

GRADING NOTES

1. G.C. SHALL REFER TO "REPORT OF SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING EVALUATION NORTH CROSS SCHOOL IMPROVEMENTS ROANOKE COUNTY, VIRGINIA F&R PROJECT NO. 62W0387" FOR ADDITIONAL SITE AND EARTHWORK REQUIREMENTS. IF ANY DISCREPANCIES ARE DISCOVERED BETWEEN THE PLANS AND THE REPORT, THE REPORT SHALL GOVERN.
2. G.C. SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS.
3. REFER TO BUILDING PLANS FOR SUBGRADE AND UTILITY TRENCHES WITHIN 5' OF THE BUILDING ENVELOPE.
4. REMOVE TREES, SHRUBS, GRASS, AND OTHER VEGETATION, IMPROVEMENTS OR OBSTRUCTIONS AS REQUIRED TO PERMIT INSTALLATION OF NEW CONSTRUCTION. REMOVE TREES AND OTHER VEGETATION, INCLUDING STUMPS AND ROOTS, COMPLETELY IN AREAS REQUIRED FOR SUBSEQUENT SEEDING. CUT OFF TREES AND STUMPS IN AREAS TO RECEIVE FILL MORE THAN THREE FEET IN DEPTH TO WITHIN EIGHT INCHES OF THE ORIGINAL GROUND SURFACE.
5. BARRICADE OPEN EXCAVATIONS OCCURRING AS PART OF THIS WORK AND OPERATE WARNING LIGHTS AS RECOMMENDED BY AUTHORITIES HAVING JURISDICTION.
6. EXCAVATION FOR STRUCTURES:
- a. CONFORM TO ELEVATIONS AND DIMENSIONS SHOWN WITHIN A TOLERANCE OF 0.1"
 - b. PROVIDE TRUE AND STRAIGHT FOOTING EXCAVATIONS WITH UNIFORM AND LEVEL BOTTOMS OF THE WIDTH INDICATED TO ENSURE PROPER PLACEMENT AND COVER OF ALL REINFORCEMENT.
 - c. REMOVE LOOSE MATERIALS FROM THE EXCAVATION PRIOR TO PLACEMENT OF CONCRETE.
 - d. FOOTINGS WHICH SUPPORT CONCRETE MASONRY UNITS MAY BE STEPPED PROVIDED THE VERTICAL STEP DOES NOT EXCEED ONE HALF OF THE HORIZONTAL DISTANCE BETWEEN STEPS AND HORIZONTAL DISTANCE BETWEEN STEPS IS NOT LESS THAN TWO FEET.
 - e. IF ROCK IS ENCOUNTERED IN A FOOTING EXCAVATION, UNDERCUT IT A MINIMUM EXCAVATION WITH CONTROLLED FILL.
7. CUT SURFACE UNDER PAVEMENTS TO COMPLY WITH CROSS SECTIONS, ELEVATIONS, AND GRADES AS INDICATED.
8. EXCAVATE TRENCHES TO UNIFORM WIDTH CONFORMING TO VDOT STANDARD PB-1 FOR STORM DRAINAGE PIPING.
9. PREVENT SURFACE WATER AND SUBSURFACE OR GROUND WATER FROM FLOWING INTO EXCAVATIONS AND FROM FLOODING PROJECT SITE AND SURROUNDING AREA. DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS. REMOVE WATER TO PREVENT SOFTENING OF FOUNDATION BOTTOMS, UNDERCUTTING FOOTINGS, AND SOIL CHANGES DETRIMENTAL TO STABILITY OF SUBGRADES AND FOUNDATIONS.
10. PROTECT EXCAVATED BOTTOMS OF ALL FOOTINGS AND TRENCHES AGAINST FREEZING WHEN ATMOSPHERIC TEMPERATURE IS LESS THEN 35°F (1').
11. BACKFILLING SHALL BE A SUITABLE MATERIAL THAT IS CAPABLE ACHIEVING THE REQUIRED COMPACTIONS INDICATED ON THE DETAILS PAGE.
12. FINISH LAWN AREAS TO WITHIN ONE INCH ABOVE OR BELOW REQUIRED SUBGRADE ELEVATIONS. SHAPE SURFACE UNDER WALKS AND PAVEMENTS TO LINE, GRADE, AND CROSS SECTION, WITH NOT MORE THAN 1/2" ABOVE OR BELOW REQUIRED SUBGRADE ELEVATION.
13. GRADE SURFACE UNDER BUILDING SLABS SMOOTH AND EVEN, FREE OF VOIDS. PROVIDE FINAL GRADES WITHIN 1/2" OF THOSE INDICATED WHEN TESTED WITH A 10' STRAIGHT EDGE.
14. PROTECT GRADED AREAS FROM TRAFFIC AND EROSION. REPAIR AREAS WHICH HAVE SETTLED, ERODED, OR BECOME DAMAGED DUE TO CONSTRUCTION ACTIVITIES AT NO ADDITIONAL COST TO OWNER.
15. PLACE ALL FILL AND BACKFILL AS CONTROLLED FILL AS FOLLOWS:
- a. ESTABLISH SUITABLE SUBGRADE CONDITIONS PRIOR TO PLACING FILL BY PROOFROLLING, UNDERCUTTING AND COMPACTING AS NECESSARY.
 - b. PLACE FILL MATERIALS IN LAYERS NOT MORE THAN 8" IN LOOSE DEPTH FOR HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4" FOR HAND TAMPERS.
 - c. PRIOR TO COMPACTION, PROVIDE MOISTURE CONTENT TO WITHIN 3% OF OPTIMUM BY MOISTENING OR AERATING EACH LAYER. DO NOT PLACE FILL MATERIAL ON SURFACES WHICH ARE MUDDY, FROZEN OR CONTAIN FROST OR ICE.
 - d. COMPACT SOIL TO NOT LESS THAN THE FOLLOWING PERCENTAGES OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D 698 (STANDARD PROCTOR):
 - i. 95% UNDER PAVEMENT
 - ii. 85% UNDER LAWN OR UNPAVED AREAS
16. PREPARE AREA FOR PERMANENT STABILIZATION BY SPREADING TOPSOIL TO A DEPTH OF 4" OVER ALL DISTURBED AREAS NOT RECEIVING WALKS, PAVEMENT, WALLS OR BUILDING, INCLUDING TRENCHES. IMMEDIATELY FOLLOWING PLACEMENT OF TOPSOIL, DISK THE ENTIRE TOPSOILED AREA AND RAKE FREE OF STONES AND DEBRIS OVER 1/2" IN ANY DIMENSION. PROVIDE A FINISHED SURFACE FREE OF DEPRESSIONS OR HIGH SPOTS. PREPARE FOR SOD IMMEDIATELY.
17. OWNER (CONTRACTOR) SHALL EMPLOY QUALIFIED SOILS TESTING LABORATORY TO INSPECT EARTHWORK OPERATIONS. NOTIFY LABORATORY PRIOR TO PERFORMING EARTHWORK OPERATIONS.

