

## **SECTION 402 – FINISH GRADING AND SEEDING**

### **1. GENERAL**

Work under this section shall meet the requirements of the latest version of Sections 903 and 904 of the Kansas Department of Transportation (KDOT) Standard Specifications and as herein.

### **2. FINISH GRADING**

Finish grading shall consist of cutting, filling, shaping and fine grading work to be done according to the exact lines and elevations indicated on the approved landscaping plans or as directed by the Engineer.

The contractor is responsible for the following:

A. Completing all finish grading on-site. The top of the subgrade shall be the depth below the finished grade as required for pavements, walks, seeding, plugging, sodding, landscaping, mulches and other site improvements.

B. Protecting the finish grade areas and regrading to correct any irregularities caused by hauling materials or by other operations over the finished grade.

C. Repairing any soil erosion or other damage resulting from weathering action before final acceptance.

D. Finish and fine grade the project area to establish an even and well matched grade over the entire surface. Positive surface drainage shall be assured and there shall be no depressions, subsequent settling or irregularities in the finished grade.

Excavated and filled sections and adjacent transition areas shall be smooth, properly compacted and free from irregular surface changes, all lumps of soil shall be pulverized, raked out or removed. The degree of finish grading shall be that ordinarily obtained from either blade, grader or scraper operations. Where finishing cannot be satisfactorily completed with power equipment, hand raked methods shall be used.

Unless otherwise indicated, the subgrade shall be evenly sloped to provide drainage away from site improvements or the centerline of medians. Swales shall be cut as shown on the plans, but shall not reduce the thickness of the topsoil specified. Finish grading shall conform to the elevations shown on an approved landscaping plan and the area shall be in a smooth, even condition, free from debris, rocks, and other materials that would be detrimental to the finished grade. Settling of any finish grade shall not be more than 0.1 feet, and if settling is greater, the contractor shall bring the grade to specified elevations.

### **3. PRIMARY GRASS SEED MIXTURES**

All grass seeds shall comply with the seed laws and noxious weed laws of the State of Kansas. Seed, which has become wet, moldy or otherwise, damaged in storage or transit will not be acceptable. All grass seed bags must be supplied with all certified grass seed identification tags from the Kansas Department of Agriculture and given to the City. Any substitutions must be done with the written consent of the Engineer. The grass seeds listed below shall be drilled or if

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impracticable, broadcast the seed evenly over the entire seed area at the rate recommended by supplier and either raked or harrowed after seed is placed. Unless specified otherwise in the contract documents, the type of grass seed mixture shall be as follows:

### a. WARM SEASON GRASS SEED MIXTURE

Grass Seed Type	Planting Depth	Lbs per 1000 sqft	Purity%	Germination%
Native Blue Grama	¼ to ½"	1	70	75
Buffalo	¼" to ½"	2	95	90

### b. COOL SEASON GRASS SEED MIXTURE

Grass Seed Type	Planting Depth	Lbs per 1000 sqft	Purity%	Germination%
Tall Fescue	¼" to ½"	6	98	85

### 4. RYEGRASS SEED

Ryegrass is to be applied concurrently with the primary seed mixture. This will act as an erosion barrier while the permanent lawn develops plus giving any area an almost "instant" green coverage.

Grass Seed Type	Planting Depth	Lbs per 1000 sqft	Purity%	Germination%
Annual Ryegrass	¼" to ½"	3	95	90

### 5. FERTILIZERS

Starter fertilizer shall be used for cool season seeding and shall be an approved commercial brand composed of a "Slow Release Nitrogen" fertilizer in the 1 1½ 1 range, such as 13 20 12. Apply starter fertilizer at a ratio of at least 1 lb Phosphorous per 1000 square feet (sqft), per example below. Do **NOT** use fertilizers with warm season grass seed mixture.

Nitrogen	Phosphorous	Potassium	Rate (lb/1000 sqft)
9	13	7	7.7

The fertilizer shall meet the material requirements for fertilizers covered in the latest version of Section 2108 of the Kansas Department of Transportation Standard Specifications and shall comply with the State of Kansas Fertilizer laws.

### 6. WATERING

Contractor is responsible for keeping grass seed damp during the first 2-3 weeks. Moisture is especially critical for successful grass seed which needs available moisture to germinate. Hydro mulch is an acceptable method of maintaining moisture using the recommended manufactures rates.

### 7. MULCHING

Mulching should follow the latest version of Section 905 of the KDOT Standard Specifications.

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Materials acceptable are covered in the latest version of Section 2110 of the KDOT Standard Specifications.

### **8. COMPLETION TERMS**

Upon completion of the seeding operations, a final check of the total quantities of materials used in the seeding, fertilizing and mulching operations will be made against the total area seeded. If the minimum rate of applications has not been met or if inspection after the germination period indicates that areas have been missed, the Contractor will be required to reseed and/or apply fertilizer on these areas, designated by the Engineer, at no additional cost to the City.

### **9. MEASUREMENT AND PAYMENT**

Payment shall be made for the amount of completed and accepted work measured in-place at the contract unit price bid for “SEEDING” of the specified type. No separate payment will be made for fertilizer or mulching.