NOTE: CONTRACTOR TO ENSURE POSITIVE DRAINAGE.

NOTICE:
ALL LANDOWNERS, DEVELOPERS AND CONTRACTORS
FAILURE TO COMPLY WITH THE CONSTRUCTION PROCEDURE REQUIREMENTS LISTED BELOW MAY RESULT IN THE COSTLY REMOVAL OF STRUCTURES, TIME DELAYS, OR THE ISSUANCE OF A STOP WORK ORDER

CONSTRUCTION PROCEDURE REQUIREMENTS

1. CITY INSPECTIONS: TO ENSURE THE COORDINATION OF TIMELY AND PROPER INSPECTIONS, A PRECONSTRUCTION CONFERENCE SHALL BE INITIATED BY THE CONTRACTOR WITH THE DEVELOPMENT INSPECTOR. CALL 540/853-1227 TO ARRANGE A CONFERENCE AT LEAST THREE (3) DAYS PRIOR TO ANTICIPATED CONSTRUCTION.
2. RIGHT-OF-WAY EXCAVATION PERMIT: PRIOR TO THE COMMENCEMENT OF ANY DIGGING, ALTERATIONS, OR CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY (STREETS, ALLEYS, PUBLIC EASEMENTS) A RIGHT-OF-WAY EXCAVATION PERMIT SHALL BE APPLIED FOR AND OBTAINED BY THE CONTRACTOR FROM THE CITY OF ROANOKE.
3. LAND DISTURBANCE PERMIT: AN APPROVED EROSION AND SEDIMENT CONTROL PLAN FOR ANY BORROW/FILL SITES ASSOCIATED WITH THE PROJECT MUST BE SUBMITTED PRIOR TO THE ISSUANCE OF A LAND DISTURBANCE PERMIT.
4. PLANS AND PERMITS: A COPY OF THE PLANS AS APPROVED BY THE CITY (SIGNED BY THE PROPER CITY OFFICIALS) AND ALL PERMITS ISSUED BY THE CITY SHALL BE AVAILABLE AT THE CONSTRUCTION SITE AT ALL TIMES OF ONGOING CONSTRUCTION.
5. LOCATION OF UTILITIES: THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.
6. CONSTRUCTION ENTRANCE: THE CONTRACTOR SHALL INSTALL AN ADEQUATE CONSTRUCTION ENTRANCE FOR ALL CONSTRUCTION-RELATED EGRESS FROM THE SITE. SIZE AND COMPOSITION OF CONSTRUCTION ENTRANCE SHALL BE AS SHOWN ON THE PLANS.
6. STREETS TO REMAIN CLEAN: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT THE PUBLIC STREET ADJACENT TO THE CONSTRUCTION ENTRANCE REMAINS FREE OF MUD, DIRT, DUST, AND/OR ANY TYPE OF CONSTRUCTION MATERIALS OR LITTER AT ALL TIMES.
7. BARRICADES/DITCHES: THE CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF ALL EXCAVATED DITCHES AND SHALL FURNISH AND ENSURE THAT ALL BARRICADES PROPER AND NECESSARY FOR THE SAFETY OF THE PUBLIC ARE IN PLACE.
8. SEWER AND PAVEMENT REPLACEMENT: CONSTRUCTION OF SANITARY SEWERS AND THE REPLACEMENT OF PAVEMENT SHALL BE IN ACCORDANCE WITH APPROVED STANDARDS AND SPECIFICATIONS OF THE CITY OF ROANOKE AND WESTERN VIRGINIA WATER AUTHORITY.
9. APPROVED PLANS/CONSTRUCTION CHANGES: ANY CHANGE OF VARIATION FROM CONSTRUCTION DESIGN AS SHOWN ON THE OFFICIALLY APPROVED PLANS SHALL BE APPROVED BY THE EROSION AND SEDIMENT CONTROL AGENT PRIOR TO SAID CHANGES OR VARIATIONS IN CONSTRUCTION BEING MADE.
10. FINAL ACCEPTANCE/CITY: THE DEVELOPER OR CONTRACTOR SHALL FURNISH THE CITY OF ROANOKE'S PLANNING BUILDING AND DEVELOPMENT DEPARTMENT WITH A FINAL CORRECT SET OF AS-BUILT PLANS PRIOR TO FINAL ACCEPTANCE BY THE CITY.

WATER NOTES:

1. IN AREAS OF WATERLINE CONSTRUCTION, GRADES SHALL BE WITHIN SIX (6) INCHES OF FINISHED SUBGRADE PRIOR TO THE COMMENCEMENT OF THIS WORK.
2. ALL CONNECTIONS TO EXISTING WATER MAINS SHALL BE MADE BY THE WVWA
3. WATER SERVICE LATERAL SHALL BE 3/4" TYPE "K" COPPER OR EQUIVILANT.
4. MINIMUM CLEAR COVER OVER ALL WATER PIPE SHALL BE THREE (3) FEET.
5. THE CITY SHALL INSTALL ALL WATER SERVICE CONNECTIONS AND METER BOXES.

