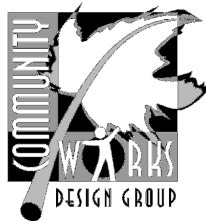


PROJECT
SPECIFICATIONS

FOR

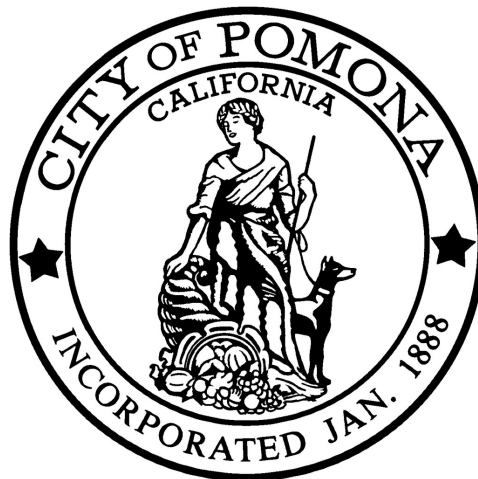
GANESHA PARK – TREE GROVE

Prepared by



COMMUNITY WORKS DESIGN GROUP
Landscape Architecture - Park Planning
4649 Brockton Avenue
Riverside, California 92506

For



City of Pomona
PUBLIC WORKS DEPARTMENT
505 S Garey Avenue
Pomona, CA 91766

GANESHA PARK – TREE GROVE
CITY OF POMONA
TECHNICAL SPECIFICATIONS

TABLE OF CONTENTS:

DIVISION 1	GENERAL REQUIREMENTS
01000	MOBILIZATION
01300	SUBMITTALS
DIVISION 2	SITE CONSTRUCTION
02110	SITE CLEAR & GRUB
02441	IRRIGATION
02445	TEMPORARY CHAIN LINK FENCING
02480	PLANTING

SECTION 01000 - MOBILIZATION

PART 1 – GENERAL

1.01 RELATED DOCUMENTS:

The provisions of *The “Greenbook” Standard Specifications for Public Works Construction* shall apply except as modified herein.

1.02 SCOPE OF WORK:

The Work of this Section shall consist of furnishing all labor, materials, equipment, appliances and services necessary for the execution and completion of all Mobilization Work as shown on the Plans and as described in the Specifications including, but not necessarily limited to, the following:

- Preparatory operations including, but not limited to those efforts necessary for the movement of personnel, equipment, supplies, and incidentals to the Work site;
- All other operations which must be performed or costs incurred prior to beginning Work on the site;
- Provision and installation of Construction Fence per Technical Specification Section **02445 Temporary Chainlink Fence**;
- Provision of temporary utilities;
- Secure all required permits;
- Obtain temporary construction water & electrical service
- Submittals per Special Provisions Section **2-5.3.3 Shop Drawings and Submittals** and Technical Specifications Section **01300 Submittals**.

1.03 SUBMITTALS:

As a part of mobilization, all submittals as specified in various individual Sections of the Specifications shall be submitted for approval by the City in the format specified in Technical Specifications Section **01300 Submittals** and within the time-frames specified in Special Provisions Section **2-5.3.3 Shop Drawings and Submittals**. Submittals shall include all Materials Lists, Catalog Cuts, Shop Drawings, material and color samples, and Construction Schedule all as specified.

PART 2 - MATERIALS

2.01 TEMPORARY UTILITIES:

The permanent potable domestic water meter is already in place and available for use on the Project. Contractor shall furnish temporary water (if need exceeds safe rate of flow through existing water meter), and power complete with connecting piping, wiring, lamps, meters and similar equipment as required for the Work. Install, maintain, and remove temporary lines upon completion of the Work. All expenses in connection with temporary services and facilities shall be paid for by Contractor.

PART 3 – EXECUTION

3.01 GENERAL:

- A. Payment: Payment for mobilization will be at the lump sum price bid for mobilization. Payment shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing

all the Mobilization and De-mobilization Work as herein specified. The 10% retention shall apply to all Mobilization Work.

3.02 CLEAN-UP:

Contractor shall provide trash receptacles for collecting debris, shall remove debris from the job site at regular intervals not less than weekly and shall dispose of same in a legal manner.

