SECTION 02923

LANDSCAPE GRADING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Topsoil for finishing landscaping.

B. Place, level, and compact topsoil.

1.02 SAMPLES

A. Submit fill material samples under provisions of Section 01300.

B. Submit a minimum of one-10 lb random composite sample of imported fill for every one hundred cubic yards of fill to testing laboratory, in clean containers.

C. Disregard sample submission if recent test results are available for type of fill.

1.03 PROTECTION

A. Protect landscaping and other features remaining as final work.

B. Protect existing structures, fences, roads, sidewalks, paving, and curbs.

PART 2 PRODUCTS

2.01 MATERIALS

A. Imported Fill: Agricultural soil with typical texture for locality, capable of sustaining vigorous plant growth, taken from drained site, free of subsoil, clay or impurities, caliche, plants, weeds and roots, with minimum ph of 5.4 and maximum of 8.0. The fill material shall have salts less than two (2) MMHOS/CM, Boron less than 1 (one) PPM, and percolation rate greater than 1/4" (one-quarter inch) per hour.

B. Nutri-mulch: Shredded, loose; free of lumps, roots, inorganic material or acidic materials.

PART 3 EXECUTION

3.01 INSPECTION

A. Verify site conditions and note irregularities affecting work of this Section.

B. Beginning work of this Section means acceptance of existing conditions.

3.02 SUBSOIL PREPARATION

A. Eliminate uneven areas and low spots. Remove debris, roots, branches, stones, in excess of 3/4 inch in size. Remove subsoil contaminated with petroleum products.

B. Scarify to a depth of 3 inches where equipment used for hauling and spreading topsoil has compacted subsoil.

3.03 PLACING TOPSOIL

A. Use fill in relatively dry state. Place during dry weather.

B. Remove stone, roots, grass, weeds, debris, and foreign material while spreading.

C. Remove surplus subsoil and soil from site.

D. Leave stockpile area and site clean and raked, ready to receive landscaping.

3.04 TOLERANCES

A. Top of fill: Plus or minus 1/2 inch from structure, sidewalks, curbs, etc. Subject to the Architect approval.

3.05 SCHEDULE

A. Compacted topsoil thickness at the following areas:
1. Trees and shrubs: as per details

END OF SECTION

SECTION 02950

TREES, PLANTS, AND GROUNDCOVER

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Preparation of subsoil and topsoil.

B. Topsoil bedding

C. Trees, plants, and ground cover.

D. Mulch and fertilizer.

E. Maintenance.

1.02 REFERENCES

A. ANSI Z60.1 - Nursery Stock.

B. FS O-F-241 - Fertilizers, Mixed, Commercial.

C. "Arizona Nursery Association Recommended Tree Specifications."

D. "USA Standard for Nursery Stock."

1.03 DEFINITIONS

A. Weeds: Includes Dandelion, Jimsonweed, Quackgrass, Horsetail, Morning Glory, Rush Grass, Mustard, Lambsquarter, Chickweed, Cress, Crabgrass, Canadian Thistle, Nutgrass, Poison Oak, Blackberry, Tansy Ragwort, Bermuda Grass, Johnson Grass, Poison Ivy, Nut Sedge, Nimble Will, Bindweed, Bent Grass, Wild Garlic, Perennial Sorrel, and Brome Grass.

B. Plants: Living trees, plants, and ground cover specified in this Section, and described in ANSI Z60.1.

1.04 OPERATION AND MAINTENANCE DATA

A. Submit instructions for continuing Owner maintenance under provisions of Sections 01700.

1.05 QUALITY ASSURANCE

A. Nursery: Company specializing in growing and cultivating the plants specified in this Section with minimum three years documented experience.

B. Installer: Nevada Licensed Contractor specializing in installing and planting the plants specified in this section.

1.06 REGULATORY REQUIREMENTS

A. Comply with regulatory requirements for fertilizer and herbicide composition.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.