SEWER NOTES:

1. PIPE AND FITTINGS SHALL BE POLYVINYL CHLORIDE (PVC) SDR 35 AND SHALL CONFORM TO ASTM D-3034. BEDDING SHALL BE CLASS "B" MINIMUM.

DIMENSIONAL NOTES:

1. IN GENERAL DIMENSIONS ARE TO BOTTOM FACE OF CURB, CENTER OF PAINTED LINE, EDGE OF PAVEMENT, FACE OF WALL.
2. DO NOT SCALE DIMENSIONS. IF A QUESTION CONCERNING A DIMENSION ARISES,

PAVING NOTES:

1. SEE PAVEMENT SECTION THIS SHEET.
2. SAW CUT EDGE OF EXISTING PAVEMENT WHERE CURB IS TO MEET EXISTING PAVEMENT.
3. 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 CITY OF ROANOKE.
5. DO NOT LAY PAVEMENT BASE STONE UNTIL ALL UTILITIES, INCLUDING STORM SEWER, ARE IN PLACE.

GRADING NOTES:

1. REFER TO BUILDING PLANS FOR SUBGRADE AND UTILITY TRENCHES WITHIN 5' OF BUILDING ENVELOPE.
2. 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.
3. BARRICADE OPEN EXCAVATIONS OCCURRING AS PART OF THIS WORK AND OPERATE WARNING LIGHTS AS RECOMMENDED BY AUTHORITIES HAVING JURISDICTION.
4. EXCAVATION FOR STRUCTURES:
   a. CONFORM TO ELEVATIONS AND DIMENSIONS SHOWN WITHIN A TOLERANCE OF PLUS OR MINUS 0.10 FOOT.
   b. PROVIDE TRUE AND STRAIGHT FOOTING EXCAVATIONS WITH UNIFORM LEVEL BOTTOMS OF THE WIDTH INDICATED TO ENSURE PROPER PLACEMENT AND COVER OF ALL REINFORCEMENT.
   c. REMOVE ALL LOOSE MATERIALS FROM THE EXCAVATION PRIOR TO PLACEMENT OF CONCRETE.
   d. PROVIDE A MINIMUM OF 2'-0" FROM FINISHED GRADE TO TOP OF ALL EXTERIOR WALL FOOTINGS.
   e. 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.
   f. IF ROCK IS ENCOUNTERED IN A FOOTING EXCAVATION, UNDERCUT IT A MINIMUM OF 12" BELOW THE BOTTOM OF THE FOOTINGS AND FILL THE RESULTING OVER-EXCAVATION WITH CONTROLLED FILL.
5. CUT SURFACE UNDER PAVEMENTS TO COMPLY WITH CROSS SECTIONS, ELEVATIONS, AND GRADES AS INDICATED.
6. EXCAVATE TRENCHES TO UNIFORM WIDTH CONFORMING TO VDOT STANDARD PB-1 FOR STORM DRAINAGE PIPING. BACKFILL
7. 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. TRENCHES WITH CONTROLLED FILL.
8. PROTECT EXCAVATED BOTTOMS OF ALL FOOTINGS AND TRENCHES AGAINST FREEZING WHEN ATMOSPHERIC TEMPERATURE IS LESS THEN 35°F (1°C).
9. BACKFILLING:
   a. COMPACT THE BACKFILL AROUND THE OUTSIDE OF EACH BUILDING TO A MINIMUM OF 85% OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D 698 STANDARD PROCTOR. DO NOT ALLOW HEAVY COMPACTION EQUIPMENT SUCH AS ROLLERS, ETC., CLOSER TO ANY FOOTING THAN THE HORIZONTAL DISTANCE SUBTENDED BY A 45° ANGLE WITH THE TOP EDGE OF THE FOOTINGS AND THE SURFACE OF THE GROUND.
   b. BACKFILL BEHIND WALLS AFTER PERMANENT CONSTRUCTION WHICH BRACES THE WALL IS IN PLACE OR TEMPORARY BRACING OF THE WALL IS PROPERLY INSTALLED, AND AFTER ACCEPTANCE OF CONSTRUCTION BELOW FINISH GRADE INCLUDING DAMP-PROOFING, REMOVAL OF CONCRETE FORMWORK, AND REMOVAL OF TRASH AND DEBRIS.
10. 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.
11. 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.
12. 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.
13. 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.
14. 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
15. SPREAD 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. SEED IMMEDIATELY.
16. OWNER (CONTRACTOR) SHALL EMPLOY QUALIFIED SOILS TESTING LABORATORY TO INSPECT EARTHWORK OPERATIONS. NOTIFY LABORATORY PRIOR TO PERFORMING EARTHWORK OPERATIONS.

