## GENERAL NOTES

- 1. 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
- VDOT VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS—LATEST EDITION
- d. VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS AND HANDBOOK,
- e. OSHA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

ASTM - AMERICAN SOCIETY FOR TESTING AND MATERIALS

- MAINTAIN A SET OF APPROVED PLANS ON SITE AT ALL TIMES DURING CONSTRUCTION.
- 3. OBTAIN EACH REQUIRED PERMIT PRIOR TO COMMENCING THAT PART OF THE WORK
- PAY REQUIRED FEES.

  4. NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERY OF CONDITIONS WHICH DIFFER
- 5. COMPLY WITH LOCAL ORDINANCES FOR BURNING OF WASTE. TRANSPORT WASTE MATERIALS AND UNSUITABLE MATERIALS FROM OWNER'S PROPERTY.
- A PRECONSTRUCTION MEETING MUST TAKE PLACE PRIOR TO COMMENCING WORK. AS
  A MINIMUM, THE CONTRACTOR, OWNER'S AGENT AND COUNTY'S AGENT MUST ATTEND.
- 7. 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.
- 8. REPAIR ALL DAMAGE TO ANY UTILITY, PUBLIC OR PRIVATE, CAUSED AS A RESULT OF CONSTRUCTION ACTIVITIES. AT NO ADDITIONAL COST TO OWNER.
- 9. NOTIFY OWNERS OF UTILITIES IN AREAS OF CONSTRUCTION PRIOR TO COMMENCEMENT OF EXCAVATION.
- 10. SIGNAGE SHALL COMPLY WITH THE APPLICABLE REGULATIONS OF THE COUNTY. A SEPARATE PERMIT IS REQUIRED. A MINIMUM 15.0' SIGN SETBACK IS REQUIRED FOR ANY FREESTANDING SIGN. A MAXIMUM OF 30 SQUARE FEET OF SIGNAGE MAY BE PERMITTED FOR THIS PROJECT.
- 11. STREET SIGNS SHALL CONFORM TO THE LATEST EDITION OF THE MUTCD. PRIOR TO INSTALLING THE SIGNS CONTACT MR. DARRYL ABSHIRE AT 387-5409 TO VERIFY THE LOCATION AND INSTALLATION.

# WATER NOTES:

- ALL MATERIALS, CONSTRUCTION, ETC. SHALL MEET ALL THE SPECIFICATIONS AND REQUIREMENTS OF THE COMMONWEALTH OF VIRGINIA/STATE BOARD OF HEALTH "WATERWORKS REGULATIONS", LATEST EDITION, AS WELL AS THOSE OF THE LOCAL GOVERNING AUTHORITY. PROVIDE QUALITY WORKMANSHIP.
- 2. MINIMIZE ANY DISTURBANCE TO EXISTING UTILITY SERVICES DURING CONSTRUCTION
- 3. PROVIDE 3.0 FEET MINIMUM COVER.
- 4. WATER MAINS SHALL BE ASTM 2241 SDR 21 OR EQUAL.
- 5. WATER LINES SHALL BE D.I.P. CLASS 52 AS A MINIMUM. INSTALL WATER BOXES BEYOND THE CURB LINE AND STUB THE SERVICE LINE. THE COUNTY SHALL INSTALL THE METER 5/8" EACH LOT.
- 6. MAKE ALL PIPE JOINTS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- 7. PRESSURE TEST THE WATER MAINS AT TWO TIMES THE WORKING PRESSURE FOR AT LEAST TWO HOURS WITH NO LEAKAGE.
- 8. LOCATE AND UNCOVER VALVE VAULTS AFTER PAVING
  9. ALL TAPS TO EXISTING WATER UTILITIES TO BE PERFORMED BY ROANOKE COUNTY UTILITY
- DEPARTMENT.
- 10. REFERENCE THE ROANOKE COUNTY UTILITY DEPARTMENT WATER AND SEWER REGULATIONS, LATEST EDITION.

