DIVISION 28 00 00. ELECTRONIC SAFETY AND SECURITY

28 30 00 - Detection and Alarm
Install an intrusion detection alarm system which detects entry into the room and broadcasts a local alarm of sufficient volume to cause an illegal entrant to abandon an attempt. Intrusion detectors must have the following essential features:

- An internal, automatic charging DC standby power supply and a primary AC power operations.
- A remote, key operated activation/deactivation switch installed inside the residence/office and adjacent to the entrance door frame and/or a central alarm ON-OFF control in the Police office.
- An automatic reset capability following an intrusion detection.
- A local alarm level of 80 dB (min) to 90 dB (max) within the configuration of the protected area.
- An integral capability for the attachment of wiring for remote alarm and intrusion indicator equipment (visual or audio). See installation notes below.
- A low nuisance alarm susceptibility.

28 31 46 - Smoke Detection Sensors
Install at least one smoke alarm on every floor of a structure (including the basement) and outside each sleeping area. Smoke alarms are required in all sleeping rooms, according to NFPA 72, National Fire Alarm Code®. Mount the smoke alarms on ceilings or high on walls. Ceiling-mounted alarms should be installed at least four inches away from the nearest wall; wall-mounted alarms should be installed at least four inches, but not more than 12 inches, away from the ceiling. On vaulted ceilings, be sure to mount the alarm at the highest point of the ceiling. Don't install smoke alarms near windows, outside doors, or ducts where drafts might interfere with their operation. Do not paint, apply finish or obstruct smoke alarms.

DIVISION 31 00 00. EARTHWORK

31 10 00 - Site Clearing
The area of clearing shall be maintained within the limits shown on the applicable plans. Remove stumps and matted roots to a depth of 24 inches below existing grade. Dispose of trees and shrubs in accordance with applicable garbage, refuse or weeds ordinances. Do not burn materials on site. The Country Fire Marshal may consider granting a waiver from open burning restrictions. Remove material from the site as it accumulates to avoid material to accumulate for more than 48 hours.

Soil Bearing - Foundation designs are based on a soil bearing value of 2500 psf. Foundations and slabs are designed to uniformly bear on well-compacted, well-drained non-expansive soils. A certified soils engineer shall review foundation building loads and compare with subsurface soil investigation.
observations show that foundation designs are not satisfactory, a structural engineer should be contacted immediately to redesign foundations to accommodate conditions.

**SPECIFIER NOTE:**

*resource management*: Biodiversity can be damaged by extensive site clearing on greenfield sites. Limit site clearing and sequence operations to protect existing habitats.

*toxicity/IEQ*: Where existing soils are contaminated, consider phytoremediation techniques in addition to chemical and mechanical treatments.

*performance*: This section typically specifies removal of vegetation from the site, including stripping of sod and soil, in preparation for construction and landscaping. Any vegetation that must be removed, coordinate with Section 01 74 19 (01351) - Construction Waste Management to avoid loss of topsoil and contamination of waterways. Minimize site clearing and identify indigenous vegetation to be protected in situ or relocated. Plants that are native and indigenous to the site will not only help to preserve biodiversity, but typically perform better than most imported plants.

PART 1 - GENERAL

1.1 SUMMARY

This Section includes:
- Site Clearing.
- Temporary erosion and sedimentation control measures.

Related Sections:
- 01 74 19 (01351) - Construction Waste Management.
- 32 90 00 (02900) - Planting.

1.2 SUBMITTALS

Photographs, sufficiently detailed, of existing conditions of trees and plantings, adjoining construction, and site improvements that might be misconstrued as damage caused by site clearing.

Submit on CD. Organize photographs by date and description. Format to ISO 9660.

Erosion Control Plan: Not less than 10 days before the Pre-construction meeting, prepare and submit an Erosion Control Plan.

Format: At a minimum, address the following elements:
- Identification of Project.
- Details of Plan, specific to the site, that comply with EPA 832/R-92-005 or requirements of authorities having jurisdiction, whichever is more stringent.
- Monitoring procedures.
- Revise and resubmit Plan as required by Owner.

