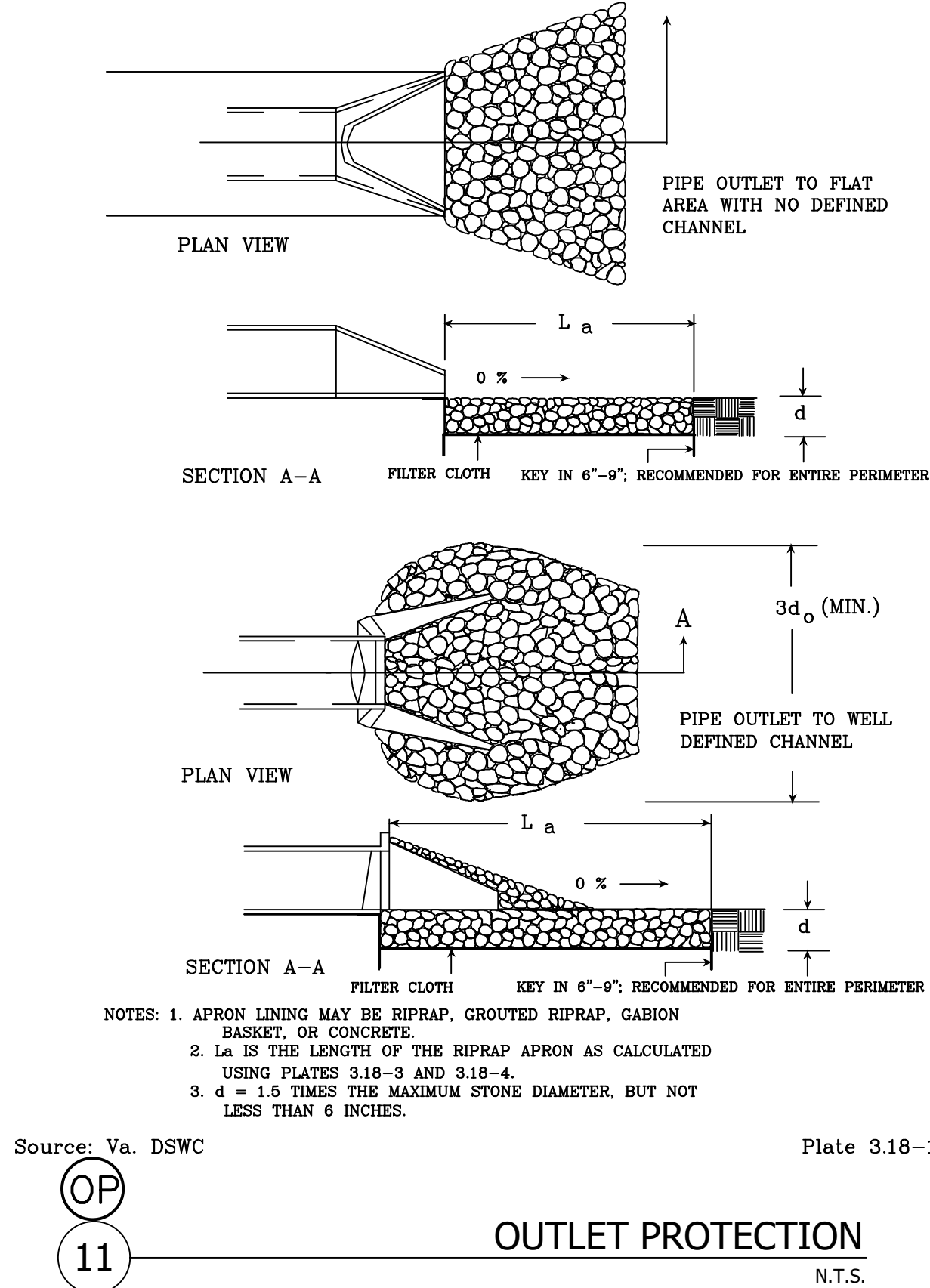
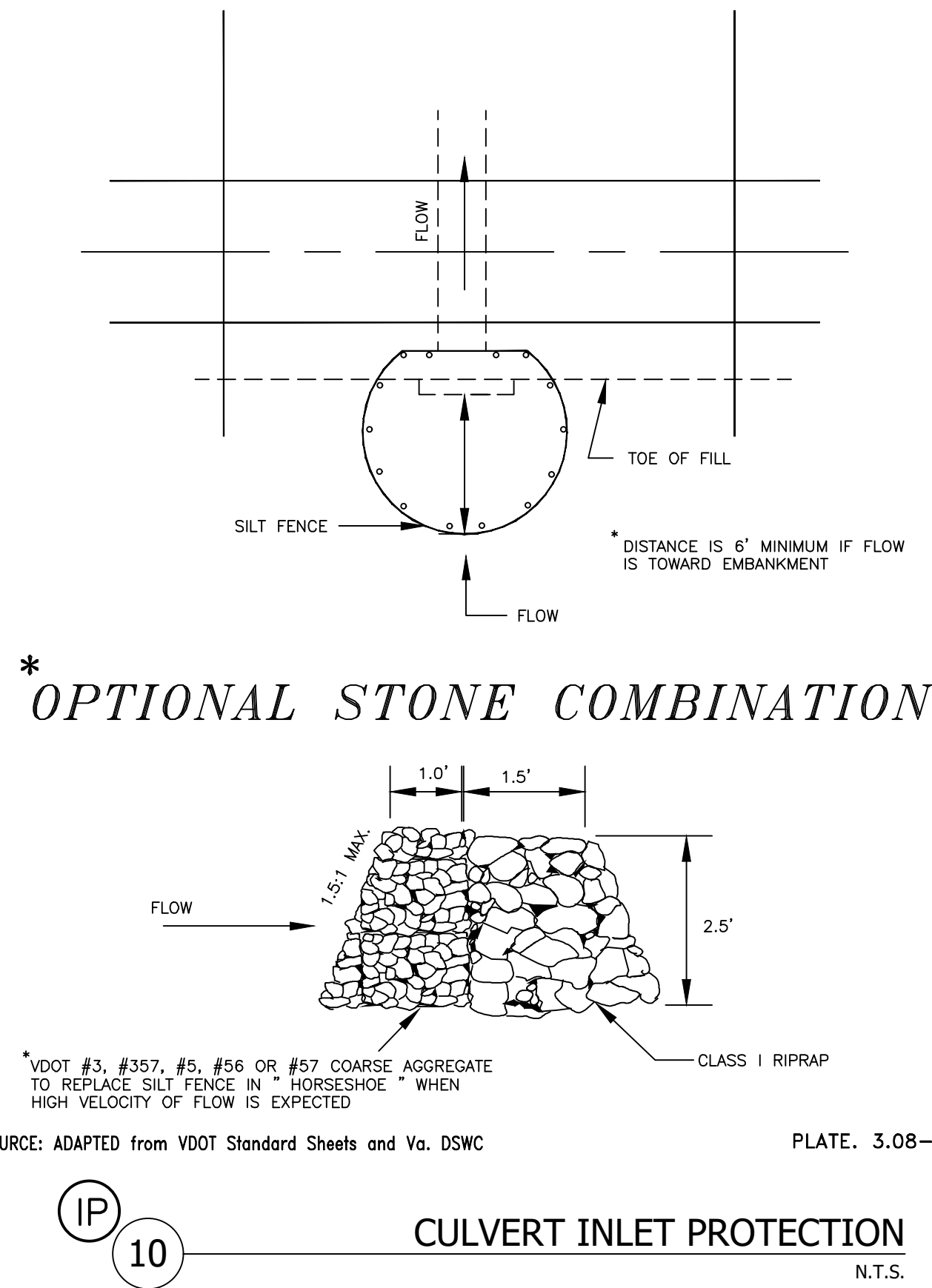
STRASBURG ROAD SUBDIVISION
ESC DETAILS
ALI BILLOO
WARREN COUNTY, VA

RACEY PROJECT NUMBER: 9276 PUBLISH DATE: 10/15/2024

C500



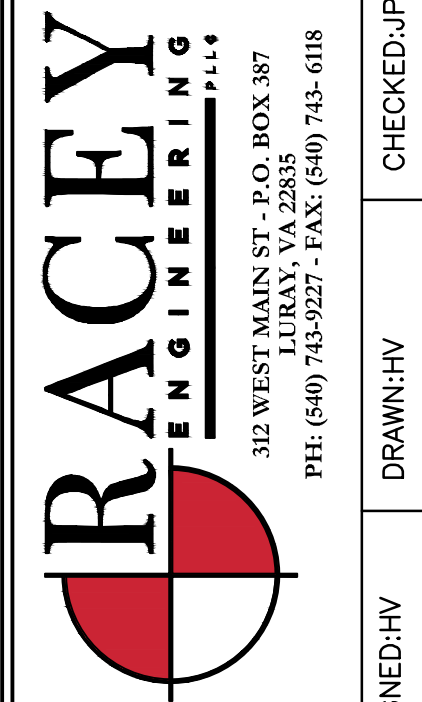
IP 9 DROP INLET PROTECTION
N.C. EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL 1988 - PLATE 3.07-1



No.	Submittal / Revision	By	App'd	Date
1	1ST SUBMITTAL TOWN	HV	JPT	06/28/24
2	2ND SUBMITTAL TOWN	HV	JPT	10/15/24



PERMIT
REVIEW SET



STRASBURG ROAD SUBDIVISION
ESC DETAILS
ALI BILLOO
WARREN COUNTY, VA
RACEY PROJECT NUMBER: 9276
PUBLISH DATE: 10/15/2024

C501

Typical Traffic Control
Stationary Operation on a Shoulder
(Figure TTC-4.1)
NOTES

- Standard**
- For long-term stationary work (more than 3 days) on divided highways having a median wider than 8', sign assemblies on both sides of the roadway shall be required as shown (ROAD WORK AHEAD (W20-1), RIGHT SHOULDER CLOSED AHEAD (W21-5bR), RIGHT SHOULDER CLOSED (W21-5aR)), even though only one shoulder is being closed. For operations less than 3 days in duration, sign assemblies will only be required on the side where the shoulder is being closed and a RIGHT SHOULDER CLOSED (W21-5aR) sign shall be added to that side.

Guidance

- Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.

- Option:**
- The SHOULDER WORK (W21-5) sign on an intersecting roadway may be omitted where drivers emerging from that roadway will encounter another advance warning sign prior to this activity area.
 - For short duration operations of 60 minutes or less, all signs and channelizing devices may be eliminated if a vehicle with activated high-intensity amber rotating, flashing, or oscillating lights is used.

- Standard:**
- Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or oscillating lights. Vehicle hazard warning signals can be used to supplement high-intensity amber rotating, flashing, or oscillating lights.
 - Taper length (L) and channelizing device spacing shall be as follows:

Speed Limit (mph)	Taper Length (L)			
	9	10	11	12
25	95	105	115	125
30	135	150	165	180
35	185	205	225	245
40	240	270	295	320
45	405	450	495	540
50	450	500	550	600
55	495	550	605	660
60	540	600	660	720
65	585	650	715	780
70	630	700	770	840
Minimum taper lengths for Limited Access highways shall be 1000 feet.				
Shoulder Taper = 1/2 L Minimum				

Location	Channelizing Device Spacing	
	Speed Limit (mph)	
	0 - 35	36 +
Transition Spacing	20'	40'
Travelway Spacing	40'	80'
Construction Access*	80'	120'

* Spacing may be increased to this distance, but shall not exceed one access per 1/4 mile.
On roadways with paved shoulders having a width of 8 feet or more, channelizing devices shall be used to close the shoulder in advance of the merging taper to direct vehicular traffic to remain within the traveled way.

- The buffer space length shall be as shown in Table 6H-3 on Page 6H-5 for the posted speed limit.
- A truck-mounted attenuator (TMA) shall be used on the shadow vehicle on Limited Access highways and multi-lane roadways with posted speed limit equal to or greater than 45 mph for operations with a duration greater than 60 minutes.
- When a side road intersects the highway within the temporary traffic control zone, additional traffic control devices shall be placed as needed.

1: Revision 1 - 4/1/2015

Typical Traffic Control
Lane Closure on a Two-Lane Roadway Using Flaggers
(Figure TTC-23.1)
NOTES

Guidance:

- Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, and 500'-800' where the posted speed limit is greater than 45 mph.
- Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the flagger station and transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. Generally speaking, motorists should have a clear line of sight from the graphic flagger symbol sign to the flagger.

- Option:**
- Where Right-of-Way or geometric conditions prevent the use of 48" x 48" signs, 36" x 36" signs may be used.

Standard:

- Flagging stations shall be located far enough in advance of the work space to permit approaching traffic to reduce speed and/or stop before passing the work space and allow sufficient distance for departing traffic in the left lane to return to the right lane before reaching opposing traffic (see Table 6H-3 on Page 6H-5).
- All flaggers shall be state certified and have their certification card in their possession when performing flagging duties (see Section 6E.01, Qualifications for Flaggers).
- Cone spacing shall be based on the posted speed and the values in Table 6H-4 on Page 6H-6.
- A shadow vehicle with at least one high intensity amber rotating, flashing, or oscillating light shall be parked 80'-120' in advance of the first work crew.

- Option:**
- A supplemental flagger may be required in this area to give advance warning of the operation ahead by slowing approaching traffic prior to reaching the flagger station or queued traffic.

Guidance:

- If the queue of traffic reaches the BE PREPARED TO STOP (W3-4) sign then the signs, and if used the portable temporary rumble strips (PTRS), should be readjusted at greater distances.
- When a highway-rail crossing exists within or upstream of the transition area and it is anticipated that queues resulting from the lane closure might extend through the highway-rail grade crossing, the temporary traffic control zone should be extended so that the transition area precedes the highway-rail crossing (see Figure TTC-56 for additional information on highway-rail crossings).