B. Protect plants until planted.

C. Deliver plant life materials immediately prior to placement. Keep plants moist.

1.08 ENVIRONMENTAL REQUIREMENTS

A. Do not install plant life when ambient temperatures may drop to below 35 degrees F or above 105 degrees F.

B. Do not install plants when wind velocity exceeds 30 mph.

1.09 SEQUENCING AND SCHEDULING

A. Coordinate the work of this Section with installation of underground irrigation system, utilities, piping and watering heads.

1.10 WARRANTY

A. Provide a warranty on work of this Section for a ninety day minimum, (90 day) period. Commence warranty on date identified in the Certificate of Substantial Completion.

B. Warranty: Include coverage of plants from death or unhealthy conditions.

C. Replacements: Plants of same size and species as specified, with a new warranty commencing on date of replacement.

1.11 MAINTENANCE SERVICE

A. Maintain plant life immediately after placement until plants are well established and exhibit a vigorous growing condition. Continue maintenance until termination of warranty period.

B. Maintenance to include:
1. Cultivation and weeding plant beds and tree pits.
2. Application of herbicides for weed control in accordance with manufacturer's instructions. Remedy damage resulting from use of herbicides.
3. Application of pesticides in accordance with manufacturer's instructions. Remedy damage from use of pesticides.
4. Irrigating sufficient to saturate root system.
5. Trimming and pruning, including removal of clippings and dead or broken branches, and treatment of pruned areas or other wounds.
6. Disease control.
7. Maintaining wrapping, guys, and stakes. Repair or replace accessories when required.

PART 2 PRODUCTS

2.01 TREES, PLANTS, AND GROUND COVER

A. Trees, Plants, and Ground Cover: Species and size identifiable in plant schedule, grown in climatic conditions similar to those in locality of the Work. At least 10% of all plant varieties to have nursery identification tags attached.

B. Plants to be in compliance with the "Arizona Nursery Association Recommended Tree Specification" (1989) standards. If plant is not on that list then it will be in compliance with the "USA Standard for Nursery Stock" current edition.

2.02 SOIL AMENDMENT MATERIALS

A. Agriform preplant 21 gram: One per 1 gallon plants, three per 5 gallon plants, five per 15 gallon plants, 10 per 24" box, 15 per 36" box and 10 per palm installed as per manufacturer's recommendation.

B. Nutri-mulch: Shredded, loose; free of lumps, roots, inorganic material or acidic materials.

C. Water: Clean, fresh and free of substances or matter which could inhibit vigorous growth of plants.

2.03 MULCH MATERIALS

A. See plans for size and type.

2.04 ACCESSORIES

A. Tree Stakes: All stakes are to be Lodge pole pine with 10 inch tapered driving point and chamfered top; treated with copper napthanate or pentachlorophenol to heartwood; green in color, 2 inches in diameter x 8 feet in length for 15 gallon trees and 2 inches in diameter x 10 feet in length for 24" box trees or greater. If tree is staked, 24" of stake is to be driven into soil. Staking shall be by industry standards.

B. All standard tree staking to use two"GCS Treestraps", 2 straps per tree and to be installed according to manufacturer's specifications, with the exception of using four 1-1/4", 10 gauge zinc plated screws per brace instead of nails for final attatchment. Nursery tape or rope will not be considered an adequate substitute. Source of supply: GCS, Inc. 230 Center St., North Wales, PA 19454. 1-800-360-3584

C. Multi-trunk trees to have three lodge pole pine stakes used in a 14" triangular configuration with three Treestraps. See multi-trunk detailing.

D. Pre-emergent XL 2G or Snapshot granular base. Rate per manufacturer's specifications. All pre-emergent applictions are to be water activated within 2 hours after the applications.

2.05 SOURCE QUALITY CONTROL

A. Provide inspection for verifying acceptability of plants prior to planting.

2.06 TESTS

A. Provide verification of imported soil under provisions of Section 02923.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that prepared subsoil and planters are ready to receive work of this section.

B. Saturate soil with water to test drainage.

C. Verify that required underground utilities are available, in proper location and ready for use.

D. Beginning of installation means acceptance of existing conditions.

3.02 PREPARATION OF SUBSOIL

A. Prepare subsoil to eliminate uneven areas. Maintain profiles and contours. Make changes in grade gradual. Blend slopes into level areas.