Approval of Contractor's Plan will not relieve the Contractor of responsibility for compliance with applicable environmental regulations.
PART 3 - EXECUTION

3.X SITE ENVIRONMENTAL PROCEDURES

Waste Management: As specified in Section 01 74 19 (01351) - Construction Waste Management and as follows:
Mulch: Identify organic debris that is free of disease, pest infestation, and chemical contamination and that is suitable for recycling as mulch on site. Stockpile where indicated on Drawings or directed by [Architect] [Owner]. Coordinate with requirements of Section 32 90 00 (02900) - Planting.
Topsoil: Where existing topsoil is scheduled to be removed, carefully strip and stockpile for reuse. Stockpile where indicated on Drawings or directed by [Architect] [Owner]. Coordinate with requirements of Section 32 90 00 (02900) - Planting.
Compost: Identify organic debris suitable for composting on site. Coordinate with requirements of Sections 01 74 19 (01351) - Construction Waste Management and 32 90 00 (02900) - Planting.
Solarizing Soil: As specified in Section 32 90 00 (02900) - Planting.
Erosion Control: Implement an Erosion Control Plan in accordance with approved submittals. Coordinate with requirements of Section 01 57 19.13 (01354) - Environmental Management.
Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

31 11 00 - Clearing and Grubbing
Clear and grub the construction site. Grade building site with appropriate soils. Existing trees to remain shall be marked prior to clearing and protected to prevent damage done to walkways, driveways, etc, needed repairs shall be provided by the contractor. Repair or replace any damaged vegetation or terrain that is indicated to be protected 8 feet from the edge of any construction.

31 20 00 - Earth Moving
Excavate bottom of all foundation walls and footings at building perimeter below frost line and 20” wide, (check with local building officials for frost line). Base of footings shall extend down to undisturbed virgin soil which has been compacted to 95 percent proctor density. All excavation shall be to a level below existing demolition debris. Board form all footing as required by soil conditions.

For basement walls, excavate area indicated on construction documents an additional 18” minimum clearance around the perimeter of foundation for drainage and waterproofing assembly.
At slab foundations, compact sub-grade under slabs to a minimum 95% density. Compact backfill areas not under slabs or foundation to a minimum 90% ASTM D-689. Sub-base directly under concrete slabs on grade shall be a minimum of four inches of compacted granular fill.

31 22 00 - Grading
Carefully remove loam and topsoil to be incorporated in the finished work, from the other excavated material. Failure to isolate loam and topsoil from other excavations shall require that said soils not be used as topsoil. When excavations are to be made in paved surfaces, remove pavement so as to provide a clean, uniform edge with a minimum disturbance of remaining pavement. Dispose large pieces of pavement away from the site of the work immediately.

31 22 13 - Rough Grading
Prior to commencement of earthwork, perform such soil and rock removal as required to facilitate the progress of the work and bring all elevations to the rough grade lines indicated on the Contract Documents. Fill or backfill as required.

31 22 19 - Finish Grading
Keep exterior finished grade a minimum of 6 1/2" below finished floor elevations (construction documents for exact locations) by backfilling with appropriate soils with positive outfall and slope grade away from building to allow water to drain away from the building foundation. Do not backfill against foundation until project is completely framed and roof structure is in place. Soil type of fill shall be specified by Geotechnical Engineer.

31 23 00 - Excavation and Fill
Backfill material to be used from the excavations shall be of such nature that, when placed and properly compacted, it will make a dense, stable fill. It shall not contain vegetation, masses of roots, stones over 3-inches in diameter, or porous matter and shall not be saturated. Organic matter shall not exceed minor quantities and shall be well distributed.

31 23 16 - Excavation
Carry out the excavation, dewatering, sheeting and bracing in such manner as to eliminate any possibility of undermining or disturbing the foundations or any existing structure or any work previously completed. Excavate pipe trenches to the necessary depth as shown on plans. Trenches over 5 feet in depth shall be properly sloped, shored, braced or otherwise supported in conformance with the OSHA Construction Safety and Health Standards. Excavate trenches to provide a uniform and continuous bearing and support of appurtenant structures on solid and undisturbed ground and at the specified grade at every point. Excavation for structures and pipelines shall include the disposal of materials unsuitable for reuse for backfill. Excavation activities shall include the stockpiling of suitable materials which shall be incorporated into the project at a later date of different location.