  11. THE MAIN LINE CONNECTION TO THE EXISTING 8" WATER LINE SHALL BE A "WET TAP" PERFORMED BY ROANOKE COUNTY UTILITY. THE COORDINATION FOR THIS TAP SHALL BE
- 13. ALL PUBLIC WATER CONSTRUCTION SHALL COMPLY WITH ROANOKE COUNTY WATER REGULATIONS.

DONE AT THE PRE-CONSTRUCTION MEETING. A 72 HOUR NOTIFICATION IS REQUIRED.

12. THE EXISTING WELL WILL BE REMOVED AND ABANDONED PER THE VIRGINIA DEPARTMENT OF

# SANITARY SEWER NOTES

1. SEWER PIPE SHALL BE PVC SDR-35.

HEALTH AND ROANOKE COUNTY REGULATONS.

- 2. ALL SANITARY LATERALS WITHIN RIGHTS-OF-WAY AND EASEMENTS SHALL BE FOUR (4) INCH DIAMETER WITH A MINIMUM GRADE OF 2.08%, (1/4":1'). MATERIAL TO BE PVC SDR-35. THE COUNTY SHALL TAP THE EXISTING SANITARY LINE AND BRING LATERAL TO THE RIGHT-OF-WAY LINE; HOWEVER, THE COUNTY MAY ALLOW THE CONTRACTOR TO DO SEWER CONNECTIONS WITH COUNTY APPROVED MATERIALS AND COUNTY INSPECTION.
- 3. REFERENCE THE ROANOKE COUNTY UTILITY DEPARTMENT WATER AND SEWER REGULATIONS,
- 4. THE NEW CONNECTION TO THE EXISTING SEWER MANHOLE SHALL BE DONE BY THE CONTRACTOR WITH THE COUNTY INSPECTOR ON SITE..
- 5. BY-PASS PUMPING OF THE SEWER FLOWS MUST ADHERE TO SECTION 02731-3.5 OF THE ROANOKE COUNTY WATER AND SEWER REGULATIONS.
- 6. REMOVE EXISTING SANITARY SEWER PER ROANOKE COUNTY AND THE VIRGINIA DEPARTMENT OF HEALTH REGULATIONS.
- 7. ALL PUBLIC SANITARY SEWER CONSTRUCTION SHALL COMPLY WITH ROANOKE COUNTY SEWER REGULATIONS.

# **DIMENSIONAL NOTES**

- 1. IN GENERAL DIMENSIONS ARE TO BOTTOM FACE OF CURB, CENTER OF PAINTED LINE, EDGE OF PAVEMENT.
- DO NOT SCALE DIMENSIONS. IF A QUESTION CONCERNING A DIMENSION ARISES, CONTACT THE ENGINEER FOR INTERPRETATION.

# PAVING NOTES

- 1. SEE PAVEMENT SECTION AT RIGHT.
- 2. SAW CUT EDGE OF EXISTING PAVEMENT WHERE NEW IS TO MEET EXISTING.
- . PROVIDE SMOOTH TRANSITION FROM EXISTING TO NEW PAVEMENT AND CURB.
- 4. THE PAVEMENT DESIGN SHOWN IS BASED ON A SUBGRADE RATING OF CBR 10 OR GREATER. SHOULD THE ACTUAL SUB GRADE CBR VALUES BE LESS THAN 10, AN ALTERNATE PAVEMENT DESIGN MUST BE APPROVED BY THE COUNTY OF ROANOKE.
- DO NOT LAY PAVEMENT BASE STONE UNTIL ALL UTILITIES, INCLUDING STORM SEWER, ARE IN PLACE.

