

PROJECT SUMMARY:

1. OWNER:

NAME
ADDRESS
CITY, STATE, ZIP
- DEVELOPER:

NAME
ADDRESS
CITY, STATE, ZIP
- PROJECT LOCATION:

ADDRESS
CITY, STATE, ZIP
2. TAX MAP NUMBER:
PARCEL ID:

NUMBER
NUMBER
- * ALL WORK PROPOSED IN THESE PLANS IS TO BE DONE WITHIN THE ABOVE LISTED TAX PARCEL, EASEMENTS OBTAINED, OR PUBLIC RIGHTS-OF-WAY.
3. LEGAL REFERENCE:

DEED: D.B. XXX PG. XXX OR INSTRUMENT NO.
PLAT: D.B. XXX PG. XXX OR INSTRUMENT NO. (IF AVAILABLE)
4. PROJECT DESCRIPTION: EXPLANATION OF WHAT IS BEING PROPOSED. PARKING LOT EXPANSION, NEW CONSTRUCTION, ADDITION, ETC.
(RESIDENTIAL, COMMERCIAL, INDUSTRIAL)
* IF RESIDENTIAL, DWELLING UNITS SHOULD BE BROKEN DOWN BY TYPE (I.E. SINGLE-FAMILY UNITS, DUPLEX UNITS, APARTMENT UNITS, TOWNHOUSE UNITS, CONDOMINIUM UNITS)
IF RESIDENTIAL, LIST TOTAL DWELLING UNITS.
IF RESIDENTIAL, LIST DWELLING UNITS PER ACRE.
5. ZONING DISTRICT:
PERMITTED USE:

ZONING AND ANY PROFFERED CONDITIONS
(TYPE OF USE WITHIN ZONING CODE AND WITHIN THAT ZONING DISTRICT)
- SETBACKS:

FRONT=
SIDE=
REAR=
PARKING=

XX' FROM ANY STREET RIGHT-OF-WAY
XX'
XX'
15' FROM RIGHT-OF-WAY
6. NOTE ANY VARIANCE, CONDITIONAL ZONING, OR CONDITIONAL USE PERMIT. INCLUDE DATE ISSUED BY TOWN COUNCIL AND ANY ASSOCIATED PROFFERS, CONDITIONS, OR VARIANCE. ANY APPLICABLE CHANGES TO ZONING DISTRICT STANDARDS SHALL BE NOTED WITHIN APPLICABLE NOTES. INCLUDE APPROVED DOCUMENTS IN PLAN SET, REFERENCE PLAN SHEETS HERE.
7. NOTE LOT AVERAGING, IF APPLICABLE
8. NOTE CLUSTER SUBDIVISION, IF APPLICABLE
9. ZONING/PLANNING AREAS

TOTAL PROJECT/PARCEL AREA: XX,XXX S.F. (X.XX AC.)
TOTAL DISTURBED AREA: XX,XXX S.F. (X.XX AC.)
TOTAL BUILDING AREA: X,XXX S.F. (FOOTPRINT)
TOTAL NUMBER OF BUILDINGS: XX
BUILDING HEIGHT: XX
LOT COVERAGE (% IMP): XX,XXX S.F. (XX.X%)
10. GREENSPACE AND LANDSCAPING AREAS

TOTAL AREA: X,XXX S.F.
IMPERVIOUS SURFACE AREA: X,XXX S.F.
GREENSPACE REQUIRED: X,XXX S.F.
GREENSPACE PROVIDED: X,XXX S.F.
LANDSCAPING REQUIRED: X,XXX S.F.
LANDSCAPING PROVIDED: X,XXX S.F.

TREES REQUIRED: X TREES (MIN. 6 FEET TALL)
TREES PROVIDED: X TREES (MIN. 6 FEET TALL)
11. INTERIOR PARKING LOT GREENSPACE AND TREE REQUIREMENTS

PARKING GREENSPACE REQUIRED: X,XXX S.F. (40 SF PER PARKING SPACE)
PARKING GREENSPACE PROVIDED: X,XXX S.F.
TREES REQUIRED: X TREES (1 PER 10 SPACES, MIN. 6 FEET TALL)
TREES PROVIDED: X TREES (MIN. 6 FEET TALL)
12. PARKING TABULATIONS

PARKING SPACES REQUIRED: X SPACES (MIN. 4 INCH STRIPING)
PARKING SPACES PROVIDED: X SPACES
ACCESSIBLE SPACES REQUIRED: X SPACES
ACCESSIBLE SPACES PROVIDED: X SPACES
13. FRONTAGE REQUIREMENT OF ZONING: XXX L.F
14. LOT AREA REQUIREMENT OF ZONING: XXX S.F.
15. STATEMENT OF WHETHER ANY EASEMENTS ARE PRESENT ON PROPERTY.
16. THE TOPOGRAPHY, AS DEPICTED HEREON, IS THE RESULT OF AN ACTUAL FIELD SURVEY CONDUCTED BY XXXXXXXXXXXX ON XX/XX/XX.
-OR-
BOUNDARY INFORMATION AS SHOWN HEREON IS FOR INFORMATIONAL PURPOSES ONLY. NO BOUNDARY SURVEY WAS PERFORMED AS A PART OF THIS PROJECT.
17. NO GRAVES, STRUCTURES, OR OBJECTS MARKING A PLACE OF HUMAN BURIAL WERE FOUND AT TIME OF SURVEY. *DELETE NOTE IF A SURVEY WAS NOT COMPLETED.*
18. THE SUBJECT PROPERTY DOES NOT LIE WITHIN A F.E.M.A. DESIGNATED 100-YEAR FLOOD HAZARD ZONE. THE SUBJECT PROPERTY LIES WITHIN "UNSHADED ZONE X - OTHER AREAS", AS DEFINED BY F.E.M.A. & AS SHOWN ON F.I.R.M. MAP NO. 51161001390, EFFECTIVE DATE OF SEPTEMBER 28, 2007. THIS DETERMINATION HAS BEEN MADE BY GRAPHIC METHODS ONLY. NO ELEVATION STUDY HAS BEEN PERFORMED AS A PART OF THIS PROJECT.
CONSULT SURVEY DRAWING
19. DESIGN DAILY WATER CONSUMPTION RATE: XXX GPD
DESIGN DAILY SEWER DISCHARGE RATE: XXX GPD
20. SOLID WASTE COLLECTION :

IF DUMPSTER IS NOT PLANNED, "CURBSIDE GARBAGE COLLECTION IS PLANNED. SHOULD A DUMPSTER BE ADDED, IT SHALL BE SCREENED FROM THE VIEW OF PUBLIC STREETS."
IF CURBSIDE GARBAGE COLLECTION IS NOT PLANNED, PROVIDE HEIGHT AND GATE DIMENSIONS FOR DUMPSTER SCREENING.
21. PROVIDE HEIGHT AND MATERIAL OF ALL RETAINING WALLS AND/OR FENCES. NOTE IF NO RETAINING WALLS/FENCES WILL BE INCLUDED IN THE DEVELOPMENT.
22. ALL QUANTITIES ARE ENGINEER'S ESTIMATES FOR TOWN BONDING PURPOSES ONLY. ALL QUANTITIES SHALL BE CONSIDERED PRELIMINARY UNTIL FINAL SITE PLAN APPROVAL.
23. EARTHWORK QUANTITIES MAY BE BASED ON AN EXISTING TOP OF GRADE TO PROPOSED TOP OF GRADE COMPARISON ONLY AND THUS ARE APPROXIMATE. ACTUAL EARTHWORK REQUIRED WILL VARY BASED ON THE PRESENCE OF UNSUITABLE SOILS, TOPSOIL DEPTH, COMPACTION RATE, BASE STONE DEPTH, UTILITY TRENCH EXCAVATION, AND OTHER ENVIRONMENTAL FACTORS.
24. CONTRACTOR IS RESPONSIBLE FOR CONDUCTING THEIR OWN QUANTITIES TAKEOFF FOR BIDDING PURPOSES.
25. NO CONSTRUCTION/FIELD CHANGES ARE PERMITTED WITHOUT THE APPROVAL OF THE CONSULTING ENGINEER, OWNER, AND THE TOWN. ALL CONSTRUCTION/FIELD CHANGES SHALL BE SUBMITTED TO THE TOWN FOR REVIEW AND APPROVAL PRIOR TO INITIATING ANY WORK IN THE FIELD. A PLAN REVISION MAY BE REQUIRED.

