

## EROSION & SEDIMENT CONTROL NARRATIVE

### PROJECT DESCRIPTION

THE PURPOSE OF THIS PLAN IS TO CONSTRUCT AN OFFICE BUILDING. MINIMUM GRADING WILL ONLY BE REQUIRED. TOTAL DISTURBED AREA IS 4832SQ.FT. OR .11 ACRES.

### EXISTING SITE CONDITIONS

THE EXISTING SITE IS CURRENTLY OPEN GRASSY AREAS. THE TERRAIN SLOPES IN THE 0.5% TO THE 5% RANGE. ALL OF THE STORMWATER SHEET FLOWS ACROSS SITE.

### ADJACENT AREAS

THE PROPERTY IS BORDERED BY RESIDENTIAL PROPERTIES ZONED RM-1 TO THE NORTH AND BY CENTRE STREET, NV TO THE SOUTH AND 7TH STREET TO THE WEST AND BY ANOTHER PROPERTY OWNED MY MINCON TO THE EAST.

### SOILS

7B - CECIL FINE SANDY SOIL, 2-7% SLOPE

### STORMWATER MANAGEMENT

THIS SITE REQUIRES NO STORMWATER MANAGEMENT.

### OFF SITE AREAS

THERE WILL BE NO OFF-SITE DISTURBED AREAS.

### CRITICAL EROSION AREAS

THE POTENTIAL CRITICAL EROSION AREAS ARE:  
1. THERE ARE NOT CRITICAL EROSION AREAS FOR THIS SITE.

### EROSION AND SEDIMENT CONTROL MEASURES

UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE "VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK", THIRD EDITION.

### STRUCTURAL PRACTICES

1. **SILT FENCE (SECTION 3.05)**  
TEMPORARY SILT FENCES WILL BE INSTALLED AS INDICATED ON THE SITE PLAN. AFTER EVERY RUNOFF PRODUCING RAINFALL THE SILT FENCE SHALL BE INSPECTED AND AND REPAIRED AS NEEDED.

### 7. NOT USED

8. IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED WEEKLY AND AFTER EACH SIGNIFICANT RAINFALL. IN PARTICULAR:

#### A. NOT USED

- B. ALL SILT FENCE BARRIERS SHALL BE CHECKED REGULARLY FOR UNDERMINING AND SEDIMENT BUILDUP.

- C. ALL SEEDED AREAS WILL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHALL BE FERTILIZED AND RESEED AS NEEDED.

9. FOLLOWING THE COMPLETION OF DEVELOPMENT AND STABILIZATION OF ALL AREAS AND AFTER IT HAS BEEN DETERMINED THAT EROSION OR SEDIMENTATION IS NO LONGER OCCURRING ON THE SITE OR AT ITS BOUNDARIES AND THAT DRAINAGE FLOWS ARE FUNCTIONING ACCORDING TO DESIGN, THE CONTRACTOR CAN ONLY BEGIN TO REMOVE THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER APPROVAL HAS BEEN GRANTED BY THE CITY. ALL WORK SHALL BE DONE IN A CAREFUL, NEAT, ORGANIZED MANNER.

#### PERMANENT STABILIZATION

ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH PERMANENT SEEDING IMMEDIATELY FOLLOWING FINISH GRADING. SEEDING SHALL BE DONE WITH KENTUCKY 31 TALL FESCUE ACCORDING TO STD. & SPEC. 3.32. PERMANENT SEEDING, OF THE HANDBOOK. EROSION CONTROL BLANKETS WILL BE INSTALLED OVER FULL SLOPES WHICH HAVE BEEN BROUGHT TO FINAL GRADE AND HAVE BEEN SEEDED TO PROTECT THE SLOPES FROM RILL AND GULLY EROSION AND TO ALLOW SEED TO GERMINATE PROPERLY. MULCH (STRAW OR FIBER) WILL BE USED ON RELATIVELY FLAT AREAS. IN ALL SEEDING OPERATIONS, SEED, FERTILIZER AND LIME WILL BE APPLIED PRIOR TO MULCHING.

#### MAINTENANCE

IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY AND AFTER EACH SIGNIFICANT RAINFALL. ANY ITEMS NOT FOUND IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK WILL BE IMMEDIATELY REPLACED AND/OR REPAIRED. THE FOLLOWING ITEMS WILL BE CHECKED IN PARTICULAR:

1. THE SILT FENCE BARRIER WILL BE CHECKED REGULARLY FOR UNDERMINING OR DETERIORATION OF THE FABRIC. SEDIMENT SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT DEPOSITION REACHES HALF WAY TO THE TOP OF THE BARRIER.
2. THE SEEDED AREAS WILL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RE-SEEDED AS NEEDED.