## GENERAL UTILITY NOTES

- 1. SUPPLY AND INSTALL ALL MATERIALS AND METHODS FOR WATERLINES, SANITARY SEWERS AND STORM DRAINAGE IN ACCORDANCE WITH THE SPECIFICATIONS AND REQUIREMENTS OF ROANOKE COUNTY AND THE VIRGINIA DEPARTMENT OF TRANSPORTATION "ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS", LATEST EDITION.
- 2. OBTAIN ALL REQUIRED PERMITS AND NOTIFY APPROPRIATE OFFICIALS 48 HOURS PRIOR TO COMMENCEMENT OF WORK. OBTAIN INFORMATION FROM ROANOKE COUNTY CONCERNING PERMITS AND CONNECTIONS TO EXISTING LINES.
- 3. ALL WORK SHALL BE SUBJECT TO INSPECTION BY ROANOKE COUNTY. NOTIFY APPROPRIATE OFFICIALS PRIOR TO COMMENCEMENT OF WORK.
- 4. SITE SHALL BE TO SUB GRADE 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 CLODS, STONES, AND DEBRIS FOR BACK FILL FROM THE BOTTOM OF THE TRENCH TO TWELVE (12) INCHES ABOVE THE
- 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 THE COUNTY'S 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, CONSTRUCT THE SEWER OF AWWA APPROVED WATER PIPE AND PRESSURE TREAT IN PLACE PRIOR TO BACKFILLING. THE SEWER MANHOLE SHALL BE OF WATERTIGHT CONSTRUCTION TESTED IN PLACE.
- 9. SEWER AND WATER TAPS SHALL BE LOCATED BY THE CONTRACTOR AND MADE BY THE COUNTY AT THE DEVELOPER'S EXPENSE.
- 10. LOCATE AND UNCOVER VALVE VAULTS AND MANHOLES AFTER PAVING AND ADJUST TO FINAL GRADE, IF NECESSARY.
- 11. 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:

ANY LOCATION OR ELEVATION IS DIFFERENT FORM THAT SHOWN ON THE PLANS.

### IF THERE APPEARS TO BE ANY CONFLICT.

UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON THE PLANS.

TO MISS UTILITIES, CALL "MISS UTILITY" OF VIRGINIA (TOLL FREE 1-800-552-7001)
48 HOURS BEFORE YOU DIG. THE CONTRACTOR IS RESPONSIBLE FOR ALL

DAMAGE CAUSED TO ANY UTILITY, PUBLIC OR PRIVATE, AS A RESULT OF THIS
WORK. EXISTING UTILITY LOCATIONS SHOWN ARE A RESULT OF A COMBINATION
OF EXISTING INFORMATION AND FIELD LOCATION OF SURFACE FEATURES. LOCATIONS
ARE APPROXIMATE.