Standard:

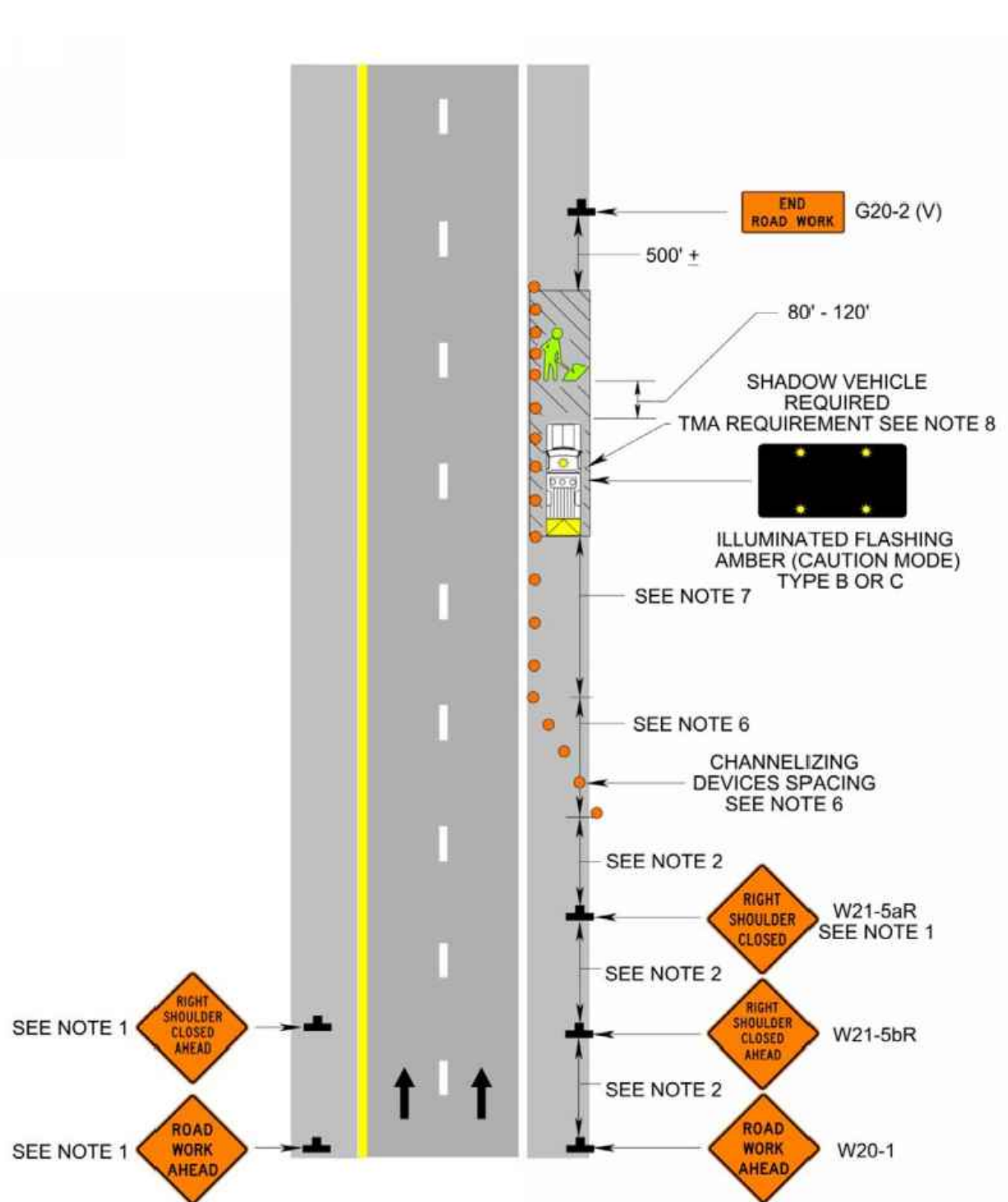
- At night, flagger stations shall be illuminated, except in emergencies (see Section 6E.08).
- Cones may be eliminated when using a pilot vehicle operation or when the total roadway width is 20 feet or less.
- For low-volume situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger, positioned to be visible to road users approaching from both directions, may be used (see Chapter 6E).

- Standard:**
- When approved for use, three portable temporary rumble (PTRS) strips shall be installed across the entire travel lane adjacent to the BE PREPARED TO STOP (W3-4) sign. The portable temporary rumble strips shall be monitored and adjusted as necessary during the work shift to ensure proper placement on the roadway. When the PTRS are installed, the RUMBLE STRIPS AHEAD (W20-V26) sign shall also be utilized.

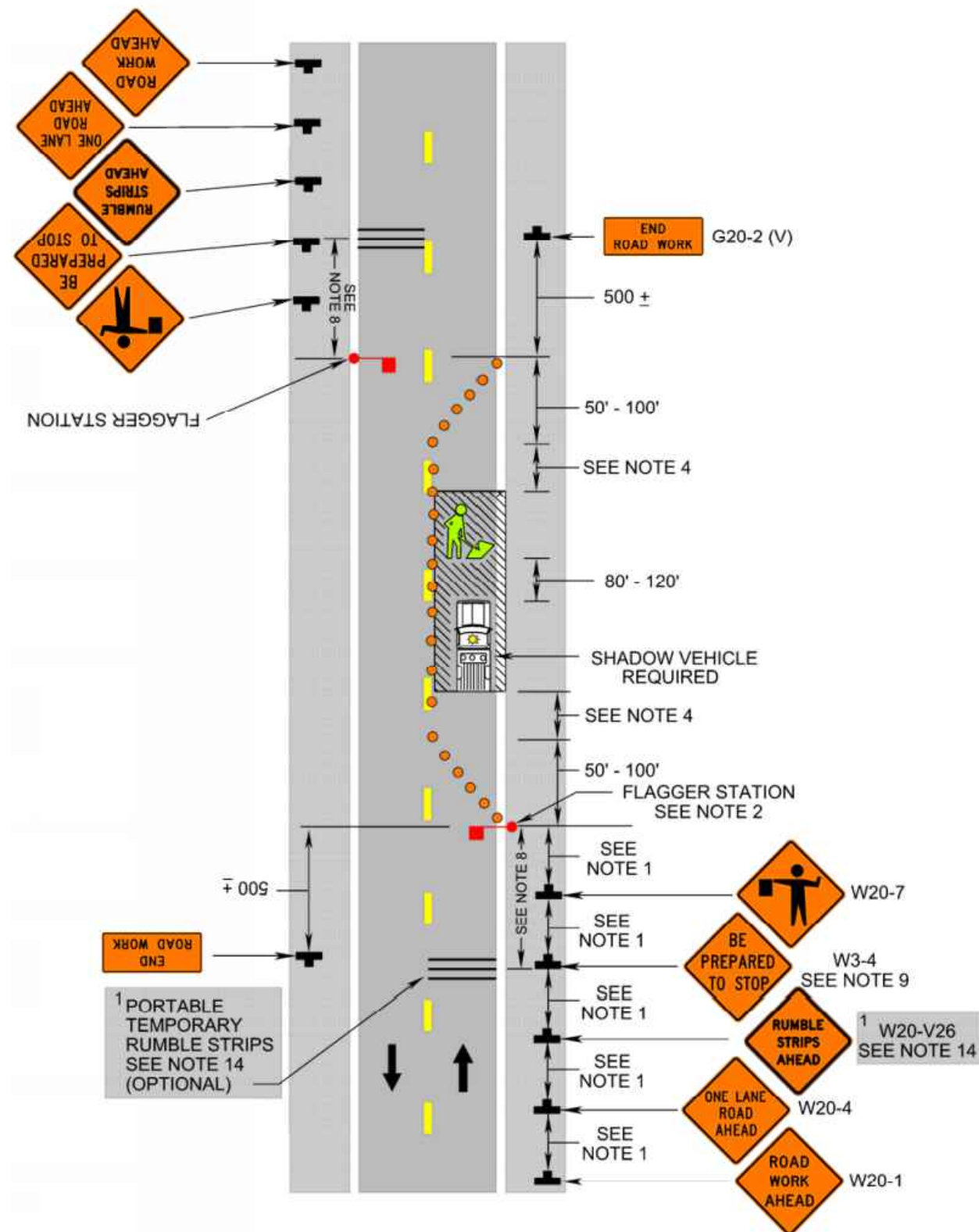
Posted Speed	0 - 35 mph	36 - 55 mph
PTRS Spacing (Center to Center)	5 Feet	8 Feet

1: Revision 1 - 4/1/2015

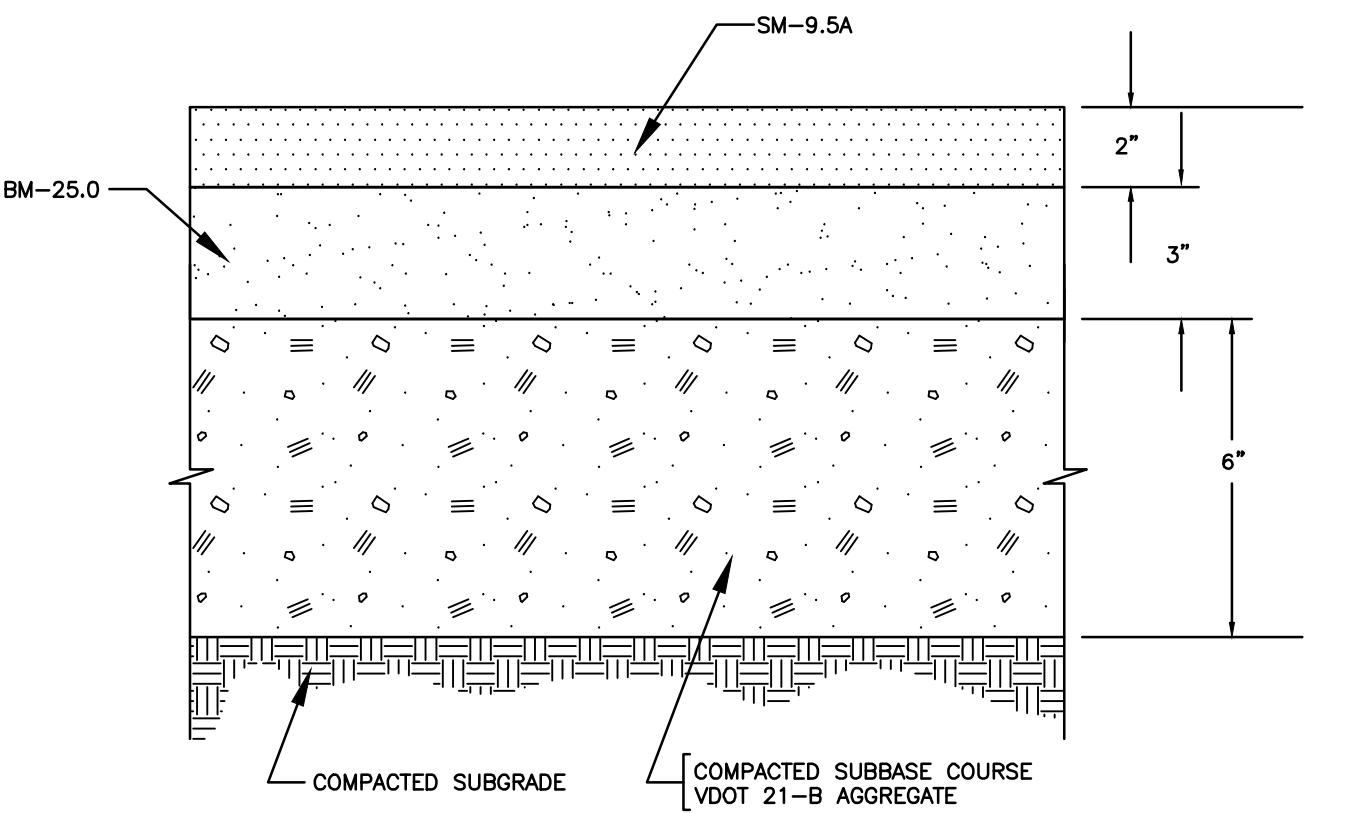
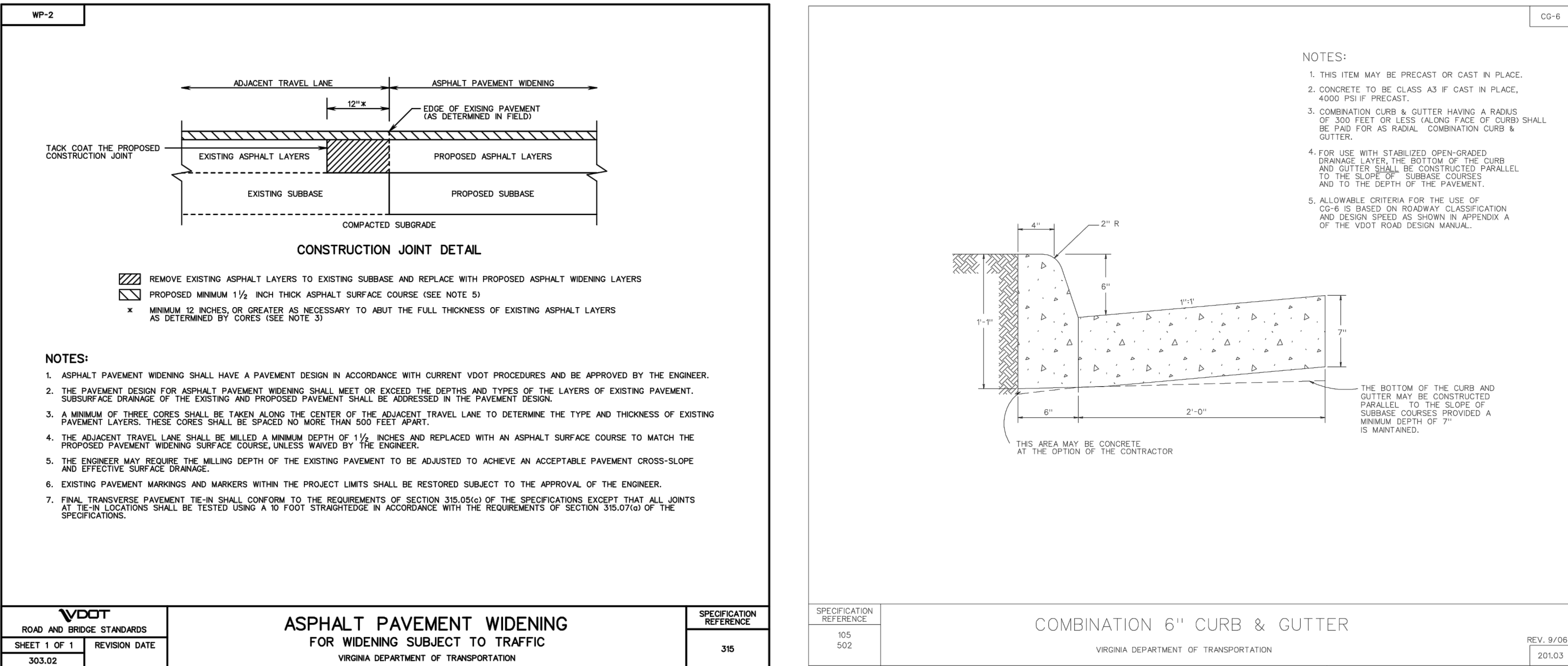
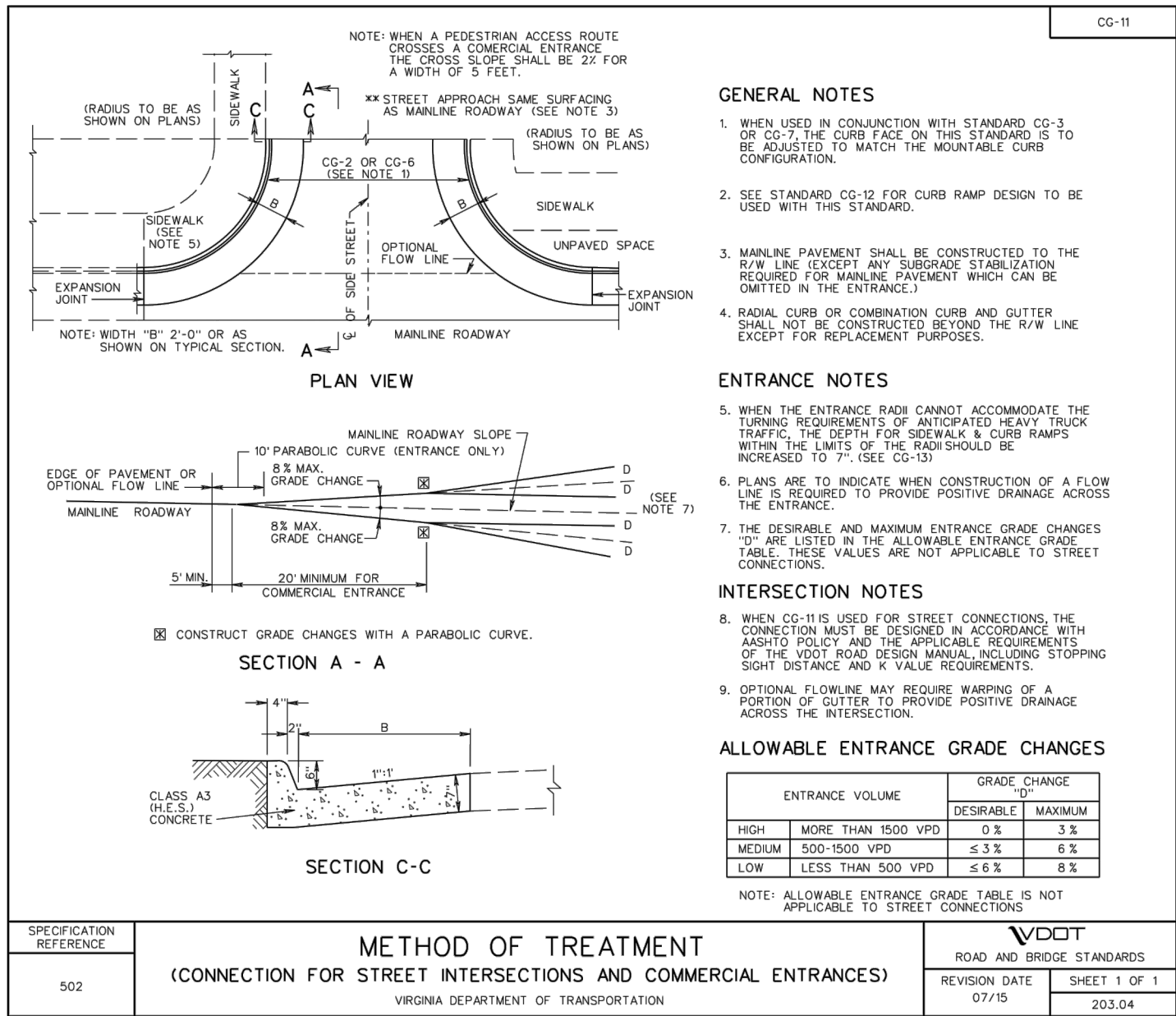
Stationary Operation on a Shoulder
(Figure TTC-4.1)