B. Remove foreign materials, weeds, and undesirable plants and their roots. Remove contaminated subsoil.

C. Dig pits and beds as per planting details.

3.03 PLANTING

A. Place plants for best appearance for review and final orientation by Landscape Architect.

B. Set plants vertical.

C. Remove all root containers. All cans to be cut with can cutter on 2 sides to remove plant.

D. Set plants in pits of beds, partly filled with prepared soil mixture. Remove burlap, ropes, and wires from the root ball. Scarify root ball before planting.

E. Saturate soil with water when the pit or bed is half full of soil mix and again when full. Install agriform tablets when hole is 2/3 full.

F. Backfill mix to consist of 1/3 Nutri Mulch and 2/3 top soil. Add to and mix into this, soil sulfur according to following rate per plant container size:

1 gallon = 1/4 cup
5 gallon = 1 cup
15 gallon = 2 cups
24" box = 3 cups
36" box = 4 cups

3.04 INSTALLATION OF ACCESSORIES

A. A non-selective pre-emergent appropriate for the season shall be applied to all shrub beds as per manufacturer's recommendations. Avoid application to any areas to be seeded. Acceptable products are: Ronstar, Devinol WP40 and Treflan.

B. Installation: Decomposed granite or crushed rock. Granite mulch shall not be placed until the required water distribution systems and planting operations have been completed within the area.

C. The surfaces upon which decomposed granite or crushed rock mulch is to placed shall be graded and compacted to a density of 85 to 90 percent of the maximum density. Areas which shall not be compacted will be designated by the Landscape Architect.

D. The areas on which mulch is to placed shall be reasonably smooth and firm and all deleterious material. Rocks larger than one and one quarter inches in diameter shall be removed and disposed of by the contractor.

E. Decomposed granite or crushed rock mulch shall be evenly distributed over the designated areas. The depth of the decomposed granite or granite mulch shall be at least the minimum depth shown on the project plans. All areas to receive mulch shall be as approved by the Landscape Architect prior to placement of the mulch.

F. The contractor shall apply two applications of an approved pre-emergent herbicide on all mulch areas, one before and one following placement of the mulch.

G. The contractor shall notify the Landscape Architect and obtain prior approval for the use of any herbicides for weed eradication. He shall keep a record of all applications; and the date and location of such applications. A copy of this record shall be submitted to the Landscape Architect.

H. After placing, spreading and grading the mulch, the contractor shall water settle the total thickness of the mulch, removing the fine material from the surface.

I. Any erosion which occurs within the mulch areas shall be corrected by the contractor prior to final acceptance.

3.05 FIELD QUALITY CONTROL

A. Plants will be rejected when ball of earth surrounding roots has been disturbed or damaged prior to or during planting.

3.06 SCHEDULE - PLANT LIST

A. (See Planting Plan).

END OF SECTION

SECTION 02811

LANDSCAPE IRRIGATION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Pipe and fittings, valves, outlets, emitters and accessories.

B. Connection to utilities.

C. Control system.

1.02 REFERENCES

A. ANSI/ASTM D2564 - Solvent Cement for Poly Vinyl Chloride (PVC) Plastic Pipe and Fittings.

B. ASTM D1785 for schedule 40 - Poly Vinyl Chloride (PVC) Plastic Pipe (SDR-PR).

1.03 SYSTEM DESCRIPTION

A. Electric solenoid controlled underground irrigation system.

1.04 SUBMITTALS

A. Submit under provisions of Section 01300.

B. Manufacturer's Installation Instructions: Include Controller.

1.05 PROJECT RECORD DOCUMENTS

A. Submit under provisions of Section 01700.

B. Accurately record on reproducible drawings actual locations of piping system, back flow preventer, controller, wiring, sleeves, gate valves, quick couplers, and automatic control valves.

1.06 OPERATION AND MAINTENANCE DATA

A. Submit under provisions of Section 01700.

B. Provide instructions for operation and maintenance of system, controllers and manufacturer's parts catalog.

C. Provide schedule indicating length of time each valve is required to be open to provide a adequate amount of water for all four seasons.