31 23 19 - Dewatering
At all times during construction, provide, place and maintain ample means and devices which to remove promptly all water entering trenches and other excavations, dry until the structures, pipes and appurtenances to be built therein have been backfilled. Dispose of all water pumped or drained from the work without
work, traffic or injury to public or private property. Prevent siltation of storm receiving waterways.

**31 23 23 - Select Borrow**

Material needed in addition to that available from construction operations shall be defined as select borrow. Select borrow shall consist of durable natural granular material or granular aggregates mixed or blended with sand, stone dust, soil or other filler material and graded mixture meeting the requirements herein specified. These materials shall be free from vegetable or organic matter, lumps or clay or other objectionable or foreign substances, but may contain a maximum of shale by weight. The size and gradation of the material shall range from stone no larger than the maximum dimension to soil passing a No 200 sieve. The gradation shall be well dispersed through the borrow.

**31 23 23.13 - Backfill**

Correct any part of the trench bottom excavated below the specified grade with approved materials and thoroughly compact. Complete all backfilling to the dimensions and levels shown on the construction documents. Where excavated material or any portion thereof is deemed unsuitable for backfilling, procure and place approved select borrow materials. Backfill as promptly as is consistent with non-damage to the installed structures. Do not place frozen material in the backfill. No material shall be placed or compacted when it is too wet or frozen or when the sub-grade or previously placed material is too wet or frozen.

**31 25 00 - Erosion and Sedimentation Controls**

Clear the top layer of soil and place in a designated area for use at the end of the project. Provide swales with positive outfall, and slope grade away from building to allow water to drain away from the foundation. Backfill around building with subsoil graded free of lumps larger than 6", rocks larger that 3" and debris. Keep finished grade elevations a minimum of 6 1/2" below finished floor elevation (see construction documents for exact locations. Do not backfill against foundation, until home is completely framed and roof structure is in place.

**31 25 73 - Stormwater Management by Compost**

*SPECIFIER NOTE:*

**resource management:** According to the U.S. Department of Agriculture, more than 2 billion tons of topsoil each year to erosion. Erosion removes nutrients and organic matter, which reduces the ability of plants to establish, grow and remain healthy in the soil. A reduction in plant growth and subsequent plant residue cover, allowing the erosion process to perpetuate and become worse. Erosion not only causes loss of soil productivity but also creates water quality problems once the sediment leaves the site and enters surface waters. The U.S. EPA has declared that sediment contamination of our surface waterways is the biggest threat to our nation’s water resources. Construction and development projects, where soil is excavated or moved, are particularly subject to erosion problems. In addition, heavy machinery and constant traffic can compact the soil creating a "hard pan" that repels water, increases runoff.
Compost replaces valuable organic matter and soil nutrients essential to vegetative establishment and long-term plant health.

**toxicity/IEQ:** Within the past few years, laboratory-, greenhouse-, and pilot-scale research has indicated that composting provides a cost-effective solution for managing hazardous waste streams (solid, air, or liquid). Compost has also been found to successfully remediate soil contaminated with toxic organic compounds (such as solvents and pesticides) and inorganic compounds (such as toxic metals). Refer to U.S. EPA Report - Analysis of Composting as an Environmental Remediation Technology; [http://www.epa.gov/epaoswer/non-hw/composting/pubs.htm](http://www.epa.gov/epaoswer/non-hw/composting/pubs.htm#anacomp)

**performance:** Compost breaks up compacted soils and increases soil structure allowing water to infiltrate the soil surface. If immediate planting is not feasible, compost can act as a protective layer or sediment filter until vegetation can be established.