Lane Closure on a Two-Lane Roadway Using Flaggers
(Figure TTC-23.1)

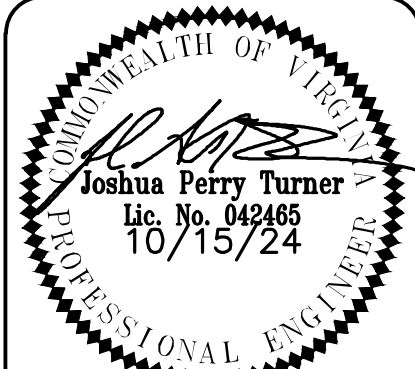


1: Revision 1 - 4/1/2015

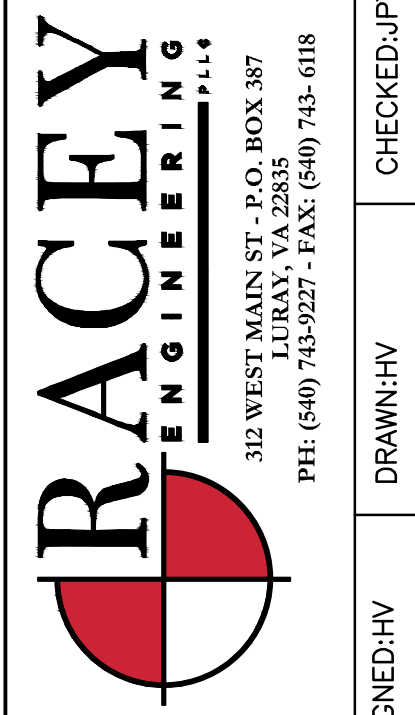


1 PROPOSED ROAD PAVEMENT SECTION
Scale: Not to Scale

Date	06/28/24
App'd	JPT
By	HV
Submital / Revision	1ST SUBMITTAL TOWN
No.	2ND SUBMITTAL TOWN



PERMIT
REVIEW SET



STRASBURG ROAD SUBDIVISION	CONSTRUCTION DETAILS	ALI BILLOO	WARREN COUNTY, VA	PUBLISH DATE: 10/15/2024
RACEY PROJECT NUMBER: 9276				CHECKED: JPT

C502

[illegible][illegible]

T_c FLOW PATH LEGEND

	SHEET FLOW
	SHALLOW CONCENTRATED FLOW
	CHANNEL FLOW

T_c FLOW PATH COMPUTATIONS CAN BE FOUND IN
THE 10-YEAR HYDROLOGIC REPORTS SECTION OF
THE COMPUTATIONS BOOK.

STORMWATER MANAGEMENT (SWM) PLAN NARRATIVE:

THE TOTAL SITE HAS BEEN MANAGED FOR WATER QUALITY IN ACCORDANCE WITH VIRGINIA STORMWATER MANAGEMENT ACT. THE SITE IS LOCATED WITHIN THE SHENANDOAH WATERSHED. THE HUC 8 CODE OF THE WATERSHED IS 02070006.

WATER QUALITY NARRATIVE:

FOR WATER QUALITY ANALYSIS, THE PROJECT SITE AREA (2.94 ACRES) IS ANALYZED AT ONE (1) SITE EVALUATION POINT. THE EVALUATION POINT IS LOCATED TO THE NORTH OF THE SITE IN AN EXISTING SWALE.

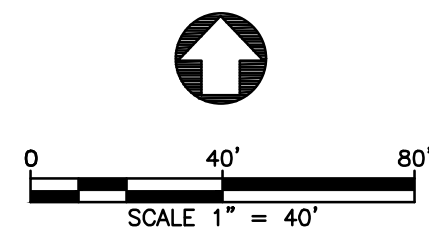
CHANNEL PROTECTION:

THE SITE MEETS CHANNEL PROTECTION BY SECTION 9VAC25-66-B-3.A. WHERE THE SITE UTILIZES THE DETENTION FROM THE PROPOSED UNDERGROUND STORAGE CONTROL STRUCTURE TO RELEASE FLOW UNDER THE Q-ALLOWABLE DETERMINED USING THE ENERGY BALANCE EQUATION.

FLOOD PROTECTION

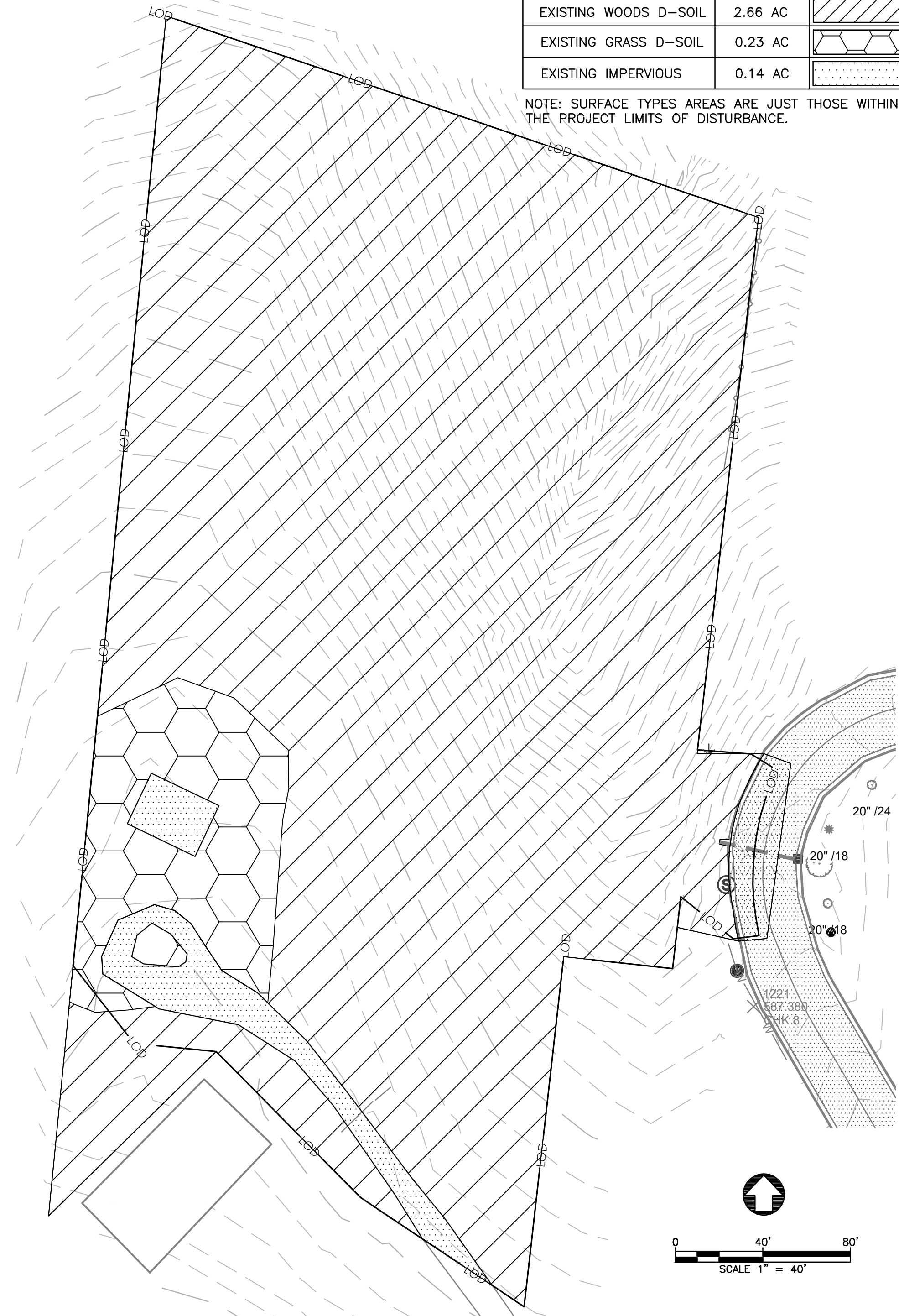
THE SITE MEETS FLOOD PROTECTION BY 9VAC25-87-66.C.1 WHERE 10-YEAR POST DEVELOPMENT FLOOD RATE IS RELEASED AT LESS THAN THE PRE-DEVELOPMENT 10-YEAR FLOWRATE DUE TO THE DETENTION OF THE PROPOSED UNDERGROUND STORAGE. DRAINAGE CONVEYANCE HAS BEEN ANALYZED AND SHOWS NO SIGN OF FLOODING AND THEREFORE, IN ACCORDANCE WITH METHODOLOGY ESTABLISHED IN 9VAC25-87-66.C.1 FLOOD PROTECTION HAS BEEN MET.

DRAINAGE SUMMARY TABLE					
EVALUATION POINT					
DRAINAGE AREA ID	AREA	1 YR (CFS)	2 YR (CFS)	10 YR (CFS)	100 YR (CFS)
PRE-DEVELOPMENT					
DA PRE	3.88	4,262	6,245	12,470	24,830
TOTAL AREA PRE	3.88				
POST-DEVELOPMENT					
DA TO UG-1	3.40	5,776	7,826	13,780	24,840
UG-1 OUT		2,106	2,578	11,700	24,430
BYPASS	0.48	0,724	1,019	1,928	3,689
DA POST		2,208	2,757	12,220	27,080
TOTAL AREA POST	3.88				

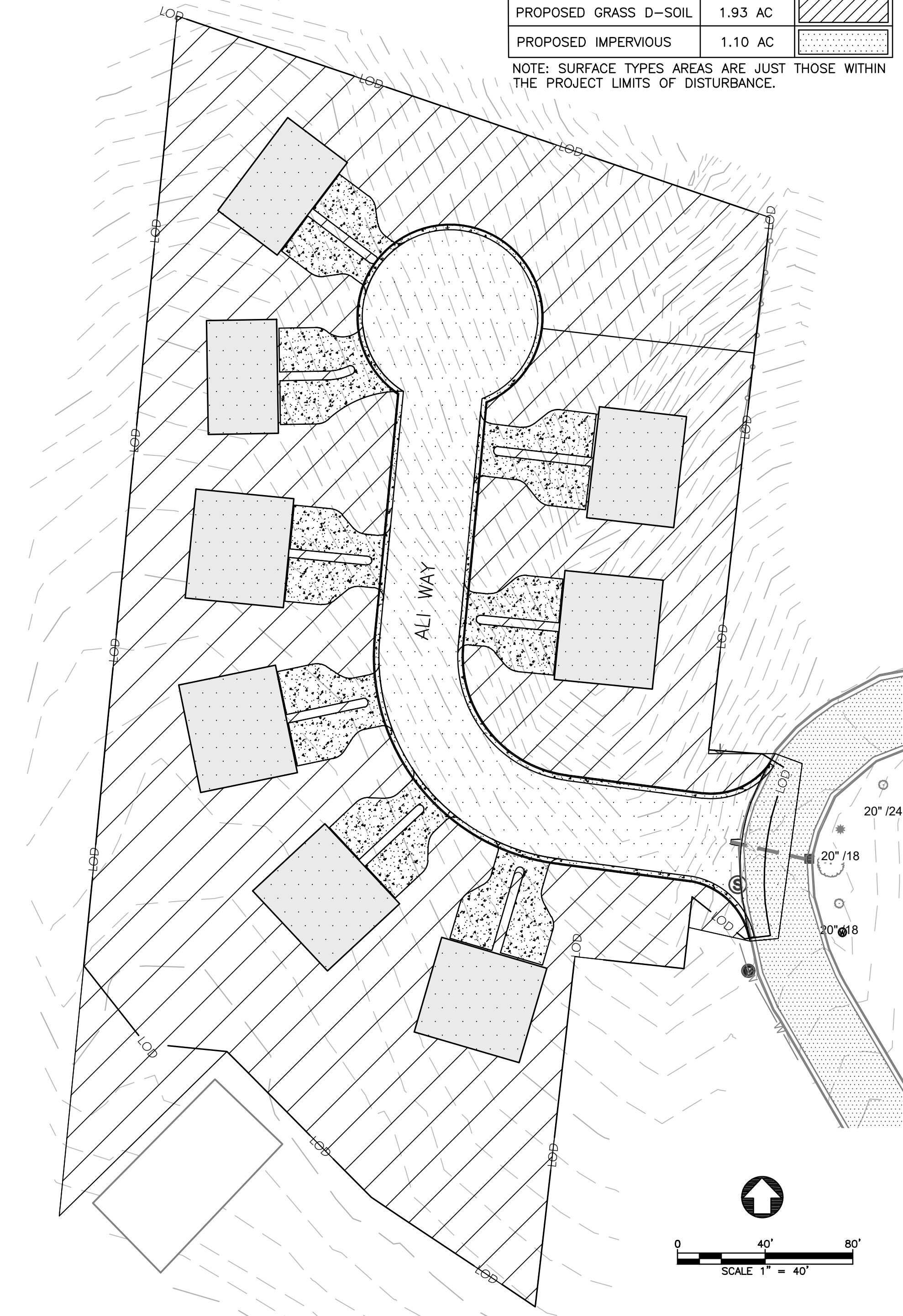


C 600	STRASBURG ROAD SUBDIVISION DRAINAGE MAP ALI BILLOO WARREN COUNTY, VA	RACEY PROJECT NUMBER: 9276 PUBLISH DATE: 10/15/2024	 RACEY ENGINEERING 312 WEST MAIN ST. - P.O. BOX 387 LITTLETON, CO 80120 PH: (303) 743-2227 FAX: (303) 743-0188				DESIGNED:HV		DRAWN:HV	CHECKED:JPT
									PERMIT REVIEW SET	
			No.	Submittal / Revision	By	App'r'd	Date			
			1	1ST SUBMITTAL TOWN	HV	JPT	06/28/24			
			2	2ND SUBMITTAL TOWN	HV	JPT	10/15/24			

PRE-DEVELOPMENT



POST-DEVELOPMENT



CREDIT AVAILABILITY
LETTER TO BE
SUBMITTED PRIOR TO
SITE PLAN APPROVAL

WATER QUALITY:

THE TOTAL SITE (3.52 ACRES), WHICH CONSISTS OF 2.94 ACRES OF DISTURBANCE, HAS BEEN MANAGED FOR WATER QUALITY IN ACCORDANCE WITH VIRGINIA STORMWATER MANAGEMENT ACT. THE SITE IS LOCATED WITHIN THE NORTH FORK SHENANDOAH WATERSHED. THE HUC8 CODE FOR THE WATERSHED IS 02070006.