1.07 REGULATORY REQUIREMENTS

A. Conform to applicable code for piping and component requirements.

B. Provide certificate of compliance from authority having jurisdiction indicating approval of products in system.

1.08 FIELD MEASUREMENTS

A. Verify that field measurements are as shown on Drawings.

1.09 EXTRA MATERIALS

A. Provide the following components under the provisions of section 01700.
1. Two keys for each controller.
2. Four emitters of each flow rate.

PART 2 PRODUCTS

2.01 MATERIALS

A. Pipe: PVC schedule 40 pressure rated upstream from controls, to downstream lateral; solvent-weld sockets.

B. Fittings: Type and style of connection to match pipe.

C. Solvent Cement: ANSI/ASTM D2564 for PVC pipe and fittings.

D. Sleeve Material: Schedule 40 PVC sized as per plan.

2.02 VALVES

A. Ball Valves: Milwaukee or Nibco Brass construction, non-rising stem, inside screw with threaded ends.

B. Valve Box and Cover: Ametek, Carson or approved equal.

C. Y-Strainer with 200 mesh screen: Attached downstream to valve on all lines with drip emitters (see plan).

D. Pressure regulator attached down stream from valve on all lines with drip emitters (see plan).

2.03 AUTOMATIC CONTROLS

A. Independent Station Controller: As indicated on plan.

B. Controller Housing: Weatherproof, watertight, with lockable access door.

C. Wire: Color coded 14 gauge or larger single conductor solid copper with a minimum 4/64 inch insulative covering of ICC-100 compound, UL approved for direct burial.

PART 3 EXECUTION

3.01 INSTALLERS

A. Nevada licensed irrigation contractor.

3.02 EXAMINATION

A. Verify that field conditions are acceptable and are ready to receive work.

B. Verify location of existing utilities.

C. Verify that required utilities are available, in proper location and ready for use.

D. Beginning of installation means installer accepts existing conditions.

3.03 PREPARATION

A. Piping layout indicated is diagrammatic only. Route piping to avoid plants and structures.

B. Layout and stake locations of system components.

C. Review layout requirements with other affected work. Coordinate locations of sleeves under paving to accommodate system.

3.04 TRENCHING

A. Minimum Trench Width: 8 inches.

B. Minimum Trench Depth: 18 inches.

C. Trench to accommodate grade changes.

D. Maintain trenches free of debris, material, or obstructions that may damage pipe.

E. See detail for piping and wiring depth.

3.05 INSTALLATION

A. Install pipe, valves, controls, and outlets in accordance with manufacturer's instructions.

B. Connect to water and electrical service.

C. Set emitter heads at finish grade elevations, prior to application of groundcover.

D. Provide for thermal movement of components in system.

E. Use threaded nipples for risers to each outlet to facilitate easy replacement.

F. Install controller. Provide 10 inch expansion coil at each valve to which controls are connected, and at 100 ft. intervals. Bury wire beside pipe. Any field splices must be approved, be placed in a circular valve box and connected with snap-tite connector as per manufacturers recommendations.

G. After piping is installed but before backfilling commences, open valves and flush system with full head of water. Architect to be present for flushing of system.

3.06 FIELD QUALITY CONTROL

A. Prior to backfilling, test system for leakage at main piping to maintain 150 psi pressure for one hour. System acceptable if no leakage or loss of pressure occurs during test period, according to AWWA C-600.

3.07 BACKFILLING

A. Backfill with sand around mainline as shown on details.

B. Backfill trench in 6" lifts with debris free and rock-free earth, and compact to subgrade elevation as specified . Protect piping from displacement.

3.08 ADJUSTING

A. Adjust control system to achieve time cycles required.

3.09 DEMONSTRATION

A. Instruct Owner's personnel in operation and maintenance of system, including adjusting of sprinkler heads. Use operation and maintenance material as basis for demonstration.

3.10 WARRANTY

A. Contractor will guarantee entire system for a 90 (ninety) day period after substantial completion of construction. He will be on call to replace and/or repair any faulty equipment within 24 hours after notification by the Owner.