WATER AND SEWER NOTES

GENERAL:

1. ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE LATEST WESTERN VIRGINIA REGIONAL DESIGN AND CONSTRUCTION STANDARDS, LATEST EDITION.
2. OBTAIN ALL REQUIRED PERMITS AND NOTIFY APPROPRIATE OFFICIALS AT LEAST THREE (3) DAYS PRIOR TO COMMENCEMENT OF WORK. OBTAIN INFORMATION FROM WESTERN VIRGINIA WATER AUTHORITY AND/OR BOTETOURT COUNTY CONCERNING PERMITS AND CONNECTIONS TO EXISTING LINES. WVWA SHALL BE NOTIFIED IN WRITING AND MARK SINK SHALL BE CONTACTED AT (540) 537-3460.
3. ALL WORK SHALL BE SUBJECT TO INSPECTION BY WESTERN VIRGINIA WATER AUTHORITY AND/OR BOTETOURT COUNTY. NOTIFY APPROPRIATE OFFICIALS PRIOR TO COMMENCEMENT OF WORK.
4. SITE SHALL BE TO SUBGRADE PRIOR TO INSTALLATION OF UTILITIES. ALL UTILITIES SHALL BE IN PLACE PRIOR TO PLACEMENT OF PAVEMENT BASE MATERIAL.
5. USE SELECT MATERIAL FREE FROM FROST, LARGE CLOUDS, STONES, AND DEBRIS FOR BACKFILL FROM THE BOTTOM OF THE TRENCH TO TWELVE (12) INCHES ABOVE THE PIPE.
6. MINIMIZE ANY DISTURBANCE TO EXISTING WATER SERVICE, SEWER LINES OR ANY OTHER UTILITY DURING CONSTRUCTION AND PROVIDE QUALITY WORKMANSHIP.
7. MAKE ALL PIPE JOINTS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND/OR WESTERN VIRGINIA WATER AUTHORITY SPECIFICATIONS. MAKE JOINTS BETWEEN DIFFERENT PIPE MATERIALS WITH STANDARD FITTINGS MANUFACTURED FOR THE PURPOSE.
8. MAINTAIN ALL WATER LINES AT TEN (10) FEET HORIZONTAL SEPARATION FROM SEWER LINES AND MANHOLES; MEASURE THE DISTANCE EDGE-TO-EDGE. WHEN LOCAL CONDITIONS PREVENT THE DESIRED HORIZONTAL SEPARATION, THE WATERLINE MAY BE LAID CLOSER TO THE SEWER OR MANHOLE PROVIDED THAT THE BOTTOM OF THE WATERLINE SHALL BE AT LEAST EIGHTEEN (18) INCHES ABOVE THE TOP OF THE SEWER. WHERE THIS VERTICAL SEPARATION CANNOT BE OBTAINED, ADDITIONAL MEASURES WILL BE REQUIRED IN ACCORDANCE WITH WVWA STANDARDS.
9. LOCATE AND UNCOVER VALVE VAULTS AND MANHOLES AFTER PAVING AND ADJUST TO FINAL GRADE, IF NECESSARY.
10. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS WHERE UTILITIES ENTER THE BUILDING.
11. PRIOR TO COMMENCING WITH ANY UNDERGROUND PIPE CONSTRUCTION OR GRADING (EXCAVATION), THE GENERAL CONTRACTOR SHALL CALL MISS UTILITY OF VIRGINIA (TOLL FREE 1-800-552-7001) AT LEAST 48 HOURS PRIOR TO COMMENCING. THE G.C. IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO ANY UTILITY, PUBLIC OR PRIVATE, AS A RESULT OF NOT CONTACTING MISS UTILITY AND SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER/DEVELOPER.
