SECTION 329113

SOIL PREPARATION

PART 1 - GENERAL

1.1 SUMMARY

A. General: Preserve and Stockpile Existing Topsoil, Provide and Place Planting Soils and Planting Soil Amendments in accordance with Contract Documents

B. Related Work Specified Elsewhere:

1. Grading - Refer to Drawings
2. Section 328000 Irrigation
3. Section 329100 Planting

C. Summary of Work: This Section includes the following:

1. Harvesting Soil from Site In-Situ or Stockpiling of top 2-4 feet for Reuse as Planting Soil Base Component to be Amended.
2. Importing of Harvested Soil from off-site if required.
3. Planting Soil Testing to determine Amendment Requirements.
4. Planting Soil Placement and Amendment Procedures.
5. Planting Soil Drainage Improvements.

1.2 REFERENCES

A. Except as modified by governing codes and by the Contract Documents, comply with the applicable ASTM or USDA provisions and recommendations.

B. Where the language in any of the documents referred to herein is in the form of a recommendation or suggestion, such recommendation or suggestion shall be deemed to be mandatory under this Contract.

1.3 SYSTEM DESCRIPTION

A. Performance Requirements

1. Provide Planting Soils, to be hand-tamped or compacted to firm the soil and to prevent subsidence but not to exceed 80% compaction of maximum dry weight, Proctor Scale.

1.4 SUBMITTALS

A. Product Data:

1. Submit four (4) to Construction Manager with copies for Landscape Architect and Soil Scientist technical data for each manufactured or packaged product of this section. Include manufacturer's product testing and analysis, and installation instructions for manufactured or processed items or materials.

2. Submit to Construction Manager with copies for Landscape Architect and Soil Scientist locations of soil material sources.

B. Certificates:

1. Submit to Construction Manager with copies for Landscape Architect and Soil Scientist certified analysis for each treatment, amendment, and fertilizer material specified and as used. Include guaranteed analysis and weight for packaged material.

2. Prior to job acceptance submit to Construction Manager with copies for Landscape Architect and Soil Scientist written certificates for the following total quantities by weight as used on Project Site for Project materials:

a. Quantity and type of commercial fertilizer, organic fertilizer, or organic amendment.

b. Quantity and type of additional soil amendments

C. Soil Analysis:

1. Unless otherwise directed soil analysis shall be done by Garn Wallace, Soils Scientist, Wallace Labs, 365 Coral Circle, El Segundo, California 90245, 310-615-0116 SOIL SCIENTIST). Contractor shall provide five (5) samples for testing as directed by Wallace Labs.

2. Furnish a soil analysis made by a qualified independent soil-testing agency stating percentages of organic matter; gradation of silt, clay and sand content; cation exchange capacity; deleterious material; pH, mineral and plant-nutrient content of topsoil or soil mix.

3. Report suitability of topsoil or soil mix for growth of applicable planting material. State recommended quantities of nitrogen, phosphorus, and potash nutrients and any limestone, aluminum sulfate, or other soil amendments to be added to produce a satisfactory topsoil or soil mix.

4. Construction Manager, Landscape Architect and Soil Scientist reserve the right to require additional soil analysis at any time such additional samples of materials are deemed necessary for verification of conformance to specification requirements. Contractor shall furnish samples for this purpose upon request and shall perform testing as requested.

D. Test Reports: Submit five (5) to Construction Manager with copies for Landscape Architect and Soil Scientist written report of each sample tested. Testing Laboratory and specific tests must be approved by Landscape Architect. Soil tests must be unique and individual to each sample taken and are not to be resubmitted or reused. Samples and analysis must be submitted within 7 calendar days of sampling. Soils Testing shall consists of the minimum following:

1. "Complete Standard Analysis" reports of imported soils base materials.
2. Soil Fertility Composition and Bulk Density Test Reports of soil base material to be used for "structural soil planting mix".
3. Soil permeability analysis
4. Each report shall include the following as a minimum and such other information required specific to material tested. Test Reports:

a. Date issued.
b. Project Title and names of Contractor and material supplier.
c. Testing laboratory name, address, and telephone number, and name(s), as applicable, of each field and laboratory inspector.
d. Date, place, and time of sampling or test, with a record of temperature and weather conditions.
e. Location of material source.
f. Type(s) of test
g. Results of tests including identification of deviations from acceptable ranges.