END OF SECTION

SECTION 01700
CONTRACT CLOSEOUT

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Closeout procedures.

B. Final cleaning.

C. Adjusting.

D. Project record documents.

E. Warranties.

F. Spare parts and maintenance materials.

1.02 CLOSEOUT PROCEDURES

A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete ins complete in accordance with Contract Document and ready for Owner's review.

B. Provide submittals to Owner that are required by governing or other authorities.

1.03 FINAL CLEANING

A. Execute final cleaning prior to substantial completion date.

B. Clean site; sweep paved areas, rake clean landscaped surfaces.

C. Remove waste and surplus materials, rubbish, and construction facilities from the site.

1.04 ADJUSTING

A. Adjust operating Products and equipment to ensure smooth and unhindered operation.

1.05 WARRANTIES

A. Provide duplicate copies.

B. Execute and assemble transferable warranty documents from Subcontractors, suppliers, and manufacturers.

C. Provide Table of Contents and assemble in three D ring binder with durable cover.

D. For items of Work delayed beyond date of Substantial Completion, provide updated submittal within 10 days after acceptance, listing date of acceptance as start of warranty period.

1.06 SPARE PARTS AND MAINTENANCE MATERIALS

A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual specification sections.

B. Deliver to and place in location on the property as directed by Owner.

PART 2 PRODUCTS -- Not Used

PART 3 EXECUTION -- Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 PAYMENT

A. No separate payment will be made for any work indicated in this section.

END OF SECTION

SECTION 01300
SUBMITTALS

PART 1 GENERAL

1.01 PROPOSED PRODUCTS LIST

A. Submit list of major products proposed for use, with Specification Section number, name of manufacturer, trade name, and model number of each product.

B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.02 SHOP DRAWINGS

A. Submit in the form of one reproducible transparency and three opaque reproductions. Maximum sheet size shall be 30 X 42 inches. Note scale on each drawing.

B. Shop Drawings: Submit for review.

C. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

1.03 PRODUCT DATA

A. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information unique to this Project.

B. Indicate Product utility and electrical characteristics, and location of utility outlets for service for functional equipment and appliances.

1.04 SAMPLES

A. Submit samples that match the functional and aesthetic characteristics of the Project, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.

B. Include identification on each sample, with full Project information.

C. Submit the number of samples specified in individual specification sections.

1.05 MANUFACTURER INSTALLATION INSTRUCTIONS

A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, to Owner in quantities specified for Product Data.

B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.06 MANUFACTURER CERTIFICATES

A. When specified in individual specification sections, submit certification by manufacturer to Owner, in quantities specified for Product Data.

B. Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

C. Certificates may be recent or previous test results on material or Product, but must be acceptable to Owner.

PART 2 PRODUCTS -- Not Used

PART 3 EXECUTION -- Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 PAYMENT

A. No separate payment will be made for any work indicated in this section.

END OF SECTION

JWZUNINO&ASSOCIATES
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HKS

Valley Hospital Medical Center

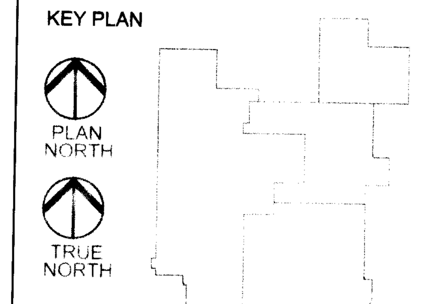
VALLEY HOSPITAL MEDICAL CENTER
LAS VEGAS, NEVADA

SURGERY EXPANSION

REGISTERED LANDSCAPE ARCHITECT
CHRISTOPHER LANGHAM
733
11/5/07
Expires: 6/30/08
STATE OF NEVADA

DATE:

KEY PLAN



REVISION

HKS PROJECT NUMBER
07141.005

DATE
9 OCTOBER 2007

ISSUE
CONSTRUCTION DOCUMENTS

#25071

SHEET TITLE
LANDSCAPE SPECIFICATIONS

SHEET NO.
L4.01 OF 21

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