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 THE CITY OF ROANOKE AND THE VIRGINIA DEPARTMENT OF TRANSPORTATION "ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS"
2. OBTAIN ALL REQUIRED PERMITS AND NOTIFY APPROPRIATE OFFICIALS 48 HOURS PRIOR TO COMMENCEMENT OF WORK. OBTAIN INFORMATION FROM THE CITY OF ROANOKE CONCERNING PERMITS AND CONNECTIONS TO EXISTING LINES.
3. ALL WORK SHALL BE SUBJECT TO INSPECTION BY THE CITY OF ROANOKE. 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 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 THE CITY'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 CITY AT THE DEVELOPER'S EXPENSE.
10. LOCATE AND UNCOVER VALVE VAULTS AND MANHOLES AFTER PAVING AND ADJUST TO FINAL GRADE, IF NECESSARY.
11. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS WHERE UTILITIES ENTER THE BUILDING.
12. 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 FOUND SURFACE FEATURES. LOCATIONS SHOWN HEREON ARE APPROXIMATE IN NATURE, AND ARE ONLY TO BE USED AS A GUIDE.
13. REPAIR ALL DAMAGE CAUSED TO ANY UTILITY, PUBLIC OR PRIVATE, AS A RESULT OF THIS WORK AT NO ADDITIONAL COST TO OWNER.
14. 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.
15. PLACE BACK FILL FOR ALL UTILITIES IN ACCORDANCE WITH THE CITY'S SPECIFICATIONS, AND THE FOLLOWING CRITERIA:

    (1) BACK FILL NO TRENCH UNTIL AUTHORIZED BY THE CITY. 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

    (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.
16. IN AREAS OF WATER LINE CONSTRUCTION, GRADES SHALL BE WITHIN SIX (6) INCHES OF FINISHED SUB GRADE PRIOR TO THE COMMENCEMENT OF THIS WORK.
17. MINIMUM COVER OVER WATER AND SANITARY SEWER LINES SHALL BE THREE (3) FEET.
18. THE CITY OF ROANOKE SHALL MAKE ALL CONNECTIONS TO EXISTING WATER MAINS.
19. WATER PIPE SHALL BE DUCTILE IRON.
20. PIPES AND FITTINGS SHALL BE POLYVINYL.
21. CONNECT PIPE TO MANHOLES THROUGH PRE CAST OPENINGS AND JOIN WITH EITHER A FLEXIBLE BOOT ADAPTER OR A PIPE SEAL GASKET.
22. BACKFILL FOR UTILITY TRENCHING IN THE RIGHT OF WAY SHALL BE VDOT 21A PLACED IN 6" LOOSE LIFTS AND COMPACTED TO 95% STANDARD PROCTOR +/- 20% OPTIMUM MOISTURE CONTENT. AS AN ALTERNATIVE, VDOT SPECIFIED FLOWABLE FILL WITH STRENGTH OF BETWEEN 30 AND 300 PSI AT 28 DAYS MAY BE USED.

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 CITY
   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
2. 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.
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.
6. COORDINATE BUILDING DIMENSIONS WITH ARCHITECTURAL PLANS.
7. A PRECONSTRUCTION MEETING MUST TAKE PLACE PRIOR TO COMMENCING WORK. AS A MINIMUM, THE CONTRACTOR, OWNER'S AGENT AND CITY'S AGENT MUST ATTEND.
8. 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, 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.
9. REPAIR ALL DAMAGE TO ANY UTILITY, PUBLIC OR PRIVATE, CAUSED AS A RESULT OF CONSTRUCTION ACTIVITIES, AT NO ADDITIONAL COST TO OWNER.
10. NOTIFY OWNERS OF UTILITIES IN AREAS OF CONSTRUCTION PRIOR TO COMMENCEMENT
11. SIGNAGE SHALL COMPLY WITH THE APPLICABLE REGULATIONS OF THE CITY. A
12. SITE LIGHTING SHALL CONFORM TO THE APPLICABLE REGULATIONS OF THE
13. SCREEN ALL TRANSFORMERS, HEAT PUMPS, AND OTHER MECHANICAL EQUIPMENT. MECHANICAL UNITS LOCATED TO THE REAR OF BUILDINGS MUST BE VISUALLY AND ACOUSTICALLY SCREENED FROM ADJOINING PROPERTIES.
14. TRASH TO BE HANDLED BY INDIVIDUAL CANS.