THE VIRGINIA RUNOFF REDUCTION METHOD RE-DEVELOPMENT WORKSHEET - V3.0 WAS USED TO DETERMINE THE NUTRIENT LOAD REMOVAL REQUIRED. THE PHOSPHORUS LOAD REDUCTION REQUIRED WAS DETERMINED TO BE 2.24 LB/YR. THE STORMTECH ISOLATOR ROW PLUS WILL PROVIDE A REDUCTION OF 1.84 LB/YR. THE REMAINING 0.40 LB/YR WILL BE OFFSET WITH THE PURCHASE OF NUTRIENT CREDITS.

DEQ Virginia Runoff Reduction Method Re-Development Compliance Spreadsheet - Version 3.0

BMP Design Specifications List: 2013 Draft Sids & Specs

Site Summary

Project Title: STRASBURG ROAD SUBDIVISION	
Date: 4/5/21	
Total Rainfall (in)	43
Total Disturbed Acreage:	3.03

Site Land Cover Summary

Pre-ReDevelopment Land Cover (acres)	A Soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.00	0.00	0.00	2.66	2.66	88
Managed Turf (acres)	0.00	0.00	0.00	0.23	0.23	8
Impervious Cover (acres)	0.00	0.00	0.00	0.14	0.14	5
					3.03	100

Post-ReDevelopment Land Cover (acres)

Post-ReDevelopment Land Cover (acres)	A Soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.00	0.00	1.93	1.93	64
Impervious Cover (acres)	0.00	0.00	0.00	1.10	1.10	36
					3.03	100

Site Tv and Land Cover Nutrient Loads

	Final Post-Development (Post-ReDevelopment & New Impervious)	Post- ReDevelopment	Post- Development (New Impervious)	Adjusted Pre- ReDevelopment	Pre- ReDevelopment TP Load per acre (lb/acre/yr)	Final Post-Development TP Load per acre (lb/acre/yr)	Post-ReDevelopment TP Load per acre (lb/acre/yr)
Site Rv	0.50	0.30	0.95	0.13			
Treatment Volume (ft ³)	5,545	2,234	3,311	1,000			
TP Load (lb/yr)	3.48	1.40	2.08	0.63			
Baseline TP Load (lb/yr): 0.84877 *Reduction below new development load limitation not required							
Total TP Load Reduction Required (lb/yr)	2.24	0.56	1.69				
	Final Post-Development Load (Post-ReDevelopment & New Impervious)				Pre- ReDevelopment		
TN Load (lb/yr)	24.92				5.28		

Site Compliance Summary

Maximum % Reduction Required Below Pre-ReDevelopment Load	20%	* Note: % Reduction will reduce post-development TP load to less than or equal to baseline load of 0.85 lb/yr (0.41 lb/acre/yr) (Required reduction for Post-ReDev. = Post-ReDev TP load - baseline load of 0.8487 lb/yr, baseline load = site area x 0.41 lb/acre/yr)
Total Runoff Volume Reduction (ft ³)	0	
Total TP Load Reduction Achieved (lb/yr)	1.84	
Total TN Load Reduction Achieved (lb/yr)	0.00	
Remaining Post Development TP Load (lb/yr)	1.64	
Remaining TP Load Reduction (lb/yr) Required	0.40	
*Reduction below new development load limitation not required		

Drainage Area Summary

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0.00
Managed Turf (acres)	1.93	0.00	0.00	0.00	0.00	1.93
Impervious Cover (acres)	1.10	0.00	0.00	0.00	0.00	1.10
Total Area (acres)	3.03	0.00	0.00	0.00	0.00	3.03

Drainage Area Compliance Summary

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
TP Load Reduced (lb/yr)	1.84	0.00	0.00	0.00	0.00	1.84
TN Load Reduced (lb/yr)	0.00	0.00	0.00	0.00	0.00	0.00

Drainage Area A Summary

Land Cover Summary

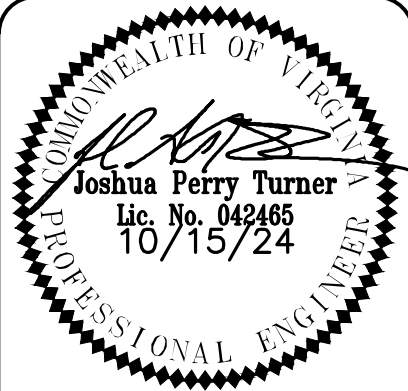
	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.00	0.00	1.93	1.93	64
Impervious Cover (acres)	0.00	0.00	0.00	1.10	1.10	36
					3.03	

BMP Selections

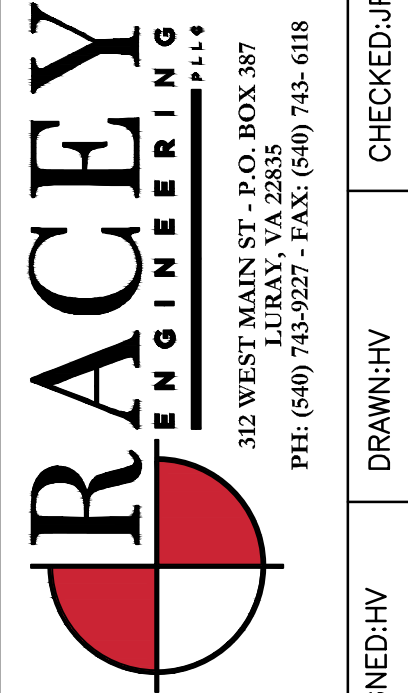
Practice	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	BMP Treatment Volume (ft ³)	TP Load from Upstream Practices (lbs)	Untreated TP Load to Practice (lbs)	TP Removed (lb/yr)	TP Remaining (lb/yr)	Downstream Treatment to be Employed
14.b. Manufactured Treatment Device- Filtering	0.21	1.88	6,643.49	0.00	4.17	1.67	2.50	

Total Impervious Cover Treated (acres)	1.00
Total Turf Area Treated (acres)	1.59
Total TP Load Reduction Achieved in D.A. (lb/yr)	1.84
Total TN Load Reduction Achieved in D.A. (lb/yr)	0.00

No.	Submittal / Revision	By	Date
1	1ST SUBMITTAL TOWN	HV	06/28/24
2	2ND SUBMITTAL TOWN	HV	10/15/24



PERMIT
REVIEW SET



STRASBURG ROAD SUBDIVISION
VRM MAP
ALI BILLOO
WARREN COUNTY, VA

PUBLISH DATE: 10/15/2024
RACEY PROJECT NUMBER: 9276

C601

A. APPLICATION TYPE

☒ INITIAL SUBMISSION

☐ RESUBMISSION

DEQ PLAN # : _____

☐ MODIFICATION with ACREAGE INCREASE

☐ MODIFICATION without ACREAGE INCREASE

DEQ PLAN # : _____

DEQ PLAN # : _____

B. DESIGN PROFESSIONAL

CONTACT NAME: JOSHUA P. TURNER, P.E.
MAILING ADDRESS: 312 WEST MAIN STREET, LURAY VA
TELEPHONE NO: 540-743-9227
EMAIL ADDRESS: JTURNER@RACEYENGINEERING.COM

C. PROJECT DEVELOPER

PROJECT DEVELOPER:
CONTACT NAME:
MAILING ADDRESS:
TELEPHONE NO:
EMAIL ADDRESS:

D. PROPERTY OWNER

PROPERTY OWNER: ALI BILLOO
CONTACT NAME: ALI BILLOO
MAILING ADDRESS: 7214 SIPES LANE, ANNANDALE VA
TELEPHONE NO: 703-346-6254
EMAIL ADDRESS: BILLSHOMES@HOTMAIL.COM

E. PROJECT INFORMATION

PROJECT NAME: STRASBURG ROAD SUBDIVISION
ADDRESS (911 ADDRESS IF AVAILABLE):
COUNTY (IF NOT LOCATED WITHIN A CITY):
TAX MAP NO. (OR GPIN): 20A114 23B
LATITUDE (6 DIGITS, DECIMAL DEGREES): 38.9490
LONGITUDE (6 DIGITS, DECIMAL DEGREES): 78.2103
TOTAL LAND AREA OF DEVELOPMENT (1/100th ACRE): 3.52 AC
ESTIMATED AREA TO BE DISTURBED (1/100th ACRE): 2.94 AC
PROJECT STATUS: ☐ FEDERAL ☐ STATE ☐ PUBLIC ☒ PRIVATE
PART OF A LARGER COMMON PLAN OF DEVELOPMENT? ☐ YES ☐ NO
OFFSITE IMPROVEMENTS PROPOSED? ☐ YES ☐ NO

F. OFFSITE SUPPORT ACTIVITY INFORMATION

OFFSITE SUPPORT ACTIVITY NAME:
ADDRESS (911 ADDRESS IF AVAILABLE):
COUNTY (IF NOT LOCATED WITHIN A CITY):
TAX MAP NO. (OR GPIN):
LATITUDE (6 DIGITS, DECIMAL DEGREES):
LONGITUDE (6 DIGITS, DECIMAL DEGREES):
ESTIMATED AREA TO BE DISTURBED (1/100th ACRE):

G. PLAN INFORMATION

GENERAL PLAN INFORMATION	SHEET NO.
1. VICINITY MAP	T100
2. NORTH SCALE	T100
3. PLAN LEGEND	T101
4. PLAN SCALE	T100
5. SHEET INDEX	T100

PRE-DEVELOPMENT SITE INFORMATION	SHEET NO.
6. NARRATIVE OF PRE-DEVELOPMENT SITE CONDITIONS	C400
7. EXISTING PROPERTY BOUNDARIES (INC. LEASE BOUNDARIES)	C100
8. EXISTING TOPOGRAPHY (EXISTING CONTOURS)	C100
9. EXISTING STREAMS, PONDS, DITCHES, WETLANDS & OTHER WATERS	N/A
10. EXISTING KARST FEATURES	N/A
11. EXISTING 100-YEAR FEMA FLOODPLAIN	N/A
12. RESOURCE PROTECTION AREAS	N/A
13. EXISTING IMPROVEMENTS (BUILDINGS, ROADS, PARKING & UTILITIES)	C100
14. EXISTING VEGETATIVE AREAS (FOREST, OPEN SPACE & TURF)	C601
15. EXISTING LAND COVER / USE TABULATION	C601
16. EXISTING EASEMENTS (DEED BOOK/PAGE REF. OR INSTRUMENT #)	T100
17. PRE-DEV. DRAINAGE AREAS (ACREAGE, DIVIDES & FLOW PATHS)	C600

POST-DEVELOPMENT SITE INFORMATION	SHEET NO.
18. NARRATIVE OF POST-DEVELOPMENT SITE CONDITIONS	C400
19. PROPOSED PROPERTY BOUNDARIES (INC. LEASE BOUNDARIES)	C100
20. PROPOSED LIMITS OF LAND DISTURBANCE (CLEARING & GRADING)	C401
21. PROPOSED GRADING (PROPOSED CONTOURS INC. SWM PRACTICES)	C300
22. PROPOSED 100-YEAR FLOODPLAIN	N/A
23. PROPOSED IMPROVEMENTS (BLDGS, ROADS, PARKING & UTILITIES)	C200
24. PROPOSED VEGETATIVE AREAS (FOREST, OPEN SPACE & TURF)	C601
25. PROPOSED LAND COVER / USE TABULATION	C601
26. PROPOSED EASEMENTS	N/A
27. POST-DEV. DRAINAGE AREAS (ACREAGE, DIVIDES & FLOW PATHS)	C600

EROSION & SEDIMENT CONTROL INFORMATION	SHEET NO.
28. NARRATIVE OF PROP. EROSION & SEDIMENT CONTROLS	C400
29. MINIMUM STANDARDS (9VAC25-840-40)	C400
30. CRITICAL EROSION AREAS (VESCH, CHAPTER 6)	C400
31. PROP. EROSION & SEDIMENT CONTROLS (VESCH, CHAPTER 3)	C401
32. EROSION & SEDIMENT CONTROL DETAIL DRAWINGS	C500
33. HYDROLOGIC & HYDRAULIC COMPUTATIONS	COMPS BOOK
34. INSPECTION, OPERATION & MAINTENANCE REQUIREMENTS	C400

PLAN SUBMISSION CHECKLIST

[SEE DEQ GUIDANCE MEMO NO. 22-2012 FOR ADDITIONAL INSTRUCTIONS]

G. PLAN INFORMATION (CONT.)

POST-DEVELOPMENT WATER QUANTITY & WATER QUALITY INFO.	SHEET NO.
35. NARRATIVE OF PROP. SWM FACILITIES / PRACTICES	C600
36. PROP. SWM FACILITIES / PRACTICES	C600
37. HYDROLOGIC & HYDRAULIC COMPUTATIONS *	COMPS BOOK
38. LONG-TERM INSP., OPERATION & MAINTENANCE REQUIREMENTS	C400
39. OUTFALL SUMMARY TABLE WITH PRE, POST, AND ALLOWABLE DISCHARGE RATES USED FOR QUANTITY ASSESSMENT; IDENTIFY THE TYPE OF CONVEYANCE SYSTEM AT EACH POINT OF DISCHARGE	C600

* STORM DRAIN DESIGN COMPUTATIONS AND HYDRAULIC GRADE LINE COMPUTATIONS SHOULD BE PROVIDED AND SHOULD INCLUDE EACH PIPE SEGMENT. IN ADDITION, STORM SEWER LONGITUDINAL PROFILES WITH HYDRAULIC GRADE LINE ELEVATIONS SHOULD BE INCLUDED FOR VISUAL REPRESENTATION. DESIGN CALCULATIONS AND CROSS-SECTIONS SHOULD BE PROVIDED FOR ALL OPEN MANMADE CHANNELS. CROSS-SECTIONS SHOULD SHOW AND LABEL THE 1-YEAR, 2-YEAR, AND 10-YEAR WATER SURFACE ELEVATIONS.