END OF SECTION

SECTION 01300 - SUBMITTALS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

The provisions of the *The "Greenbook" Standard Specifications for Public Works Construction* shall apply except as modified herein.

1.02 SCOPE OF WORK:

The Work of this Section shall consist of furnishing all labor, materials, equipment, appliances and services necessary for the execution and completion of all Submittals Work as shown on the Plans and as described in the Specifications including, but not necessarily limited to, the following:

- Preparation of Submittals Schedule;
- Submittals Planning;
- Submittals Preparation, Distribution and Transmittal, to include all of the following:
 - Materials Lists;
 - Samples;
 - Record Drawings;
 - Turn-over Items;
- Submittals Schedule updating and distribution;

1.03 RELATED WORK SPECIFIED ELSEWHERE:

Shop Drawings and Submittals
Construction Schedule

Special Provisions Section 2-5.3.3
Special Provisions Section 6-1.1

1.04 SUBMITTAL PLANNING:

- A. Processing Lead Time: Allow sufficient review time so that installation will not be delayed as a result of the time required to process submittals, including time for resubmittals.
1. Allow two (2) weeks for initial review. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. The City representative will promptly advise Contractor when a submittal being processed must be delayed for coordination.
 2. If a resubmittal is necessary due to corrections or revisions, process the resubmittal in the same manner as the initial submittal.
 3. Allow two (2) weeks for processing each resubmittal.
 4. No extension of Contract Time will be authorized because of failure to transmit submittals to the City representative sufficiently in advance of the Work to provide the two week processing time specified.

B. Coordination and Completeness:

1. Contractor shall coordinate preparation and processing of submittals with the performance of the related Work. Transmit each submittal allowing sufficient lead time to obtain appropriate reviews and approvals and to avoid delays in the related Work.
2. Coordinate the submittal date for each submittal with the lead time needed for fabrication, purchasing, testing, delivery, review of other related submittals, and related Work that require sequential processing/completion.
3. Coordinate the transmittal dates for each different type of submittal so processing will not be delayed. Ensure concurrent transmittal of submittals for related portions of the Work that need concurrent review to allow the PA to verify that a coordinated work effort is being provided. City and PA each reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
4. Contractor is responsible to verify completeness of all submittals. Incomplete submittals will be rejected.

1.05 SUBMITTALS SCHEDULE:

- A. Concurrently with the development of Contractor's Construction Schedule (per Special Provisions Section 6-1.1 CONSTRUCTION SCHEDULE), prepare a complete "Submittals Schedule" for all submittals. Submit the Submittals Schedule together with the Construction Schedule at the Pre-Construction meeting.
 1. Coordinate the Submittals Schedule with all subcontractors, with the schedule of values, with the Materials Lists and with the Construction Schedule.
 2. Itemize items on the Submittals Schedule in the chronological sequence planned for submission; include all submittals required by the Contract Documents. Provide the following information:
 - a) Scheduled date for the initial submittal for each item.
 - b) Related Specification Section number.
 - c) Submittal category (i.e. Product Data, Samples, Record Documents, Shop Drawing, etc.).
 - d) Name of subcontractor or supplier as applicable.
 - e) Description of the portion of the Work covered by the submittal.
 - f) Record successive date(s) of any resubmittal(s).
 - g) Record date of City approval of each submittal.
- B. Submittals Schedule Updating: Update the Submittals Schedule after each meeting or activity where revisions have been recognized or made.
- C. Distribution: Following receipt of review comments to the initial Submittals Schedule, on a monthly basis thereafter issue updated copies of the Submittals Schedule. Distribute copies to the Landscape Architect, the City representative, all subcontractors, and all other parties required to comply with scheduled submittal dates. Keep an up to date copy of the Submittals Schedule posted in the Construction Office. Parties may be deleted from the distribution upon completion of all portion(s) of the Work assigned to such parties and such parties are no longer involved in construction activities.