EROSION & SEDIMENT CONTROL NOTES

1. PROVIDE CONSTRUCTION MATERIALS AND METHODS IN ACORDANCE WITH ALL STATE AND LOCAL REGULATIONS, INCLUDING THE STANDARDS AND SPECIFICATIONS OF THE "VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK", LATEST EDITION. REFER TO THIS HANDBOOK FOR DETAILS AND SPECIFICATIONS OF EROSION CONTROL DEVICES.
2. SCHEDULE A PRECONSTRUCTION MEETING INVOLVING THE ENGINEER, DEVELOPER'S REPRESENTATIVE AND SELECTED CONTRACTOR ON SITE PRIOR TO BEGINNING CONSTRUCTION.
3. ADHERE TO THE EROSION AND SEDIMENT CONTROL NARRATIVE AS PART OF THIS CONTRACT. INSTALL EROSION CONTROL DEVICES AS PER THE NARRATIVE/PLAN.
4. NOTIFY THE PROJECT ENGINEER WHEN THE LOCAL GOVERNING OFFICIAL HAS INSPECTED AND APPROVED ALL IN-PLACE EROSION AND SEDIMENT CONTROL DEVICES, REQUIRED BY LOCAL ORDINANCES TO BE IN PLACE PRIOR TO LAND DISTURBANCE.
5. NOTIFY THE PROJECT ENGINEER 24 HOURS IN ADVANCE OF BEGINNING CLEARING AND GRADING OPERATIONS.
6. DISPOSE OF EXCESS EXCAVATION, AS WELL AS ALL ORGANIC MATTER AND DEBRIS, OFF SITE.
7. SEED AND MULCH OR TEMPORARILY STABILIZE ALL DENUDED AREAS WITHIN SEVEN DAYS OF DISTURBANCE. SEED TRENCHES IMMEDIATELY FOLLOWING BACKFILL.
8. REMOVE ALL DEMOLISHED MATERIAL FROM THE PROJECT SITE AND DISPOSE OF IN AN ACCEPTABLE LOCATION.
9. REINSTALL ANY STRUCTURE(S) RELOCATED AND/OR REMOVED DURING THE INSTALLATION OF THE PROPOSED IMPROVEMENTS AT NO ADDITIONAL COST TO OWNER.
10. INSPECT ESC MEASURES WEEKLY AND AFTER EACH RAINFALL TO INSURE PROPER FUNCTIONING.
11. AVOID CONSTRUCTION TRAFFIC IN NATURAL STREAMS AND DRAINAGE WAYS WHENEVER POSSIBLE.
12. REMOVE ALL SILT FROM STREAMS AND DRAINAGE WAYS PRIOR TO BOND RELEASE.
13. ALL PERIMETER EROSION & SEDIMENT CONTROLS SHALL BE INSTALLED PRIOR TO ANY UPSLOPE LAND DISTURBING ACTIVITIES.
14. IN ORDER TO REDUCE THE AMOUNT OF MUD TRANSPORTED ONTO PUBLIC ROADS, THE TIRES ON ALL CONSTRUCTION VEHICLES MUST BE WASHED BEFORE ENTERING PUBLIC RIGHT OF WAY. IN LIEU OF A CONSTRUCTION ENTRANCE, THE CONTRACTOR IS TO ENSURE THAT ALL DISTURBED AREAS RECEIVE CONSTRUCTION ROAD STABILIZATION IMMEDIATELY AFTER DISTURBANCE.

EROSION AND SEDIMENT CONTROL NARRATIVE:

PROJECT DESCRIPTION

The project consists of the construction of a general office building. Utilities are planned. Total project area is 0.437 acres. Total disturbed area is approximately 0.31 acres.

EXISTING SITE CONDITIONS

The site currently drains from the east to the west where it sheet flows to Corporate Circle which is drained via storm sewer.

ADJACENT PROPERTIES

Adjacent properties are zoned C2. Various offices with associated parking.

OFF-SITE AREAS

Silt fence will be installed along the south and west property lines to insure sediment runoff does not enter into Corporate Circle.

SOILS

On site soils are identified as 57A Wheeling-Urban land complex. Soils information is from the U.S. Department of Agriculture soils survey map.

CRITICAL EROSION AREAS

Silt fence shall be installed along the south and west property lines and maintained to prevent runoff from leaving the property.

EROSION AND SEDIMENT CONTROL MEASURES

All measures to be in accordance with the Virginia Erosion and Sediment Control Handbook, latest edition.

Silt Fence-3.05
Silt fence will protect downstream property from sediment laden runoff.
Temporary Seeding-3.31
Any denuded areas left dormant for extended periods of time will be seeded temporarily within seven days.
Permanent Seeding-3.32
Areas not receiving buildings, paving or landscaping will be seeded.
Construction Road Stabilization-3.03
Construction road stabilization will reduce the amount of erosion in the parking area between the time of initial grading and final stabilization.
Temporary Diversion Dike-3.09
Diversion dikes divert stormwater runoff from upslope drainage areas away from disturbed areas.

MANAGEMENT STRATEGIES

Construction will be sequenced so that grading operations can begin and end as quickly as possible.
In lieu of a construction entrance, the contractor is to ensure that all disturbed areas receive construction road stabilization immediately after disturbance.
Install silt fence as the second 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.
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 buildings or paving shall be stabilized with permanent seeding as specified. All seeding shall be tacked and mulched and placed immediately after reaching finished grade.