PROJECT NAME
PROJECT ADDRESS
TOWN OF CHRISTIANSBURG, VA



SHEET INDEX

SHOW NORTH ARROW AND
LABEL MAJOR ROADS
(WITH POST DIRECTION)

VICINITY MAP
SCALE: 1" = XXX'

OWNER/OWNER'S AGENT CERTIFICATION

I, _____, HEREBY ACKNOWLEDGE THE SITE IMPROVEMENTS IMPOSED BY THIS PLAN AND THE _____, CHRISTIANSBURG TOWN CODE AND THE CODE OF VIRGINIA. I HEREBY AGREE TO DEVELOP THE SUBJECT PROPERTY IN COMPLIANCE WITH THIS PLAN AND WILL SUBMIT ANY PLAN REVISIONS TO THE TOWN OF CHRISTIANSBURG FOR APPROVAL PRIOR TO INITIATING ANY WORK IN THE FIELD. I AGREE TO POST AND MAINTAIN ALL REQUIRED BONDS WITH THE TOWN FOR THIS DEVELOPMENT, AND FURTHER ACKNOWLEDGE ALL IMPROVEMENTS MUST BE COMPLETED TO THE TOWN'S SATISFACTION PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.

OWNER/AGENT* _____ TITLE _____ DATE _____

*IF SIGNING ON BEHALF OF A CORPORATION OR SIGNING AS AGENT ON BEHALF OF OWNER, SIGNATORY SHALL PROVIDE EVIDENCE OF AUTHORITY TO SIGN.

APPROVED: Engineering _____ Date _____

APPROVED: Planning _____ Date _____

TOWN OF CHRISTIANSBURG PLAN SUBMITTAL LOG		
#	ISSUE DATE	COMMENT
1	08/01/2022	FIRST SUBMITTAL

APPROXIMATE EARTHWORK NOTES

GRADING PHASE I/II (MASS GRADING)

CUT: XX,XXX C.Y.
FILL: XX,XXX C.Y. (1.1X COMPACTION RATE),
XX,XXX C.Y. FROM STOCKPILE

NET: XXX C.Y.

GRADING PHASE III (INDIVIDUAL LOT CONSTRUCTION)

CUT: XX,XXX C.Y.
FILL: XX,XXX C.Y. (1.1X COMPACTION RATE),
XX,XXX C.Y. FROM STOCKPILE

NET: XXX C.Y.

Project Name
Project Address
Christiansburg, Virginia

GENERAL NOTES:

1. CONTRACT SHALL BE USED WITH STRICT CONFORMANCE TO THE PROJECT SPECIFICATIONS AND APPROVED STORMWATER / ESC PLAN AND NARRATIVE.
2. DISTANCES AND RADI REFERRED TO ARE TO THE EDGE OF PAVEMENT, OR FACE OF CURB, UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL VERIFY BUILDING DIMENSIONS WITH ARCHITECTURAL PLANS, PRIOR TO STAKING BUILDING.
4. CONTRACTOR SHALL CALL "MISS UTILITY" AT 811 OR VAB11.COM AT LEAST 48 HOURS PRIOR TO ANY EARTHWORK BEGINNING. ACCURACY OF UTILITY MARKS ARE ±2 FEET HORIZONTAL FROM THE ACTUAL LOCATION OF THE BURIED UTILITY. VDOT DOES NOT RESPOND TO MISS UTILITY TICKETS. TO LOCATE VDOT FACILITIES, THE CUSTOMER SERVICE CENTER MUST BE CONTACTED AT (800) 367-7623 AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
5. THE CONTRACTOR SHALL NOTIFY THE TOWN IN ADVANCE OF COMMENCING WORK AND SHALL SCHEDULE A PRECONSTRUCTION MEETING WITH TOWN STAFF, OWNER / DEVELOPER, GRADING CONTRACTOR AND THE GEOTECHNICAL ENGINEER OF RECORD WHO WILL BE PROVIDING GRADING, FILLING AND COMPACTION OVERSIGHT FOR THE OWNER/DEVELOPER.
6. ALL CONSTRUCTION WILL BE IN ACCORDANCE WITH TOWN OF CHRISTIANSBURG STANDARDS AND SPECIFICATIONS.
7. ALL TRANSPORTATION INFRASTRUCTURE AND THE DESIGN AND CONSTRUCTION OF STORM DRAINS AND MANHOLES WILL BE IN ACCORDANCE WITH VDOT ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS, LATEST EDITION, CHAPTER 9 OF THE VDOT DRAINAGE MANUAL, LATEST EDITION, AS AMENDED, AND TOWN OF CHRISTIANSBURG STANDARDS AND SPECIFICATIONS UNLESS SPECIFICALLY NOTED ON THE PLANS OR BY TOWN POLICY.
8. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MEET COMPLIANCE REQUIREMENTS WITH SECTION 59.1-406, ET SEQ. OF THE CODE OF VIRGINIA (OVERHEAD HIGH VOLTAGE LINES SAFETY ACT).
9. ALL NECESSARY PERMITS (e.g., USACOE, VDEQ, VDOT, NORFOLK SOUTHERN, TOWN OF CHRISTIANSBURG) MUST BE OBTAINED BEFORE BEGINNING CONSTRUCTION.
10. ALL ACTIVITIES IN PUBLIC RIGHT-OF-WAY SHALL CONFORM TO VDOT WORK AREA PROTECTION MANUAL, (MOST RECENT EDITION)
11. PAVEMENT WORK WITHIN THE RIGHT-OF-WAY REQUIRES THE FOLLOWING INSPECTIONS:
 - A. SUBGRADE PRIOR TO PLACEMENT OF BASE STONE
 - B. BASE STONE PRIOR TO PLACEMENT OF PAVEMENT
 - C. PAVEMENT
12. MINIMUM PAVEMENT SHALL BE IN ACCORDANCE WITH THE PAVING DETAILS AS SHOWN ON THE PLANS. CONTRACTOR TO ENSURE SMOOTH TRANSITION BETWEEN ALL PROPOSED AND EXISTING ASPHALT. CERTIFIED COMPACTION TESTING SHALL BE PERFORMED ON ALL BITUMINOUS CONCRETE LAYERS IN ACCORDANCE WITH VDOT ROAD AND BRIDGE SPECIFICATIONS, LATEST EDITION, SECTION 315.05.
13. RIGHTS-OF-WAY, LOT LINES AND EASEMENTS ARE DEDICATED ON PLATS SEPARATE FROM THESE PLANS.
14. ALL PARKING SPACES, INCLUDING ADA COMPLIANT SPACES, SHALL BE SIGNED AND STRIPED ACCORDING TO CODE OF VIRGINIA SECTION 36-99.11.
15. ADA SIGNAGE SHALL BE PROVIDED ACCORDING TO TOWN STANDARD DETAIL HS-1 FOR ALL HANDICAP ACCESSIBLE PARKING SPACES.
16. SIGNAGE IS PERMITTED SEPARATELY IN ACCORDANCE WITH CHAPTER 42, "ZONING" OF THE CHRISTIANSBURG TOWN CODE.
17. CONTRACTOR SHALL ENSURE THAT INGRESS/EGRESS FOR EMERGENCY SERVICES VEHICLES IS MAINTAINED AT ALL TIMES.
18. CONTRACTOR SHALL MAINTAIN ACCESS TO SURROUNDING BUSINESSES AND RESIDENCES.
19. LIGHTING FACILITIES SHALL BE ARRANGED AND INSTALLED, AND THE LIGHT SOURCE SHIELDED, TO MINIMIZE GLARE ON ADJACENT PROPERTY OR STREETS AND NO LIGHTING FIXTURE SHALL EXCEED A HEIGHT OF 15 FEET IN A RESIDENTIAL DISTRICT OR 30 FEET IN A BUSINESS DISTRICT. FOR MIXED USE DISTRICTS, LIGHTING FIXTURES SHALL NOT EXCEED 15 FEET FOR A RESIDENTIAL USE OR 30 FEET FOR A BUSINESS USE OR MIXED USE.
20. ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND SITE CONDITIONS OR ANY INCONSISTENCIES OR AMBIGUITIES IN THE DRAWINGS SHALL BE IMMEDIATELY REPORTED TO THE OWNER'S REPRESENTATIVE, WHO SHALL PROMPTLY CORRECT SUCH INCONSISTENCIES OR AMBIGUITIES. WORK DONE BY THE CONTRACTOR WITHOUT DIRECTION AFTER HIS DISCOVERY OF SUCH INCONSISTENCIES OR AMBIGUITIES SHALL BE DONE AT THE CONTRACTOR'S RISK.
21. PER ARTICLE III SECTION 42-69 OF THE TOWN CODE, THE TOWN WILL REQUIRE AS-BUILT PLANS AND SPECIFICATIONS PREPARED BY AN ENGINEER OR SURVEYOR FOR ALL REQUIRED PHYSICAL IMPROVEMENTS AFTER INSTALLATION.