#### GENERAL

THE EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE CONSTRUCTION PLANS ARE THE MINIMUM MEASURES REQUIRED. THE OWNER, THROUGH HIS CONTRACTOR, WILL EMPLOY WHATEVER MEASURES WHICH MAY BE REQUIRED TO ASSURE THAT SEDIMENT LADEN RUNOFF DOES NOT LEAVE THE SITE.

ALL MATERIALS AND MEASURES EMPLOYED FOR EROSION AND SEDIMENT CONTROL WILL BE IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.

IF, DURING CONSTRUCTION, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES ARE DEEMED NECESSARY, THEY SHALL BE INSTALLED AS DIRECTED BY THE OWNER, ENGINEER OR LOCAL GOVERNMENT AGENT.

#### STORMWATER CONSIDERATIONS

NO STORMWATER MANAGEMENT FACILITIES ARE REQUIRED FOR THIS PROJECT.

### VEGETATIVE PRACTICES

1. **PERMANENT SEEDING (SECTION 3.32)**  
AFTER FINAL GRADING PERMANENT SEEDING WILL BE EMPLOYED TO ALL DENUDED AREAS TO REDUCE EROSION AND SEDIMENT YIELD.
2. **MULCHING (SECTION 3.35)**  
MULCH SHALL BE USED OVER ALL SEEDED AREAS AND SHALL BE APPLIED IN ACCORDANCE WITH STANDARD AND SPECIFICATION 3.35 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.

### MANAGEMENT STRATEGIES

1. CONSTRUCTION SHOULD BE SEQUENCED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE.
2. AREAS WHICH ARE NOT TO BE DISTURBED SHALL BE CLEARLY MARKED BY FLAGS, SIGNS, ETC.
3. ALL SILT FENCE BARRIERS SHALL BE INSTALLED FIRST.
4. NOT USED
5. REGARDLESS OF FUTURE DEVELOPMENT PLANS, THE CONTRACTOR SHALL IMMEDIATELY INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE PLANS. THIS WORK SHALL BE COORDINATED IN ORDER OF THE WORK WHICH IS TO FOLLOW. CONTROL AT CENTERS OF FLOW, AND OTHER POINTS OF CONCENTRATION SHOWN SHALL BE CONSTRUCTED IN PLACE FIRST.
6. AFTER THE INSTALLED CONTROL DEVICES ARE FOUND TO BE FUNCTIONAL, THE CONTRACTOR SHALL IMMEDIATELY PROCEED WITH CLEARING, GRUBBING, AND PRELIMINARY GRADING OPERATIONS. ALL EXPOSED DENUDED AREAS SHALL BE SEEDED WITHIN SEVEN (7) DAYS AFTER FINAL GRADING, AND SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH THE "VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK", THIRD EDITION.

DATE: 10/22/2013

11/13/2013

REVISIONS  
Δ  
Δ  
Δ  
Δ

PIERSON  
ENGINEERING  
&  
SURVEYING

P.O. BOX 311  
44 CATAWBA ROAD  
DALEVILLE, VA 24083

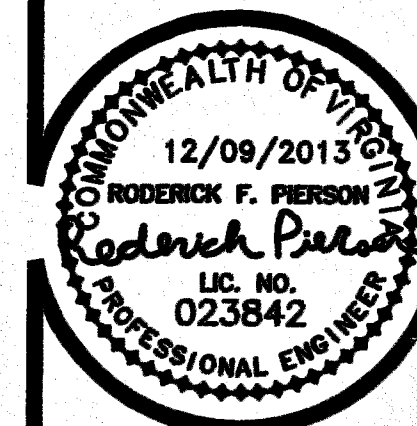
(540) 966-3027 TEL

(540) 966-5906 FAX

e-mail: rpierson@rbnet.com

SITE PLAN  
FOR  
MINCON BUILDING  
CITY OF ROANOKE, VIRGINIA

E & S  
CONTROL  
DETAILS



COMMISSION

R201365

SHEET

C6

APPROVED

DEC 13 2013

### SEEDING

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

1. Work includes: Furnish and install lime, fertilizer, seed, mulch, and water on all disturbed areas on the site, in strict accordance with this Section and as shown on the drawings. Work in this section includes permanent seeding and, when required, temporary seeding.