SOILS & GEOTECHNICAL INFORMATION	SHEET NO.
40. SOILS MAP (INC. NRCS SOIL TYPES)	C400
41. SOILS TABULATION	C400
42. GEOTECHNICAL INVESTIGATION / REPORT	COMPS BOOK

OTHER SUPPORTING INFORMATION	SHEET NO.
43. BOUNDARY SURVEY (18VAC10-20-370)	C100
44. PHYSICAL IMPROVEMENT SURVEY (18VAC10-20-380)	C100
45. TOPOGRAPHIC SURVEY (18VAC10-20-382)	C100

H. LAND COVER TABULATION

EXISTING LAND COVER / USE	ACRES
1. IMPERVIOUS COVER	0.14
IMPERVIOUS COVER (% OF TOTAL LAND AREA OF DEVELOPMENT)	4.6%
2. MANAGED TURF	0.23
3. OPEN SPACE	0
4. FOREST COVER	2.66
5. PRIME FARMLAND (NRCS FARMLAND CLASSIFICATION)	N/A

PROPOSED LAND COVER / USE ("SITE" TAB OF VRRM SPREADSHEET)	ACRES
1. IMPERVIOUS COVER	1.10
IMPERVIOUS COVER (% OF TOTAL LAND AREA OF DEVELOPMENT)	36.3%
2. MANAGED TURF	1.93
3. OPEN SPACE	0
4. FOREST COVER	0

I. SOILS TABULATION

MAP UNIT SYMBOL	MAP UNIT NAME	HSG	K FACTOR	ERODIBILITY	ACRES IN LOD	% OF LOD
41C	WEIKERT-BERKS CHANNERY SILT LOAMS	D	0.17	LOW	0.94	32%
41D	WEIKERT-BERKS CHANNERY SILT LOAMS	D	N/A	LOW	2.00	68%

J. EROSION & SEDIMENT CONTROL

ESC PLAN VARIANCE REQUEST: ☐ YES ☒ NO

IF "YES", PLEASE PROVIDE JUSTIFICATION FOR THE VARIANCE REQUEST:

K. STORMWATER MANAGEMENT

APPLICABLE DESIGN CRITERIA: ☐ PART II B
☐ PART II C (GRANDFATHERING)
☐ PART II C (TIME LIMITS ON APPLICABILITY)
☐ "SAFE HARBOR"

OFFSITE COMPLIANCE OPTION(S)? ☐ YES ☒ NO

IF "YES", PLEASE DESCRIBE THE OFFSITE COMPLIANCE OPTION(S):

DISCHARGE TO A KARST FEATURE(S)? ☐ YES ☒ NO

IF "YES", PLEASE DESCRIBE THE KARST FEATURE(S):

IF "YES", PLEASE DESCRIBE ANY KNOWN NATURAL HERITAGE RESOURCES IN THE KARST FEATURE(S):

SWM PLAN EXCEPTION REQUEST? ☐ YES ☒ NO

IF "YES", PLEASE PROVIDE THE JUSTIFICATION FOR THE EXCEPTION REQUEST:

L. STORMWATER MANAGEMENT FACILITIES / PRACTICES

FACILITY NO.	FACILITY TYPE	LAT.	LONG.	REC. WATER	TOT. ACRES TREATED	IMP. ACRES TREATED	PLAN SHEET NO.
12	FILTER DEVICE	38.9497	-78.2099	02070006	3.40	1.16	C301

M. OWNER / DEVELOPER CERTIFICATION

I hereby certify that coverage under the General VPDES Permit for Discharges of Stormwater from Construction Activities will be obtained, if required, prior to commencing land-disturbing activities.

I hereby certify that all wetlands permits required by law will be obtained, if required, prior to commencing land disturbing activities.

I hereby certify that permission to construct any offsite improvements, if proposed, will be obtained prior to commencing land disturbing activities.

I hereby certify that all offsite nonpoint source nutrient credits will be obtained, if proposed, prior to commencing land disturbing activities.

I hereby certify that construction record drawings (as-built drawings) for all permanent stormwater management facilities/practices will be prepared and submitted to DEQ prior to project closeout. The construction record drawings will be appropriately sealed and by a professional registered in the Commonwealth of Virginia, certifying that the stormwater management facilities/practices have been constructed in accordance with the approved plan(s).

I hereby certify that a long-term maintenance agreement(s) for all permanent stormwater management facilities/practices and other techniques specified to manage the quality and quantity of runoff will be submitted to DEQ, if required, prior to project closeout. The long-term maintenance agreement(s) will be recorded in the local land records prior to termination of coverage under the General VPDES Permit for Discharges of Stormwater from Construction Activities.

OWNER / DEVELOPER NAME:
OWNER / DEVELOPER TITLE:
SIGNATURE:
DATE:

N. DESIGN PROFESSIONAL CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I hereby certify that the plans and hydrologic & hydraulic computations herein are in compliance with the Stormwater Management Act and attendant regulations, the Erosion and Sediment Control Law and attendant regulations, and applicable DEQ guidance.

DESIGN PROFESSIONAL NAME:
LICENSE NO.:
SIGNATURE:
DATE:

O. DUAL COMBINED ADMINISTRATOR (DCA) CERTIFICATION

[INCLUDE THIS SECTION / CERTIFICATION IF REQUESTING A STREAMLINED PLAN REVIEW IN ACCORDANCE WITH DEQ GUIDANCE MEMO NO. 22-2011, OTHERWISE DELETE]

I hereby certify that I have reviewed the plans and hydrologic & hydraulic computations herein for compliance with the Stormwater Management Act and attendant regulations, the Erosion and Sediment Control Law and attendant regulations, and applicable DEQ guidance, and recommend the plans and computations for DEQ approval.

DCA NAME:
DCA CERTIFICATION NO.:
SIGNATURE:
DATE:

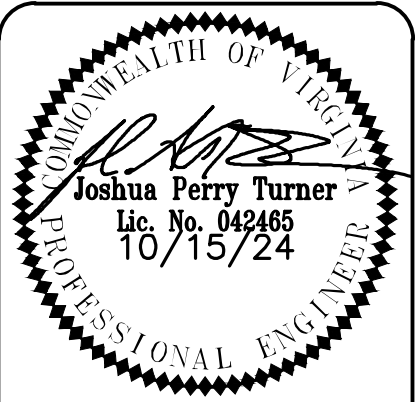
APPROVAL BLOCK

DEQ PLAN # 20____ - 0____

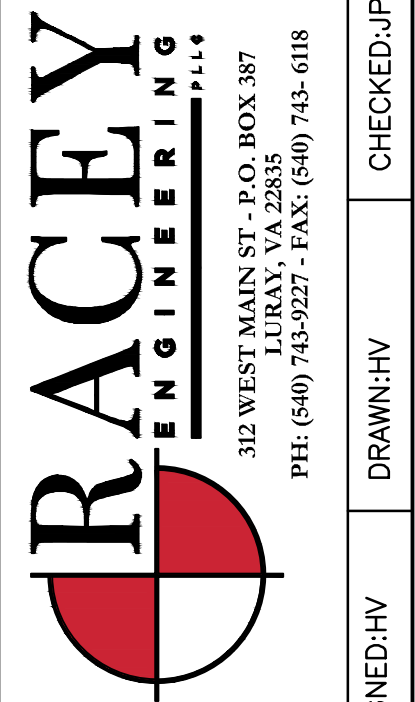
DEPT. OF ENVIRONMENTAL QUALITY

DATE

Date	06/28/24
App'd	JPT
By	HV
Submital / Revision	1ST SUBMITTAL TOWN
No.	2ND SUBMITTAL TOWN



PERMIT REVIEW SET



STRASBURG ROAD SUBDIVISION
DEQ COVER SHEET
ALI BILLOO
WARREN COUNTY, VA
RACEY PROJECT NUMBER: 9276
PUBLISH DATE: 10/15/2024

C602



Town of Front Royal, VA | Dept. of Planning & Zoning
102 E. Main St | Front Royal, VA 22630
Office: (540) 635-4236

Strasburg Road Subdivision

Permit #2400421 (Owner-Ali Billoo)

DATE: 19 December 2024

TO: Joshua P. Turner P.E. and Bradley Ritchie CE

CC: Lauren Kopishke, Director of Planning & Zoning

FROM: John M. Ware, Deputy Zoning Administrator

RE: Comments on Preliminary Plan dated October 15, 2024 (2nd Submittal)

Mr. Turner,

We have reviewed the above-noted submission and offer the following comments:

1. Comments are based on Policy Guidelines for a Major Subdivision Preliminary Plan per 148-300, Street Design per 148-820, Utilities and Services per 148-840, Street Improvements 148-850 and Zoning per Chapter 175 of the Towns Municipal Code and the associated checklist. [All other Local Agencies' Comments \(Warren County Building and E&S, Fire Marshall's Office, VDOT, DEQ\) from the previous submittal still apply.](#)
2. As per Checklist 148-1010-1 item (e), Provide minimum lot size requirements on the Cover Sheet.
3. As per Checklist 148-1010-1 item (i), provide an area tabulation showing total area and number of lots, streets, open space and residue on the Cover Sheet. [Provide a tabulation list showing the area \(square footage\) of all the lots, streets, open space, etc. on the Cover Sheet.](#)

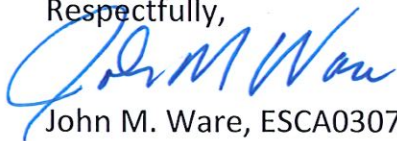
4. As per Checklist 148-1010 item (12), Show location type, grade, and all proposed and existing sanitary sewers, manholes, gas lines, storm sewers, inlets ditches, **culverts** and other unities. Show location of proposed connections to existing utilities. *Provide invert information, type, size, percent of grade, length of pipe, etc. for the culverts shown on the plans.*
5. As per Checklist 148-1010 item (25), provide typical street section of proposed street showing entire width of right-of-way, depth and type of pavement, base and subbase and curb line or ditch section, sidewalk and cut or fill slope. *The Typical Road Section provided on Sheet C303 needs to include curb and gutter.*
6. As per Checklist 148-1010 item (37), Show significant physical features on the property (watercourses, wetlands, wooded areas, etc.) and other significant man-made or natural features within the subdivision. *Since most of the parcel is wooded, show the wooded areas on an appropriate sheet.*

As per PUBLIC WORKS COMMENTS

7. Sheet C200 needs to have the CG-6 curb and gutter and CG-9 driveway aprons labeled and shown.
8. Sidewalk still needs to be shown on the plans, there's no approved waiver for the sidewalk at this time.
9. Town standards need to be added to the detail sheet, W-6, S-10, S-1, RC-1, RC-2, RC-4, and RC-5.

Please resubmit with corrections at your earliest convenience.

Respectfully,



John M. Ware, ESCA0307, SWPA0226, CZO
Deputy Zoning Administrator

Connie Potter

From: David Beahm <Dbeahm@warrencountyva.gov>
Sent: Monday, July 15, 2024 1:09 PM
To: Connie Potter
Cc: Gerry Maiatico; Gordon Foster; Inspections; Kevin Perry; Matthew Byers
Subject: RE: Request for Comments – Major Subdivision Preliminary Plan Review – Tax Map 20A114----23B – 336 West Strasburg Rd., Front Royal, VA – 2400421
Attachments: 2400421_Application_Preliminary Plan_Major Subdivision_336 W Strasburg Rd.pdf; 2400421_Plan_STRASBURG ROAD SUBDIVISION_062824.pdf; 2400421_Stormwater Computations Packet.pdf

Comments – Ali Billoo – Preliminary Plan Approval Major Subdivision – 2400421:

- Erosion and Sediment Control (ESC) Items:
 - Application and permits are required for ESC permit, which would be a normal submission including a full plan review application.
 - The area of disturbance exceeds one (1) acre, more than two dwellings and a new subdivision which will additionally require a Stormwater permit through the Department of Environmental Quality (DEQ). Approval by DEQ (Construction General Permit) would be required prior to any ESC Permit and any type of Building Permit being issued by Warren County.
 - Each lot when developed for a residential dwelling unit would then be required to have an Agreement In Lieu Of which would be obtained at that time.
- Site Plan Review:
 - If or when any building construction related activity were to take place, a Site Plan Review and Permit for Building Code Compliance would be required to be completed for including emergency access, utilities, structure placement for required fire separation, fire hydrants, fire lane markings, required fire signage, etc.
- Building Inspections Items:
 - If or when any building construction related activity (structure, electrical, plumbing, mechanical, fire suppression, energy, etc.) were to start, it would be subject to the normal requirements of application, review and approval prior to work beginning.
- Fire Marshal's Office Comments (standard):
 - We would defer all comments for the site development/new construction/retrofit/change of use to the Building Official. Upon approval and issuance of the CO, the facility (as applicable) shall be maintained in accordance with the Virginia Statewide Fire Prevention Code.

If anything should change in the scope, additional requirements may be required.

Respectfully,

David C. Beahm, CBO
Building Official
County of Warren
540-636-9973
Fax 540-636-4698
dbeahm@warrencountyva.gov
www.warrencountyva.gov

Connie Potter

From: Spielman, Joseph (VDOT) <Joseph.Spielman@vdot.virginia.gov>
Sent: Monday, August 5, 2024 1:55 PM
To: Connie Potter; Lauren Kopishke
Cc: Funkhouser, Rhonda (VDOT); Johnson, Joseph (VDOT)
Subject: Major Subdivision Preliminary Plan Review

Connie,

We have reviewed the above referenced Major Subdivision Preliminary Plan, Application #2400421, for impacts to the transportation system.

While we do not have any general objections to the proposal, we would recommend that you have a turn lane warrant analysis conducted for all users on Fisher Road, to see if it would warrant a turn lanes or tapers, if so, we would recommend they would be included as a condition for the application/permit. The subdivision could add 130 additional trips daily.

Also, looking at the road in person, it is curb and gutter for its entirety, the entrance should be installed to a CG-11 commercial entrance standard, providing an entrance profile to verify grades.

Please reach out if you have any further concerns or questions.

Thanks
Ryan



Joseph Ryan Spielman
Land Development Engineer / Edinburg Residency
Virginia Department of Transportation
540-535-1829
joseph.spielman@vdot.virginia.gov

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 ON A VACANT PARCEL OFF OF ROYAL LANE, IDENTIFIED BY TAX MAP 20A17-1-14B1. THE PROPERTY IS ZONED C-1, COMMUNITY BUSINESS DISTRICT.



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

#2400673
Main: 540.635.4236
Fax: 540.631.2727
Internet: www.frontroyalva.com
NOV 27 2024
RECEIVED
SUP TOWN OF FRONT ROYAL
PLANNING & ZONING DEPARTMENT

SPECIAL USE PERMIT REQUEST

APPLICANT

NAME Pennoni Associates Inc. c/o Mike Artz PHONE 540-667-2139

ADDRESS 117 E. Piccadilly St., Suite 200, Winchester, VA 22601

E-MAIL MArtz@pennoni.com

PROPERTY DESCRIPTION

PROPERTY ADDRESS Royal Lane (vacant)

TAX MAP 20 SECTION A BLOCK 171 LOT 14B1

SUBDIVISION NAME _____ ACREAGE 3.601

REQUEST

ZONING DISTRICT C-1

PROPOSED USE OF PROPERTY Residential Apartments

SPECIFIC SPECIAL USE PERMIT REQUEST Three 12 unit apartment buildings

and an office.