GENERAL GRADING, FILLING, COMPACTION AND TESTING NOTES

1. THESE NOTES SHALL APPLY TO ALL GRADING, EXCAVATION, AND CONTROLLED FILL NECESSARY FOR THE CONSTRUCTION OF FILL SLOPES AND THE SUBGRADE FOR FOUNDATIONS, FOOTINGS, UTILITIES, ROADS, AND ALL OTHER TOWN MAINTAINED INFRASTRUCTURE.
2. ALL TESTING AND REPORTING SHALL BE THE RESPONSIBILITY OF THE OWNER / DEVELOPER AND SHALL BE CONDUCTED BY A LICENSED PROFESSIONAL GEOTECHNICAL ENGINEER LICENSED IN THE COMMONWEALTH OF VIRGINIA AND SHALL BE THE GEOTECHNICAL ENGINEER OF RECORD.
3. DEVIATIONS FROM THE REQUIREMENTS LISTED HERE-ON SHALL BE SUPPORTED BY A GEOTECHNICAL REPORT AND ENGINEERING DATA PREPARED BY THE PROJECT'S GEOTECHNICAL ENGINEER OF RECORD AND SHALL BE PROVIDED TO THE TOWN FOR REVIEW PRIOR TO COMMENCING WORK.
4. THE CONTRACTOR SHALL USE ALL MEANS NECESSARY TO PROTECT ALL NEWLY GRADED INFRASTRUCTURE SUBGRADES FROM DISTURBANCE FROM TRAFFIC, EROSION, OR SETTLEMENT.
5. IN THE EVENT OF DAMAGE OR DISTURBANCE OF PREPARED AREAS, ALL REPAIRS AND RE-GRAING OF THE AREA SHALL BE APPROVED AND REPORTED BY THE GEOTECHNICAL ENGINEER OF RECORD.
6. COPIES OF ALL LABORATORY AND FIELD TEST REPORTS SHALL BE SUBMITTED TO THE TOWN WITHIN 72 HOURS OF TEST COMPLETION.
7. ONLY THAT PORTION OF THE WORK AREA ACTUALLY NEEDED FOR CONSTRUCTION SHALL BE CLEARED OR USED BY HEAVY EQUIPMENT UNLESS DIRECTED OTHERWISE BY THE TOWN. IN NO CASE SHALL CLEARING OR DEBRIS FROM CLEARING OPERATIONS BE TAKEN PAST THE APPROVED LIMITS OF DISTURBANCE, RIGHT-OF-WAY LINES, OR PERMANENT EASEMENT LINES ONTO PRIVATE PROPERTY.
8. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY COMPANIES AND HAVE UTILITIES LOCATED PRIOR TO STARTING CONSTRUCTION. LOCATIONS OF EXISTING FACILITIES SHOULD BE DETERMINED BY THE CONTRACTOR FAR ENOUGH IN ADVANCE OF THE CONSTRUCTION TO PROVIDE FOR MODIFICATION TO THE DESIGN, IF REQUIRED.
9. WORK NOT DEFINED IN THE NOTES HERE-IN SHALL FOLLOW GUIDANCE OF THE PROJECT'S GEOTECHNICAL ENGINEER OF RECORD IN ACCORDANCE WITH THE TOWN'S STANDARDS AND SPECIFICATIONS AS APPROVED BY THE TOWN.

DEFINITIONS

1. CONTROLLED FILL IS REQUIRED BENEATH ALL AREAS ON WHICH FINAL SUBGRADE OR GRADE IS NOT PLACED ON ORIGINAL EXCAVATED SOIL NECESSARY FOR CONSTRUCTION OF AND CONTROLLED FILL FOR FOUNDATIONS, FOOTINGS, UTILITIES, ROADS, AND ALL OTHER INFRASTRUCTURE.
2. MATERIALS CLASSIFIED BY ASTM D 2487 AS GW, GP, GM, CC, GC, SW, SP, SM, SC, ML, AND CL ARE SATISFACTORY AS FILL FOR OVER-LOT GRADING AND ARE SATISFACTORY IN-SITU. OWNER SHALL PERFORM SOIL ANALYSIS AS REQUIRED BY THE TOWN FOR REVIEW AND APPROVAL.
3. MATERIALS CLASSIFIED BY ASTM D 2487 AS OL, OH, MH, CH, AND PT ARE UNSATISFACTORY IN-SITU AND AS FILL. UNSATISFACTORY MATERIALS ALSO INCLUDE THOSE MATERIALS CONTAINING ROOTS AND OTHER ORGANIC MATTER, TRASH DEBRIS, FROZEN MATERIALS, AND STONES LARGER THAN 6 INCHES. UNSATISFACTORY MATERIALS ALSO INCLUDE MAN-MADE FILLS, REFUSE, OR BACKFILLS FROM PREVIOUS CONSTRUCTION.
4. COHESIVE MATERIALS INCLUDE MATERIALS CLASSIFIED BY ASTM D 2487 AS GC, SC, ML, CL, MH, AND CH. COHESIONLESS MATERIALS INCLUDE MATERIALS CLASSIFIED IN ASTM D 2487 AS GW, GP, SW, AND SP. MATERIALS CLASSIFIED AS GM AND SM WILL BE IDENTIFIED AS ONLY WHEN THE FINES HAVE PLASTICITY INDEX OF ZERO.
5. DEGREE OF COMPACTION IS A PERCENTAGE OF THE MAXIMUM DENSITY OBTAINED BY THE TEST PROCEDURE PRESENTED IN ASTM D 698, ABBREVIATED BELOW AS A PERCENT OF LABORATORY MAXIMUM DENSITY.
6. MATERIAL OBTAINED FROM EXCAVATIONS, SUITABLE FOR TOPSOILS, IS DEFINED AS THE UPPER 6 INCHES OF EXISTING SOIL COVER. TOPSOIL SHALL CONSIST OF FRIABLE CLAY LOAM, FREE FROM ROOTS, STONES, AND OTHER UNDESIRABLE MATERIAL AND SHALL BE CAPABLE OF SUPPORTING A GOOD GROWTH OF GRASS.