##### 1.02 REFERENCES

1. General: The work shall comply with the most recent standards or tentative standards as published at the date of the contract and as listed in this specification using the abbreviation shown.
  - 1.1. Virginia Department of Transportation Road and Bridge Specifications (VDOT)
  - 1.2. Virginia Crop Improvement Association (VCIA) Virginia Turfgrass Variety Recommendations
  - 1.3. Virginia Erosion and Sediment Control Handbook (VESCH)

##### 1.03 SUBMITTALS

1. General: When requested by the Landscape Architect at any time during the landscape installation, Contractor shall submit the following in accordance with the Conditions of the Contract.
  - 1.1. Hydeseeding: Hydeseeding may be used upon prior approval by the Landscape Architect. Contractor shall submit information on the mixture to be used including fertilizer, lime, and mulch.
  - 1.2. Product Data: Contractor shall furnish labels or other appropriate product data for landscape materials. This may include but is not limited to: labels showing lime and fertilizer analysis; labels showing seed mixture contents and analysis; and labels from geotextile fabrics and similar materials.
  - 1.3. Samples: Contractor shall furnish samples of landscape materials.
- 1.04 DELIVERY, STORAGE, AND HANDLING
  1. Delivery: All seed shall be kept cool, dry and free of contaminants during transportation. Seed and soil amendments shall be delivered in original, unopened containers with appropriate labels attached.
  2. Storage: Seed, which is not sown within 24 hours after delivery shall be stored as follows, unless other methods of storage are requested by the Contractor and approved by the Landscape Architect.
    - 2.1. Seed storage location shall be cool, dry, and sheltered from wind, traffic and construction activities.
    - 2.2. Fertilizer, lime, herbicides, insecticides, and other agricultural chemicals shall be stored separately from the seed.

##### 1.05 WARRANTY

1. General: Contractor shall perform periodic inspection of the seeded areas during the warranty period. The warranty period shall be one year and shall commence at the Owner's final acceptance of the project.
2. Warranty Maintenance: Contractor shall provide, during the warranty period, maintenance as necessary to establish a healthy, uniform stand of turf. Contractor's maintenance shall generally include overseeding, application of amendments, and repair of erosion as necessary.

##### 1.06 MAINTENANCE

Seeded areas shall be maintained as necessary to establish a healthy, uniform stand of turf until substantial completion. Maintenance shall consist of watering, mowing, fertilizing, weed removal, disease and insect removal, and where erosion occurs, repair.

#### PART 2 PRODUCTS

##### 2.01 MATERIALS

1. Grass seed: Seed shall comply with all applicable state and federal seed laws and contract requirements. Seed shall comply with all pertinent provisions of VDOT Section 244.
    - 1.1. Grass seed shall consist of pure, live, certified grass seed mixture, of the latest crop, and containing weed seed less than 0.5 percent by weight of the total mixture.
    - 1.2. Varieties of grass seed shall be selected from the current VCIA Recommendations and shall conform to the standards described therein for the Virginia Sod Certification Program.
  - 1.3. Seed mixture(s) for permanent seeding shall be selected from the following table, based on the time of year during which seeding is to occur. Numbers indicate pounds of seed per acre.
- |   | Sept. 15 - Jan. 31 | Feb. 1-May 15 | May 16-July 31 | Aug. 1-Sept. |
|---|--------------------|---------------|----------------|--------------|
| Grass Type                                    | Mixture A          | Mixture B     | Mixture C      | Mixture C    |
| Mixture D                                     |                    |               |                |              |
| Tall Fescue ( <i>Festuca arundinacea</i> )    | 100                | 120           | 100            | 120          |
| Annual Ryegrass ( <i>Lolium multiflorum</i> ) | 15                 | -             | 15             | -            |
| Perennial Ryegrass ( <i>Lolium perenne</i> )  | -                  | 10            | -              | -            |
| Red Clover ( <i>Trifolium pratense</i> )      | 2                  | 2             | 2              | 2            |
| TOTAL WEIGHT                                  | 117                | 132           | 117            | 132          |

2. Fertilizer: Fertilizer shall be commercially-prepared and granular. Fertilizer shall be uniform in composition, dry, and free-flowing. Fertilizing requirements shall be the same for both permanent and temporary seeding.

