



INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

Design Memorandum No. 16-22 Technical Advisory

May 26, 2016

TO: All Design, Operations, and District Personnel, and Consultants

FROM: /s/Elizabeth W. Phillips
Elizabeth W. Phillips
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Bridges Division

SUBJECT: Seeding Application Rates

REVISES: *Indiana Design Manual* Sections 17-4.10(01) through -4.10(04)

EFFECTIVE: Lettings on or after September 1, 2016

Effective with lettings on or after September 1, 2016, RSP 621-R-637 Seed Mixtures and Seed Requirement will be included in all contracts with a 621 pay item.

The RSP revises the composition and application rates of Seed Mixture Types R, U, P, and D; Seed Mixture Grass Type 1 and Type 2; and Seed Mixture Legume Type 1 and Type 2. The referenced *Indiana Design Manual* sections have been revised to reflect the new application rates as follows. Quantities for seed mixture pay items paid for by the pound should be revised accordingly.

Seed Mixture	Application Rate, Lettings prior to September 1, 2016	Application Rate, Lettings on or after September 1, 2016
Type R	170 lb/acre	205 lb/acre
Type U	150 lb/acre	200 lb/acre
Type P	80 lb/acre	130 lb/acre
Type D	14 lb/acre	16 lb/acre
Seed Mixture Grass, Type 1	195 lb/acre	235 lb/acre
Seed Mixture Grass, Type 2	110 lb/acre	125 lb/acre
Seed Mixture Legume, Type 1	190 lb/acre	230 lb/acre
Seed Mixture Legume, Type 2	100 lb/acre	150 lb/acre

17-4.09(08) NGS Horizontal Control Point [Rev. Apr. 2016]

The designer is responsible for notifying the NGS if a NGS horizontal control point (formerly triangulation point) will be destroyed due to proposed highway construction. This notification will be made by the Highway Design and Technical Support Division director and should be made at the time the plans are sent to the district office. Sufficient detail of the mark should be provided with notification to ensure positive identification. Said notifications will be made to the following:

NOAA, National Geodetic Survey, N/NGS43
Bldg. SSMC3, Room 8545
1315 East-West Highway
Silver Spring, MD 20910
Phone: 301-713-3242

It is not necessary to show a monument in the plans for use in re-establishing a NGS horizontal-control point.

17-4.09(09) United States Geological Survey Benchmark [Rev. Apr. 2016]

Each United States Geological Survey (USGS) benchmark disturbed by highway construction must also be re-established. Information on resetting such may be obtained by contacting the following:

National Spatial Data Infrastructure Partnership Office
U.S. Geological Survey
Ohio Mapping Partnership Office
6480 Doubletree Avenue
Columbus, OH 43229
Phone: (614)-430-7768

17-4.10 Seeding and Sodding [Rev. May 2016]

Permanent seeding and sodding requirements can be found in the INDOT *Standard Specifications*, section 621.

17-4.10(01) Seeding for Grading and Paving Project [Rev. May 2016]

The following will apply.

1. Rural Area of 1 ac or Larger. An area within the right of way that is not sodded or paved should be seeded as follows.
 - a. Seeding. Use Seed Mixture R as specified in the *INDOT Standard Specifications*. Estimate the quantity assuming an application rate of 205 lb/ac.
 - b. Mulching. Use the pay item Mulching Material and estimate it at a rate of 2 T/ac.
 - c. Fertilizer. For estimating purposes, assume an application rate of 800 lb/ac.
2. Urban Area of 1 ac or Larger. An area within the right of way that is not sodded or paved should be seeded as follows.
 - a. Seeding. Use Seed Mixture U as specified in the *INDOT Standard Specifications*. Estimate the quantity assuming an application rate of 200 lb/ac.
 - b. Mulching. Use the pay item Mulching Material and estimate it at a rate of 2 T/ac.
 - c. Fertilizer. For estimating purposes, assume an application rate of 800 lb/ac.
3. Rural Area of Smaller Than 1 ac. For an area within the right of way which is not sodded or paved, use the pay item Mulched Seeding R. Estimate the area and pay quantity in square yards.
4. Urban Area of Smaller Than 1 ac. For an area within the right of way which is not sodded or paved, use the pay item Mulched Seeding U. Estimate the area and pay quantity in square yards.

17-4.10(02) Seeding for Grading Project [Rev. May 2016]

The following will apply.

1. Shoulder Point to Shoulder Point. The area between the outside shoulder points should be seeded as follows.
 - a. Seeding. Use Seed Mixture P as specified in the *INDOT Standard Specifications*. Estimate the quantity assuming an application rate of 130 lb/ac.
 - b. Fertilizer. For estimating purposes, assume an application rate of 400 lb/ac.

2. Shoulder Point to Right-of-Way Line. The area between the outside shoulder point and the right-of-way line should be seeded according to the requirements for a grading and paving project as discussed in Section 17-4.10(01).

17-4.10(03) Seed Mixture Type D [Added May 2016]

Seed Mixture Type D is intended for ditch applications where seasonal or chronic saturated soils exist. Estimate the quantity assuming an application rate of 16 lb/ac. Fertilizer is not used. This mixture should be specified for use only on maintenance contracts. The use on other contract types should be coordinated with the Environmental Services Division landscape architect.

17-4.10(04) Seeding for Environmental Mitigation [Rev. May 2016]

Where environmental mitigation is required by the environmental document, or as determined from a field check, specify one of the following seed mixtures.

1. Seed Mixture Grass. The following will apply.
 - a. Type 1. Specify this mixture where a special grass is required in addition to the regular seed mixture. The pay item is Seed Mixture Grass Type 1. For estimating purposes, assume an application rate of 235 lb/ac.
 - b. Type 2. This mixture is to be furnished at the contractor's expense instead of the regular seed mixture in an urban area that has been disturbed beyond the construction limits.
2. Seed Mixture Legume. The following will apply.
 - a. Type 1. Specify this mixture where a special legume mixture is required in addition to the regular seed mixture. The pay item is Seed Mixture Legume Type 1. For estimating purposes, assume an application rate of 230 lb/ac.
 - b. Type 2. This mixture is to be furnished at the contractor's expense instead of the regular seed mixture in a rural area that has been disturbed beyond the construction limits.
 - c. Signs. Include "Do Not Spray" signs where this mixture is specified.