1.06 SUBMITTALS PREPARATION AND TRANSMITTAL:

- A. Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.
1. Provide a space approximately 4" x 5" on the label or beside the title block on Shop Drawings to record Contractor's review and approval markings and the action taken.
 2. Include the following information on the label for processing and recording action taken.
 - a) Project name.
 - b) Date.
 - c) Name and address of PA.
 - d) Name and address of Contractor.
 - e) Name and address of subcontractor (as applicable).
 - f) Name and address of supplier.
 - g) Name of manufacturer.
 - h) Number and title of related Specification Section.
 - i) Drawing number and detail references, as appropriate.
- B. Transmittal: Forward one electronic copy of each submittal appropriately for transmittal and handling. Transmit each submittal from Contractor to the City representative using a transmittal form. Submittals received from sources other than Contractor may be returned without action. If a submittal is rejected, submit one electronic copy of the resubmittal.
1. When transmitting submittals, record relevant information and requests for data on the transmittal form. Include a Contractor's certification that information submitted complies with the Contract Document requirements as a part of each submittal. If the submittal is not in full accordance with the Contract Documents, record specific deviations from the Contract Document requirements, including minor variations and limitations, either on the transmittal form or on a separate attached sheet that is referenced on the form.
 2. Transmittal Form: Use AIA Document G 810, or City approved equal.

1.07 SUBMITTALS PROCESSING AND DISTRIBUTION:

- A. Processing: Upon receipt of the submittals, the City representative will retain one copy and forward an electronic copy to the PA who will retain one, and will return an electronic copy marked with action taken. Electronic copies will be forwarded to the PA who will return an electronic copy with action taken.
1. Except for submittals for record information or similar purposes, where action and return is required or requested the City or Landscape Architect will review each submittal, mark to indicate action taken, and return promptly.
 2. Verification of the submittals compliance with characteristics specified in the Contract Documents is Contractor's responsibility.
 3. Action Stamp: The City or Landscape Architect will stamp each submittal with a uniform, self-explanatory action stamp. The stamp will be appropriately marked, as follows, to indicate the action taken:

- a) "No Exception Taken": When submittals are marked "No Exception Taken," that part of the Work covered by the submittal may proceed.
- b) "Make Corrections Noted": When submittals are marked "Make Corrections Noted," that part of the Work covered by the submittal may proceed provided it complies with the notations and corrections marked on the submittal as well as the requirements of the Contract Documents.
- c) Returned for Resubmittal: Submittals may be returned for resubmittal for various reasons. When a submittal is marked either "Submit Specified Item," "Rejected," or "Revise and Resubmit," Contractor shall not proceed with any part of the Work covered by the submittal, including purchasing, fabrication, delivery, or any other associated activity. Instead, the submittal shall either be revised to comply with the Contract Documents and resubmitted, or a new submittal shall be prepared in accordance with the notations and submitted; resubmit without delay.
- d) Other Action: Where a submittal is primarily for information or record purposes, special processing or other activity, the submittal will be returned, marked "Action Not Required".
- e) Contractor shall repeat the submittal process as specified above for all submittals as necessary to obtain an action mark that will allow the Work to proceed.

B. Distribution: Upon receipt of marked copies of the submittals from the Landscape Architect, the City representative will forward four hard copies or one electronic copy of the marked submittal to the Prime Contractor for further distribution to the Subcontractor(s) and/or Supplier(s).

- 1. Do not proceed with the Work until an appropriately marked copy of the applicable submittal has been received from the City and is in the installer's possession.
- 2. Do not permit use of unmarked copies of submittals in connection with construction.
- 3. Contractor shall not permit submittals marked "Rejected," "Submit Specified Item," or "Revise and Resubmit" to be used at the Project site, or elsewhere where Work is in progress.

1.08 PRODUCT DATA ("CATALOG CUTS"):

A. Submittal: Assemble Product Data submittals into a single submittal package for each construction trade or system (e.g. Plumbing, Electrical Lighting, Concrete, HVAC, etc.). Submittals shall consist of one electronic copy. Product Data submittals shall include all available printed information such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams and performance curves. Where Product Data must be specially prepared because standard printed data is not suitable for use, submit as "Shop Drawings."

- 1. Mark the copy to show applicable choices and options. Where printed Product Data includes information on several products, some of which are not required, mark copies to delete inapplicable information. Product Data submittals, as a minimum, shall include the following information:
 - a) Manufacturer's printed recommendations.
 - b) Compliance with recognized trade association standards.
 - c) Compliance with recognized testing agency standards.

- d) Application of testing agency labels and seals.
 - e) Notation of dimensions verified by field measurement.
 - f) Notation of coordination requirements.
2. Do not submit Product Data until Contractor has confirmed the product's compliance with requirements of the Contract Documents.