7. ROCK SHALL CONSIST OF BOULDERS MEASURING ½ CUBIC YARD OR MORE AND MATERIALS THAT CANNOT BE REMOVED WITHOUT SYSTEMATIC DRILLING AND BLASTING SUCH AS ROCK MATERIAL IN LEDGES, BEDDED DEPOSITS, UNSTRATIFIED MASSES AND CONGLOMERATE DEPOSITS, AND BELOW GROUND CONCRETE OR MASONRY STRUCTURES, EXCEEDING ½ CUBIC YARD IN VOLUME. PAVEMENTS WILL NOT BE CONSIDERED AS ROCK.
8. UNYIELDING MATERIAL SHALL CONSIST OF ROCK AND GRAVELLY SOILS WITH STONES GREATER THAN 18 INCHES IN ANY DIMENSION OR AS DEFINED BY THE WORK PERFORMED, WHICHEVER IS SMALLER.
9. UNSTABLE MATERIAL SHALL CONSIST OF MATERIALS TOO WEAK TO PROPERLY SUPPORT THE UTILITY PIPE, CONDUIT, OR APPURTENANT STRUCTURE.
10. SELECT GRANULAR MATERIAL SHALL CONSIST OF WELL-GRADED SAND, GRAVEL, OR CRUSHED STONE, AND SHALL NOT CONTAIN MORE THAN 10 PERCENT BY WEIGHT OF MATERIAL PASSING A NO. 200 MESH SIEVE. THE MAXIMUM ALLOWABLE AGGREGATE SIZE SHALL BE 1 INCH, OR THE MAXIMUM SIZE RECOMMENDED BY THE PIPE MANUFACTURER, WHICHEVER IS SMALLER.

EXCAVATION AND PREPARATION

1. WET OR OTHERWISE UNSUITABLE SOIL AT THE SUBGRADE SHALL BE REMOVED AND REPLACED WITH APPROVED, SOUND MATERIALS. EXCESS OR UNSUITABLE MATERIALS SHALL BE DISPOSED OF PROPERLY BY THE CONTRACTOR.
2. LEDGE ROCK, BOULDERS, AND LARGE STONES SHALL BE REMOVED TO PROVIDE A CLEARANCE OF AT LEAST 6-INCHES BELOW AND ON EACH SIDE OF ALL PIPE, MANHOLES, VALVES, OR OTHER APPURTENANCES AND OVER DEPTH SHALL BE BACKFILLED WITH 6-INCHES OF ASTM D 448 #10 (PVC) OR #26 (DUCTILE IRON) AGGREGATE BEDDING.
3. LEDGE ROCK, BOULDERS, AND LARGE STONES ENCOUNTERED IN EXCAVATIONS FOR OTHER STRUCTURES SHALL BE REMOVED AND/OR OVER-EXCAVATED AS DEFINED IN THE PROPOSED SCOPE OF WORK IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER OF RECORD.
4. TOPSOIL SHALL BE STRIPPED FROM EXCAVATION AREA AND STOCKPILED SEPARATELY FROM OTHER BACKFILL MATERIAL IN APPROVED AREA UNTIL NEEDED FOR FINISH BACKFILL AND GRADING.
5. THE CONTRACTOR SHALL REMOVE BY APPROPRIATE MEANS ANY WATER WHICH MAY ACCUMULATE OR BE FOUND IN THE TRENCHES OR OTHER EXCAVATIONS AND SHALL KEEP THE EXCAVATIONS CLEAR OF WATER WHILE WORK IS BEING INSTALLED, UNLESS APPROVAL TO THE CONTRARY IS GRANTED BY THE TOWN.
6. BLASTING WILL NOT NORMALLY BE ALLOWED. WHERE APPROVED BY THE TOWN, BLASTING SHALL BE PERFORMED IN STRICT COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH STANDARDS FOR THE CONSTRUCTION INDUSTRY, SUBPART U, THE VIRGINIA STATEWIDE FIRE PROTECTION CODE VR 394-01-6 AND ALL AMENDMENTS OR REVISIONS THEREOF. THE CONTRACTOR SHALL ADHERE TO THE REQUIREMENTS OF THE TOWN OF CHRISTIANSBURG, SHALL OBTAIN ALL NECESSARY PERMITS AND SHALL NOTIFY THE TOWN PRIOR TO ANY BLASTING. DAMAGE OF ANY NATURE RESULTING FROM BLASTING OPERATIONS SHALL BE SATISFACTORILY CORRECTED BY THE CONTRACTOR.
7. NO CLEATED EQUIPMENT SHALL BE USED ON PAVEMENTS. ROAD DRAINAGE SHALL NOT BE CLOGGED, AND SHOULDERS, DITCHES, ROADSIDE DRAINAGE, AND FACILITIES AND PAVEMENT AFFECTED BY EXCAVATION OPERATIONS SHALL BE MAINTAINED IN CONDITION SATISFACTORY TO THE TOWN. ENTRANCES SHALL NOT BE BLOCKED EXCEPT FOR SHORT PERIOD AS ARRANGED WITH THE PROPERTY OWNER, AND INGRESS AND EGRESS TO ADJACENT PROPERTY SHALL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY DAMAGED DRAINAGE STRUCTURES. PRIVATE ROADS SHALL BE RESTORED TO AN EQUAL OR BETTER CONDITION OF THAT PRIOR TO CONSTRUCTION.
8. DISPOSE OF UNSUITABLE AND SURPLUS MATERIAL AT DESIGNATED WASTE AREAS.