12. EXISTING UTILITY LOCATIONS SHOWN ARE A RESULT OF FIELD SURVEYS, AVAILABLE RECORDS, AND PREVIOUSLY APPROVED PLANS. LOCATIONS ARE APPROXIMATE. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES SHOWN ON THE PLANS IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK. CONTACT THE ENGINEER IMMEDIATELY IF: 1) ANY LOCATION OR ELEVATION IS DIFFERENT FROM THAT SHOWN ON THE PLANS, 2) IF THERE APPEARS TO BE ANY CONFLICT. UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON THE PLANS, G.C. SHALL CALL "MISS UTILITY" OF VIRGINIA AND/OR BOTETOURT COUNTY AND/OR WESTERN VIRGINIA WATER AUTHORITY.
13. PROVIDE A CONTINUOUS AND UNIFORM BEDDING IN THE TRENCH FOR ALL PIPE. REMOVE STONES AND ROCKS FOUND IN THE TRENCH FOR A DEPTH OF AT LEAST SIX (6) INCHES BELOW THE BOTTOM OF THE PIPE AND TAMP SELECT FILL BEDDING PROVIDED. AFTER THE PIPE HAS BEEN PLACED IN THE TRENCH, BACKFILL THE TRENCH WITH SELECT MATERIAL, THOROUGHLY COMPACT TO 90% (95% UNDER PAVEMENT OR CONCRETE SLAB) OF THE STANDARD PROCTOR (ASTM D-698) USING CARE NOT TO DAMAGE THE PIPE. USE VDOT STANDARD PB-1 TRENCH FOR STORM SEWER AND UB-1 FOR SANITARY SEWER AND WATER.
14. PLACE BACKFILL FOR ALL WATER AND SEWER UTILITIES IN ACCORDANCE WITH WESTERN VIRGINIA WATER AUTHORITY SPECIFICATIONS, AND THE FOLLOWING CRITERIA: 1) BACKFILL NO TRENCH UNTIL INSPECTED BY WESTERN VIRGINIA WATER AUTHORITY. MATERIALS USED FOR BACKFILL FROM THE BOTTOM OF THE TRENCH TO TOP OF THE PIPE SHALL BE CRUSHER RUN, OR APPROVED EQUAL MATERIAL, THOROUGHLY AND CAREFULLY COMPACT THE BACKFILL MATERIAL. 2) COMPACT BACKFILL BY MECHANICAL TAMPING THROUGHOUT THE DEPTH OF THE TRENCH TO ENSURE A SUITABLE SUBBASE ACCEPTABLE TO THE ROAD ENGINEER. IF THE MATERIAL TAKEN FROM THE DITCH IS NOT SUITABLE FOR BACKFILLING, REMOVE IT AND USE AN ACCEPTABLE MATERIAL FOR BACKFILLING THE TRENCH.
15. IN AREAS OF WATER LINE CONSTRUCTION, GRADES SHALL BE WITHIN SIX (6) INCHES OF FINAL GRADE PRIOR TO BEGINNING CONSTRUCTION.
16. MINIMUM COVER OVER ALL WATER AND SANITARY SEWER LINES SHALL BE THREE (3) FEET.
17. THE CONTRACTOR SHALL INSTALL ALL WATER SERVICE CONNECTIONS AND METER BOXES.
18. CONNECT PIPE TO MANHOLES THROUGH PRE CAST OPENINGS AND JOIN WITH EITHER A FLEXIBLE BOOT ADAPTER OR A PIPE SEAL GASKET.
19. FIELD CORRECTIONS SHALL BE APPROVED BY THE WESTERN VIRGINIA WATER AUTHORITY PRIOR TO SUCH CONSTRUCTION.