Compost-based erosion and sediment control systems have several advantages over traditional storm water best management practices (BMPs) such as geotextile blankets, including:

— increasing water holding capacity of soil which reduces runoff.
— buffering rainfall energy, which prevents soil compaction.
— facilitating plant growth by capturing and retaining moisture and providing a microclimate and nutrients for seed germination.
— stimulating microbial activity to improve the soil structure.
— buffering soil pH which can increase vegetation establishment and growth.

Refer to the U.S. EPA Greenscapes program on environmentally beneficial landscaping for additional information; [http://www.epa.gov/epaoswer/non-hw/green/pubs.htm](http://www.epa.gov/epaoswer/non-hw/green/pubs.htm)

**PART 1 - GENERAL**

1.1 **SUMMARY**

This Section includes:
- Compost blanket.
- Compost filter berm.
- Compost filter sock.
- Compost soil management.

Related Sections:
- Section 01 57 19.13 (01354) - Environmental Management: Water monitoring for surface and groundwater.
- Section 31 10 00 (02230) - Site Clearing: Temporary erosion and sedimentation control measures.
- Section 32 90 00 (02900) - Planting: Compost used as soil conditioners for landscaping.

1.2 **SUBMITTALS**

Product data. Unless otherwise indicated, submit the following for each type of product provided under work of this Section:
**SPECIFIER NOTE:**
Specifying local materials may help minimize transportation impacts; however it may not have a significant impact on reducing the overall embodied energy of a building material because of efficiencies of scale in some modes of transportation. Green building rating systems frequently include credit for local materials, impacts include: fossil fuel consumption, air pollution, and labor.

USGBC-LEED™ v2.2 includes credits for materials extracted/harvested and manufactured within a 500 mile radius from the project site. Green Globes-US provides points for materials that are locally manufactured.

Local/Regional Materials:
- Sourcing location(s): Indicate location of extraction, harvesting, and recovery; indicate distance between extraction, harvesting, and recovery and the project site.
- Manufacturing location(s): Indicate location of manufacturing facility; indicate distance between manufacturing facility and the project site.
- Product Value: Indicate dollar value of product containing local/regional materials; include materials cost only.
- Product Component(s) Value: Where product components are sourced or manufactured in separate locations, provide location information for each component. Indicate the percentage by weight of each component per unit of product.

**SPECIFIER NOTE:**
The Farm Security and Rural Investment Act, Section 9002, Federal Procurement Of Biobased Products, requires each Federal Agency to develop a procurement program which will assure that items composed of biobased products will be purchased to the maximum extent practicable and which is consistent with applicable provisions of Federal procurement law. USDA designates biobased products for preferred Federal procurement and recommends biobased content levels for each designated product.

USGBC-LEED™ v2.2, for example, includes credits for use of rapidly renewable materials, which USGBC describes as plants harvested within a ten-year cycle.
Green Globes-US provides credit for integration of materials from renewable sources that have been selected based on life-cycle assessment.

Biobased materials:
- Indicate type of biobased material in product.
- Indicate the percentage of biobased content per unit of product.
- Indicate relative dollar value of biobased content per unit of product included in project.

**SPECIFIER NOTE:**
The U.S. Composting Council (USCC) certifies compost products under its Seal of Testing Assurance (STA) Program. Compost producers whose products have been certified through the STA Program.
Evidence of certification under the U.S. Composting Council Testing Assurance (STA) Program.
Field Quality Control reports.

1.3 QUALITY ASSURANCE

Certification: Provide compost products that are certified to specified product parameters in accordance with the U.S. Composting Council (USCC) Seal of Testing Assurance (STA) Program.

PART 2 - PRODUCTS

SPECIFIER NOTE:
EO 13423 includes requirements for Federal Agencies to use "sustainable environmental practices, including acquisition of biobased, environmentally preferable, energy-efficient, and recycled-content products"

Specifically, under the Sustainable Building requirements per Guiding Principle #5 Reduce Environmental Impact of Materials, EO13423 directs Federal agencies to "use products meeting or exceeding EPA's recycled content recommendations" for EPA-designated products and for other products to "use materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes at least 10% (based on cost) of the total value of the materials in the project."

Additionally, for USDA-designated biobased products, Federal agencies must use products meeting or exceeding USDA's biobased content recommendations; and for other products, biobased products made from rapidly renewable resources and certified sustainable wood products.