- 12. REPAIR ALL DAMAGE CAUSED TO ANY UTILITY, PUBLIC OR PRIVATE, AS A RESULT OF THIS WORK AT NO ADDITIONAL COST TO OWNER.
- 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, BACK FILL 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 BACK FILL FOR ALL UTILITIES IN ACCORDANCE WITH THE COUNTY'S SPECIFICATIONS, AND THE FOLLOWING CRITERIA:
  - (1) BACK FILL NO TRENCH UNTIL AUTHORIZED BY THE COUNTY. MATERIALS
    USED FOR BACK FILL FROM THE BOTTOM OF THE TRENCH TO TOP OF THE PIPE
    SHALL BE CRUSHER RUN, OR APPROVED EQUAL MATERIAL. THOROUGHLY AND CAREFULLY
    COMPACT THE BACK FILL MATERIAL.
  - (2) COMPACT BACK FILL BY MECHANICAL TAMPING THROUGHOUT THE DEPTH OF THE TRENCH TO INSURE A SUITABLE SUBBASE ACCEPTABLE TO THE ROAD ENGINEER. IF THE MATERIAL TAKEN FROM THE DITCH IS NOT SUITABLE FOR BACK FILLING, REMOVE IT AND USE AN ACCEPTABLE MATERIAL FOR BACK FILLING THE TRENCH.
- 15. IN AREAS OF WATER LINE CONSTRUCTION, GRADES SHALL BE WITHIN SIX (6) INCHES OF FINISHED SUB GRADE PRIOR TO THE COMMENCEMENT OF THIS WORK.
- 16. MINIMUM COVER OVER WATER AND SANITARY SEWER LINES SHALL BE THREE (3) FEET.
- 17. THE COUNTY OF ROANOKE SHALL MAKE ALL CONNECTIONS TO EXISTING WATER MAINS, NOTIFY ROANOKE COUNTY UTILITY DEPARTMENT TWO WORKING DAYS PRIOR TO WHEN THE TAP IS NEEDED.
- 18. THE CONTRACTOR SHALL INSTALL ALL WATER SERVICE CONNECTIONS AND METER BOXES.
- 19. PIPES AND FITTINGS SHALL BE POLYVINYL.
- 20. CONNECT PIPE TO MANHOLES THROUGH PRE CAST OPENINGS AND JOIN WITH EITHER A FLEXIBLE BOOT ADAPTER OR A PIPE SEAL GASKET.
- 21. MAKE RESIDENTIAL SERVICE CONNECTIONS WITH A FOUR (4) INCH PIPE THROUGH A WYE OR TEE—WYE BRANCH FITTING AND SHALL BE INSTALLED ON A MINIMUM GRADE OF ONE—QUARTER (1/4") INCH PER ONE (1) FOOT FROM THE SEWER PIPE OR MANHOLE TO THE PROPERTY OR EASEMENT LINE WHERE A CLEANOUT SHALL BE PLACED AND THE SERVICE LATERAL PLUGGED / CAPPED UNTIL EXTENSION.
- 22. FIELD MARK FUTURE SET:VICE CONNECTIONS BY A TREATED, SOLID WOODED (2"X4")
  MARKER THREE (3) FEET LONG SET VERTICALLY PLUMB WITH THE END OF THE CAPPED
  EXTENSION. PAINT THE TOPS OF THE MARKERS YELLOW AND SET FLUSH WITH THE
  FINISHED GRADE. SHOW THE LOCATION AND INVERT DEPTH OF THE SERVICE CONNECTION
  ON THE AS-BUILT PLANS.
- 23. A MINIMUM VERTICAL SEPERATION AT ALL UTILITY CROSSINGS WILL BE 1.5 FEET.
- 24. THE MINIMUM HEIGHT REQUIRED FROM THE PAVEMENT TO THE EXISTING POWER LINE IS EIGHTEEN FEET. THE HEIGHT TO THE POWER LINES WILL BE ADJUSTED TO A MINIMUM OF EIGHTEEN FEET WHEN THE EXISTING POWER POLE IS RELOCATED.
- 25. NO ROANOKE COUNTY UTILITY SHALL BE LOCATED WITHIN THE SIDEWALK.

### GRADING NOTES

- 1. 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.
- 2. BARRICADE OPEN EXCAVATIONS OCCURRING AS PART OF THIS WORK AND OPERATE WARNING LIGHTS AS RECOMMENDED BY AUTHORITIES HAVING JURISDICTION.
- 3. CUT SURFACE UNDER PAVEMENTS TO COMPLY WITH CROSS SECTIONS, ELEVATIONS, AND GRADES AS INDICATED.
- 4. EXCAVATE TRENCHES TO UNIFORM WIDTH CONFORMING TO VDOT STANDARD PB-1 FOR STORM DRAINAGE PIPING. BACKFILL TRENCHES WITH CONTROLLED FILL.
- 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 REMOVED FROM EXCAVATIONS AND RAIN WATER TO COLLECTING OR RUNOFF AREAS. ESTABLISH AND MAINTAIN TEMPORARY DRAINAGE DITCHES AND OTHER DIVERSIONS OUTSIDE EXCAVATION LIMITS FOR EACH STRUCTURE. DO NOT USE TRENCH EXCAVATIONS AS TEMPORARY DITCHES.
- PROTECT EXCAVATED BOTTOMS OF ALL FOOTINGS AND TRENCHES AGAINST FREEZING WHEN ATMOSPHERIC TEMPERATURE IS LESS THEN 35°F (1°C).
- 7. UNIFORMLY GRADE AREAS WITHIN LIMITS OF GRADING INCLUDING ADJACENT TRANSITION AREAS. SMOOTH FINISHED SURFACES WITHIN SPECIFIED TOLERANCES, COMPACT WITH UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE SHOWN, OR BETWEEN SUCH POINTS AND EXISTING GRADES. GRADE AREAS ADJACENT TO BUILDING LINES TO DRAIN AWAY FROM STRUCTURES AND TO PREVENT PONDING.
- 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.
- 9. PROTECT GRADED AREAS FROM TRAFFIC AND EROSION. REPAIR AREAS WHICH HAVE SETTLED, ERODED, OR BECOME DAMAGED DUE TO CONSTRUCTION ACTIVITIES AT NO
- 10. 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
- d. COMPACT SOIL TO NOT LESS THAN THE FOLLOWING PERCENTAGES OF MAXIMUM, DRY DENSITY IN ACCORDANCE WITH ASTM D 698 (STANDARD

