

STANDARD SPECIFICATION

SECTION 01562

DUST CONTROL

	<u>Page</u>
<u>PART 1 - GENERAL</u>	
1.01 Description of Work	2
1.02 References	2
1.03 Definitions	2
1.04 Submittals	2
1.05 Regulatory Requirements	3
 <u>PART 2 - MATERIALS</u>	
2.01 Water	4
2.02 Mulch	4
2.03 Fertilizer	4
2.04 Seed	4
2.05 Sod	5
2.06 Gravel	5
2.07 Palliative	5
 <u>PART 3 - EXECUTION</u>	
3.01 Dust Control	5
3.02 Soil Stabilization	6

STANDARD SPECIFICATION

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DUST CONTROL

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

Section includes surface disturbance activities that affect surface area greater than 3/4 acre (32,670 SF), sandblasting and other surface preparation, and demolition of any building containing over 10,000 SF of total area.

1.02 REFERENCES

New Mexico Administrative Code (NMAC)

20 NMAC 11.20 Title 20, Environmental Protection
Chapter 11, Albuquerque/Bernalillo County Air Quality Control Board (AQCB)
Part 20, Airborne Particulate Matter

1.03 DEFINITIONS

- A. Demolition: Process of demolishing and/or removing, in whole or in part, a paved surface or structure.
- B. Reasonable Precautions: Substantially and effectively reducing transported material or emission of particulate matter into the atmosphere.
- C. Surface Disturbance: Disturbance of ground, soil, or paved surface from its pre-existing condition.
- D. Transported Material: Particulate matter moved off-site by wind or water erosion, spillage, or tracking by vehicle.

1.04 SUBMITTALS

Provide copy of approved Surface Disturbance/Demolition Permit to Environmental and Emergency Management Department 7575, Surface Disturbance Permit Oversight Program

1.05 REGULATORY REQUIREMENTS

- A. General: Do not perform Work until Albuquerque Environmental Health Department has issued Surface Disturbance/Demolition Permit for construction activities described in this article.
- B. Surface Disturbance/Demolition Permit: Obtain Surface Disturbance/Demolition Permit application from Albuquerque Environmental Health Department, Air Pollution Control Division.
1. Include Particulate Matter Control Plan that establishes reasonable precautions to prevent particulate matter from becoming airborne.
 - a. Comply with requirements of 20 NMAC 11.20.
 - b. Contact Albuquerque Air Pollution Control Division regarding special requirements.
 - c. Acquire Sandia Delegated Representative (SDR) approval of Particulate Matter Control Plan prior to submittal of application form. Contractor's on-site representative shall sign Permit application in the appropriate space.
 2. Contractor shall bear costs of Project delays due to revocation of Surface Disturbance/Demolition Permit by Albuquerque Environmental Health Department.
- C. Surface Disturbance
1. Soil: Disturbance of 3/4 acre (32,670 SF) or more of surface area, if activity may result in transported material or particulate matter becoming airborne.

If Contractor and Albuquerque Environmental Health Department agree, Permit application and resulting programmatic permit may include multiple locations, if surface disturbance activities are similar.
 2. Large Area Disturbance: If surface area to be disturbed at one time is greater than 25 acres, include justification and rationale in proposed Particulate Matter Control Plan.
 3. Other Surfaces: Disturbance by grinding, milling, or other alteration of paved surface that exceeds 3/4 acre.
- D. Sandblasting and Other Surface Preparations: For sand, abrasive, or other type of pressure blasting operation, reasonable precautions shall be undertaken to reduce particulate matter from leaving area of operation. Measures must be effective in reducing airborne and transported material, and may include use of enclosures, nonfriable blasting media, shrouding curtains, dust collectors, water sprays, or residue containment or other means of reducing particulate emissions.
- E. Demolition
1. Building containing over 10,000 SF of total.
 2. Paved surface exceeding 3/4 acre.

3. Asbestos demolition/renovation notification must be filed minimum of ten working days prior to start of demolition work on any building. Notification is required regardless of whether or not asbestos is present.
- F. Transported Material: If material has been transported off-site, remove material within reasonable time frame established by Albuquerque Environmental Health Department.

PART 2 - MATERIALS

2.01 WATER

Water shall be clean and free of oil, acid, salt or other substances harmful to plants.