UTILITY TRENCH BACKFILLING

1. ALL BACKFILL MATERIALS SHALL BE FREE FROM MUD, REFUSE, CONSTRUCTION DEBRIS, ORGANIC MATERIAL, BOULDERS, FROZEN, OR OTHERWISE UNSUITABLE MATERIAL - SELECT INITIAL BACKFILL SHALL BE FREE FROM STONES OVER 3/4 INCH.
2. INITIAL BACKFILL SHALL BE WITH SELECT MATERIAL AS STATED ABOVE AND COMPACTED PRIOR TO PLACEMENT OF REMAINING BACKFILL. BACKFILLING SHALL BE CARRIED UP EVENLY IN INCREMENTS OF ONE FOOT. MINIMUM REQUIRED DENSITY SHALL BE THE DENSITY OF THE ADJACENT UNDISTURBED MATERIAL.
3. BACKFILL OUTSIDE OF PROPOSED PAVEMENT AREAS OR STREET RIGHTS-OF-WAY, OR IN OTHER AREAS WHEN ALLOWED, SHALL BE COMPACTED TO A DRY DENSITY EQUAL TO OR GREATER THAN THE DENSITY OF THE UNDISTURBED SOIL SURROUNDING THE TRENCH. EACH LAYER OF EARTH SHALL BE COMPACTED INTO PLACE BY TAMING BEFORE THE NEXT LAYER IS APPLIED.
3. A HYDRO-HAMMER SHALL NOT BE USED FOR COMPACTION.
4. ALL PIPELINES SHALL HAVE A MINIMUM OF 18-INCHES OF COVER BEFORE ANY ROLLING EQUIPMENT IS USED. CARE SHALL BE TAKEN TO PREVENT DAMAGE TO PIPE OR OTHER STRUCTURES DURING COMPACTION. DAMAGE TO PIPELINES OR OTHER STRUCTURES RESULTING FROM COMPACTION SHALL BE CORRECTED BY THE CONTRACTOR WITHOUT EXPENSE TO THE TOWN.
5. SELECT BACKFILL SHALL EXTEND AT LEAST ONE FOOT ABOVE THE TOP OF THE PIPE AND OTHER APPURTENANCES AND SHALL BE COMPACTED PRIOR TO PLACEMENT AND COMPACTION OF REMAINING BACKFILL MATERIAL. THE CONTRACTOR MAY BACKFILL WITH THE EXCAVATED MATERIAL, PROVIDED IT MEETS THE CONDITIONS AS STATED ABOVE.
6. BACKFILL UNDER PAVEMENT, PROPOSED PAVEMENT, OR IN AREAS WITHIN TOWN RIGHT-OF-WAY SHALL BE IN LAYERS OF SELECTED EARTH NOT MORE THAN 6-INCHES IN THICKNESS, AND EACH LAYER SHALL BE COMPACTED TO A MINIMUM OF 95 PERCENT OF MAXIMUM DENSITY WHEN TESTED IN ACCORDANCE WITH ASTM D 698. COMPACTION SHALL BE BY PNEUMATIC TAMPERS OR BY HAND AND IN ACCORDANCE WITH INSTRUCTIONS IN THIS SECTION AS MODIFIED HEREIN. THE TOP COURSE OF BACKFILL DIRECTLY UNDER CONDUIT SHALL CONSIST OF AGGREGATE BASE MATERIAL MEETING THE REQUIREMENTS OF VDOT #21 A STONE. THE DEPTH OF THIS COURSE SHALL BE AT LEAST 12-INCHES, EXCEPT WHERE OTHERWISE REQUIRED BY THE TOWN. MOISTURE CONTENT SHALL BE WITHIN 20 PERCENT OF OPTIMUM.
7. UNIFORMLY SMOOTH GRADING OF DISTURBED AREAS SHALL BE REQUIRED AFTER BACKFILL AND COMPACTION. ROAD SHOULDERS SHALL HAVE A MINIMUM DEPTH OF 6-INCHES OF VDOT #25 OR #26 CRUSHER RUN AGGREGATE, COMPACTED TO A MINIMUM OF 95 PERCENT OF MAXIMUM DENSITY AS MEASURED BY ASTM D 698. DITCHES AND GUTTERS SHALL BE FINISHED TO DRAIN READILY. IN GRASS OR LAWN AREAS, THE LAST 4-INCHES OF COMPACTED FILL WILL CONSIST OF TOPSOIL OR AN APPROVED SOIL WHICH WILL SUPPORT TURF GROWTH AFTER FERTILIZING AND SEEDING. SETTLEMENT OR OTHER DAMAGE THAT OCCURS PRIOR TO ACCEPTANCE OF THIS WORK SHALL BE REPAIRED AND GRADES SATISFACTORILY RE-ESTABLISHED.
8. THE CONTRACTOR WILL BE RESPONSIBLE FOR AND SHALL REPAIR ANY SETTLEMENT IN THE BACKFILL OR PAVEMENT FOR A PERIOD OF ONE YEAR AFTER COMPLETION OF THE WORK.

FILLS

1. UNLESS OTHERWISE RECOMMENDED BY THE GEOTECHNICAL ENGINEER OF RECORD, FILLS SHALL COMPLY WITH THIS SECTION.
2. THE GROUND SURFACE SHALL BE PREPARED TO RECEIVE FILL BY REMOVING VEGETATION, TOPSOIL, AND OTHER UNSUITABLE MATERIAL, AND SCARIFYING THE GROUND TO PROVIDE A BOND WITH THE FILL MATERIAL.
3. WHERE EXISTING GRADE IS AT A SLOPE STEEPER THAN 5:1 (H:V, 20%) AND THE DEPTH OF THE FILL EXCEEDS 5 FEET, BENCHING SHALL BE PROVIDED. A KEY SHALL BE PROVIDED THAT IS AT LEAST 10 FEET IN WIDTH AND 2 FEET IN DEPTH.
4. FILL MATERIAL SHALL NOT INCLUDE ORGANIC, FROZEN, OR OTHER DELETERIOUS MATERIALS. NO ROCK OR SIMILAR IRREDUCIBLE MATERIAL GREATER THAN 12 INCHES IN ANY DIMENSION SHALL BE INCLUDED IN FILLS.
5. BACKFILL UNDER PAVEMENT, PROPOSED PAVEMENT, OR IN AREAS WITHIN TOWN RIGHT-OF-WAY SHALL BE IN LAYERS OF SELECTED EARTH NOT MORE THAN 6-INCHES IN THICKNESS, AND EACH LAYER SHALL BE COMPACTED TO A MINIMUM OF 95 PERCENT OF MAXIMUM DENSITY WHEN TESTED IN ACCORDANCE WITH ASTM D 698. MOISTURE CONTENT SHALL BE WITHIN 20 PERCENT OF OPTIMUM.
6. BACKFILL OUTSIDE OF PROPOSED PAVEMENT AREAS OR STREET RIGHTS-OF-WAY, OR IN OTHER AREAS WHEN ALLOWED, SHALL BE COMPACTED TO 90 PERCENT OF MAXIMUM DENSITY AS MEASURED BY ASTM D 698, IN LIFTS NOT EXCEEDING 12 INCHES IN DEPTH.
7. THE SLOPE OF THE FILL SURFACES SHALL BE NO STEEPER THAN IS SAFE FOR THE INTENDED USE. FILL SLOPES STEEPER THAN 2:1 (H:V, 50%) SHALL BE JUSTIFIED BY A GEOTECHNICAL REPORT OR ENGINEERING DATA BY THE GEOTECHNICAL ENGINEER OF RECORD.

8. THE CONTRACTOR SHALL SELECT THE PROPER COMPACTION METHOD AND MATERIALS THAT CANNOT BE REMOVED WITHOUT SYSTEMATIC DRILLING AND BLASTING SUCH AS ROCK MATERIAL IN LEDGES, BEDDED DEPOSITS, UNSTRATIFIED MASSES AND CONGLOMERATE DEPOSITS, AND BELOW GROUND CONCRETE OR MASONRY STRUCTURES, EXCEEDING ½ CUBIC YARD IN VOLUME. PAVEMENTS WILL NOT BE CONSIDERED AS ROCK.
9. THE OWNER / DEVELOPER SHALL BE RESPONSIBLE FOR AND SHALL REPAIR ANY SETTLEMENT IN THE BACKFILL OR PAVEMENT FOR A PERIOD OF ONE YEAR AFTER COMPLETION OF THE WORK.