SEWER NOTES:

1. ALL SANITARY SEWER CONNECTIONS TO EXISTING LINES SHALL BE COORDINATED WITH AND PERFORMED BY THE WESTERN VIRGINIA WATER AUTHORITY.
2. ALL WATER AND SANITARY SEWER FACILITIES ARE TO BE INSTALLED ACCORDING TO THE WESTERN VIRGINIA WATER AUTHORITY DESIGN AND CONSTRUCTION STANDARDS.

WATER NOTES:

1. ALL WATER CONNECTIONS TO EXISTING LINES SHALL BE COORDINATED WITH AND PERFORMED BY THE WESTERN VIRGINIA WATER AUTHORITY.
2. ALL WATER AND SANITARY SEWER FACILITIES ARE TO BE INSTALLED ACCORDING TO THE WESTERN VIRGINIA WATER AUTHORITY DESIGN AND CONSTRUCTION STANDARDS.

CONSTRUCTION SITE PLAN GENERAL NOTES
CONSTRUCTION METHODS

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS, VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE STANDARDS, AND LOCAL JURISDICTIONAL STANDARDS AND SPECIFICATIONS, WHERE APPLICABLE.
2. THE LOCATION OF EXISTING UTILITIES AS SHOWN IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION WORK AND NOTIFY ENGINEER IMMEDIATELY IF LOCATIONS DIFFER FROM PLANS.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-552-7001 OR 811 PRIOR TO ANY CONSTRUCTION WORK IN THIS AREA.
- HANDICAPPED ACCESSIBILITY / ADA COMPLIANCE
1. THE MAXIMUM ALLOWABLE CROSS SLOPE ACROSS ACCESSIBLE PARKING SPACES AND ACCESSIBLE AISLES IS 2%. NO SLOPE IN ANY DIRECTION SHALL EXCEED 2% WITHIN ADA PARKING SPACES OR AISLES.
2. THE MAXIMUM ALLOWABLE LONGITUDINAL SLOPE ALONG ACCESSIBLE AISLES IS 5%.
3. THE CONTRACTOR SHALL VERIFY SLOPES AND GRADES FOR ALL ACCESSIBLE PARKING SPACES AND ACCESS AISLES AFTER STAKING IS COMPLETE AND BOTH BEFORE AND AFTER INSTALLATION.
4. ANY SLOPE DISCREPANCIES DETECTED BY THE SURVEYOR AND/OR CONTRACTOR SHALL BE REPORTED TO THE ENGINEER PRIOR TO INSTALLATION.
5. UNLESS SPECIFICALLY NOTED ON THE SITE PLAN, DETECTABLE WARNING STRIPS ARE REQUIRED AT ALL CURB RAMPS AND FLUSH CURB TRANSITIONS TO PARKING LOTS.
6. HAND RAILS ARE REQUIRED FOR ANY ACCESSIBLE SITE PEDESTRIAN RAMPS WITH LONGITUDINAL SLOPES THAT EXCEED 5% AND / OR 6-INCHES IN RISE.
7. SITE HAND RAILS SHALL BE PER VDOT / ADA / ANSI STANDARDS AND SPECIFICATIONS, UNLESS NOTED OTHERWISE.
8. SITE HAND RAILS SHALL BE INSTALLED ON BOTH SIDES OF THE SITE SIDEWALKS WHERE HAND RAILS ARE REQUIRED.
9. PER VDOT STANDARDS, THE MAXIMUM PERMISSIBLE CURB RAMP SLOPE IS 12:1.
10. WHEEL STOPS FOR ACCESSIBLE PARKING SPACES SHALL BE INSTALLED 3'-0" OFF THE FACE OF CURB.
11. GUTTER PAN INSTALLED IN ACCESSIBLE PARKING SPACES SHALL NOT EXCEED 2% SLOPE.
12. NO VERTICAL TRANSITIONS IN ADA ACCESSIBLE ROUTES SHALL EXCEED 1/4".