1.09 SAMPLES:

- A. General: Submit full-size, fully fabricated Samples cured and finished as specified, in the quantity specified in the respective Technical Specification section, and physically identical with the material or product proposed. Where quantities are not specified in the Technical Specification, submit a minimum of three samples, one will be returned marked with the action taken. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture and pattern.
 1. Mount, display, or package Samples in the manner specified to facilitate review of qualities indicated. Prepare Sample Submittals to match the PA's Sample when available. Include the following:
 - a) Generic description of the Sample.
 - b) Sample source.
 - c) Product name or name of manufacturer.
 - d) Certification of compliance with the specified standards.
 - e) Availability and delivery time.
 2. Submit Samples for review of kind, color, pattern, and texture, for a final check of these characteristics with other elements, and for a comparison of these characteristics between the final submittal and the actual component as delivered and installed. Where variation in color, pattern, texture or other characteristics are inherent in the material or product represented, submit multiple units (not less than 3), that show approximate limits of the variations.
 3. Preliminary submittals: Where Samples are for selection of color, pattern, texture or similar characteristics from a range of standard choices, submit a full set of choices for the material or product. Preliminary submittals will be reviewed and returned with the PA's mark indicating selection and other action.
 4. Maintain appropriately marked sets of Samples, as returned by the City, at the Project site for quality comparisons throughout the course of construction.
- B. Distribution of Samples: If additional sets of samples are needed for distribution to subcontractors, manufacturers, fabricators, suppliers, installers, and others as required for performance of the Work, Contractor shall submit samples in sufficient quantities for such distribution. Do not distribute unmarked copies of sample to others involved in the Work.

1.10 MATERIALS LISTS:

- A. Submittal Requirements: Submitting a catalog number and manufacturer's name as a materials list stating that the items will be furnished to meet the Specifications will not be acceptable. Contractor shall submit a complete materials list for approval by the City representative prior to performing any Work. Catalog data and full descriptive literature must be submitted whenever the use of items

different than those specified is requested. Notarized certificate must be submitted by plastic pipe and fitting manufacturer indicating that material complies with the Project Specifications, unless material has been previously approved and used on other projects by the DISCTRICT.

Material list shall be submitted in a format similar to the following:

<u>Item</u>	<u>Description</u>	<u>Manufacturer</u>	<u>Model No.</u>
1.	Pressure Supply Line	Lasco	Sch. 40
2.	Lawn Head	Rainbird	2400
etc.	etc.	etc.	etc.

1.11 "RECORD" PRINTS:

- A. Changes: Record accurately on one set of blue-line prints all changes in the Work constituting departures from the original Contract Plans. For example, changes in pressure and non-pressure irrigation line locations.
- B. Legibility and Approval: The changes and dimensions shall be recorded in a legible and workmanlike manner to the satisfaction of the City. Prior to final inspection of the Work, submit "record" prints to the City representative for approval.
- C. Reference Points: Dimension from two permanent points of reference (buildings, monuments, sidewalks, curbs, pavement, etc.). Data to be shown on "record" prints shall be recorded day-to-day as the project is being installed.
- C. As-built Items: Show locations and depths of the following types of underground items:
 - 1. Point(s) of connection for irrigation, domestic water, gas, sewer, electric and similar underground utilities.
 - 2. Routing of underground conduits, irrigation pressure lines and utility lines (dimension maximum 100 feet on center along routing).
 - 3. All types of valves in various piping systems, including gate valves, quick coupler and remote control valves.
 - 4. Routing of irrigation control wires.
 - 5. Related equipment (as may be directed).
- D. Maintain record prints on site at all times.

PART 2 - MATERIALS (See 'MATERIALS' part of each specification section.)

PART 3 - EXECUTION (See 'EXECUTION' part of each specification section.)

END OF SECTION

SECTION 02110 - SITE CLEAR AND GRUB

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

The provisions of *The "Greenbook" Standard Specifications for Public Works Construction* shall apply except as modified herein.

1.02 SCOPE OF WORK:

Furnish all material, equipment and labor necessary to perform all clearing and grubbing work complete, including but not limited to the following:

Protection of trees indicated on drawings to remain.

Clearing and grubbing of all vegetation from site work areas.