## i. 95% UNDER PAVEMENT

- ii. 85% UNDER LAWN OR UNPAVED AREAS
  11. SPREAD TOPSOIL TO A DEPTH OF 4" OVER ALL DISTURBED AREAS NOT RECEIVING WALKS OR PAVEMENT, 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. SEED IMMEDIATELY.
- 12. OWNER (CONTRACTOR) SHALL EMPLOY QUALIFIED SOILS TESTING LABORATORY TO INSPECT EARTHWORK OPERATIONS. NOTIFY LABORATORY PRIOR TO PERFORMING EARTHWORK OPERATIONS.

## VDOT GENERAL NOTES

- 1. VDOT APPROVAL OF SUBDIVISION ROAD PLANS DOES NOT PRECLUDE THE RIGHT TO ADD ADDITIONAL FACILITIES SUCH AS SEEDING, PAVING, SEDIMENT CONTROL ITEMS, ETC., AS MAY BE DEEMED NECESSARY BY THE DEPARTMENT PRIOR TO THE ACCEPTANCE OF SUCH ROADS IN ORDER TO LIMIT SILTATION AND POLLUTION OF NEARBY LAKES, PONDS, STREAMS, AND
- 2. THE DEPARTMENT'S APPROVAL OF THESE PLANS EXPIRES THREE YEARS FROM DATA APPROVAL
- INSTALLATION OF ALL PIPE CULVERTS AND STORM SEWER SYSTEMS LOCATED WITHIN VDOT RIGHT OF WAY AND EASEMENTS SHALL CONFORM TO THE 2001 VDOT ROAD AND BRIDGE STANDARDS.
- 4. ALL DRAINAGE EASEMENTS SHALL BE MADE TO FUNCTION, AND IN ACCORDANCE WITH COMMISSION POLICY, THEY MUST EXTEND TO A NATURAL WATERCOURSE. ALL PROPOSED DRAINAGE EASEMENTS SHALL BE REVIEWED IN THE FIELD DURING AND AFTER CONSTRUCTION TO DETERMINE IF EROSION OR SCOUR IS OCCURRING AND IF SUCH IS FOUND, TO DETERMINE APPROPRIATE REMEDIAL CORRECTIVE MEASURES. THE DEVELOPER SHALL BE RESPONSIBLE FOR ALL CORRECTIVE MEASURES.

# VIRGINIA DEPARTMENT OF TRANSPORTATION NOTES:

### 1. Quality Control

All work done in the proposed, or existing right of way, including but not limited to street grading, street paving and all construction of all structural components, shall be done in accordance with current Virginia Department of Transportation Road and Bridge Standards and Specifications. All materials used shall be tested in accordance with VDOT standard policies. The developer shall contact the office of the resident engineer, prior to beginning any construction within the proposed or existing right of way. At the time, the resident engineer shall prepare an inspection and testing schedule. The developer will produce test reports from approved independent laboratories at the developer's expense.

The pavement designs shown are based on a sub—grade CBR value of 10 or greater. The sub—grade soil is to be tested by an independent laboratory and the results submitted to the Virginia Department of Transportation prior to base construction. Should the Sub—grade CBR values be less than 10, additional base material will be required in accordance with Departmental specifications.

The sub-grade shall be approved by the Department prior to placement of the base. Base shall be approved by the Virginia Department of Transportation for depth, template and compaction before surface is applied.

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All necessary utility laterals along with provisions for conduits (i.e. water, sewer, storm, gas and telephone) will be constructed prior to placement of base materials.

Gas or petroleum transmission lines will not be permitted within the pavement or shoulder element (back curb to back of curb) of this development. Service laterals crossing and pipe lines located outside the pavement but inside the right—of—way will be constructed in conformity with ASA B 31.8 specifications and safety regulations. Distribution lines with pressures less than 120 lbs. are unaffected by the above.