CURB AND GUTTER

1. THE CONTRACTOR SHALL USE A MINIMUM OF THREE (3) RUNNING CONSTRUCTION STAKES TO AVOID HARD BREAK LINES IN THE CURB - UNLESS SPECIFICALLY CALLED FOR ON THE PLANS.
2. THE MINIMUM LONGITUDINAL SLOPE FOR GUTTER PAN IS 0.5%, UNLESS OTHERWISE NOTED ON PLANS.
3. A MINIMUM 20-FOOT TRANSITION FROM CG-6 TO CG-7 IS REQUIRED, UNLESS OTHERWISE NOTED ON THE PLANS.
4. ALL CURB AND GUTTER SHOWN ON THE PLANS SHALL BE VDOT CG-6, CG-2, OR CG-7, UNLESS SPECIFICALLY NOTED OTHERWISE.

UNDERGROUND UTILITIES

1. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING LINE AND GRADE FOR ALL DRY UTILITIES PRIOR TO THE START OF CONSTRUCTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING DRY UTILITY LINES AND GRADES AGAINST ALL PROPOSED UTILITIES SHOWN ON THE PLANS. POTENTIAL CONFLICTS SHALL BE REPORTED TO THE ENGINEER AS SOON AS POSSIBLE.
3. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING TELEPHONE, CABLE, FIBER OPTIC, AND ELECTRICAL SERVICES TO THE PROJECT. CONTACT UTILITY PROVIDERS AS SOON AS POSSIBLE TO BEGIN COORDINATION.
4. THE CONTRACTOR SHALL REVIEW SITE AND BUILDING DRAWINGS TO VERIFY COORDINATION OF UTILITY INVERTS. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT AND ENGINEER PRIOR TO INSTALLATION.

SIDEWALKS AND SITE STAIRS

1. ALL SITE STAIRS SHALL BE FURNISHED WITH VDOT HR-1 ON BOTH SIDES OF THE STAIRS.
2. ALL SITE STAIRS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ADA / ANSI STANDARDS AND SPECIFICATIONS, UNLESS SPECIFICALLY NOTED OTHERWISE.
3. SIDEWALKS SHALL BE INSTALLED WITH A MAXIMUM 2% CROSS-SLOPE
4. SIDEWALKS SHALL BE BROOM FINISHED, UNLESS NOTED OTHERWISE ON THE PLANS.
5. SIDEWALKS SHALL BE 5-FEET IN WIDTH, UNLESS NOTED OTHERWISE ON THE PLANS.

ROOF DRAINS AND DOWN SPOUTS

1. ALL DOWNSPOUTS NOT CONNECTED TO STORM SEWER SHALL BE FURNISHED WITH SPLASH BLOCKS.
2. ALL DOWN SPOUTS SHALL BE FURNISHED WITH A DOWNSPOUT/ROOFDRAIN TRANSITION BOOT. STUBBING OF DOWNSPOUT INTO ROOF DRAIN LATERAL WITHOUT A SUITABLE BOOT TRANSITION IS NOT PERMITTED.
3. ALL ROOF DRAIN LATERALS SHALL BE INSTALLED IN ACCORDANCE WITH THE PREVAILING LOCAL JURISDICTIONAL PLUMBING CODE OR THE INTERNATIONAL PLUMBING CODE, WHICHEVER IS MORE STRINGENT.
4. MINIMUM ALLOWABLE SLOPE FOR 4-INCH ROOF DRAIN LATERAL IS 1.08%.
5. MINIMUM ALLOWABLE SLOPE FOR 6-INCH ROOF DRAIN LATERAL IS 1.04%.
6. ROOF DRAIN LATERALS SHALL BE 6-INCH DIAMETER (SMOOTH-WALLED), UNLESS NOTED OTHERWISE ON THE PLANS.

TELEPHONE, FIBER OPTIC, CABLE, AND GAS LINE SERVICES

1. CONTRACTOR SHALL HAVE "MISS UTILITY" MARK EXISTING UTILITY LINES PRIOR TO START OF CONSTRUCTION AND AS NECESSARY THROUGHOUT CONSTRUCTION.
2. CONTRACTOR SHALL REVIEW PLANS TO VERIFY EXISTING LOCATIONS MARKED IN THE FIELD MATCH THOSE SHOWN ON THE PLANS.
3. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY POTENTIAL DISCREPANCIES PRIOR TO THE START OF CONSTRUCTION.
4. CONTRACTOR SHALL POT-HOLE EXISTING UTILITIES AT CRITICAL CROSSING LOCATIONS PRIOR TO THE START OF CONSTRUCTION AND PROVIDE ENGINEER WITH LINE AND GRADE INFORMATION.