Removal and disposal of all deleterious materials.

Furnishing, developing, applying and providing dust control watering equipment as required for the project.

1.03 RELATED WORK SPECIFIED ELSEWHERE:

Planting	Section 02480
Irrigation	Section 02441

1.04 RESPONSIBILITY AND COORDINATION:

Contractor shall secure and maintain all required permits and licenses, and pay all fees necessary to legally complete the work of this section.

Contractor shall notify utility companies for all utilities to be cut off, modified or relocated, and shall maintain and protect all active utilities.

Contractor shall coordinate all work with the City in an effort to avoid any conflicts with the parks maintenance schedules.

1.05 PROTECTION AND SAFETY:

Contractor shall provide signs in necessary places to exclude persons, except those connected with the work, from entering the working area. Contractor is responsible for preventing unauthorized persons from entering working area.

Protect the project site and adjacent properties from dirty water, mud and water accumulated due to Contractor's operations, rainfall runoff or water that enters the project site from any other sources.

PART 2 - MATERIALS - Not applicable.

PART 3 - EXECUTION

3.01 GENERAL REMOVAL WORK:

Removal work shall be carefully done to avoid damage to all existing facilities to remain.

3.02 SITE CLEARANCE AND DISPOSAL:

Clear the sites to be improved of grass, shrubs, weed growth, rubbish and debris, etc., that are to be removed for construction of the improvements shown on the construction plans. Roots three inches in diameter and larger, rocks and broken masonry larger than 1 inch in the greatest dimension, shall be removed to a minimum depth of 12" below finished grade.

All deleterious materials shall be disposed of off the site in a legal manner by the Contractor, who shall make all necessary arrangements and pay all related costs.

Miscellaneous existing underground facilities, drainage devices, secondary water lines, cables, abandoned oil and water lines, leaching fields, irrigation pipes, wiring, etc, located 12 inches or more below proposed finish grade may be abandoned in place or removed as necessary for proper completion of the work. All miscellaneous active lines that are uncovered during the grading operations shall be protected.

3.03 UTILITIES:

Inactive or abandoned utilities shall be disconnected, removed, and plugged or capped subject to the local governing ordinances.

Should the Contractor encounter any existing underground utilities not shown on the drawings, he shall at once notify the Landscape Architect who will determine further procedure.

3.04 DEBRIS BURNING:

Burning of debris will not be permitted.

3.05 DUST CONTROL:

Dust shall be kept to a minimum during site clearing operations by means of wetting the site or other approved method. Wash down all existing sidewalks and roadways on and off the site after all operations are complete.

END OF SECTION

SECTION 02441 - IRRIGATION

PART 1 - GENERAL

1.01 SCOPE OF WORK:

The work required is indicated on the drawings and includes, but is not limited to, lawn and shrub irrigation systems and remote control valves.

1.02 SUBMITTALS:

A. Materials List:

1. Complete material list shall be submitted prior to performing any work. Catalog data and full descriptive literature must be submitted whenever the use of the items different than those specified is requested. Notarized certificate must be submitted by plastic pipe and fitting manufacturer indicating that material complies with specifications, unless material has been previously approved.
2. Material list shall be submitted using the following format (double spaced between each item):

<u>Item</u>	<u>Description</u>	<u>Manufacturer</u>	<u>Model</u>
1.	Pressure Pipe	Lasco	Class 200
2.	Lawn Head	Rainbird	1804-SAM-PRS
Etc.	Etc.	Etc.	Etc.

B. Record Drawings:

1. Record accurately on one set of contract drawings all changes in the work constituting departures from the original contract drawings.
2. The changes and dimensions shall be recorded in a legible and workmanlike manner to the satisfaction of the City Representative. Prior to final inspection of work, submit record drawings to City Representative for approval.
3. Dimensions from two permanent points of reference (buildings, monuments, sidewalks, curbs, pavement, etc.). Data to be shown on record drawing shall be recorded day to day as the project is being installed. All lettering on drawings shall be minimum 1/8 inch in size.
4. Show locations and depths of the following items:
 - a. Point of connection.
 - b. Routing of sprinkler pressure lines (dimension maximum 100 feet along routing)
 - c. Gate valves.