Permits will be required for all utilities within street right—of—way prior to acceptance into the secondary highway system. Any easements granted to a utility company for placement of power, telephone, etc. shall be released prior to acceptance.

### 3. <u>Private entrances</u>

Modified CG-9D gutter will be provided at all entrances to private lots where standard CG-6 curb and gutter is approved for use. A VDOT standard PE-1 is required for private entrances on streets without curb and gutter. It is the developer's responsibility to ensure that all private entrances have either a CG-9D or a PE-1. A street shall not be brought into the system where existing houses (occupied, unoccupied, or under construction) have neither a CG-9D or a PE-1.

Permits will be required for all private entrances constructed on street right—of—way after acceptance into the secondary highway system.

All private entrances within the right—of—way area should not exceed eight percent (8%) maximum grade.

# EROSION AND SEDIMENT CONTROL NARRATIVE

# PROJECT DESCRIPTION

THE PROJECT CONSISTS OF 15 SINGLE FAMILY LOTS. PUBLIC UTILITIES ARE PLANNED. TOTAL PROJECT AREA IS 4.0 ACRES. TOTAL DISTURBED AREA IS APPROXIMATELY 3.5 ACRES.

# EXISTING SITE CONDITIONS

**DWELLINGS** 

THIS SITE.

THE EXISTING SITE CONTAINS A SINGLE FAMILY DWELLING AND RELATIVELY FLAT OPEN FIELD.
ADJACENT PROPERTIES

ADJACENT PROPERTIES ARE DEVELOPED LOTS CONSITING OF SINGLE FAMILY

# OFF-SITE THE EXISTING DITCH ALONG COVE ROAD WILL CONTINUE TO RECEIVE RUNOFF FROM

SOILS
ON SITE SOILS WERE IDENTIFIED ON THE "GENERALIZED SOIL PARENT MATERIAL

MAP" OF ROANOKE VIRGINIA. SOILS IN THIS AREA ARE GENERALLY IDENTIFIED AS

# 5C, CHISWELL-LITZ COMPLEX. CRITICAL EROSION AREAS

THE EXISTING DITCH ALONG COVE ROAD WILL NEED TO BE RESTABILIZED ONCE

# CONTRUCTION IS COMPLETE. MANAGEMENT STRATEGIES

- 1. CONSTRUCTION WILL BE SEQUENCED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE.
  2. THE GRAVEL CONSTRUCTION ENTRANCE WILL BE INSTALLED AS A FIRST STEP IN CONSTRUCTION.
- OTHER MEASURES WILL BE INSTALLED AS WORK PROGRESSES INTO THOSE AREAS.
   TEMPORARY SEEDING OR OTHER STABILIZATION WILL FOLLOW IMMEDIATELY AFTER GRADING.
   THE JOB SUPERINTENDENT SHALL BE RESPONSIBLE FOR THE INSTALLATION
- AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL PRACTICES.

  6. AFTER ACHIEVING ADEQUATE STABILIZATION, THE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES WILL BE CLEANED AND REMOVED.

# PERMANENT STABILIZATION

ALL AREAS DISTURBED BY CONSTRUCTION WHICH DO NOT RECEIVE PAVING SHALL BE STABILIZED WITH PERMANENT SEEDING AS SPECIFIED. ALL SEEDING SHALL BE TACKED AND MULCHED AND PLACED IMMEDIATELY AFTER REACHING FINISHED GRADE. THE ROADWAY AREA SHALL RECEIVE PAVING.

# STORMWATER MANAGEMENT

A STORMWATER MANAGEMENT FACILITY IS PLANNED FOR THIS DEVELOPMENT.

MAINTENANCE

DAILY AND AFTER EACH SIGNIFICANT RAINFALL. IN PARTICULAR:

1. SILT FENCE WILL BE CHECKED REGULARLY FOR UNDERMINING OR DETERIORATION OF THE FABRIC. SEDIMENT SHALL BE REMOVED WHEN SEDIMENT REACHES HALF WAY UP ANY GIVEN DEVICE.

IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED

2. THE SEEDED AREAS WILL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RESEEDED AS NEEDED.

3. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL DEVICES IMMEDIATELY AFTER EACH SIGNIFICANT RAINFALL. REPAIR ALL STRUCTURES AS

# 4. Erosion control and landscaping

Care shall be taken during construction to prevent erosion, dust and mud from damaging adjacent property, clogging ditches, tracking public streets and otherwise creating a public or private nuisance to

The entire construction area including ditches, channels, back of curbs and/or pavement is to be back filled and seeded at the earliest possible time after final grading.

Drainage easements shall be defined by excavated ditched or channels for their full length to well defined existing natural watercourses.

The road will be reviewed during construction for the need of paved ditches. If erosion is encountered in any drainage easement, it will be the responsibility of the developer to sod, rip rap, grout, pave or to do whatever is necessary to correct the problem.

All vegetation and overburden shall be removed from shoulder to shoulder prior to the conditioning (cutting and/or preparation) of the sub-grade.

### 5. Intersection Payement Radius

Minimum pavement radius of 25 feet is required at all street

# 6. Connections to State Maintained Roads

While these plans have been approved such approval does not exempt connections with existing state—maintained roads from critical review at the time permit applications are made. This is necessary in order that the prevailing conditions be taken into consideration regarding safety accompaniments such as turning lanes.

## <u>Guardrails</u>

Standard guardrails with safety end sections may be required on fills as deemed necessary by the resident engineer. After completion of rough grading operations, the office of the resident engineer, shall be notified so that a field review may be made of the proposed locations.

Where guardrails are to be installed the shoulder width shall be 7 increased in accordance with VDOT road and bridge standards.

### Storm Drainage

Field review will be made during construction to determine the need and limits of paved ditched and/or ditch stabilization treatments, and to determine the need and limits of additional drainage easements. All drainage easements shall be cut and made to function to a natural watercourse. Any erosion problems encountered in an easement shall be corrected by whatever means necessary prior to subdivision acceptance.

Ditch slopes are to be four to one (4:1) for shoulder widths of six feet (6') or greater and three to one (3:1) for shoulder widths of four feet (4') or five (5'), unless otherwise specified in the plans.

Contractor shall obtain entrance permit to the existing Virginia

g. An inspector will not be furnished except for periodic progress

stone depths. The developer will be required to post a surety to

### Entrance Permit

Department of Transportation's right—of—way resident engineer prior to road construction.

Inspection

inspections, the above mentioned field reviews and checking for required

# guarantee the road free of defects for one year after acceptance by the Department of Transportation.

10. Street Maintenance

The streets shall be properly maintained until acceptance. At such time as all requirements have been met for acceptance, another inspection will be made to determine that the street has been properly

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Underground Utilities

Contractor shall verify location and elevation of all underground utilities shown on the plans in areas of construction prior to starting work by contacting Miss Utility. Contact site engineer immediately if location or elevation is different from that shown on the plans. If there appears to be a conflict, and upon discovery of any utility not shown on this plan,

# call "Miss Utility" of Central Virginia at 1-800-552-7001. Revisions of specifications and standards

Approval of these plans will be based on specifications and standards in effect at the time of approval and will be subject, until completion of the roadway and acceptance by the Department, to future revisions of the specifications and standards.

The developer shall be responsible for installation of all traffic control

striping, etc., required by the latest edition of the Manual on Uniform

devices. STOP SIGNS, YIELD SIGNS, SPEED LIMIT SIGNS, pavement

14. System. All traffic control devices shall be installed according to the

# Traffic Control Devices (MUTCD). The developer shall be responsible of reinstalling and maintaining all traffic control devices required as part of this development until the streets are taken into the Secondary

<u>Traffic Control Devices</u>

AND ASSOCIATES INC.

OF THE PROPERTY OF THE PR

PLANNERS • ARCHITECTS

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EN SUBDIVISIC eral Notes

General Notes

DRAWN BY: SMH
DESIGNED BY: SMH

CHECKED BY: RIS

DATE: 3/13/03 REVISIONS: 5-29-03 11-17-03 12-18-03

SCALE: AS NOTED

SHEET NO.

6 OF 6

WVWA ID# 6HZGNM

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