2.1 COMPOST


SPECIFIER NOTE:
For current designations under the Federal Biobased Products Purchase Program (FB4P), refer to www.biobased.oece.usda.gov. As of March 16, 2006, the Federal Register includes the final rule designating the first six items, which are generic groupings of biobased products. The items are: mobile equipment hydraulic fluids; biobased roof coatings; water tank coatings; diesel fuel additives; and; bedding, bed linens and towels. Refer to 7 CFR Part 2902, Designation of Biobased Items for Federal Procurement; Final Rule. The requirements for the items apply to those items directly purchased by the federal agency, not to construction contract, the contractor's use of hydraulic fluid in its bulldozers and
backhoes is incidental to the purpose of its contract, so the contractor is not required to use biobased hydraulic fluids. The Office of the Federal Environmental Executive (OFEE) recommends that agencies encourage the use of these items. This is the first of a series of rules that will be issued designating biobased items. The USDA proposed to designate 20 additional items, including several used in construction, on August 17, 2006. Proposed minimums for biobased content of building materials include the following:

- Carpet: 7 percent
- Insulating Foam for Wall Construction: 8 percent
- Composite Panels (non-structural): 26 percent

The USDA currently has identified about 150 items for which it is needed for the additional designations of items that will extend preferred procurement status to include all qualifying biobased products.

Biobased Content: Minimum [100] [xxxx] percent.

**SPECIFIER NOTE:**
A compost blanket is a layer of loosely applied compost that is placed on the soil in disturbed areas to control erosion and retain sediment resulting from sheet-flow runoff. It can be used in place of traditional sediment control tools such as mulch, netting, or chemical stabilization. The American Association of State Highway Transportation Officials (AASHTO) and many individual state Departments of Transportation have issued specifications for compost blankets. These specifications describe the quality and particle size distribution of compost to be used in compost blankets. Following is an example:

Compost Blanket: Provide blanket in accordance with AASHTO specification MP 10-03; Compost for Erosion/Sediment Control (Compost Blankets), American Association of State Highway Transportation Officials, Washington, D.C. and with product parameters as follows:

- Particle size: 3/8-1/2 in. screen and 2-3 in. screen (ratio = 3:1)
- Moisture content: 20-50%
- Soluble salt: 3.0 - 6.0 mmhos/cm
- Organic matter: 40 - 70%
- pH: 6.0 - 8.0
- Nitrogen content: 0.5 - 2.0%
- Human made inerts: 0.0 - 1.0%
- Application rate/size: 3/4 - 3 in. depth

**SPECIFIER NOTE:**
A compost filter berm is a dike of compost that is placed perpendicular to sheet-flow runoff to control erosion in disturbed areas and retain sediment. It can be used in place of a traditional sediment control tool such as a silt fence. The compost filter berm, which is trapezoidal in cross section, provides a three-dimensional filter that retains sediment and other pollutants (e.g., suspended solids, metals, oil and grease) while allowing the cleaned water to pass through.
flow through the berm. Following is an example:

Compost Filter Berm: Provide berm in accordance with AASHTO Standard Specification for Compost for Erosion/Sediment Control (Filter Socks), and with product parameters as follows:
- Particle size: 3/8-1/2 in. screen and 2-3 in. screen (ratio = 1:1)
- Moisture content: 20-50%
- Soluble salt: 4.0 - 6.0 mmhos/cm
- Organic matter: 40 - 70%
- pH: 6.0 - 8.0
- Nitrogen content: 0.5 - 2.0%
- Human made inerts: 0.0 - 1.0%
- Application rate/size: 1’ - 2’ H x 2.5’ - 4’ W

SPECIFIER NOTE:
A compost filter sock is a type of contained compost filter filled with composted material that is placed perpendicular to sheet-flow runoff to control erosion and retain sediment in disturbed areas. This provides a three-dimensional filter that retains sediment and suspended solids, nutrients, and motor oil while allowing the cleaned water to flow through. The filter sock can be used in place of a traditional erosion control tool such as a silt fence or straw bale barrier. Compost filter socks can be vegetated or unvegetated. Vegetated filter socks can be left in place to provide long-term filtration of stormwater as a post-construction best management practice (BMP). The vegetation grows into the slope, further anchoring the filter sock. Unvegetated filter socks are often cut open when the project is completed, and the compost is spread around the site as soil amendment or mulch.