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

1. Survey/Plat of property showing all **existing** improvements.
(10 copies if larger than 11" X 17")
2. Site Plan Application
3. Application Fee of \$400.00 (Checks payable to the Town of Front Royal)
4. Additional information as required by the Department of Planning & Zoning.

CERTIFICATION

I certify that the information provided with this application is correct to the best of my knowledge and should the special use permit be granted, the project will comply with the conditions imposed upon it and will be implemented only as approved by Town Council.

Signature Michael M. Artz Date 11/27/24

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.

Receipt # _____ Date Paid _____



0 REMOUNT RD

Property Details

Current Owner

Name: BEEREN & BARRY INVESTMENTS LLC

Mailing Address: 11654 PLAZA AMERICA DR #653 N/A
RESTON, VA 20190

Physical Address: 0 REMOUNT RD
FRONT ROYAL, VA 22630

Tax Map #: 20A171 14B1

Account #: 31140

Total Acres (Includes all Sublots): 3.4984

Zoning: C-1

Occupancy Code: Vacant Commercial

Magisterial Code: Shenandoah-Town

Land Use: Commercial/Industrial

School Zone: HJB Elem., WC Middle, WC High

Legal Repository

Legal Description: L 14B1 F H L INC
LR02-4781

Instrument Type and Year: LR 2024

Deed Book No: N/A

Legal Description 2: SURVEY LR05-
929 & BDY

Instrument Number: 2398

Deed Book Page: 0

Legal Description 3: ADJ LR18-4507

Slide Number: N/A

Will Book No: N/A

Legal Description 4: N/A

Slide Index: N/A

Will Book Page: 0

Valuation & Sales

Land	Improvements	Total Value
\$437,300	N/A	\$437,300

Grantor	Sale Price	Sale Date
CAMPBELL JEANNETTE M TTEE/CAMPBELL	\$603,000	6/17/2024

Number of Parcels Involved in Sale

1



Building

Year Built: N/A

Story Height: N/A

Number of Rooms: N/A

Number of Bedrooms: N/A

Full Bathrooms: N/A

Half Bathrooms: N/A

Basement: N/A

Finished Basement SQ FT: N/A

Garage Capacity: N/A

Garage Type: N/A

Foundation Type: N/A

Water: Public Available

Sewer: Public Available

Heating: N/A

Air Conditioning: N/A

Fuel Type: N/A

Floor Type: N/A

Exterior Wall Type: N/A

Interior Wall Type: N/A

Roof Type: N/A

Roof Material: N/A

ROYAL LANE APARTMENTS – IMPACT ANALYSIS STATEMENT

November 19, 2024

The following is a summary of the proposed special use permit for Royal Lane Apartments which proposes 36 total apartment units comprised of three 3-story buildings, as well as an office building, on the vacant parcel at the existing terminus of Royal Lane within the Town of Front Royal (the “Town”). The project site totals 3.4984 acres zoned C-1 (Community Business) and is identified by the Town as tax map parcel 20A171-14B (the “Property”). The development is proposed by Beeren & Barry Investments, LLC to provide for needed workforce housing in the area. The Town of Front Royal Zoning Ordinance permits apartment developments containing four or more units within the C-1 Zoning District subject to approval of a Special Use Permit.

Proposed Development

The proposed development plan for the Property is depicted on the attached Preliminary Site Plan for Royal Lane Apartments. As shown, the project would consist of three buildings, each containing 12 apartment units along with associated surface parking served by a southerly extension of Royal Lane, an office space, and a playground. The proposed 36 apartment units represent a density of 10 dwelling units per acre. The extension of Royal Lane would be constructed to Town standards to provide for the future dedication of the roadway and its associated right of way through the Property, allowing for an extension of the roadway south of the project site at a future date, if desired.

Site Location

A location map is attached as *Exhibit A*. As shown, the project is located at the existing terminus of Royal Lane approximately 1,100 feet south of the intersection of Royal Lane with John Marshall Highway (Route 55). Existing development along Royal Lane is predominantly residential in nature. Business type development on the roadway is limited to a professional office building located at Royal Lane’s intersection with Route 55 as well as a day care facility located west and adjacent to the subject Property at the terminus of Royal Lane. The remaining development along Royal Lane includes apartments on the west side of the roadway and single-family dwellings on the east side. The proposed apartment use for the Property would be consistent with the residential nature of Royal Lane.

A zoning map is attached as *Exhibit B*. The subject Property as well as all parcels located west of Royal Lane are zoned C-1 (Community Business) while the parcels located east of Royal Lane are zoned R-1 (Residential). Despite the commercial zoning for half the parcels fronting Royal Lane, the predominant development pattern is residential in the area. The proposed apartment use of the subject property would ensure that the project is developed in a manner that is consistent with the existing development pattern.

Site Characteristics

Sheet 2 of the attached preliminary site plan depicts the existing site conditions. The Property is currently vacant, wooded and includes an existing power line bisecting the site in a north/south direction. The Property contains sloping topography with a high

elevation at its western boundary of 707 feet and a low elevation at the eastern property boundary of approximately 643 feet. The proposed development plan takes the sloping topography into account and would utilize a retaining wall with a maximum height of approximately 8 feet in proximity to the eastern property boundary, as well as a retaining wall to the south of the property around the playground area.

Soils on the site are identified as Unison-Chagrin-Dyke soils which are characterized as deep, well drained soils that have a loamy or clayey subsoil. The specific soil type for the subject includes Chester loam and Dekalb channery loam. The characteristics of this soil type and any implications for site development are manageable through the site engineering process.

Pursuant to FEMA flood map numbers 51187C0116C and 51187C0118C, both with effective date June 3, 2008, the entire site is located in areas of minimal flooding outside of the 100-year and 500-year flood plain.

Access and Transportation

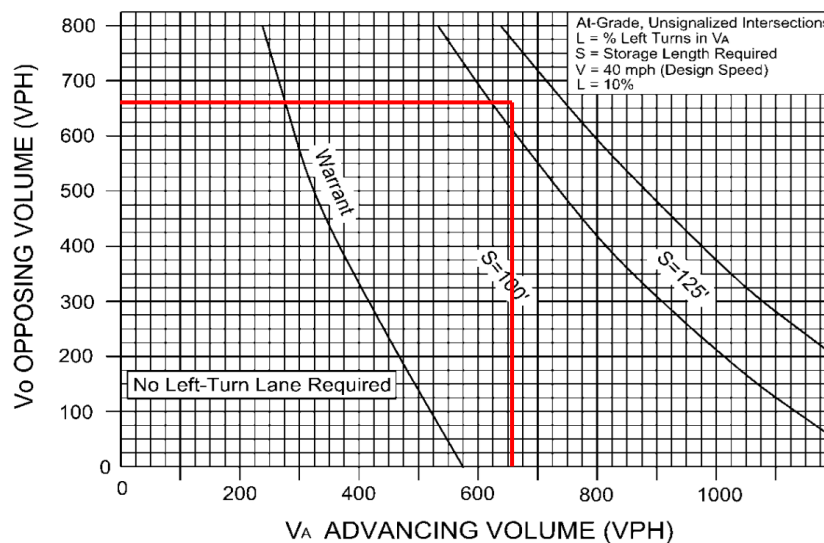
Access to the Property would be provided by an extension of Royal Lane into the Property. Currently, Royal Lane terminates at the northern property boundary. The proposed development plan would extend Royal through the Property to a cul-de-sac near the southern site boundary. A reserve area will be provided that would enable the dedication of the extension of Royal Lane through the site as a public street. The right of way reservation area extends to the southern property boundary, providing the opportunity for a future extension of Royal Lane if desired.

The proposed 36 apartment units would generate 252 average daily vehicle trips. Compared with the commercial uses that could be realized on the Property on a by-right basis, this special use permit application substantially reduces the trip generation potential for the site.

Other existing uses on Royal Lane include 9 single family dwellings, 90 apartment dwellings, a day care facility of approximately 7,000 SF, and a professional office building of approximately 10,000 SF. These existing uses would generate approximately 1,502 ADT (average daily trips). Combined with the 252 trips associated with the proposed 36 apartment units, the total traffic volume on Royal Lane would be approximately 1,754 ADT. Applying a peak hour factor of 0.11, the peak hour trips would be approximately 193 trips (97 trips in/96 trips out based on a 50/50 split of inbound and outbound movements).

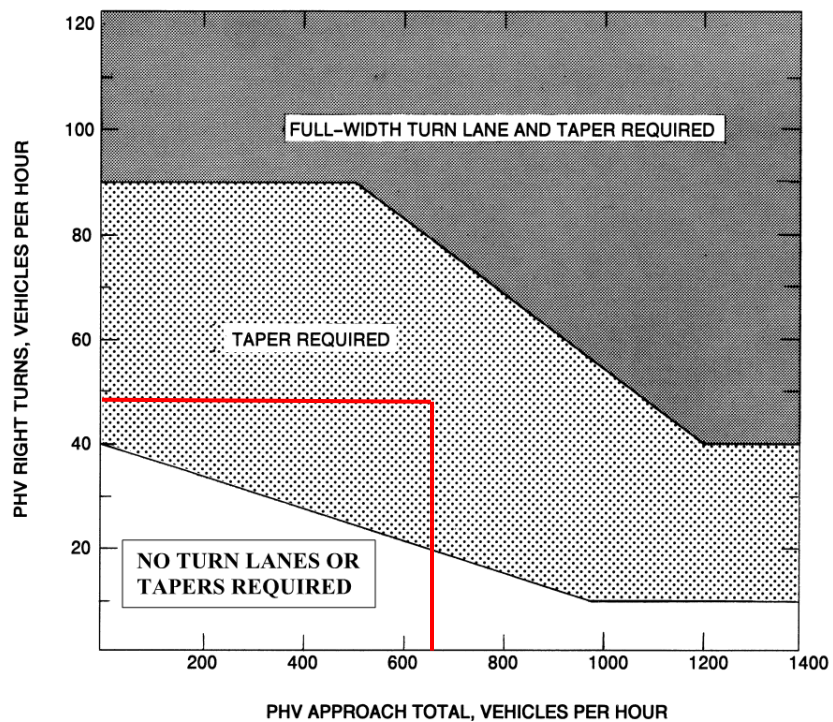
2014 VDOT traffic data identifies 12,000 total trips on John Marshall Highway at Royal Lane. Assuming a 50/50 split between eastbound and westbound trips results in 6,000 eastbound and 6,000 westbound trips resulting in 660 peak hour trips in each direction. Utilizing the VDOT Road Design Manual and 2014 VDOT Traffic Counts on John Marshall Highway (assuming a 50/50 split on eastbound and westbound trips), left and right turn lane warrants for the subject intersection are as follows:

Warrant for Left Turn Lane



Note: 125 Foot Left Turn Lane Required (Westbound Route 55).

Warrant for Right Turn Lane



Note: Right Turn Taper Required (Eastbound Route 55).

Photograph 1 and *Photograph 2*, provided below, depict the existing road improvements for John Marshall Highway at its intersection with Royal Lane. As shown, John Marshall Highway currently includes an eastbound right turn lane as well as a shared center turn lane which would accommodate westbound left turn movements onto Royal Lane. These existing improvements would satisfy the requirements for the right and left turn lane warrant analysis above.



Photograph 1. John Marshall Highway at Royal Lane (View facing east)



Photograph 2. John Marshall Highway at Royal Lane (View facing west)

Royal Lane is currently unstriped, but has sufficient pavement width to provide for separate turn lanes at its intersection with John Marshall Highway. *Photograph 3* depicts the existing improvements for Royal Lane at the subject intersection.



Photograph 3. Royal Lane at John Marshall Highway (View facing north).

Existing improvements are in place to accommodate the traffic generated by the proposed 36 apartment units. Moreover, the proposed special use permit would substantially diminish the traffic impact potential under the existing C-1 zoning for the Property. Accordingly, the minor trip generation associated with the proposal is manageable under existing road improvements.

Stormwater Management

Under existing conditions, the site drains from east to west. The proposed development program for the project would generally maintain the existing drainage pattern and direct stormwater flows to a stormwater management facility, likely a bio-retention filter to accommodate both stormwater quantity and quality requirements, at the southwestern limits of the project.

Sewage Conveyance and Water Supply

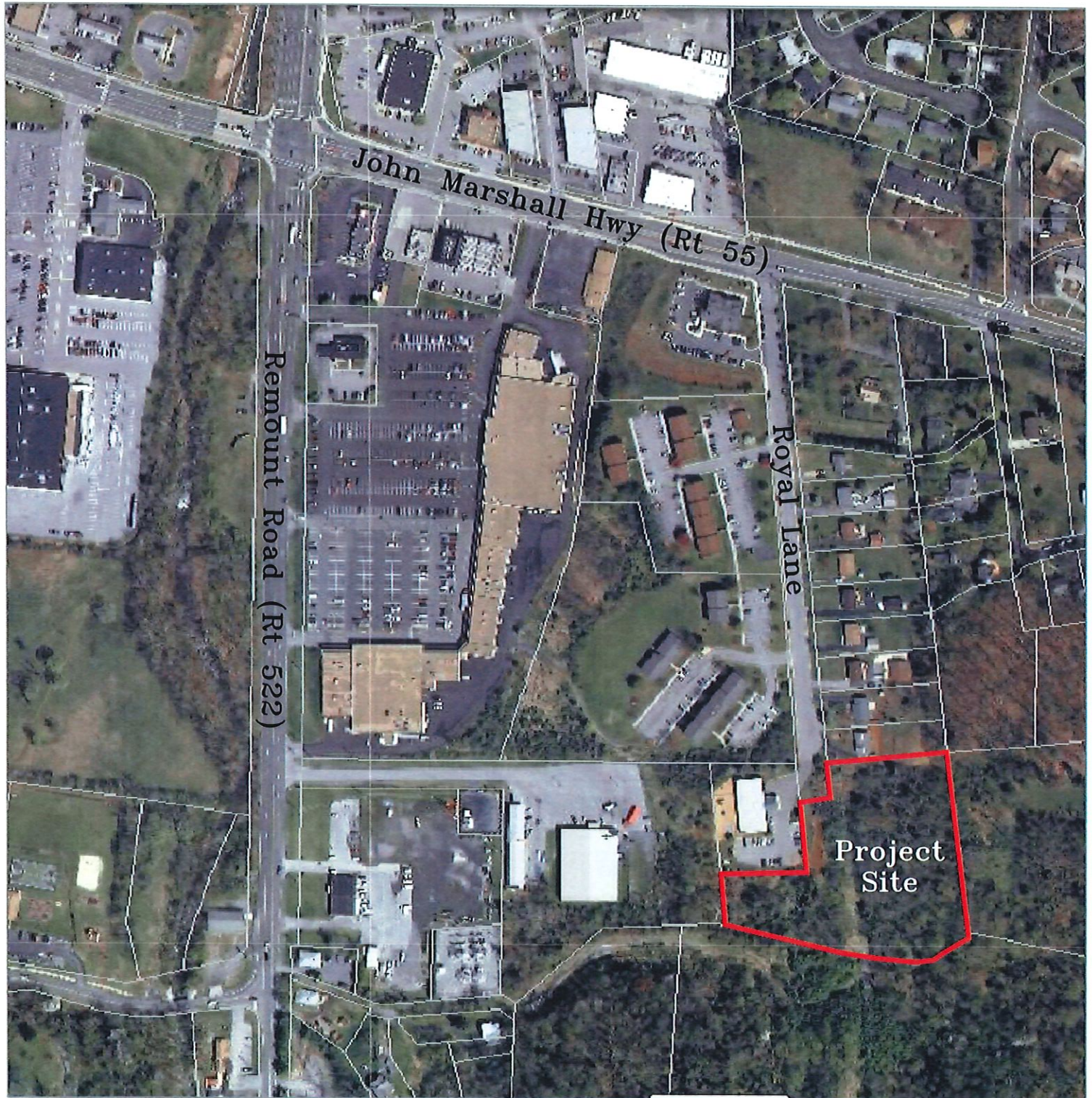
Using a standard rate of 200 gallons per day/dwelling unit it is projected that the proposed development would produce up to 7,200 gallons per day of sewer flow. Water usage would be approximately equivalent to the sewer flows. The site would be served by an extension of the existing water and sanitary facilities within Royal Lane. The water

system will be designed to provide adequate pressure for potable water service and fire-fighting services.