E. Samples:

1. Top Soil each source, 1 lb. package
2. Organic Compost: 1 lb package
3. Other Required amendments
4. Complete Soil Mix, 1 lb. package
5. Mulch Material: 1 lb package

F. Soil Blending Procedures:

1. Contractor shall submit a detailed soil blending operations plan. To the degree possible, soils shall be amended in place.

G. Purchase Documentation:

1. Top Soil Purchase and Delivery Invoices
2. Fertilizer and Chemical Amendments Purchase and Delivery Invoices.
3. Organic Compost Purchase and Delivery Invoices.

H. Settlement Mock-Up: Mock-up areas of backfill at the specified depths and apply irrigation to induce settlement, if required to help determine the amount of settlement which will be caused by irrigation and rain.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced installer who has completed soil work similar in material, design, and extent to that indicated for this Project and with a record of successful landscape establishment.

B. Installer Field Supervision: Require installer to maintain full-time supervisor during times soil work is in progress.

C. Soil Testing Agency Qualifications: An independent laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and specializes in types of tests to be performed, or a member of the Council on Soil Testing and Plant Analysis and has staff members with extensive agricultural research experience as demonstrated with peer reviewed publications.

D. Applicable Laws: Meet requirements of applicable laws, codes, and regulations required by authorities having jurisdiction over Work.

1.6 PRODUCT DELIVERY, STORAGE AND HANDLING:

A. Packaged Materials: Deliver packaged materials in containers showing weight, analysis, and name of manufacturer. Protect materials from deterioration during delivery and while stored at Project Site.

B. Stockpiling: Soil, mulch, or amendment materials, stored on Project Site temporarily in stockpiles prior to placement shall be protected from intrusion of contaminants and erosion. Soil materials shall be covered with a tarpaulin until time of actual use. All stockpiled materials shall be placed on tarpaulin, heavy polyethylene sheeting or other suitable barrier to protect paving surfaces from staining or soiling by stockpiled materials.

1.7 PROJECT CONDITIONS

A. Utilities: Determine location of planting area utilities including lighting, irrigation and drainage; and perform work in a manner, which will avoid damage. Hand excavate, as required.

B. Waterproofing: Perform work in a manner, which will avoid damage to planter waterproofing membrane, protection board or other structural sealing materials.

C. Lifting: The Contractor shall be responsible for lifting and placing planting soils and other required material through exterior means or lifts, as approved by the Construction Manager and Landscape Architect.

D. Construction Sequencing: Soil Planting Mix shall be installed prior to any adjacent concrete, pavements, or concrete base slab or header cradle installation, which require the support of the structural soil.

E. Environmental Requirements for Soils:

1. Perform both off-site and on-site soil work only during suitable weather conditions. Do not work soil when frozen, excessively wet, excessively dry, or in otherwise unsatisfactory condition. Do not work soil when moisture is so great that excessive compaction will occur, nor when it is so dry that dust will form in the air or that clods will not break readily.

2. Apply water, if necessary, to bring soil to an optimum moisture content for tilling and placement.

3. Do not apply chemicals if wind conditions will cause hazardous drift to people or property.

F. Protection of Amended Soil and Suitable Harvested Soils:

1. Protect amended soils and suitable harvested soils from contamination such as fuels, paints, welding, concrete washing, compaction, acid washings, etc. Correct any damage to soils or plants at no cost to the owner.

PART 2 - PRODUCTS

2.1 GENERAL

A. All soil planting mix materials shall fulfill the requirements as specified.
B. Soil mix for bioswale
C. Samples of Samples of individual components of planting soil and amendments in addition to blended planting soil mixes including mulch materials shall be submitted by the Contrac-

tor for testing and analysis to the approved testing laboratory. Comply with specific material requirements specified.

1. No base component material for plant mix shall be used until certified test reports by an agricultural chemist have been received and approved by the Landscape Architect and Soil Scientist.

2. As necessary, make any and all soil mix amendments and resubmit test reports indicating amendments until approved.

D. Landscape Architect and Soil Scientist may request additional testing by Contractor for confirmation of mix quality and / or soil mix amendments at any time until completion.

2.2 SOIL MATERIALS AND PRODUCTS

A. Soil Base Component: Base Soil Material shall be Harvested Soil from the site either in situ or stockpiled. If insufficient quantities of approved Base Soil Material exist on the Project Site, Base Soil Material shall be Imported Harvested Soil from off-site local source as approved by Landscape Architect or Soil Scientist. Base Soil Material from offsite shall follow the same testing procedures for acceptance as on-site material.