BUILDING DOORS AND GRADES

1. A MINIMUM 5'X5' PAD SHALL BE INSTALLED AT ALL BUILDING DOOR LOCATIONS (MAXIMUM 2% SLOPE IN ANY DIRECTION). COMPLY WITH ADA DOOR CLEARANCE REQUIREMENTS FOR PAD POSITIONING OUTSIDE OF THE DOOR.
2. FINISHED GRADE SHALL BE 6-INCHES BELOW FINISHED FLOOR ELEVATION ALONG ALL BUILDING WALLS, IN AREAS WHERE PERVIOUS SURFACES ARE PROVIDED, UNLESS OTHERWISE NOTED. FINISHED GRADE FOR AREAS TO BE MULCHED SHALL BE AT TOP OF MULCH. FINISHED GRADE FOR AREAS TO RECEIVE SOD SHALL BE TO TOP OF SOD.
3. ALL PERVIOUS SURFACES SHALL BE INSTALLED WITH A MINIMUM OF 2% SLOPE AWAY FROM THE BUILDING (FOR A MINIMUM OF 10-FEET), TO PROVIDE FOR POSITIVE DRAINAGE.
4. CONTRACTOR SHALL COORDINATE LOCATION OF WEEP HOLES ALONG ALL BUILDING WALLS AND VERIFY REQUIRED SEPARATION BETWEEN WEEP HOLES AND FINISHED GRADES.
5. CONTRACTOR SHALL REVIEW GRADING ALONG BUILDINGS WITH STOREFRONTS TO VERIFY REQUIRED SEPARATION IS PROVIDED.

ENGINEERS NOTES

BALZER AND ASSOCIATES, INC. ASSUMES NO RESPONSIBILITY FOR ADEQUACY OF PLANS OR FOR INFORMATION ON PLANS UNTIL SUCH PLANS HAVE BEEN APPROVED BY THE REQUIRED PUBLIC AGENCIES.

ANY WORK COMMENCED ON A PROJECT PRIOR TO PLAN APPROVAL IS AT SOLE RISK OF THE DEVELOPER.

BALZER AND ASSOCIATES, INC. WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE PLANS AND WILL NOT BE RESPONSIBLE FOR ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR THEIR AGENTS OR EMPLOYEES, OR OF ANY OTHER PERSONS PERFORMING PORTIONS OF THE WORK.

SUBDIVISION & SITE CONSTRUCTION
PLAN GENERAL NOTES

ALL MATERIALS AND CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH CURRENT VIRGINIA DEPARTMENT OF TRANSPORTATION'S STANDARDS AND SPECIFICATIONS.

LAND USE PERMITS (CE-7P) MUST BE OBTAINED FROM THE VIRGINIA DEPARTMENT OF TRANSPORTATION PRIOR TO BEGINNING ANY CONSTRUCTION WITHIN THE EXISTING STATE MAINTAINED RIGHT-OF-WAY (INCLUDING ACCESS). VDOT IS TO RECEIVE WRITTEN NOTIFICATION 48 HOURS PRIOR TO COMMENCING WITH INITIAL CONSTRUCTION ACTIVITIES WITHIN SAID RIGHT-OF-WAYS.

THE CONTRACTOR SHALL VERIFY THE ELEVATIONS OF ALL POINTS OF CONNECTION OR PROPOSED WORK TO EXISTING CURBS, SANITARY LINES, WATER LINES, ETC., PRIOR TO CONSTRUCTION.

UPON THE DISCOVERY OF SOILS THAT ARE UNSUITABLE FOR FOUNDATIONS, SUBGRADES, OR OTHER ROADWAY CONSTRUCTION PURPOSES, THE CONTRACTOR SHALL IMMEDIATELY CONTACT A GEOTECHNICAL ENGINEER AND VDOT. THESE AREAS SHALL BE EXCAVATED BELOW PLAN GRADE AS DIRECTED BY THE GEOTECHNICAL ENGINEER, BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED IN ACCORDANCE WITH CURRENT VDOT SPECIFICATIONS.

ALL STORM SEWER DESIGN AND CONSTRUCTION TO BE IN ACCORDANCE WITH VDOT STANDARDS AND SPECIFICATIONS.

IF PRE-CAST DRAINAGE UNITS ARE TO BE USED, VDOT SHALL BE NOTIFIED AND THE MANUFACTURER SHALL SUBMIT DRAWING DETAILS FOR REVIEW. CERTIFICATION AND VDOT STAMP WILL BE REQUIRED ON ALL UNITS.