TESTING

1. UNDER THE DIRECTION OF THE GEOTECHNICAL ENGINEER OF RECORD, TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY QUALIFIED TO PERFORM SUCH TESTS AND SHALL BE AT THE EXPENSE OF THE OWNER / DEVELOPER.
2. THE OWNER / DEVELOPER SHALL FURNISH ALL EQUIPMENT, TOOLS, AND LABOR TO CONDUCT THE TESTING.
3. ALL TESTING SHALL BE WITNESSED BY A DESIGNATED TOWN OFFICIAL. THE TEST SHALL BE REPEATED UNTIL SATISFACTORY RESULTS ARE OBTAINED AS OUTLINED IN THIS SECTION.
4. THE CONTRACTOR SHALL DEMONSTRATE THE ADEQUACY OF BACKFILL COMPACTION BY PERFORMING DENSITY TESTING OF THE COMPLETED BACKFILL AREAS AS DESIGNATED BY THE TOWN OR THE GEOTECHNICAL ENGINEER OF RECORD.
5. DENSITY TESTING SHALL BE PERFORMED USING NUCLEAR FIELD DENSITY EQUIPMENT OR CONVENTIONAL WEIGHT-VOLUME METHODS. IF THE WEIGHT-VOLUME METHOD IS USED, VOLUME SHALL BE DETERMINED BY USING THE SAND REPLACEMENT TEST (ASTM D 1556) OR LIQUID DISPLACEMENT METHODS (ASTM D 2167). IF NUCLEAR METHODS ARE USED WITHIN TRENCHES, THE TRENCH CORRECTION EFFECT SHALL BE ACCOUNTED FOR BY RECALIBRATING THE NUCLEAR GAUGE USING ITS CALIBRATION BLOCK AT THE LOCATION OF EACH TEST PRIOR TO TAKING THE DENSITY MEASUREMENT.
6. BACKFILL AND COMPACTION TESTING FOR AREAS WITHIN THE RIGHT-OF-WAY AND UTILITY TRENCHES SHALL CONFORM TO VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) ROAD AND BRIDGE SPECIFICATIONS AND SOILS AND AGGREGATE COMPACTION, LATEST EDITION.
7. BACKFILL AND COMPACTION TESTING FOR AREAS OUTSIDE OF THE RIGHT-OF-WAY SHALL BE PERFORMED AS DIRECTED BY THE GEOTECHNICAL ENGINEER OF RECORD.

STEEP SLOPES

1. IF THE GRADE OF A SITE IS MORE THAN THIRTY-THREE AND ONE-THIRD (33.3) PERCENT, REFER TO R403.1.7 OF THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE, LATEST EDITION, FOR STEEP SLOPE DEVELOPMENT REQUIREMENTS FOR SITING STRUCTURES RELATIVE TO SLOPES.
2. WHERE THE GRADE OF A SITE IS MORE THAN THIRTY-THREE AND ONE-THIRD (33.3) PERCENT AND THE AREA IS TO BE STABILIZED BY VEGETATION, REFER TO VESCH STANDARD AND SPECIFICATION 3.29, SURFACE ROUGHENING, FOR FINISHED GRADING REQUIREMENTS.
3. ALL EMBANKMENTS FOR TEMPORARY ESC OR PERMANENT SWM STRUCTURES SHALL MEET APPLICABLE VESCH, VSPM, AND DCR DAM SAFETY CONSTRUCTION AND MAINTENANCE STANDARDS.
4. CUT SLOPES OR FILL SLOPES SHALL NOT BE GREATER THAN 2:1 (H:V, 50%), UNLESS A GEOTECHNICAL REPORT IS PROVIDED FOR THE PROPOSED SLOPES.
5. CUT SLOPES OR FILL SLOPES SHALL NOT BE GREATER THAN TWENTY-FIVE VERTICAL FEET IN HEIGHT, UNLESS A GEOTECHNICAL REPORT IS PROVIDED FOR THE PROPOSED SLOPES. CUT SLOPES OR FILL SLOPES LESS THAN OR EQUAL TO 2:1 (H:V, 33%) MAY EXCEED TWENTY-FIVE (25) VERTICAL FEET IN HEIGHT AND SHALL NOT REQUIRE A GEOTECHNICAL REPORT.
6. FOR ANY CUT SLOPES OR FILL SLOPES GREATER THAN OR EQUAL TO 2:1 (H:V, 50%) AND GREATER THAN OR EQUAL TO TWENTY-FIVE (25) VERTICAL FEET IN HEIGHT, AS-BUILT PLANS SHOWING THAT THE FINISHED GEOMETRY IS IN ACCORDANCE WITH THE DESIGN SHALL BE PROVIDED TO THE TOWN.
7. FILL MATERIALS, COMPACTION METHODS AND DENSITY SPECIFICATIONS SHALL BE INDICATED ON THE SITE DEVELOPMENT PLANS. FILL AREAS INTENDED TO SUPPORT STRUCTURES SHALL ALSO BE INDICATED ON THE SITE DEVELOPMENT PLANS. COMPACTION TEST RESULTS (PER VDOT STANDARDS) SHALL BE SUBMITTED TO THE TOWN.
8. DEVELOPMENT PLANS FOR ALL NEW SUBDIVISIONS SHALL SHOW PROPOSED LOT GRADES TO ENSURE POSITIVE DRAINAGE. ALTERNATIVELY, LOT GRADING PLANS CAN BE SUBMITTED WITH THE BUILDING PERMIT APPLICATION AND SHALL BE CERTIFIED BY A DESIGN PROFESSIONAL.

GENERAL ESC AND DRAINAGE NOTES:

1. ALL STORMWATER INFRASTRUCTURE SHALL BE CONSTRUCTED IN ACCORDANCE WITH VDOT STANDARDS AND SPECIFICATIONS.
2. AN APPROVED SET OF PLANS AND A TOWN OF CHRISTIANSBURG (TOWN) LAND DISTURBANCE PERMIT SHALL BE AVAILABLE ONSITE FOR INSPECTION AT ALL TIMES AS REQUIRED.
3. A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND A VIRGINIA STORMWATER MANAGEMENT PROGRAM CONSTRUCTION GENERAL PERMIT COVERAGE LETTER MUST BE AVAILABLE AT ALL TIMES FOR PROJECTS WHERE LAND DISTURBANCE THRESHOLDS WARRANT THESE ITEMS.
4. EVIDENCE OF PERMIT COVERAGE AND EVIDENCE OF FUNCTIONING CONTROLS SHALL BE PROVIDED TO TOWN STAFF FOR ANY OFFSITE BORROW OR FILL AREAS PRIOR TO TRANSPORT OF MATERIALS TO OR FROM THESE SITES.
5. ALL PERMANENT STABILIZATION AREAS SHALL BE MONITORED AND MAINTAINED AS NECESSARY FOR THE DURATION OF PERMIT COVERAGE AND ANY POSTCONSTRUCTION PERIOD SPECIFIED IN THE PLANS OR NARRATIVE.
6. ALL DESIGN AND CONSTRUCTION OF STORMWATER BEST MANAGEMENT PRACTICE (BMP) FACILITIES WILL BE IN ACCORDANCE WITH THE VIRGINIA BMP CLEARINGHOUSE AND THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK UNLESS SPECIFICALLY NOTED ON THE PLANS OR BY TOWN POLICY. FOR STORMWATER DETENTION AND RETENTION PONDS MUST MEET APPLICABLE FEDERAL AND STATE DAM SAFETY STANDARDS AND REQUIREMENTS.
7. ALL BELOW GRADE INFRASTRUCTURES TO BE MAINTAINED UNDER STORMWATER BMP MAINTENANCE AGREEMENT SHALL BE INSPECTED BY THE TOWN INSPECTOR PRIOR TO COVERING, EXCEPT WHERE SPECIFICALLY ALLOWED BY THE TOWN INSPECTOR.
8. RECORD DRAWINGS ARE REQUIRED FOR PERMANENT BMP AND STORMWATER CONVEYANCE INFRASTRUCTURE IN ACCORDANCE WITH TOWN DEVELOPMENT HANDBOOK.
9. THIS PLAN IDENTIFIES THE LOCATION OF EACH OUTFALL, BUILDING DOWNSPOUT, AND ANY OTHER LOCATION WHERE CONCENTRATED STORMWATER IS DISCHARGED. CHANGES TO THESE DISCHARGE POINTS REQUIRES REVIEW AND APPROVAL BY TOWN STAFF.
10. ALL INLETS, MANHOLE LIDS, CLEANOUTS, ETC., SHALL BE INSTALLED ON GRADE UNLESS SPECIFICALLY NOTED ON THE PLANS.
11. ANY/ALL OFF-SITE DRAINAGE EASEMENTS SHALL BE RECORDED PRIOR TO FINAL PLAN APPROVAL.
12. INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE TOWN MAY BE REQUIRED.
13. FOR THE PURPOSES OF PLAN APPROVAL, THE ENGINEER OF RECORD FOR THE EROSION AND SEDIMENT CONTROL PLAN AND NARRATIVE SHALL BE THE CERTIFIED RESPONSIBLE LAND DISTURBER FOR THE PROJECT UP TO THE AWARD OF CONTRACT. UPON AWARD OF CONTRACT, THE CONTRACTOR SHALL HAVE A CERTIFIED LAND DISTURBER FOR THE PROJECT.
14. THE RESPONSIBLE LAND DISTURBER SHALL INSPECT EROSION AND SEDIMENT CONTROL DEVICES AND MEASURE FOR PROPER INSTALLATION AND DEFICIENCIES IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY WHEN NO RAINFALL EVENT OCCURS. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
15. STORE EXCAVATED TOPSOIL IN TOPSOIL STOCKPILES WITHIN THE LIMITS OF CONSTRUCTION WITH SILT FENCE ON THE DOWN SLOPE SIDE IN ACCORDANCE WITH VESCH (LATEST EDITION).
16. STABILIZATION BLANKETS AND MATTING SHALL BE INSTALLED ON ALL CUT OR FILL SLOPES STEEPER THAN 3:1. ALL BLANKET MATTING APPLICATIONS SHALL BE TREATMENT TYPE-2 AND CONFORM TO VESCH (LATEST EDITION).
17. ALL CUT AND FILL SLOPES & CHANNEL SIDES SLOPES WHICH ARE NOT TO BE PAVED SHALL BE SEEDD UNTIL A GOOD STAND OF GRASS IS OBTAINED IN ACCORDANCE WITH VESCH (LATEST EDITION).
18. ALL CULVERT INLET PROTECTION AND STORM DRAIN INLET PROTECTION MUST REMAIN IN PLACE FOR THE DURATION OF THE PROJECT.
19. BASE STONE SHALL BE PLACED IN ALL PROPOSED ASPHALT AREAS WITHIN 30 DAYS OF FINAL GRADING.

20. PROPERTIES AND RIGHTS-OF-WAY ADJOINING THE SITE SHALL BE KEPT CLEAN OF MUD AND SILT CARRIED FROM THE SITE BY VEHICULAR TRAFFIC OR RUNOFF.
21. EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE MAINTAINED SO THAT SEDIMENT CARRYING RUNOFF FROM THE SITE WILL NOT ENTER STORMWATER DRAINAGE FACILITIES.
22. ANY SITE-SPECIFIC NOTES THAT DEVATE FROM GENERAL OR EROSION AND SEDIMENT CONTROL NOTES CAN BE FOUND ON THE EROSION AND SEDIMENT CONTROL PLAN.
23. EROSION AND SEDIMENT CONTROL MEASURES SHOWN ARE TO BE CONSTRUCTED, INSPECTED AND MAINTAINED IN CONFORMANCE WITH THESE PLANS AND THE APPROVED PLAN NARRATIVE.
24. ALL JURISDICTIONAL WATERS, DITCHES, AND SWALES SHALL BE INSPECTED TO ENSURE COMPLIANCE WITH VESCH MINIMUM STANDARD 19.

VESCH TABLE 6-1 GENERAL EROSION AND SEDIMENT CONTROL NOTES

- ES-1: UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH) AND VIRGINIA REGULATION 9VAC25-840-40 EROSION AND SEDIMENT CONTROL REGULATIONS.
- ES-2: THE TOWN 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 THE FINAL INSPECTION.
- ES-3: ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING
- ES-4: A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- ES-5: PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS, CONSTRUCTION TRAILERS, AND LAY DOWN AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE TOWN.
- ES-6: THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE TOWN.
- ES-7: ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
- ES-8: DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
- ES-9: THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

GENERAL INFRASTRUCTURE AND UTILITY NOTES

1. ALL INFRASTRUCTURES SHALL BE CONSTRUCTED, INSPECTED, AND TESTED IN ACCORDANCE WITH THE REGULATIONS, STANDARDS, AND SPECIFICATIONS SET FORTH BY THE COMMONWEALTH OF VIRGINIA AND THE TOWN OF CHRISTIANSBURG (TOWN).
2. ALL INFRASTRUCTURES SHALL BE CONSTRUCTED BY A CONTRACTOR THAT IS APPROPRIATELY LICENSED TO WORK IN THE TOWN OF CHRISTIANSBURG AND THE COMMONWEALTH OF VIRGINIA.
3. ALL INFRASTRUCTURES TO BE ACCEPTED, OWNED, OPERATED, AND/OR MAINTAINED BY THE TOWN SHALL BE CONSTRUCTED WITHIN RIGHTS-OF-WAY OR EASEMENTS DEDICATED TO THE TOWN.
4. UTILITY LATERAL SERVICE LINES SHALL CROSS THE PROPERTY LINE AT LEAST 5 FEET FROM ANY PROPERTY CORNER, MEASURED HORIZONTALLY.
5. A MINIMUM HORIZONTAL SEPARATION OF 10 FEET SHALL BE MAINTAINED BETWEEN SANITARY SEWER LINES AND WATERLINES, UNLESS OTHERWISE APPROVED IN WRITING BY THE TOWN ENGINEER.
6. A MINIMUM VERTICAL SEPARATION OF 18 INCHES SHALL BE MAINTAINED BETWEEN WATER AND SANITARY SEWER LINES, WITH SANITARY SEWER LINES AT A LOWER ELEVATION THAN WATERLINES, UNLESS OTHERWISE APPROVED IN WRITING BY THE TOWN ENGINEER.
7. A MINIMUM HORIZONTAL SEPARATION OF 10 FEET SHALL BE MAINTAINED BETWEEN UNDERGROUND ELECTRICAL LINES AND WATERLINES, UNLESS OTHERWISE APPROVED IN WRITING BY THE TOWN ENGINEER AND THE ELECTRICAL UTILITY COMPANY.
8. THE MINIMUM DEPTH OF COVER ON ALL UTILITIES SHALL BE 3 FEET.
9. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE LOCATION OF ALL UTILITIES PRIOR TO ACCEPTANCE BY THE TOWN. NO OTHER UTILITY SHALL BE LOCATED WITHIN 5 FEET, MEASURED HORIZONTALLY, OF ANY UTILITY TO BE MAINTAINED BY THE TOWN, EXCEPT WHERE CROSSING OF UTILITIES IS REQUIRED OR OTHERWISE APPROVED IN WRITING BY THE TOWN ENGINEER.
10. ALL BELOW GRADE INFRASTRUCTURES TO BE MAINTAINED BY THE TOWN SHALL BE INSPECTED BY THE TOWN INSPECTOR PRIOR TO COVERING, EXCEPT WHERE SPECIFICALLY ALLOWED BY THE TOWN INSPECTOR.
11. THE TOWN INSPECTOR SHALL WITNESS ALL TESTING AND SHALL BE PROVIDED WITH ALL TEST RESULTS.
12. EXISTING UTILITIES SHALL ONLY BE OPERATED BY THE UTILITY OWNER.
13. THE TOWN SHALL NOT BE RESPONSIBLE FOR THE INSTALLATION OF UTILITY SERVICE LINES BEYOND THE PROPERTY OR EASEMENT LINE.