Compost Filter Sock: Provide [unvegetated] [vegetated] filter sock in accordance with AASHTO specification MP 9-06.
- Size: [8] [12] [18] [24] [xxxx] inches in diameter.
- Mesh Sock: Biodegradable.

SPECIFIER NOTE:
Healthy soil provides important stormwater management functions including efficient water infiltration and storage, adsorption of excess sediments, biological decomposition of pollutants, and moderation of peak stream flows and temperatures. In addition, healthy soils support vigorous plant growth that intercepts rainfall, returning much of it to the sky through evaporation and transpiration.

Compost for Soil Management: Provide organic matter content of 35% to 65%, and a carbon to nitrogen ratio below 25:1. Coordinate with work of Section 32 90 00 (02900) - Planting.

PART 3 - EXECUTION
3.1 INSTALLATION

Compost Blanket: Apply compost to the soil surface in a uniform thickness for a minimum 3 feet over the shoulder of the slope.

Slopes: Apply on slopes between 4:1 and 1:1, unless otherwise indicated.

Compost Filter Berm: Apply compost to the soil surface in a uniform thickness and shape into a trapezoid. [Vegetate by hand.] [Vegetate by incorporating seed into the compost prior to installation.]

Compost Filter Sock: Do not trench. After placing filter sock, anchor with stakes driven through the center of the sock at regular intervals and placed on the downstream side of the sock. Direct ends of the sock upwards. [Vegetate by incorporating seed into the compost prior to installation.]

Compost for Soil Management: Amend soil [where indicated on drawings] [in disturbed areas] or import topsoil mix of sufficient organic content and depth to meet the specified requirements. Coordinate with work of Section 32 90 00 (02900) - Planting for topsoil analysis, recommended compost requirements for specified plants, and landscape commissioning.

SPECIFIER NOTE:
The following recommendations and formula were developed by the Washington State Department of Ecology for use in the Washington area. Edit as necessary for project. Amendment Rate: [25% - 30% compost by volume for planting areas; 15% compost by volume for turf areas.] [2" - 4" of compost into upper 8" - 12" of soil.] [xxxx] [Provide minimum 8 inch depth of soil with 10% Soil Organic Matter (SOM) content in planting areas, and 5% SOM content in turf areas.]

Unless otherwise indicated, use the following equation to calculate compost application rates necessary to achieve the specified soil organic matter (SOM) content:

\[
CR = D \times SBD \times (SOM\%-FOM\%) \\
SBD \times (SOM\% - FOM\%) - CBD \times (COM\% - FOM\%)
\]

Where:
- \( CR \) = Compost application rate (inches) calculated to achieve final organic matter (FOM)
- \( D \) = Depth of finished incorporation (inches)
- \( SBD \) = Soil bulk density (lb/cubic yard dry weight; to convert g/cm³ units to lb/cubic yard, multiply by 1697)
- \( SOM\% \) = Initial soil organic matter (%)
- \( FOM\% \) = Final target soil organic matter (%)
- \( CBD \) = Compost bulk density (lb/cubic yard dry weight; to convert "as is" to lb/cubic yard dry weight, multiply by solids content)
- \( COM\% \) = Compost organic matter (%)

Compacted subsoils: Scarify minimum 4 inches below the amended layer (for a finished uncompacted depth of 12 inches).
Planting areas: Unless otherwise indicated, mulch with minimum 2 inches of organic material.
3.2 FIELD QUALITY CONTROL

Water: Coordinate with work specified in Section 01 57 19.13 (01354) - Environmental Management to provide water monitoring for surface and groundwater.