STORMWATER MANAGEMENT

A stormwater collection pit has been designed to accept the parking lot and building runoff. This pit will be removed upon construction of future phases and when the storm sewer is extended to the property to collect the runoff.

MAINTENANCE

In general, all erosion and sediment control measures will be checked daily and after each significant rainfall. In particular:

Silt fence will be checked regularly for undermining or deterioration of the fabric. Sediment shall be removed when the level of sediment deposition reaches halfway to the top of the barrier.

The seeded areas shall be checked regularly to ensure that a good stand is maintained. Areas should be fertilized and reseeded as needed.

The contractor shall inspect all erosion control devices immediately after each significant rainfall and daily during periods of prolonged or heavy rainfall and repair all structures as necessary with in 48 hours.

(PS) PERMANENT SEEDING MIXTURE

TYPE A

15 OCTOBER TO 1 FEBRUARY
K-31 FESCUE @ 5 LB / 1000 SF
BORZY WINTER RYE @ 1/2 LB / 1000 SF

1 FEBRUARY TO 1 JUNE
K-31 FESCUE @ 5 LB / 1000 SF
ANNUAL RYE @ 1/2 LB / 1000 SF

1 JUNE TO 1 SEPTEMBER
K-31 FESCUE @ 5 LB / 1000 SF
GERMAN MILLET @ 1/2 LB / 1000 SF

1 SEPTEMBER TO 15 OCTOBER
K-31 FESCUE @ 5 LB / 1000 SF
ANNUAL RYE @ 1/2 LB / 1000 SF

TYPE B (SLOPES 3:1 OR STEEPER)

15 MARCH TO 1 MAY
CROWN VETCH @ 1/2 LB / 1000 SF
PERENNIAL RYEGRASS @ 1/2 LB / 1000 SF
RED TOP @ 1/8 LB / 1000 SF

15 AUGUST TO 1 OCTOBER
CROWN VETCH @ 1/2 LB / 1000 SF
PERENNIAL RYEGRASS @ 1/2 LB / 1000 SF
RED TOP @ 1/8 LB / 1000 SF

LIME: 140 LB / 1000 SF PULVERIZED AGRICULTURAL LIMESTONE

FERTILIZER: 5-20-10 @ 25 LB / 1000 SF
38-0-0 @ 7 LB / 1000 SF

MULCH: IF REQUIRED, SHALL BE USED OVER ALL SEEDED AREAS AND SHALL BE APPLIED IN ACCORDANCE WITH SECTION 1.75 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.

SOIL CONDITIONING: INCORPORATION OF LIME AND FERTILIZER, SELECTION OF CERTIFIED SEED, MULCHING, MAINTENANCE OF NEW SEEDLINGS, AND RESEEDING SHALL BE IN ACCORDANCE WITH SPECIFICATIONS CONTAINED WITHIN THE VIRGINIA SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION. ADDITIONAL SEEDING TO BE PERFORMED AS REQUIRED BY THE INSPECTOR.