ALL CONCRETE SHALL BE CLASS A3-AE (AIR ENTRAINED 3,000 PSI).

ALL ENTRANCES ARE TO BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH CURRENT VDOT STANDARDS. RESIDENTIAL LOT ACCESS SHALL BE PROVIDED PER THE FOLLOWING CRITERIA: a) VDOT STANDARD CG-9D ENTRANCES SHALL BE INSTALLED IN CURB AND GUTTER NEIGHBORHOODS. THE SAWCUTTING REMOVAL OF THE STANDING CURB IS UNACCEPTABLE WHEN INSTALLING AN ENTRANCE ON EXISTING CURB AND GUTTER.

CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES SHOWN ON PLANS IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK. CONTACT ENGINEER IMMEDIATELY IF LOCATION OR ELEVATION IS DIFFERENT FROM THAT SHOWN ON PLAN. IF THERE APPEARS TO BE A CONFLICT, AND/OR UPON DISCOVERY OF ANY UTILITY SHOWN ON THIS PLAN, CALL MISS UTILITY OF CENTRAL VIRGINIA AT 1-800-552-7001. THE DEVELOPER SHALL BE RESPONSIBLE FOR THE RELOCATION OF ANY UTILITY WITHIN EXISTING AND/OR PROPOSED RIGHT-OF-WAY REQUIRED BY THE DEVELOPMENT.

CASING SLEEVES SHALL BE PLACED AT ALL ROAD CROSSINGS FOR GAS, POWER, TELEPHONE AND CABLE TV SERVICES TRUNK LINES.

THE INSTALLATION OF SEWER, WATER, AND GAS MAINS (INCLUDING SERVICES LATERALS AND SLEEVES) SHALL BE COMPLETED PRIOR TO PLACEMENT OF AGGREGATE BASE COURSE. PERMITS ARE REQUIRED BY THE VIRGINIA DEPARTMENT OF TRANSPORTATION FOR ALL UTILITIES TO REMAIN IN-PLACE AFTER STREET ACCEPTANCE.

A PRIME COAT SEAL BETWEEN THE AGGREGATE BASE AND BITUMINOUS CONCRETE WILL BE REQUIRED AT A RATE OF 0.30 GALLONS PER SQUARE YARD (REC-250 PRIME COAT) PER VDOT STANDARDS AND SPECIFICATIONS.

THE SCHEDULING OF AGGREGATE BASE INSTALLATION AND SUBSEQUENT PAVING ACTIVITIES SHALL ACCOMMODATE FORECAST WEATHER CONDITIONS PER SECTION 315 OF THE ROAD AND BRIDGE SPECIFICATIONS.

ALL VEGETATION AND ORGANIC MATERIAL IS TO BE REMOVED FROM THE RIGHT-OF-WAY LIMITS PRIOR TO CONDITIONING OF THE SUBGRADE.

CERTIFICATION AND SOURCE OF MATERIALS ARE TO BE SUBMITTED TO VDOT FOR ALL MATERIALS AND BE IN ACCORDANCE WITH THE ROAD AND BRIDGE SPECIFICATIONS AND ROAD AND BRIDGE STANDARDS.

DRY GUTTER IS NOT ALLOWED IN VDOT RIGHT OF WAY.

THE NECESSITY AND LOCATIONS FOR ADDITIONAL VDOT STANDARD UNDERDRAINS TO BE DETERMINED AT TIME OF SUBGRADE INSPECTION.

VDOT SHALL BE PROVIDED DOCUMENTATION THAT ALL IN-PLACE PAVEMENTS MEET OR EXCEED THE APPROVED PAVEMENT DESIGN THICKNESS PRIOR TO STATE ACCEPTANCE.

GENERAL NOTES

PROVIDE NEW MATERIALS AND WORKMANSHIP IN CONFORMANCE WITH ALL APPLICABLE CODES, STATE AND FEDERAL LAWS, LOCAL ORDINANCES, INDUSTRY STANDARDS, AND OTHER CRITERIA WHICH WOULD NORMALLY APPLY TO WORK OF THIS NATURE. NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERING A CONFLICT IN CODES, ORDINANCES, STANDARDS, OR OTHER CRITERIA. APPLICABLE CODES AND STANDARDS INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, THE FOLLOWING:

- a. BOCA - BASIC CODES
- b. ROANOKE COUNTY
- c. VDOT - VIRGINIA DEPARTMENT OF TRANSPORTATION, ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS
- d. VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS AND HANDBOOK
- e. OSHA - OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
- f. ASTM - AMERICAN SOCIETY FOR TESTING AND MATERIALS
- g. WVWA - WESTERN VIRGINIA WATER AUTHORITY

MAINTAIN A SET OF APPROVED PLANS ON SITE AT ALL TIMES DURING CONSTRUCTION.