Summary

The proposed Royal Lane Apartments project would provide for the development of 36 apartment units to aid in satisfying workforce housing needs. Properties along Royal Lane are developed predominantly for residential uses despite all parcels located on the west side of the roadway being zoned for commercial uses. The proposed apartment use would continue the existing residential development pattern for the area while diminishing the traffic generation potential for the site under the existing C-1 zoning thereby minimizing impacts to the intersection of Royal Lane and John Marshall Highway.

In the case of this proposed application, the special use permit proposal would be more in keeping with surrounding properties than most of the by-right commercial uses that could occur on the Property. Therefore, the proposed special permit application for the apartments use merits favorable consideration.



Source: Warren Co. GIS

Royal Lane Apartments

Exhibit A – Location Map

TOWN OF FRONT ROYAL, VIRGINIA

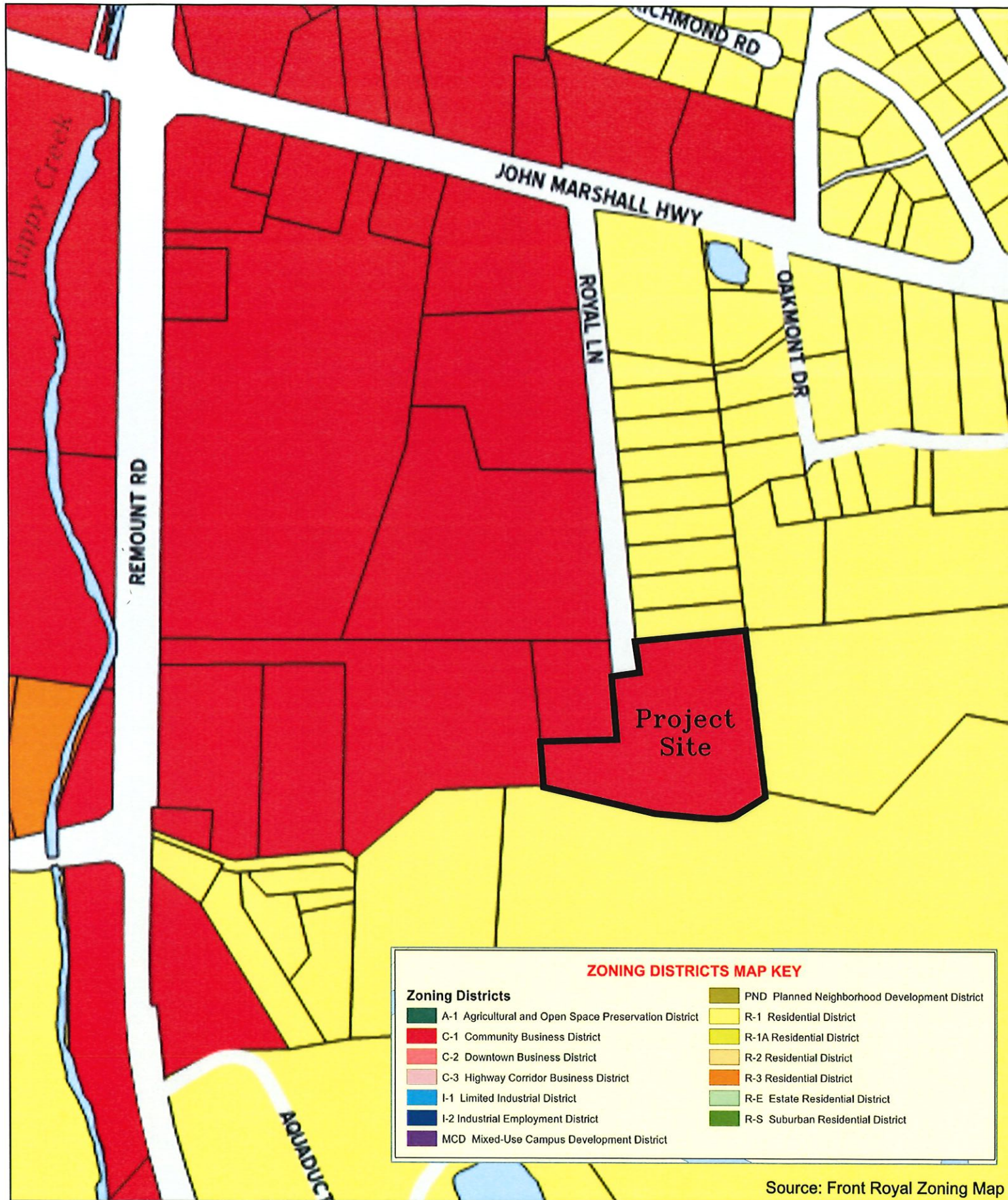
PENNONI ASSOCIATES INC.

117 E. Picadilly St. Winchester, Virginia 22601
 VOICE: (540) 667-2139 FAX: (540) 665-0493

Revised
 —

10/24/2024

1"=300'



Source: Front Royal Zoning Map

Royal Lane Apartments

Exhibit B – Zoning Map

TOWN OF FRONT ROYAL, VIRGINIA

PENNONI ASSOCIATES INC.

117 E. Picadilly St. Winchester, Virginia 22601
VOICE: (540) 667-2139 FAX: (540) 665-0493

Revised

10/24/2024

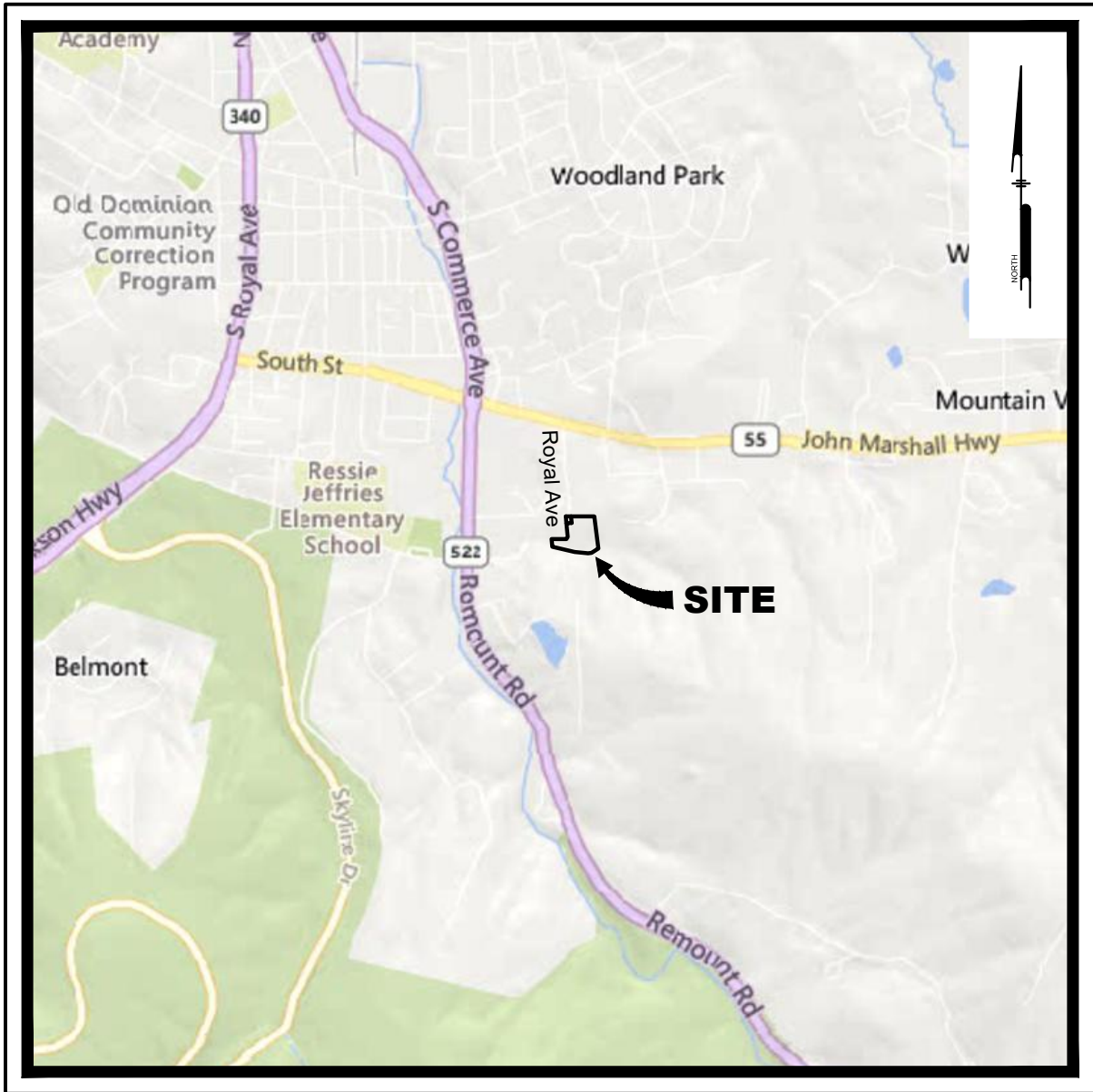
1"=300'

ROYAL APARTMENTS
PRELIMINARY SITE PLAN

SITE PLAN #__ - __
TOWN OF FRONT ROYAL, VIRGINIA -
ORIG SUBMISSION DATE: TBD
REVISED SUBMISSION DATE: TBD

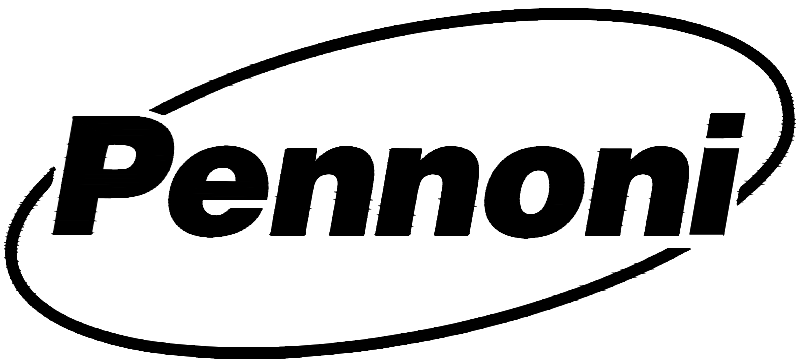
PREPARED FOR:
OWNER/DEVELOPER
BEEREN & BARRY INVESTMENTS, LLC
11654 PLAZA AMERICA DR. #653
RESTON, VA 20190

Sheet List Table	
Sheet Number	Sheet Title
CS0000	COVER SHEET
CS1000	EXISTING CONDITIONS
CS4000	GEOMETRIC PLAN
CS6000	GRADING PLAN



LOCATION MAP
Scale: 1" = 2000'

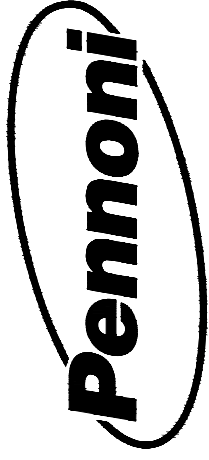
PREPARED BY:
PENNONI ASSOCIATES INC.



117 East Piccadilly Street
Winchester, VA 22601
T 540.667.2139
F 540.665.0493

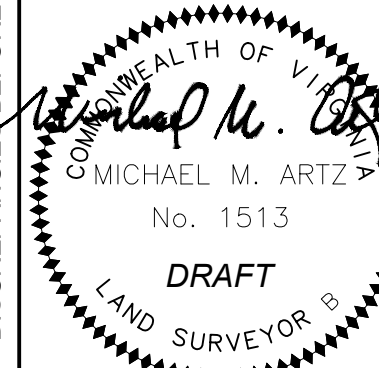


CALL BEFORE YOU DIG
ALWAYS CALL 811 BEFORE YOU DIG IN VIRGINIA
CALL 1-800-552-7001
SECTION 56-265.17 REQUIRES THREE WORKING DAYS
NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL OR
BLAST VIRGINIA UTILITY PROTECTION SERVICE, INC.
TICKET NUMBER(S):



PENNONI ASSOCIATES INC.
117 East Piccadilly Street
Winchester, VA 22601
T 540.667.2139 F 540.665.0493

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR
AND OWNER MUST BE NOTIFIED OF ANY
DISCREPANCIES BEFORE PROCEEDING WITH WORK



DRAFT

ROYAL APARTMENTS
PRELIMINARY SITE PLAN
ROYAL AVENUE
TOWN OF FRONT ROYAL, VIRGINIA
COVER SHEET
BEEREN & BARRY INVESTMENTS, LLC
11654 PLAZA AMERICA DR. #653 | RESTON, VA 20190

NO.	DATE	REVISIONS	BY

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES
ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE
PROJECT. THEY ARE NOT INTENDED OR REPRESENTED
TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON
THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER
PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION
OR ADAPTATION BY PENNONI ASSOCIATES FOR THE
SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS
SOLE RISK AND WITHOUT LIABILITY OR LEGAL
EXPOSURE TO PENNONI ASSOCIATE. AND OWNER SHALL
INDemnIFY AND HOLD HARMLESS PENNONI ASSOCIATES
FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES
ARISING OUT OF OR RESULTING THEREFROM.