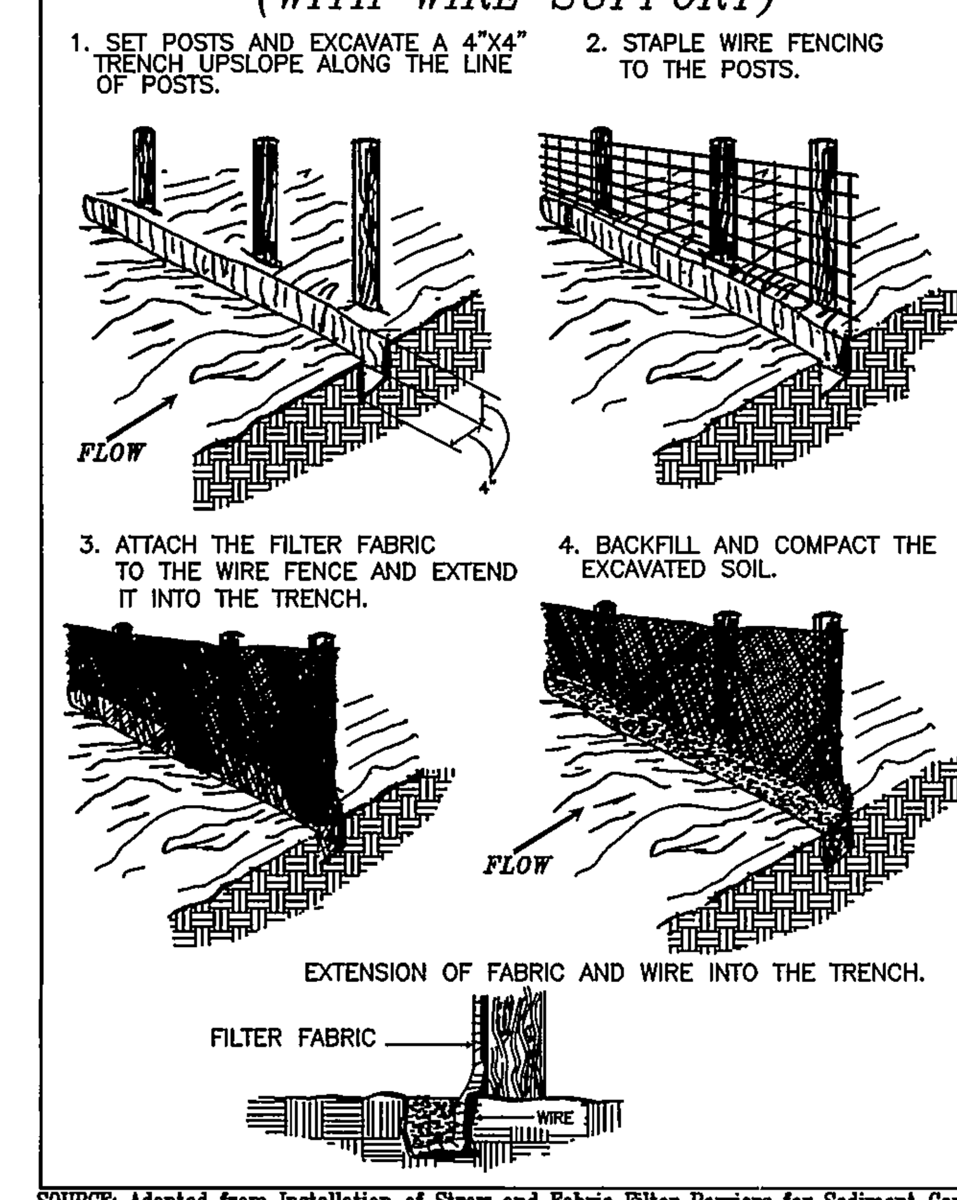
SEED APPLICATION: APPLY SEED UNIFORMLY WITH A CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER ON A FIRM, FRIABLE, SEEDBED. MAXIMUM SEEDING DEPTH SHALL BE 1/4 INCH.

TOTAL DISTURBED AREA = 0.31 AC. = 13,503 SQ. FT.

ACCEPTABLE TEMPORARY SEEDING PLANT MATERIALS

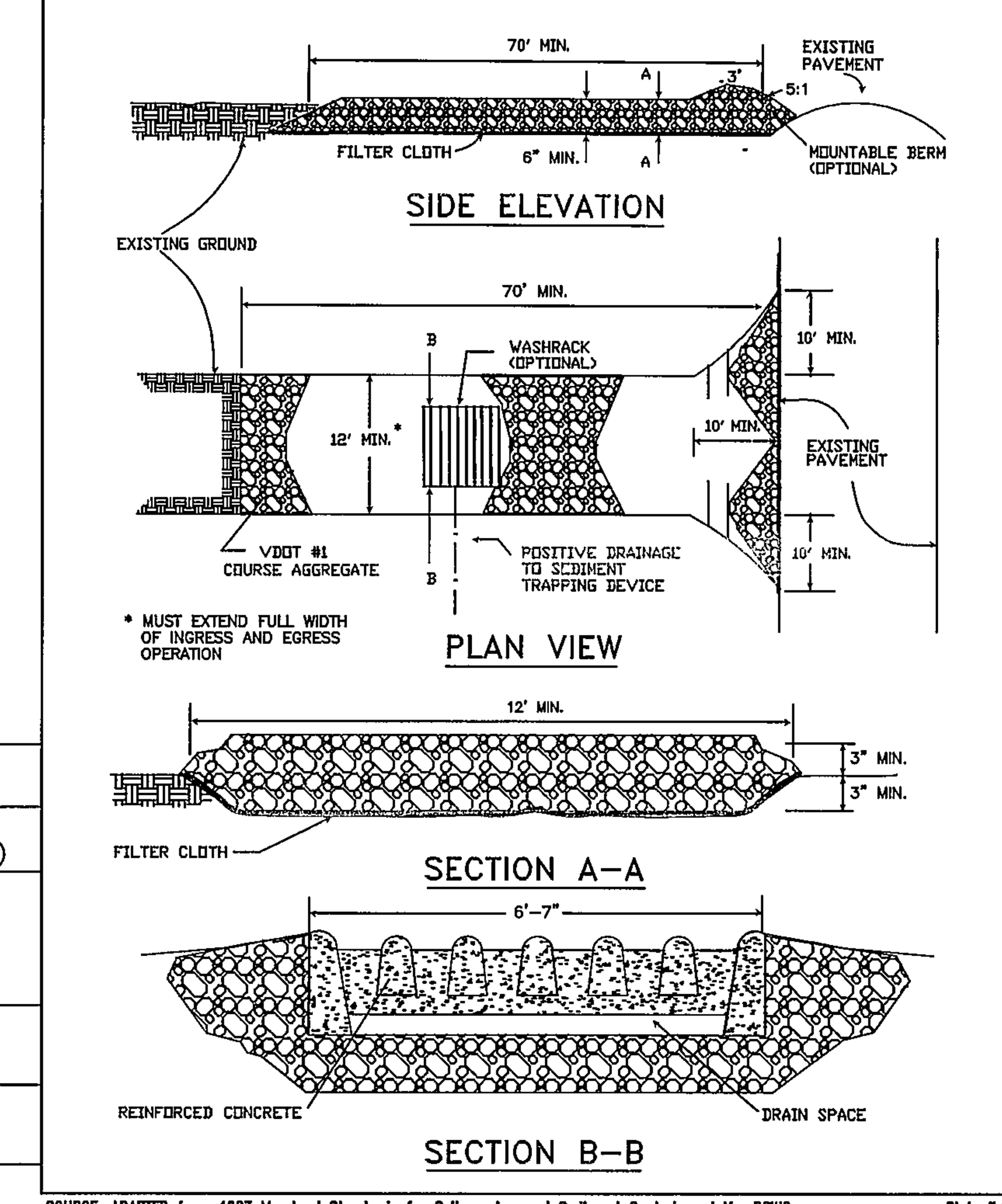
PLANTING DATES	SPECIES	RATE (LBS/ACRE)
SEP1 TO FEB15	50/50 MIX ANNUAL RYEGRASS AND WINTER RYE	50-100
FEB16 TO APR 30	ANNUAL RYEGRASS	60-100
MAY1 TO AUG31	GERMAN MILLET	50