OBTAIN EACH REQUIRED PERMIT PRIOR TO COMMENCING THAT PART OF THE WORK. PAY REQUIRED FEES.

NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERY OF CONDITIONS WHICH DIFFER FROM THOSE SHOWN ON THE PLANS.

COMPLY WITH LOCAL ORDINANCES FOR BURNING OF WASTE. TRANSPORT WASTE MATERIALS AND UNSUITABLE MATERIALS FROM OWNER'S PROPERTY.

COORDINATE BUILDING DIMENSIONS WITH ARCHITECTURAL PLANS.

A PRECONSTRUCTION MEETING MUST TAKE PLACE PRIOR TO COMMENCING WORK. AS A MINIMUM, THE CONTRACTOR, OWNER'S AGENT AND COUNTY'S AGENT MUST ATTEND.

VERIFY THE LOCATION AND ELEVATION OF EACH EXISTING UNDERGROUND UTILITY IN AREAS OF CONSTRUCTION PRIOR TO COMMENCEMENT OF WORK. CONTACT ENGINEER IMMEDIATELY IF THERE APPEARS TO BE A CONFLICT, UPON DISCOVERY OF A UTILITY WHICH IS NOT SHOWN, AND UPON DISCOVERY OF A LOCATION OR ELEVATION WHICH DIFFERS FROM THAT SHOWN. TO LOCATE UTILITIES, CALL "MISS UTILITY", 1-800-552-7001. UTILITY LOCATIONS SHOWN ARE THE RESULT OF A COMBINATION OF FIELD LOCATION AND EXISTING INFORMATION. LOCATIONS ARE APPROXIMATE.

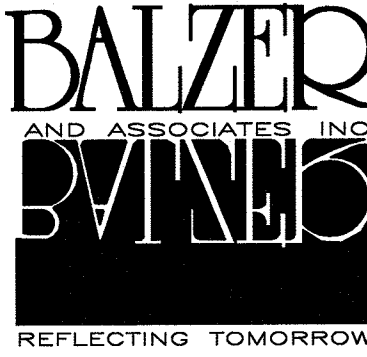
REPAIR ALL DAMAGE TO ANY UTILITY, PUBLIC OR PRIVATE, CAUSED AS A RESULT OF CONSTRUCTION ACTIVITIES AT NO ADDITIONAL COST TO OWNER.

NOTIFY OWNERS OF UTILITIES IN AREAS OF CONSTRUCTION PRIOR TO COMMENCEMENT OF EXCAVATION.

SIGNAGE SHALL COMPLY WITH THE APPLICABLE REGULATIONS OF THE COUNTY. A SEPARATE PERMIT IS REQUIRED.

ANY SITE DEVELOPMENT OUTSIDE OF THE SCOPE OF THIS PLAN WILL REQUIRE SITE PLAN REVIEW AND APPROVAL.

ADDITIONAL DRAINAGE STRUCTURES AND EASEMENTS MAY BE REQUIRED BY THE VIRGINIA DEPARTMENT OF TRANSPORTATION DUE TO ANY DEVIATION BETWEEN THE APPROVED PROPOSED CONTOURS AND THE AS-BUILT CONDITIONS OR ANY OTHER TOPOGRAPHIC CHANGES.



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LAND SURVEYING
ARCHITECTURE
STRUCTURAL ENGINEERING
TRANSPORTATION ENGINEERING
ENVIRONMENTAL & SOIL SCIENCE
WETLAND DELINEATIONS & STREAM EVALUATIONS

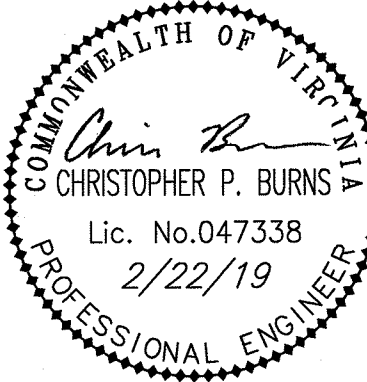
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NORTH CROSS SCHOOL
4254 COLONIAL AVENUE SW

GENERAL NOTES

CAVE SPRING DISTRICT
ROANOKE COUNTY, VIRGINIA

DRAWN BY EJP

DESIGNED BY CPB

CHECKED BY CPB

DATE 12/20/2018

SCALE N/A

REVISIONS:
2/6/2019
2/22/2019

SHEET NO.

C17

JOB NO. 03170003.01