1. Soil acceptance criteria for soil harvesting:

General – harvested soil shall be free of roots, clods, stones larger than 1-inch in the greatest dimension, pockets of coarse sand, noxious weeds, sticks, lumber, hazardous material, brush and other litter. It shall not be infested with nematodes or other undesirable disease-causing organisms such as insects and plant pathogens.

Topsoil shall be friable and have sufficient structure in order to give good tilth and aeration to the soil. Soil shall have a field capacity of at least 15 percent on a dry weight basis.

Gradation limits - soil shall be a sandy loam or loam. The definition of soil texture shall be the USDA classification scheme. Gravel over ¼1/2-inch in diameter shall be less than 10% by weight.

Permeability Rate - Hydraulic conductivity rate shall be not less than one inch per hour nor more than 20 inches per hour when tested in accordance with the USDA Handbook Number 60, method 34b or other approved methods.

Fertility - The range of the essential elemental concentration in soil shall be as follows:

	Ammonium Bicarbonate/DTPA Extraction parts per million (mg/kilogram dry weight basis
phosphorus	2 - 40
potassium	40 - 220
iron	2 - 35
manganese	0.3 - 6
zinc	0.6 - 8
copper	0.1 - 5
boron	0.2 - 1
magnesium	50 - 150
sodium	0 - 100
sulfur	25 - 500
molybdenum	0.1 - 2

Harvested soil may need to be amended and conditioned to optimize plant growth.

Acidity - The soil pH range measured in the saturation extract (Method 21a, USDA Handbook Number 60) shall be 6.0 - 7.9.

Salinity - The salinity range measured in the saturation extract (Method 3a, USDA Handbook Number 60) shall be 0.5 - 2.5 milliohm/cm.

Chloride - The maximum concentration of soluble chloride in the saturation extract (Method 3a, USDA Handbook Number 60) shall be 150 mg/l (parts per million).

Boron - The maximum concentration of soluble boron in the saturation extract (Method 3a, USDA Handbook Number 60) shall be 1 mg/l (parts per million).

Sodium Adsorption Ratio (SAR) - The maximum SAR shall be 3 measured per Method 20b, USDA Handbook Number 60.

Aluminum – Available aluminum measured with the Ammonium Bicarbonate/DTPA Extraction shall be less than 5 parts per million.

Soil Organic Matter Content - Sufficient soil organic matter shall be present to impart good physical soil properties but not be excessive to cause toxicity or cause excessive reduction in the volume of soil due to decomposition of organic matter.

Heavy Metals - The maximum permissible elemental concentration in the soil shall not exceed the following concentrations:

	Ammonium Bicarbonate/DTPA Extraction parts per million (mg/kilogram) dry weight basis
arsenic	1
cadmium	1
chromium	10
cobalt	2
lead	30
mercury	1
nickel	5
selenium	3
silver	0.5
vanadium	3

If the soil pH is between 6 and 7, the maximum permissible elemental concentration shall be reduced 50%. If the soil pH is less than 6.0, the maximum permissible elemental concentration shall be reduced 75%. No more than three metals shall be present at 50% or more of the above values.

Phytotoxic constituent, herbicides, hydrocarbons etc. - Germination and growth of monocots and dicots shall not be restricted more than 10%. Total petroleum hydrocarbons shall not exceed 50 mg/kg dry soil measured per the modified EPA Method No. 8015. Total aromatic volatile organic hydrocarbons (benzene, toluene, xylene and ethylbenzene) shall not exceed 0.5 mg/kg dry soil measured per EPA Methods No. 8020.

2. Soil acceptance criteria for amended soil

The amended soil will be accepted if it complies with the following requirements. The soil will need to be leached if the concentration of boron exceeds 1 part per million, if the alkalinity is substantially over 8.0 or if the salinity exceeds 2.5 milliohm/cm.

Fertility - The range of the essential elemental concentration of amended soil shall be as follows:

	Ammonium Bicarbonate/DTPA Extraction parts per million (mg/kilogram dry weight basis
phosphorus	10 - 40
potassium	100 - 220
iron	5 - 35
manganese	0.6- 6
zinc	1 - 8
copper	0.3 - 5
boron	0.2 - 1
magnesium	50 - 150
sodium	0 - 100
sulfur	25 - 500
molybdenum	0.1 - 2

Soil Organic Matter Content – About 3% to 5% - sufficient soil organic matter shall be present to impart good physical soil properties but not be excessive to cause toxicity or cause excessive reduction in the volume of soil due to decomposition of organic matter.

