

## LANDSCAPE SPECIFICATIONS

1. PLANT MATERIAL SIZES AND GRADING ARE TO COMPLY WITH THE LATEST EDITION OF AMERICAN STANDARDS FOR NURSERY STOCK. PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION (ANLA).
2. ALL WORK SHALL BE COORDINATED WITH TRADES.
3. USE EXISTING TOPSOIL AND/OR PROVIDE NEW TOPSOIL, WHICH IS FERTILE, FRIABLE, NATURAL LOAM, SURFACE SOIL, REASONABLY FREE OF SUBSOIL, FOREIGN MATTER AND ROOTS, STUMPS AND STONES LARGER THAN 2" IN DIMENSION.
4. CONTRACTOR SHALL ASCERTAIN LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION.
5. CONTRACTOR SHALL MAINTAIN PLANT MATERIAL DURING INSTALLATION AND MAINTENANCE SHALL BE THE RESPONSIBILITY OF OWNER UPON ACCEPTANCE OF WORK.
6. WHERE THE LANDSCAPE WORK IS COMPLETED, THE OWNER'S REPRESENTATIVE WILL, UPON WRITTEN REQUEST, MAKE AN INSPECTION TO DETERMINE ACCEPTABILITY. IF WORK IS NOT ACCEPTABLE, REPLACE REJECTED WORK AND CONTINUE MAINTENANCE UNTIL REINSPECTION AND APPROVAL.
7. GUARANTEE ALL MATERIALS AND LABOR FOR 12 CALENDAR MONTHS AFTER ACCEPTANCE.
  - A. MAKE REPLACEMENTS OF ALL DEAD PLANTS IN IMPAIRED CONDITIONS IN EARLY FALL FOLLOWING PLANTING.
  - B. REPLACE ADDITIONAL MATERIAL IN THE EARLY SPRING WHICH ARE DEAD OR IMPAIRED FROM THE WINTER CONDITIONS.
8. WITHIN 10 DAYS AFTER ACCEPTANCE, THE CONTRACTOR SHALL DELIVER AN OUTLINE OF MAINTENANCE PROCEDURES RECOMMENDED FOR THIS PLANTING FOR THE OWNER.
9. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY DURING THE GUARANTEE PERIOD TO PROVIDE WRITTEN NOTICE TO THE OWNER OF ANY MAINTENANCE PRACTICE WHICH IN THEIR OPINION WILL AFFECT THE GUARANTEE IF NOT REMEDIED PROMPTLY.

10. DO NOT MAKE SUBSTITUTIONS. BID MATERIALS SHOWN ON PLANS. CONTRACTOR IS ENCOURAGED TO PROVIDE WRITTEN ALTERNATE LIST OF MATERIALS, SIZES AND NUMBERS SUBSTITUTION FOR COST-EFFECTIVE MAINTENANCE OF DESIGN INTEGRITY.

11. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO ACCEPT OR REJECT ANY MATERIAL THAT HE/SHE DEEMS UNACCEPTABLE. REJECTED MATERIAL SHALL BE REMOVED PROMPTLY FROM THE SITE.

12. BALLED AND BURLAPPED PLANTS SHALL BE DUG WITH FIRM NATURAL BALLS OF EARTH. BALL SIZES SHALL BE IN ACCORDANCE WITH A.A.N. SPECIFICATIONS. ALL CONTAINER GROWN STOCK SHALL BE WELL ROOTED AND ESTABLISHED IN THE CONTAINER IN WHICH IT IS SOLD. AN ESTABLISHED CONTAINER GROWN PLANT SHALL HAVE A ROOT SYSTEM DEVELOPED SUFFICIENTLY TO RETAIN ITS SHAPE WHEN REMOVED FROM THE CONTAINER.

13. ALL PLANT MATERIAL SHALL BE NURSERY GROWN UNLESS OTHERWISE SPECIFIED. PRUNING SHALL BE DONE BEFORE PLANTING OR DURING THE PLANTING OPERATION.

14. ALL PLANT MATERIAL SHALL BE COVERED AND PROTECTED FROM EXCESSIVE DRYING DURING TRANSIT.

15. ANTIDESISICANTS SHALL BE APPLIED ON ALL MATERIAL DUG WHILE IN FOLIAGE.

16. MULCH MATERIAL SHALL BE EITHER SHREDDED HARDWOOD MULCH OR APPROVED EQUAL. MATERIAL SHALL BE MULCHED GRADE, UNIFORM IN SIZE AND FREE OF FOREIGN MATTER.