CONSTRUCTION OF A SILT FENCE (WITH WIRE SUPPORT)



SOURCE: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherwood & Wyant PLATE 3.05-1

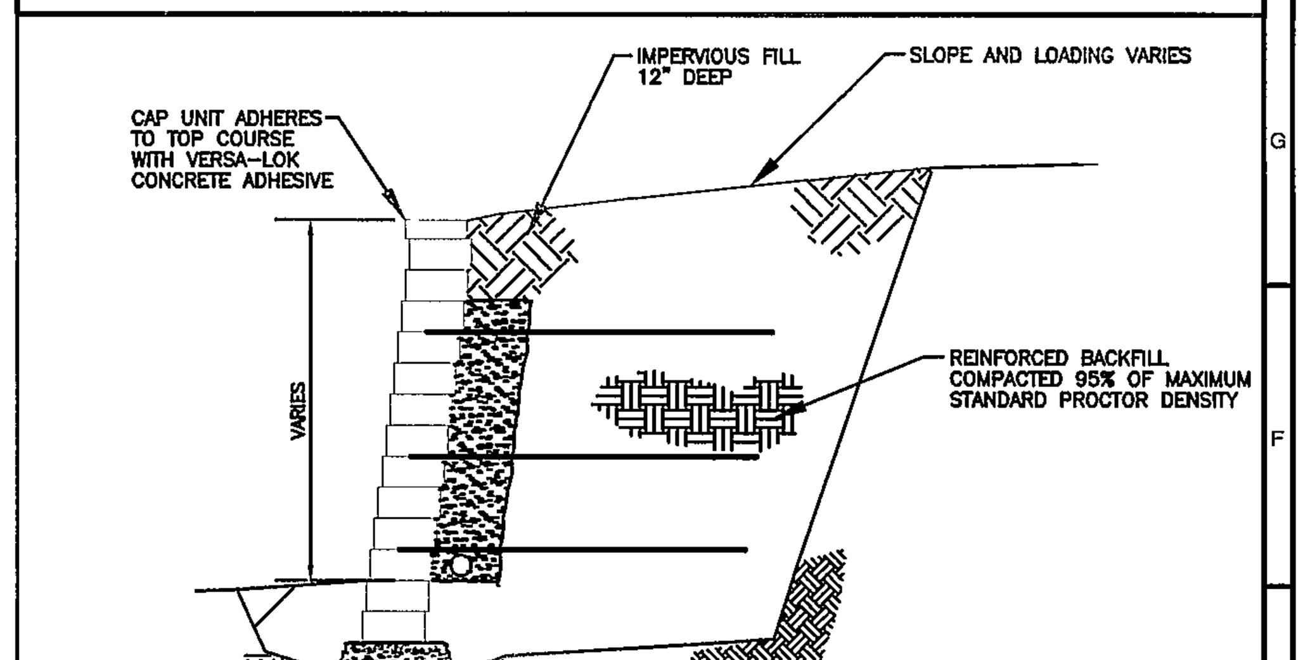
STONE CONSTRUCTION ENTRANCE



SOURCE: ADAPTED from 1983 Maryland Standards for Soil erosion and Sediment Control, and Va. DSWC Plate 3.02-1