2.3 SOIL AMENDMENT MATERIALS AND PRODUCTS

A. Organic Compost / Humus Materials: Organic matter or material of a general humus nature capable of sustaining the growth of plants, with no “foreign” matter (i.e. glass, plastic, etc.) or material toxic to plant growth. It shall be free of stones, lumps or similar objects larger than two inches in greatest diameter, roots or brush. It shall be weed free. Composts that have been derived from organic wastes that meet the following requirements and are approved by the project Soil Scientist are acceptable compost / Humus sources.

1. Humus material shall have an acid-soluble ash content of no less than 6% and no more than 20%.
2. The pH of the material shall be between 6 and 7.5.
3. The salt content shall be less than 10 milliohm/cm @ 25° C. on a saturated paste extract.
4. Boron content of the saturated extract shall be less than 1.0 parts per million.
5. Silicon content (acid-insoluble ash) shall be less than 50%.
6. Calcium carbonate shall not be present if to be applied on alkaline soils.
7. Types of acceptable products are composts, manures, mushroom composts, straw, alfalfa, peat mosses etc. low in salts, low in heavy metals, free from weed seeds, free of pathogens and other deleterious materials.
8. Composted wood products are conditionally acceptable [stable humus must be present]. Wood based products are not acceptable which are based on red wood or cedar.
9. Sludge-based materials are not acceptable.
10. Carbon:nitrogen ratio is less than 25:1.
11. The compost shall be aerobic without malodorous presence of decomposition products.
12. The maximum particle size shall be 0.5 inch, 80% or more shall pass a No. 4 screen for soil amending.

13. Maximum total permissible pollutant concentrations in amendment in parts per million on a dry weight basis:

arsenic	20
copper	150
selenium	50
cadmium	15
lead	200
silver	10
chromium	300
mercury	10
vanadium	500
cobalt	50
molybdenum	60
zinc	300
nickel	100

Higher amounts of salinity or boron may be present if the soils are to be pre-leached to reduce the excess or if the plant species will tolerate the salinity and/or boron.

B. Acceptance of amended soil

1. Take one sample per 50 cubic yards. After he has perfected his methods, the frequency can be less. Separate batches of organic amendments need to be tested and accepted.

2.4 PLANTING SOIL MIXES

A. AMENDED PLANTING SOIL MIX: Provide the following amendments of approved Harvested Soil or approved Imported Harvested Soil for planting soil. Percentages of components, unless otherwise noted, will be established upon completion of individual tests results for components of the various mixes.

1. Soil Base Material (On-site Harvested Soil or Imported Topsoil)

2. Uniformly incorporate amendments ingredients by tilling or by shovel. Organic Compost / Humus Matter shall be maintained moist, not wet, during mixing.

a. Mixing of Amendments: Add Organic Compost / Humus Matter and other soil amendments as specified by soil testing to Soil Base Material in proportions as specified and as confirmed by testing. Other amendments shall not be added unless approved to extent and quantity by Landscape Architect or Soil Scientist and additional tests have been conducted to verify type and quantity of amendment is acceptable.

3 Preliminary recommendations for bid purposes only. The final recommendations are subject to change.

a. Homogeneously blend the following materials into clean excavated soil. Remove debris, rocks and foreign material. Remove clods, rock and gravel larger than 1 inch in diameter. Excessive gravel should not be present. Rates are per cubic yard:

Ammonium sulfate (21-0-0) – 1/4 pound
Potassium sulfate (0-0-50) – 1/3 pound
Triple superphosphate (0-45-0) – 1/4 pound
Gypsum – 1 pound

Organic amendment – 15% by volume

.B. Tri-C Bioswale SOILutions: Mix Proportions

1. 90% Sand, 10% Reed Sedge Peat Moss, 8 lbs. Tri-C Humate, 4 lbs. Tri-C Endo 120.
   a. Coarse Sand: Washed concrete sand per ASTM C33 > Encourages Filtration
   b. Reed Sedge Peat Moss: Provides organic matter for plant growth
   c. Tri C Humate: A concentrated organic soil conditioner that provides organic matter; carbon; humic acids; beneficial bacteria; minerals; performs in extremely challenging soil conditions and safe in environmentally sensitive conditions.
   d. Tri C Endo 120: Mycorrhizal fungi form that foundation of ecosystem function. Increased root systems provide plant survivability, improved soil structure.