POTABLE WATER NOTES:

1. ALL WATER MAINS SHALL BE CONSTRUCTED, INSPECTED, AND TESTED IN ACCORDANCE WITH AWWA STANDARD C600, LATEST REVISION, AND THE REGULATIONS, STANDARDS, AND SPECIFICATIONS SET FORTH BY THE COMMONWEALTH OF VIRGINIA AND THE TOWN OF CHRISTIANSBURG (TOWN).
2. ALL WATER MAINS SHALL BE PRESSURE CLASS 350, OR GREATER, DUCTILE IRON PIPE.
3. WATERLINE JOINTS MAY BE DEFLECTED TO MAINTAIN PROPER ALIGNMENT. DEFLECTION SHALL BE IN ACCORDANCE WITH THE PIPE MANUFACTURER'S RECOMMENDATIONS. A BEND AND THRUST BLOCK, OR OTHER APPROVED MECHANICAL RESTRAINING DEVICE, SHALL BE REQUIRED WHERE DEFLECTION IS NOT SUITABLE AS DETERMINED BY THE TOWN ENGINEER.
4. INSTALLATION OF WATER METERS, WATER METER BOXES, AND TAPS ON EXISTING WATER MAINS MAY BE PERFORMED BY TOWN PERSONNEL AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL CONSTRUCT ALL WATER SERVICE LINES BETWEEN THE TAPS AND WATER METERS. THE LOCATION AND INSTALLATION OF EACH ITEM SHALL BE COORDINATED BY THE CONTRACTOR.
5. WATER METER AND BOX LOCATIONS SHALL BE AT THE PROPERTY LINE OR EASEMENT LINE UNLESS OTHERWISE APPROVED IN WRITING BY THE TOWN ENGINEER.
6. WATER SERVICE LINES SHALL BE CONSTRUCTED, INSPECTED, AND TESTED IN ACCORDANCE WITH AWWA STANDARD C800, LATEST REVISION, AND THE UNIFORM STATEWIDE BUILDING CODE.
7. SERVICE LINES SHALL BE SEAMLESS, TYPE "K" COPPER OR COPPER TUBE SIZE POLYETHYLENE (PE) 4710, SODR-9 (200 PSI), FROM THE WATER MAIN TO THE WATER METER. THE PE PIPE SHALL MEET THE REQUIREMENTS OF AWWA C901 AND ASTM D2737 AND SHALL BE CERTIFIED ACCORDING TO NSF 61 AND TO THE SAME SHALL BE INDICATED ON THE PIPE. TUBING SHALL HAVE A 10 AWG INSULATED TRACER WIRE ATTACHED TO THE PIPE WITH TWO INDEPENDENT, SPIRAL WOUND POLYPROPYLENE CONTINUOUS TAPE LAYERS. SIX FEET (6 FT) OF TRACE WIRE (CONTINUOUS WITH WIRE ATTACHED TO TUBING) SHALL BE PROVIDED IN ALL VALVE BOXES AND METER BOXES. TUBING AND FITTINGS SHALL BE INSTALLED SUCH THAT TRACE WIRE REMAINS CONTINUOUS AROUND VALVES AND FITTINGS. TRACE WIRE SHALL BE BONDED TO CORP STOP AND METER YOKE. TUBING SHALL BE ENDOTRACE BY ENDOT INDUSTRIES, INC., OR APPROVED EQUAL.
8. FINAL GRADE SHALL BE OBTAINED PRIOR TO THE REQUEST FOR THE INSTALLATION OF WATER METERS. ANY CHANGES TO THE WATER METER OR BOX SHALL BE PERFORMED BY TOWN PERSONNEL AT THE CONTRACTOR'S EXPENSE.
9. FLUSHING AND DISINFECTION (PER AWWA C651) SHALL BE PERFORMED BY THE CONTRACTOR UNDER THE DIRECT SUPERVISION OF TOWN PERSONNEL.

WASTEWATER NOTES:

1. ALL SANITARY SEWER LINES SHALL BE CONSTRUCTED, INSPECTED, AND TESTED IN ACCORDANCE WITH 9VAC25-790-330. ALL SEWER MANHOLES SHALL BE CONSTRUCTED, INSPECTED, AND TESTED IN ACCORDANCE WITH 9VAC-790-350.
2. CONNECTIONS TO EXISTING TOWN SANITARY SEWERS SHALL BE PERFORMED BY THE CONTRACTOR UNDER THE DIRECT SUPERVISION OF TOWN PERSONNEL. THE CONTRACTOR SHALL CONSTRUCT ALL SANITARY SEWER SERVICE LINES BETWEEN THE SANITARY SEWER MAIN AND THE CLEANOUT LOCATED AT THE PROPERTY OR

EASEMENT LINE.

3. ALL SANITARY SEWER GRAVITY MAINS TO BE ACCEPTED, OWNED, OPERATED, AND/OR MAINTAINED BY THE TOWN SHALL BE A MINIMUM 8 INCH DIAMETER SDR 35 PVC. ALTERNATE MATERIALS MAY BE REQUIRED AT THE DISCRETION OF THE TOWN ENGINEER.
4. ALL SANITARY SEWER GRAVITY SERVICE LINES TO BE ACCEPTED, OWNED, OPERATED, AND/OR MAINTAINED BY THE TOWN SHALL BE A MINIMUM 6 INCH DIAMETER SDR 35 PVC FROM THE MAIN LINE TO THE PROPERTY LINE, TERMINATED BY A CLEAN OUT AT THE CONNECTION TO PRIVATELY MAINTAINED SEWER PIPE. ALTERNATE MATERIALS MAY BE REQUIRED AT THE DISCRETION OF THE TOWN ENGINEER.
5. A TRAFFIC BEARING CLEANOUT COVER SHALL BE INSTALLED OVER ALL CLEAN OUTS THAT WILL BE ACCEPTED, OWNED, OPERATED, AND/OR MAINTAINED BY THE TOWN.
6. ABANDONED SEWER LINES SHALL BE PLUGGED AFTER NEW LINES HAVE BEEN INSTALLED, INSPECTED, TESTED, ACCEPTED, AND ARE IN USE.
7. THE CONTRACTOR SHALL PLUG THE CONNECTION TO EXISTING SEWER LINES WITH AN ANGLE WING NUT TEST PLUG PRIOR TO EXTENDING THE SANITARY SEWER. THE PLUG SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL THE PROPOSED SANITARY SEWER HAS BEEN INSTALLED, INSPECTED, TESTED, AND ACCEPTED BY THE TOWN. FAILURE TO INSTALL AND MAINTAIN PLUG SHALL CAUSE THE CONTRACTOR TO BE HELD LIABLE FOR ANY RESULTING BLOCKAGES OR REPAIRS TO EXISTING SEWER LINES.
8. SANITARY SEWER FORCE MAINS SHALL BE CONSTRUCTED USING THE MATERIALS, MEANS, AND METHODS, ESTABLISHED FOR CONSTRUCTING POTABLE WATER MAINS.

Project Address
Christiansburg, Virginia

Project Name

APPROVED: Engineering Date

APPROVED: Planning Date

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