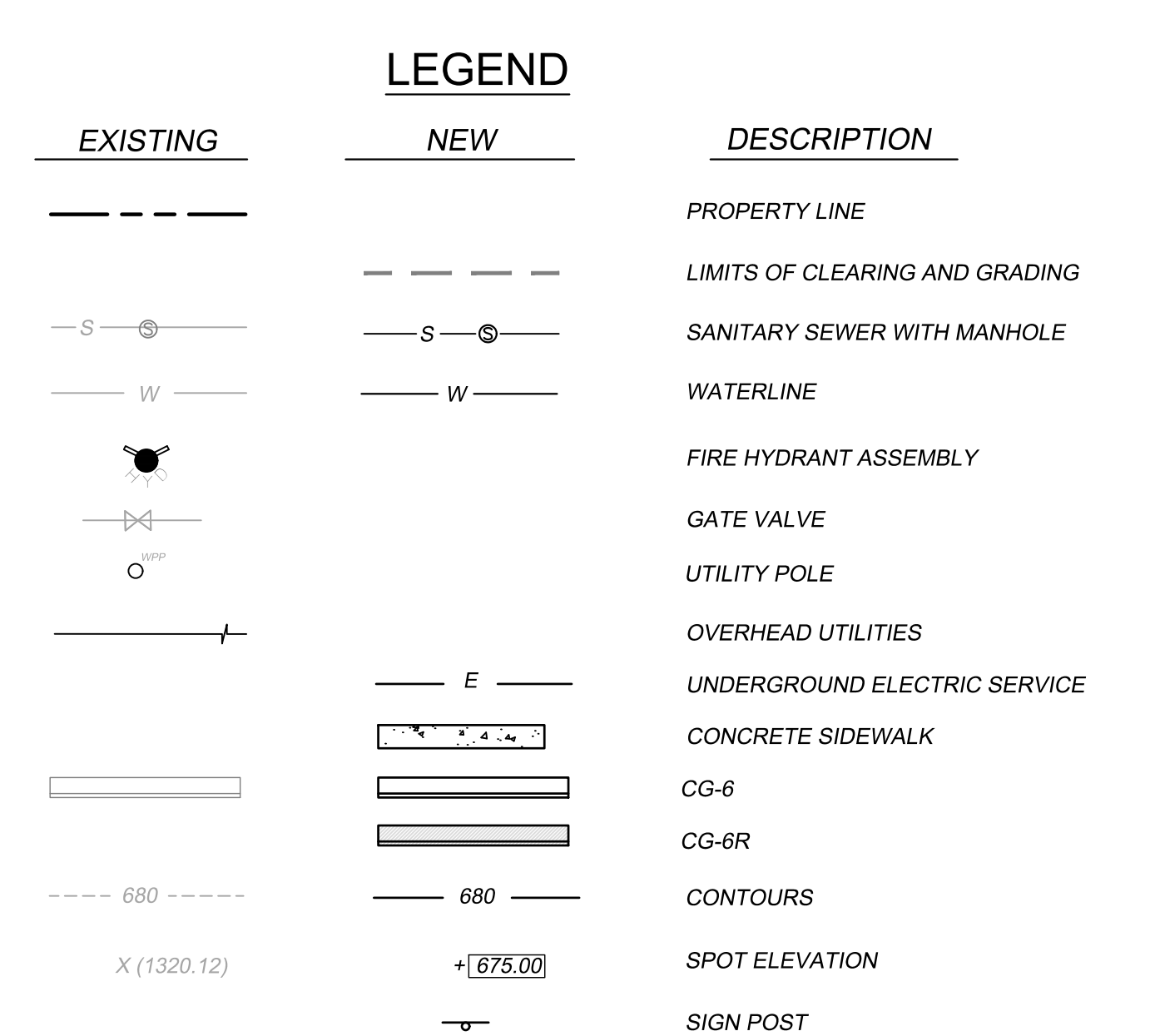
PROJECT	BBINV24001
DATE	11-12-2024
DRAWING SCALE	AS NOTED
DRAWN BY	BEF
APPROVED BY	MMA

CS0000
TOTAL SHEETS 4

NOT FOR BID OR CONSTRUCTION



BEEREN & BARRY INVESTMENTS, LLC
1654 PLAZA AMERICA DR. #653 | RESTON, VA 20190



SITE DEVELOPMENT SUMMARY

TAX IDENTIFICATION NUMBER	20A171 14B
EXISTING ZONING	C1 - COMMUNITY BUSINESS DISTRICT
OVERALL SITE AREA	3.4984 ACRES
SITE ADDRESS	ROYAL LANE
CURRENT USE	VACANT
PROPOSED USE	RESIDENTIAL APARTMENTS
PROPOSED UNITS	36 APARTMENTS & 1 OFFICE
DISTURBED AREA	3.48 ACRES

<u>YARDS/SETBACKS</u>	<u>REQUIRED</u>	<u>PROVIDED</u>
FRONT	40'	154'+
SIDE	35'	35'+
REAR	40'	44'+

BUILDING COVERAGE PERMITTED50% MAX.
BUILDING COVERAGE PROVIDED11%

* PROPOSED BLDG FLOOR AREA.....	16,200 S.F. - BLDG. A
	16,200 S.F. - BLDG. B
	16,200 S.F. - BLDG. C
	1,024 S.F. - BLDG. O
	<u>49,624 S.F. TOTAL</u>

PARKING SCHEDULE

PARKING REQUIRED:

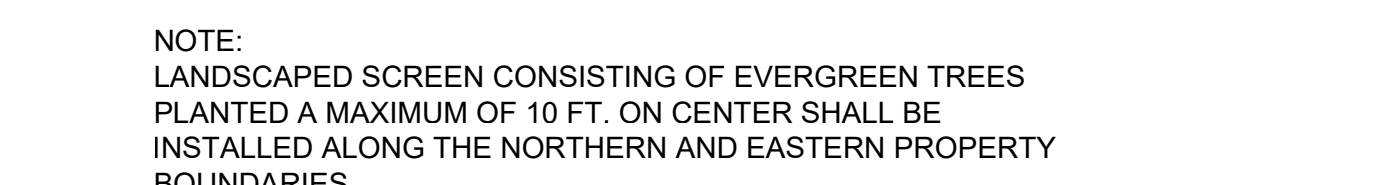
RESIDENTIAL:	2 SPACES/UNIT = 72 SPACES
OFFICE:	5 SPACES/1000 SF = 5 SPACES
TOTAL = 79 SPACES	

PARKING PROVIDED: 72 SPACES

HANDICAPPED PARKING REQUIRED: 2 SPACES
HANDICAPPED SPACES PROVIDED: 4 SPACES

VAN ACCESSIBLE PARKING REQUIRED: 1 SPACE
VAN ACCESSIBLE SPACES PROVIDED: 1 SPACE

		PENNONI ASSOCIATES INC. 117 East Piccadilly Street Winchester, VA 22601 T 540.667.2139 F 540.665.0493	
ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK			
ROYAL APARTMENTS PRELIMINARY SITE PLAN 800 KIL AVENUE TOWN OF FRONT ROYAL, VIRGINIA GEOMETRIC PLAN		BEEREN & BARRY INVESTMENTS, LLC 11854 FLAZA AMERICA DR #5031 RESTON, VA 20190	
			BY
			REVISIONS
			DATE
ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES. AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.			
PROJECT	BBINV24001		
DATE	11-12-2024		
DRAWING SCALE	AS NOTED		
DRAWN BY	BEF		
APPROVED BY	MMA		
CS4000 TOTAL SHEETS 4			



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.



TOWN OF FRONT ROYAL ~102 East Main Street, Front Royal, Va. 22630 ~ 540-635-4236
Department of Planning & Zoning

FRREZON 2400687

REZONING APPLICATION

APPLICANT

Name Skyline Investment Realty LLC Phone 540-771-7653

Address: 8043 Main St, Middletown VA 22645

E-mail: info@skylineRealtyInvestments.com

PROPERTY OWNER OF RECORD

Name same as above Phone _____

Address _____

PROPERTY DESCRIPTION

Location/Street Address 52, 44, 56, 30, 10, W Strasburg Road

Number of lots: 6 Total Acreage _____

Tax Map Identification for each parcel (Map, Section, Block, & Lot):
20A123 22, 20A123 23, 20A123 26, 20A123 27A, 20A123 31, 20A123 31C

Subdivision Name (if applicable) _____

REQUEST

Existing Zoning C-1

Proposed Zoning R-3

Existing Use Vacant and Residential

Proposed Use Multifamily residential

January 2019

RECEIVED
DEC 10 2024
TOWN OF FRONT ROYAL
PLANNING & ZONING DEPARTMENT

PLEASE COMPLETE REVERSE SIDE

ATTACHMENTS

The following should be submitted with a completed copy of this application. Additional information may be determined necessary depending on the nature of the request.

1. Application Fee (Checks should be made out to the Town of Front Royal. Fees are as follows: 1 acre or less = \$500, over 1 acre = \$500 + \$100 per acre after 1st acre, Downzoning = \$400)
2. Survey/Plat of the property with metes and bounds descriptions for all existing and proposed property lines and zoning district boundaries (8 copies and a digital copy).
3. Environmental Site Assessment Phase I and Phase II (unless waived by Director).
4. Traffic Impact Analysis (if required)
5. Written proffers. Proffers are voluntary but should be submitted in a written format approved by the Director.
6. Statement of Justification. As a separate document, provide a statement or statements that explain why you believe the property should be rezoned.

CERTIFICATION

I certify that the information provided with this application is correct to the best of my knowledge. The proffering system has been explained to me and I have read Sections 175-149 and 175-150 of the Town of Front Royal Zoning Ordinance pertaining to conditional zoning and proffering.





Signature of Property Owner

Signature of Applicant (if different)

City/County of WARREN, Commonwealth of Virginia
The foregoing instrument was acknowledged before me this 10th day of December, 2024 by
Chris William Holloway.
(Name of person seeking acknowledgement)



Notary Public

Notary registration number: 7076929 My commission expires: 8/31/2027

NOTICES

- Staff will notify adjacent property owners of the rezoning request and the scheduled public hearing dates with the Planning Commission and Town Council.
- Town Staff will place an advertisement in the local newspaper as required under Virginia Code §15.2-2204.
- Town Staff will place a public hearing sign(s) at the location of the proposed rezoning.
- Submission of this application does not establish a vested right as outlined under Virginia Code §15.2-2307.
- By submitting this application, the applicant grants permission to the 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.
- When the applicant is different than the fee simple property owner, the signature by the fee simple property owner on this application shall be considered as authorization for the applicant to act as an agent for matters concerning this application.

OFFICE USE ONLY

Receipt # 1677 iwork Date Paid 12/10/2024
Planning Commission Hearing Date: 1/15/2025 Recommendation: _____
Town Council Hearing Date: _____ Date Sent to Clerk: _____

Statement of Justification

Rezoning Request for: 10 W Strasburg Road, 30 W Strasburg Road, 44 W Strasburg Road, 52 W Strasburg Road, & 56 W Strasburg Road

I am requesting a rezoning of six (6) parcels from C-1 Community Business District to R-3 Residential District. Due to right-of-way improvements completed by VDOT, the parcels are accessed off of a hammerhead, dead end drive which severely limits commercial viability. The parcels included in this application are either vacant or currently used for single family residential uses. Other parcels in this vicinity have been previously rezoned to R-3, this rezoning would continue this trend.

See the attached proposed plan which shows the potential for residential townhome development.

Requested Parcels:

20A123 22

20A123 23

20A123 26

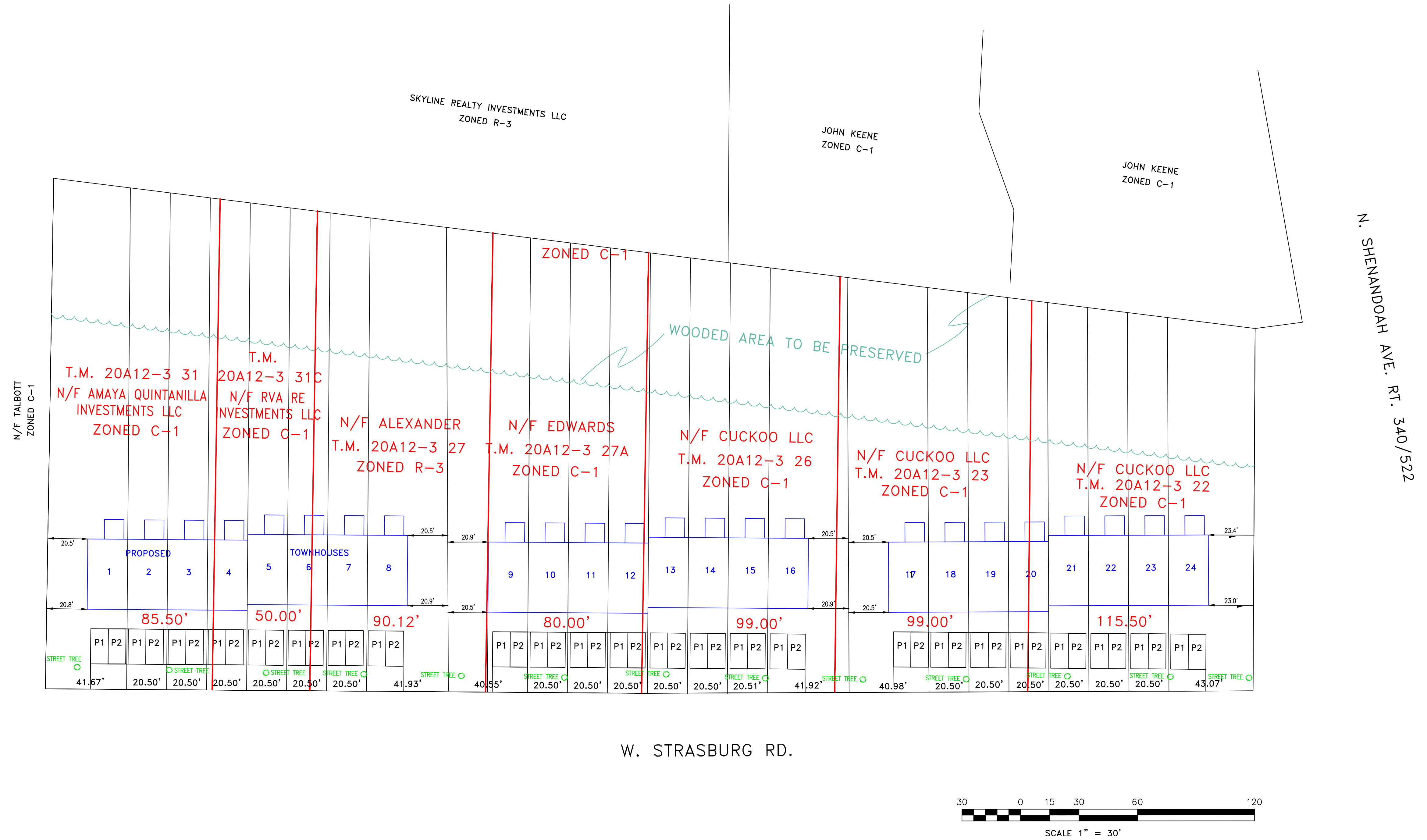
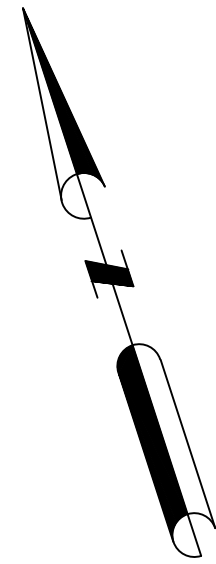
20A123 27A

20A123 31

20A123 31C

Skyline Realty Investments, LLC

Chris Holloway



CONCEPTUAL LAYOUT FOR PROPOSED TOWNHOUSES AND DUPLEX
ON TAX MAP 20A12- PARCELS 22, 23, 26, 27, 27A, 31 AND 31C

NORTH RIVER MAGISTERIAL DISTRICT

TOWN OF FRONT ROYAL
WARREN COUNTY, VA.

PREPARED BY
BROGAN LAND SURVEYING PLC
P.O. BOX 1578, FRONT ROYAL, VA. 22630
TEL. & FAX 540-635-5657
NOVEMBER 7, 2024

DATA CENTER AND SOLAR DISCUSSION