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PART 3 - EXECUTION

3.1 SOIL SURVEY

A. Contractor shall review locations for soil samples with Landscape Architect for approval prior to commencing potholing procedure. Contractor shall pothole **four** hole**s** per 1/2 acre. Contractor shall take individual soil samples from the top 2 feet, between 2 and 4 feet and between 4 feet and the depth of the excavation at each pothole. Contractor shall mark each sample by location and depth. Contractor shall send one pound of each sample by zone and depth to the laboratory for testing and evaluation. Contractor shall take Soil Samples from locations identified by Landscape Architect and Soil Scientist. Soil Samples shall be taken at least 14 days in advance of commencing earth moving and grading operations. Contractor shall allow sufficient time for performance of Soil Testing and Test Results which will identify areas of suitable soil for Soil Harvesting, Stockpiling and Reuse as Planting Topsoil.

3.2 SOIL HARVESTING

A. Harvest suitable soil as determined by the soil survey results. Soil harvesting needs to selective and limited to the better soil. The target soil is darker in color, is less dusty, is more friable and has lower compaction, probably contains roots, contains less rock and gravel, contains less debris, etc. Preliminary identification of Suitable Soil for Soil Harvesting will be made based on Soil Survey results.

B. Contractor shall Stockpile the apparently suitable soil based on evaluation by Soil Scientist of Initial soil testing. Place unsuitable soil in a separate location. Mark the apparently suitable soil and warn other trades to not place trash on the stockpile.

C. Generally, the stockpiles should not be higher than 6 feet. The stockpiles should be worked from the side – equipment should not be operated on the amended soil surface, especially after amending. Moist soils are more sensitive to damage than dry soil. Dry soil can be stockpiled higher, particularly if they are low in soil organic matter.

D. Take one sample per 50 cubic yard with a minimum of 10 samples from the suitable stockpile for additional soil testing by Soil Scientist to determine its properties and recommendations for amendments.

3.3 SOIL AMENDING

A. Based on Soil Scientist soil amendment recommendations the Contractor shall submit proposed method to amend the soil for acceptance. The Contractor shall submit one pound samples of proposed soil amendments to Soil Scientist for acceptance. Each new batch of soil amendment needs to be submitted for conformance to the initial approved

sample. Amend the stockpiled harvested soil or in-situ harvested soil as approved by Soil Scientist.

B. Soil for planting shall be free of rocks over 1/2 inch in diameter and free of foreign debris, refuse, plants or roots, clods, weeds, sticks, solvents, petroleum products, concrete, base rock, or other deleterious or undesirable and unwanted materials. Soil shall be free of soil-borne diseases and capable of sustaining healthy plant life. Materials not meeting such requirements shall be removed, including all temporary road bases or pavement already in place.

3.4 SOIL AMENDING DEPTHS

A. Unless otherwise specified in the drawings or directed by Landscape Architect and Soil Scientist the depth of amended soil shall be as follows:

1. Shrub and Herbaceous Plantings
Amend to 18-inches depth for an area equal to future mature shrub drip line or for shared or mass planting areas amend entire planting area.

2. Turf Grass Areas
Amend to 9-inches depth entire planting area.

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3.5 BLENDING

A. Material shall be blended prior to delivery by a twin screw pug mill or equal. This method ensures thorough blending of all materials. Bucket blending is NOT equal.

3.6 ENHANCED SOIL DRAINAGE

A. General Site Areas

1. Remove the existing surface vegetation for shrubs and weeds taller than 6 inches.

2. Soil Conditioning:

a.) Verify that there is at least 9 inches of suitable soil in all areas. Add suitable import soil as needed to provide a minimum of 9 inches of suitable soil.

b.) Add fertilizers if required to provide for optimum fertility in the top 9 inches. Add soil organic soil organic amended to provide between 3% and 7% soil organic matter in the top 9 inches.

c.) When the soil is partially dry and is workable, disc the soil with a harrow disk at least 9 inches deep. Reduce the clods to less than 1 inch in diameter. Uniformly blend the fertilizers if used and soil organic matter if used into the soil.

d.) Test the soil for acceptance.

e.) Roll the soil with a turf roller to consolidate the soil.

f.) Irrigate the site for at least 2 weeks. Spray weeds with Roundup Pro. Repeat one more time.

g.) Remove surface rocks, gravel, and debris if present.

h.) Scratch the soil about ½ deep to prevent a sharp soil interface.

i.) Lay sod and roll for firm contact with soil.

j.) Irrigate. Provide for sufficient soil moisture but not excessive water.