2.02 MULCH

- A. Hay Mulch: Unless otherwise specified, use perennial native or introduced grasses of fine-stemmed varieties. At least 65 percent of herbage by weight of each bale of hay shall be 10 inches in length or longer. Hay with noxious seed and plants will not be acceptable. Rotted, brittle, or moldy hay will not be acceptable.
1. March grass or prairie hay composed of native grass of species to be seeded will be acceptable. March grass hay shall be composed of mid and tall native, usually tough and wiry grass and grass-like plant found in lowland areas within Rocky Mountain region.
 2. Tall wheat grass, intermediate wheat grass, switch grass, or orchard hay will be acceptable, if cut prior to seed formation.
 3. Hay shall be properly cured and harvested at least 60 days prior to use.
- B. Straw Mulch: Species of straw shall be barley straw mulch. Rotted or moldy straw will not be acceptable.

2.03 FERTILIZER

Fertilizer shall be 16-20-0 applied at 400 pounds per acre.

2.04 SEED

- A. Each bag of seed shall be sealed and labeled by seed dealer in accordance with Federal Seed Laws and New Mexico Department of Agriculture labeling Laws.
1. Label shall include variety, kind of seed, lot number, purity, germination, percent crop, percent inert, percent weed (including noxious weeds), origin, test data and net weight.
 2. Federal Seed Laws require that analysis shall be no older than 5 months for seed shipped inter-state and no older than 9 months for seed shipped inter-state.

B. Seed mix in pounds per acre shall be as follows:

2# pls	galleta plant
3# pls	side oats grama
4# pls	sand drop seed
5# pls	annual rye

2.05 SOD

Sod shall be freshly-cut live bluegrass, buffalo grass, blue gramma, or buffalo and blue gramma sod mixture.

2.06 GRAVEL

Gravel shall be uniformly graded 3/4-inch processed natural material consisting of hard, durable fragments of stone or gravel. Gravel used on slope steeper than 5 horizontal to 1 vertical shall be crushed.

2.07 PALLIATIVE

A. Dust Control Palliative: One of the following products, or product approved by SDR:

1. Witco Coherex: Resinous petroleum based emulsion; not harmful to plants.
2. Southwest Emulsions PEP: Penetration emulsion prime coat based on minimum 38 percent AC-5 asphalt cement.
3. Chevron USA PDOK: Prime dust oil emulsion based on minimum 50 percent AC-10 asphalt cement.

B. Formulation, Dilution and Application Rate: Comply with manufacturer's or supplier's written recommendations for particular soils encountered at job site.

C. Prior to submittal of Surface Disturbance/Demolition Permit application for SDR approval, dust palliative to be used shall be applied to test strip at job site to determine suitability of palliative as dust control treatment. Suitability of palliative shall be as inferred by SDR.

PART 3 - EXECUTION

3.01 DUST CONTROL

A. General: Implement Particulate Matter Control Plan specified in Surface Disturbance/Demolition Permit to prevent emission of particulate matter from construction site.

B. Use method approved by SDR, or method or combination of methods listed below for dust control during execution of Work:

1. Watering: Use sprinkler system or water truck with spray boom to water down disturbed area as required during each day. Water down area at end of each day to establish stabilizing crust. Water stored excavated material.
2. Phasing: Disturb areas less than one acre at one time. Begin construction activities at west side of site, and proceed toward east to provide "buffer area" where shifting soil may be arrested.
3. Reschedule: Delay grading and other earthworking activities until wind velocity is 10 mph or less.
4. Vehicle Restriction: Use signing and other traffic control devices to control speed and access of vehicles on job site. Limit vehicle speeds to 10 mph or less. Use access controls to maintain integrity of previously dust-stabilized areas.

Keep excavated material out of active traffic lanes. Immediately remove material deposited in roadways by erosion. Cover loads transported in earth-moving equipment.
5. Windbreaks: Use snow fences or similar windbreaks upwind, within, and downwind of disturbed areas. Place fences perpendicular to prevailing winds.
6. Palliatives: Use dust palliative to stabilize soils after earthwork operations are completed, or in sandy soils where watering is ineffective. Do not use palliative substances that are detrimental to vegetation where future landscaping will include plants.
7. Other Measures: Employ reasonable precautions to effectively limit transported material or emissions of particulate matter.