17. TOPSOIL MIXTURE SHALL BE 2 PARTS EXISTING SOIL MIXED EVENLY WITH 1 PART SPAGNUM PEAT MOSS OR PEAT HUMUS. EXISTING SOIL SHALL BE FREE OF STONES, LUMPS, PLANTS, ROOTS AND OTHER DEBRIS OVER 1 1/2 INCHES. IT SHALL NOT CONTAIN TOXIC SUBSTANCES HARMFUL TO PLANT GROWTH. TOPSOIL SHALL HAVE A PH RANGE OF 5.0 TO 7.0.

18. PLANTING PROCEDURES FOR TREES AND SHRUBS

- A. PLANTING SHALL OCCUR IN ACCORDANCE WITH ALL DETAILS.
- B. TREES AND SHRUBS SHALL BE PLACED IN THE PLANTING PIT, BY LIFTING FROM THE BALL (NEVER FROM THE BRANCHES OR TRUNK). ALL PLANT MATERIAL SHALL BE PLACED IN A STRAIGHT POSITION WITHIN THE PLANTING PIT WITH THE MOST DESIRABLE SIDE PLACED TOWARDS THE PROMINENT VIEW (SIDEWALK, STREET, ETC.).
- C. THE TREE PIT SHALL BE BACKFILLED WITH A SOIL MIXTURE AS PER SPECIFICATIONS. THE PIT SHALL BE FILLED HALFWAY INITIALLY AND TAMPED FIRMLY. ALL ROPES, WIRES, ETC. ON THE ROOTBALL SHALL BE CUT AND THE BURLAP OR BALL WRAP PULLED BACK TO THE EDGE OF THE ROOTBALL. COMPLETE BACKFILLING PLANT PIT AND TAMP FIRMLY. BACKFILL SOIL SHALL NOT COVER TOP OF ROOTBALL. MULCH ROOTBALL AND SAUCER WITH MINIMUM OF 3 INCHES SHREDDED OR CHIPPED HARDWOOD OR PINE MULCH. WATER THOROUGHLY OR UNTIL PLANT PIT IS FILLED.

## 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 CONTRACTORS FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE PLANS OR 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.

TOPOGRAPHIC INFORMATION IS APPROXIMATE AND IS BASED ON PREVIOUSLY APPROVED PLANS AND A SITE VISIT WITH THE OWNER.

## 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. WWA - WESTERN VIRGINIA WATER AUTHORITY

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.

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.

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

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

ANY SIGNAGE PROPOSED FOR THIS DEVELOPMENT SHALL COMPLY WITH THE APPLICABLE REGULATIONS OF THE COUNTY OF ROANOKE ZONING ORDINANCE, SPECIFICALLY SEC. 30-93. A SEPARATE SIGN PERMIT AND APPROVAL WILL BE REQUIRED.

ANY NEW ALIGNMENTS, CHANGES IN GRADES, ALTERNATIVE PIPE SIZES OR MANHOLES WILL REQUIRE A NEW SET OF PLANS STAMPED BY THE CONSULTING ENGINEER. COUNTY ENGINEER WILL REVIEW PLANS WITHIN THREE DAYS OF SUBMITTAL. PLAN SHEETS CAN BE 8.5 X 11 IF THE INFORMATION IS LEGIBLE.

NO CONSTRUCTION/FIELD CHANGES WITHOUT APPROVAL OF THE CONSULTING ENGINEER AND ROANOKE COUNTY.

## GRADING NOTES

1. A SUBSURFACE INVESTIGATION HAS NOT BEEN PROVIDED. SOILS INFORMATION IS AVAILABLE ON THE RESIDUAL SOILS THAT IS SUGGESTED IN THE "WEB SOIL SURVEY" AS PREPARED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE. THIS SURVEY IDENTIFIES THE ORIGINAL SOIL MATERIALS AS 9B-COTAC LOAM (2 TO 7 PERCENT SLOPES) AND 49C-TUMBLING LOAM (7 TO 15 PERCENT SLOPES).

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 TREE AND STRAIGHT FOOTING EXCAVATION WITH UNIFORM AND STRAIGHT 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. CONVEY WATER WHEN ATMOSPHERIC TEMPERATURE IS LESS THAN 35°F (1°C).

10. PROTECT EXCAVATED BOTTOMS OF ALL FOOTINGS AND TRENCHES AGAINST FREEZING WHEN ATMOSPHERIC TEMPERATURE IS LESS THAN 35°F (1°C).

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. PREPARE AREA FOR SOD INSTALLATION 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.

16. OWNER (CONTRACTOR) SHALL EMPLOY QUALIFIED SOILS TESTING LABORATORY TO INSPECT EARTHWORK OPERATIONS. NOTIFY LABORATORY PRIOR TO PERFORMING EARTHWORK OPERATIONS.