3.7 PREPARATION OF SUBGRADE:

A. Examine site and verify that conditions are suitable to receive work and that no defects or errors are present which would cause defective installation of products or cause latent defects in workmanship and function.

B. Verify that the locations of utilities, structures and other underground items have been clearly marked and protected.

C. Use every possible precaution to prevent damage to existing conditions to remain such as structures, utilities, plant material to remain, walks on or adjacent to the Project Work.

3.8 PLACEMENT OF STOCKPILED OR IMPORTED TOPSOIL SOIL MIXES:

A. Install Planting Soil in 6 inch lifts and compact each lift by hand tamping to firm the soil and to prevent subsidence but not to exceed 80% compaction.

B. Excavate and compact the proposed subgrade to depths, slopes and widths as shown on the drawings. Maintain all required angles of repose of the adjacent materials as shown on the drawings. Do not over excavate compacted subgrades of adjacent pavement or structures.

C. Confirm that the subgrade is at the proper elevation and compacted as required. Subgrade elevations shall slope parallel to the finished grade and or toward the subsurface drain lines as shown on the drawings.

D. Clear the excavation of all construction debris, trash, rubble and any foreign material. In the event that fuels, oils, concrete washout silts or other material harmful to plants have been spilled into the subgrade material, excavate the soil sufficiently to remove the harmful material. Fill any over excavation with approved fill and compact to the required subgrade compaction.

E. Do not proceed with the installation of Planting Soil until all utility work in the area has been installed. All subsurface drainage systems shall be operational prior to installation of Structural Soils. Test drainage structures and verify working condition. Verify acceptable condition to protection boards and other waterproofing components and notify Construction Manager of any damage.

F. Protect adjacent walls, walks, pavers and utilities from damage or staining by the soil. Use 1/2" plywood and or plastic sheeting as directed to cover existing concrete, metal and masonry work and other items as directed during the progress of the work.

1. Clean up all trash and any soil or dirt spilled on any paved surface at the end of each working day.

2. Any damage to the paving or architectural work caused by the soils installation Contractor shall be repaired by the Contractor at the Contractor's expense.

G. Maintain all silt and sediment control devices required by applicable regulations. Provide adequate methods to assure that trucks and other equipment do not track soil from the site onto adjacent property and the public right of way.

H. Before proceeding with Work, notify Owner, Owner's Park Developer, Construction Manager and Landscape Architect in writing of unsuitable conditions and conflicts.

3.9 FINE GRADING

A. After the initial placement and rough grading of the soil but prior to the start of fine grading, the Contractor shall request review of the rough grading by the Landscape Architect. The Contractor shall set sufficient grade stakes for checking the finished grades.

B. Adjust the finish grades to meet field conditions as directed.

1. Provide smooth transitions between slopes of different gradients and direction.

2. Fill all dips and remove any bumps in the overall plane of the slope.

a. The tolerance for dips and bumps in Planting Soil areas shall be a 1/2-inch deviation from the plane in 10'.

3. All fine grading shall be inspected and approved by the Landscape Architect prior to the installation of other items to be placed on the Planting Soil.

3.10 PLACEMENT OF MULCH

A. Place mulch as indicated on the drawings.

3.11 ACCEPTANCE STANDARDS

A. The Landscape Architect will inspect the work upon the request of the Contractor. Request for inspection shall be received by the Construction Manager and Landscape Architect at least 10 days before the anticipated date of inspection.

3.12 CLEAN-UP

A. Upon completion of operations, clean areas within the contract limits. Remove all excess fills, soils and mix stockpiles and legally dispose of all waste materials, trash and debris. Remove all tools and equipment and provide a clean, clear site. Sweep, do not wash, all paving and other exposed surfaces of dirt and mud until the paving has been installed. Do no washing until finished materials are in place.

3.13 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Disposal: Remove surplus soil and waste material, including excess subsoil, unsuitable soil. Trash, and debris, and legally dispose of it off of the Owners property.

END OF SECTION 329113