- 2.1. Fertilizer must comply with pertinent provisions of VDOT Section 244. Fertilizer shall conform to all applicable state and federal regulations.
- 2.2. Fertilizer for seeding shall be complete with a 10-18-10 analysis (percentages by weight of nitrogen, phosphorus and potassium, respectively).

3. Mulch: After adequate rolling to compact the seed area, oat or wheat straw mulch shall be applied at the rate of 80 bales per acre. Straw shall be dry and free from weeds, weed seeds, and foreign matter detrimental to plant life. Mulch shall be anchored to the seeded surface by spraying with asphalt, disk, netting, or by other methods approved by the Landscape Architect. Mulch shall conform to VDOT Section 244.

4. Straw blanket: Straw blankets shall be used in areas indicated on plans. Straw blanket shall consist of a 100 percent straw blanket sown into a lightweight photodegradable net. The straw blanket shall be designed for installation on 3:1 and steeper slopes. Weight of blanket shall be approximately 0.5 pounds per square yard.

5. Water: Water shall be potable or clean water free of contaminants harmful to plant growth. Brackish water shall not be used.

6. Lime: Unless otherwise noted, agricultural ground or pulverized limestone shall be applied at the rate of 2 tons per acre for permanent and temporary seeding.

#### PART 3 EXECUTION

##### 3.01 PREPARATION

1. General: Before the soil surface to remove all root clumps, stones, and debris 1 inch or greater in size. True up all depressions and edges. Soil in the area to be seeded shall be prepared in accordance with VDOT Sections 602 and 603. The seeding, fertilizing, and mulching of all lawns and grass areas disturbed shall be in accordance with these specifications and VDOT Section 604, of the current edition of the VDOT Road and Bridge Specifications.

2. Grading: Establish a smooth grade ready to receive seed. Finish grade must conform to the grades and elevations as shown on the plans.

3. Topsoil: Topsoil shall be in place for all areas to be permanently seeded following the requirements of Section 02910 Topsoil.

##### 3.02 APPLICATION

1. General: Seeding shall conform with VDOT Section 603 and the Bedford County Department of Community Development Seeding Requirements. Initial seeding shall consist of uniformly applying seed, mulch, and water on prepared areas.

Over-seeding shall consist of applying seed, mulch, and water to areas previously seeded. Permanent or temporary seeding shall be applied within 7 days after final grade is reached on any portion of the site. Temporary seeding is required for soil stockpiles remaining dormant for more than 30 days.

2. Lime: Apply lime uniformly at the rate of 2 tons per acre, using approved application method listed in VESCH 3.32 for permanent seeding or VESCH 3.31 for temporary seeding. After application, the soil shall be loosened to a depth of 3 inches by disk, harrow, or other approved method. Watered and disturbed areas shall be final dressed prior to applying fertilizer.

3. Fertilizer: Incorporate fertilizer into top 3 inches of soil by disk or power rake.

- 3.1. For areas to be seeded, apply fertilizer uniformly at the rate of 1,500 pounds per acre. The fertilizer shall be worked into the soil by harrow or rake at least 48 hours prior to seeding.

- 3.2. Seeding Time: Seed shall be sown during favorable weather conditions. Seed shall not be sown when the ground is frozen or when air temperatures are below freezing. Do not sow under windy conditions.

- 3.3. Seeding: Sow seed uniformly, dividing the selected rate in half and sowing in cross directions using a mechanical spreader. Do not allow seed to drift into adjacent planting beds.

4. Rolling: After machine sowing, lightly cover seed by harrowing or raking. Compact lawn areas seeded by rolling with a 200 pound hand roller.

5. Mulching: Mulching shall comply with the pertinent provisions of VDOT Section 603 and VESCH 3.35.

- 7.1. Apply mulch within 48 hours of sowing seed. Apply mulch of loose straw uniformly at the rate of 80 bales per acre. Mulch shall be anchored to the seeded surface by disk, netting, or by other methods approved by the Landscape Architect.

- 7.2. A mulch cover is required on every seeding.

8. Watering: Immediately after completion of mulching, apply water thoroughly to mulch and seeded with a fine mist spray. Water heavily once per week during dry weather until a thick cover of grass is established.

9. Hydeseeding: Hydeseeding may be used as an alternative application method upon approval of the Landscape Architect. The use of alternative soil amendments and mulch will be considered provided the application rates comply with the rates specified in this section.