EROSION CONTROL COST ESTIMATE

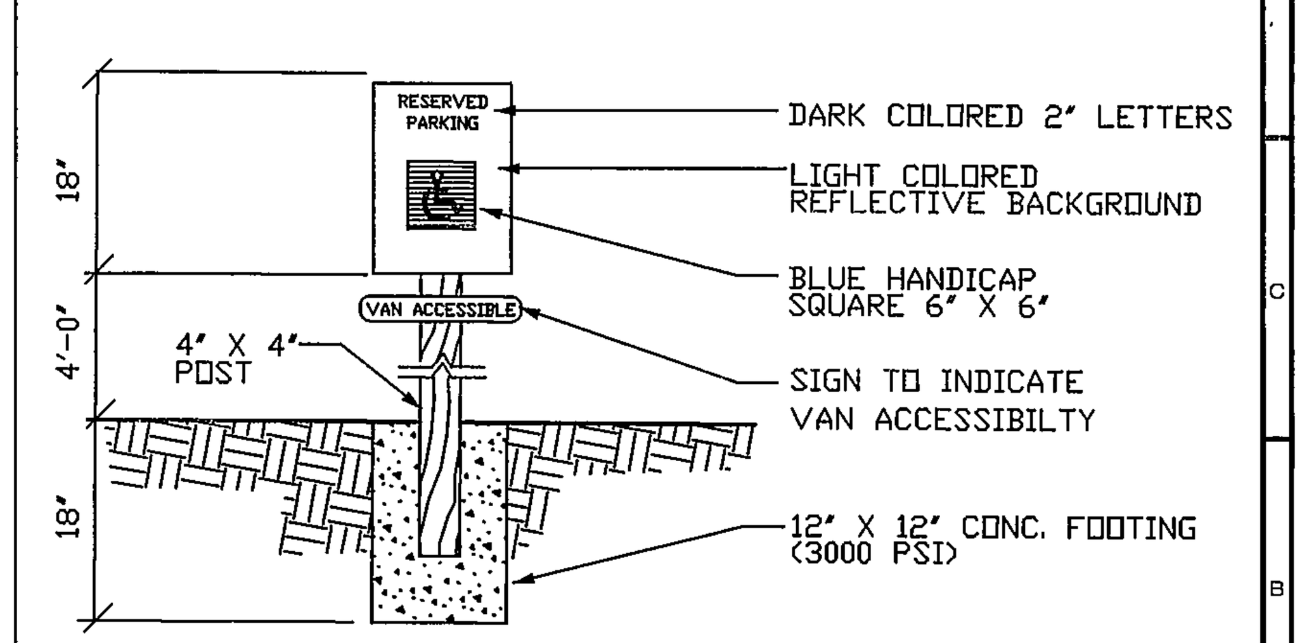
KEY	ITEM	QTY	UNIT	UNIT COST	CONST.COST
CRS	CONST. ROAD STABILIZATION	50	CY	10.00	500.00
CE	CONSTRUCTION ENTRANCE	1	EA.	1200.00	$1,200.00
DD	DIVERSION DIKE	300	L.F.	3.00	$ 900.00
SF	SILT FENCE	270	L.F.	4.00	$ 1080.00
PS	PERMANENT SEEDING	9	1000 SF	30.00	$ 270.00
ST	SEDIMENT TRAP	1	EA.	500.00	$ 500.00
	INFILTRATION PIT	1	EA	1000.00	$1000.00
				TOTAL	$5,450.00



VERSA-LOK RETAINING WALL

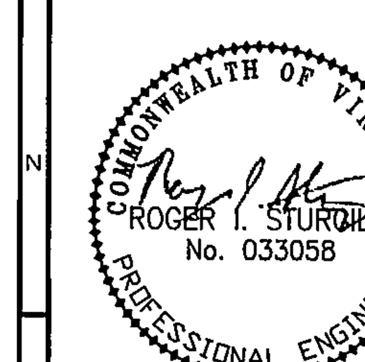
NTS

PROVIDE VERSA-LOK, ROCK WALL OR EQUAL SEGMENTED RETAINING WALL. INSTALL WALL PER MANUFACTURERS SPECIFICATIONS AND DESIGN



HANDICAP PARKING SIGN DETAIL

NO SCALE



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FAX 540/961-0962

1557 Commerce Road
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Verona, Virginia 24482
Phone: 540/248-3220
FAX: 540/248-3221

[redacted]

SELIGMAN OFFICE BUILDING

NOTES AND DETAILS

CITY OF ROANOKE, VIRGINIA

DRAWN BY: JRQ
DESIGNED BY: JRQ
CHECKED BY: SMH
DATE: 12-22-04
REVISIONS:
2-1-05
3-8-05

SCALE: AS SHOWN

SHEET NO.
C3

JOB NO.
R0400272.00