SPECIFIER NOTE:
The erosion potential of a soil is of concern in vegetated channels, spillways, road embankments, dams, levees, spillways, construction sites, etc. Assess potential effects of soil management practices on soil loss in accordance with ASTM D6629. Assess erodibility of soil with dominant soil structure less than 7 to 8 cm in accordance with ASTM D5852.

SPECIFIER NOTE:
Soil depth and quality will make a significant difference in stormwater management by preserving or restoring soil stripped away during development. A set of Best Management Practices (BMPs) has been researched and published by the Washington State Department of Ecology in its Stormwater Management Manual for Western Washington, Volume V Runoff Treatment BMPs, BMP T5.13 refer to: http://www.ecy.wa.gov/biblio/0510033.html or to http://www.soilsforsalmon.org
A slightly modified version of these BMPs has been implemented by King County, Washington; refer to http://www.metrokc.gov/ddes/forms/ls-inf-SoilPost-ConStd.pdf

Soil Depth and Quality:
Document in scale site drawing:
Undisturbed areas: Areas of site remaining undisturbed with native vegetation and soil. Verify that these areas were protected from compaction during construction. Indicate total square footage.
Disturbed areas: Areas of site disturbed by construction. Indicate stormwater management procedures implemented; identify where compost blankets, compost filter berms, compost filter socks, and compost soil management practices were implemented. Indicate size and quantity of compost blankets, berms, and socks; indicate total square footage of compost soil management.

Compost Soil Management: For disturbed areas where stormwater management includes compost soil management, report results of the following:
Visually inspect soil for compaction, scarification and amendment incorporation by digging at least one 12 inch deep test hole per landscaped acre for turf and at least one per acre for planting areas. Excavate only a garden spade driven solely by inspector's weight. Test 10 locations per landscaped acre (10 locations minimum) for compaction, using a simple rod penetrometer (a 4 foot long 3/8th inch diameter stainless steel rod, with a 30 degree bevel cut into the side that goes in 1/8 inch at the tip). Verify that rod penetrates to 12" depth driven solely by weight of [Landscape Architect] [Civil Engineer] [Owner's Representative] [xxxx] reviewing field inspection of [xxxx].
Verify placement and depth of organic mulch material is as specified. Verify amendment rate for compost is as specified. To meet SOM content requirements were prepared by a qualified professional. Qualified professionals include certified Agronomists, Soil Scientists or Crop Advisors; and licensed Landscape Architects, Civil Engineers or Geologists.]

31 31 00 - Soil Treatment

SPECIFIER NOTE:

resource management: For soil treatment options, resource management issues closely parallel toxicity issues. The more environmentally friendly alternative to canvassing the construction site with poison is to investigate, evaluate and adjust the local ecosystem such that the undesirable creatures are not attracted to materials and areas in which they are unwanted, wood boring insects. Rather than spraying the yard, consider relocating and/or trimming plants.

toxicity/IEQ: This section typically specifies pesticides and herbicides to control vegetation, rodents, and insects. Soil treatments directly impact soil and groundwater; they directly impact the hydrologic cycle and the food chain. EO 13423 includes requirements for Federal Agencies to reduce "the quantity of toxic and hazardous chemicals acquired, used, or disposed of by the agency" Therefore, utilize the least toxic treatment possible. Alternative control methods include design options and maintenance procedures to control; refer to Section 32 90 00 (02900) - Planting. Alternative systems include soil solarization; refer to Section 32 90 00 (02900) - Integrated Pest Management (IPM).

performance: Termite infestation exists throughout the United States and overseas areas with the exception of Alaska. Some construction systems, such as masonry, steel and concrete, are not considered to be susceptible to termite damage. Alternative termite-prevention systems, such as a termite sand barrier, generally require preventative maintenance on the part of the building owner, such as keeping vegetation and dead leaves away from the building. Verify that the owner understands the maintenance involved and is willing to perform such maintenance. Alternative systems may be used in combinations. For example, a mesh barrier system may be used in combination with other preventive measures such as a sand barrier and pressure treated lumber for construction. Alternative systems may require a variance.

PART 1 - GENERAL

1.1 SUMMARY

Section includes:
Sand barrier termite control.
Mesh termite control.