3.02 SOIL STABILIZATION

- A. General: When directed in Contract Documents, implement specified measures to permanently stabilize soil disturbed by grading, excavation, or other construction operations. Methods used shall be one or more of the following, or another method as designated in Contract Documents.
- B. Seeding: Reseed soils disrupted by construction operations. Perform seeding in the following manner:
 1. Criterion for selection of seeding dates will be current Major Land Resources Areas Map, and current listing of dates by Resource Areas as published or recommended by US Department of Agriculture, Soil Conservation Service. Seeding dates shall be indicated on Contractor's quotation. Do not seed when soil is too wet, too dry, or otherwise untillable.
 2. Prepare seedbed to minimum depth of 4 inches by tilling with disc, harrow, or chiseling tools. Uproot competitive vegetation during seedbed preparation, and uniformly work soil to smooth firm surface free of clods, large stones, or other foreign material that would interfere with seeding equipment. Perform tillage across slope when practical. Do not perform tillage when moisture content of soil is unfavorable, or ground is otherwise in untillable condition.

3. Extent of seedbed preparation shall not exceed area on which entire seeding operation can be applied to such prepared seedbed prior to surfaces crusting, or loss of seed and fertilizer due to erosion. If erosion or crusting occurs, entire affected area, beginning with seedbed preparation.
4. Uniformly apply fertilizer to prepared seedbed, of type and formulation, and rate of application as indicated above.
5. Mulch seeded areas. Rate of application of hay mulch shall be minimum of 2.5 tons per acre of air dry hay. Hay mulch shall have minimum of 50 percent of fibers exceeding 10 inches in length on ground after application. Rate of application of straw mulch shall be minimum of 1.5 tons per acre of air dry straw. Uniformly spread mulch over area either by hand or with mechanical mulch spreader. When spread by hand, tear apart, and fluff bales of mulch before spreading. Do not mulch when wind velocity exceeds 15 miles per hour.
6. Mulch placed in manner noted above shall be anchored into soil. Use heavy disc such as mulch tiller with flat serrated discs at least 1/4 inch in thickness, having dull edges, spaced no more than 9 inches apart to anchor mulch into soil. Discs shall be of sufficient diameter to prevent frame of equipment from dragging mulch. Anchor mulch to minimum depth of 2 inches, and do not cover with excessive amounts of soil. Perform anchoring operations across slope where practical, with no more than two passes of anchoring equipment.
7. Seed mix and rate shall be as indicated above. Uniformly apply prescribed mix and rate over area to be seeded.
8. Broadcast Seeding: Where it is not practical to accomplish seeding by drilling, mechanically broadcast seed by use of hydro mulch slurry blower. Direction of application shall be from toe of slope, where practical, using highest pressure and smallest nozzle opening which will accommodate seed.

Follow with slope harrow or hand raking operation to loosen soil and cover seed. This may be done with two or three passes of chain harrow.

9. Drill Seeding: Accomplish seeding operations, where practical, by drilling, and across slope. Plant seeds approximately 1/4 inch deep with maximum depth of 1/2 inch, unless otherwise specified on plans. Distance between drilled furrows shall not be more than 8 inches. If furrow openers on drill exceed 8 inches, area shall be drilled twice. Seed using grass seeding equipment in good working order with double disc openers, depth bands, drop tubes, packer wheels, or drag chains, rate control attachments and seed boxes with agitators for trashy seed.
10. Vehicles and other equipment shall not travel over seeded areas. If rain or some other event occurs that affects prepared surfaces prior to seeding and prevents seeding to proper depth, prepare seedbed without additional compensation.
11. Watering is condition determined by seeding season. If watering is required, water seeded areas in accordance with these specifications. Provide temporary water delivery system, which may be sprinkler system, water truck with spray boom, or other method satisfactory to distribute uniform coverage of clean water to previously seeded areas. If temporary sprinkler system is used, keep pipe connections tight to avoid leakage and loss of water, and to preclude

washing or erosion of growing areas. Maintain sprinklers in proper working order during watering.

12. Do not drive trucks with spray systems on seeded areas, and water force shall not be of such volume or pressure to cause movement of mulch on ground.
 13. Protect seeded areas until final acceptance of Work, and repair damage to seeded areas caused by pedestrian or vehicular traffic.
- C. Gravel Cover: Cover soils disrupted by construction operations with 2-inch thick minimum layer of 3/4-inch gravel.

END OF SECTION