- d. Sprinkler control valves.
 - e. Quick coupling valves.
 - f. Routing of control wires.
 - g. Related equipment (as may be directed).
5. Maintain record drawings on-site at all times. Upon completion of work, transfer all as-built information and dimensions to reproducible sepia prints.

1.03 INSPECTIONS:

A. Inspections Will Be Required For:

- 1. Coverage test.
- 3. Final inspection/start of maintenance. Final inspection shall be performed by the City in the presence of owner or his representative.
- 4. Final acceptance.

B. Inspection Requests:

Contractor shall notify the City Representative in advance for requesting all inspections as follows:

System layout - 36 hours (1-2 working days)
Coverage Tests - 36 hours (1-2 working days)
Final Inspection - 48 hours (2 working days)

When inspections have been conducted by other than the City Representative, the Contractor shall show evidence of when and by whom these inspections were made.

No inspection will commence without "record" prints. In the event the Contractor calls for an inspection without up to date "record" prints, without completing previously noted corrections, or without preparing the system for inspection, the inspection will be canceled and the Contractor back charged for the direct costs of all City personnel time and consultant time lost.

C. Closing In Uninspected Work:

Do not allow or cause any of the work of this section to be covered up or enclosed until it has been inspected, tested, and approved by the City Representative.

D. Coverage Test:

When the sprinkler system is completed, Contractor shall perform a coverage test in the presence of the City Representative and the Landscape Architect to determine if the water coverage for planting areas is complete and adequate. This test shall be accomplished before any planting.

1.04 TURNOVER ITEMS:

A. Controller Charts:

1. Record drawings must be approved by City Representative before charts are prepared.
2. Provide one controller chart for each automatic controller. Chart shall show the area covered by controller.
3. The chart is to be a reduced copy of the actual "record" drawing. In the event the controller sequence is not legible when the drawing is reduced, it shall be enlarged to a readable size.
4. Chart shall be a blackline print with a different color used to show the area of coverage for each station.
5. When completed and approved, the chart shall be hermetically sealed between two pieces of plastic, each piece being a minimum 20 mils in thickness.

B. Operation and Maintenance Manuals:

1. Two individually bound copies of operation and maintenance manuals shall be delivered to the City Representative 10 calendar days prior to final inspection. The manuals shall describe the material installed.
2. Each complete, bound manual shall include the following information:
 - a. Index sheet stating Contractor's address and telephone number, duration of guarantee period, list of equipment including names and addresses of local manufacturer representatives.
 - b. Complete operating and maintenance instructions for all equipment.
 - c. Spare parts lists and related manufacturer information for all equipment.

C. Equipment:

1. Supply as part of this contract the following items:
 - a. 4 additional sprinkler heads of each type and spray pattern shown.
 - b. Two (2) wrenches for disassembly and adjustment of each type of sprinkler

head involved.

- 2. The above equipment shall be turned over to the City Representative at the final inspection.

1.05 GUARANTEE:

- A. General: The entire sprinkler system, including all work done under this contract, shall be guaranteed against all defects and fault of material and workmanship for a period of one (1) year following the filing of the Notice of Completion. All materials used shall carry a manufacturer's guarantee of one (1) year.

Should any problem with the irrigation system be discovered within the guarantee period, it shall be corrected by the Contractor at no additional expense to the City within ten (10) calendar days of receipt of written notice from the City Representative. When the nature of the repairs as determined by the City Representative constitute an emergency (e.g. broken pressure line) the City may proceed to make repairs at the Contractor's expense. Any and all damages to existing improvement resulting either from faulty materials or workmanship, or from the necessary repairs to correct same, shall be repaired to the satisfaction of the City Representative by the Contractor, all at no additional cost to the City.

- B. Form of Guarantee: Guarantee shall be submitted on Contractors own letterhead as follows:

FORM OF:
GUARANTEE FOR SPRINKLER IRRIGATION SYSTEM

We hereby guarantee that the sprinkler irrigation system we have furnished and installed is free from defects in materials and workmanship, and the work has been completed in accordance with the drawings and specifications, ordinary wear and tear and unusual abuse, or neglect excepted. We agree to repair or replace any defects in materials or workmanship which may develop during the period of one year from date of filing of the Notice of Completion and also to repair or replace any damage resulting from the repairing or replacing of such defects at no additional cost to the City. We shall make such repairs or replacements within 10 calendar days following written notification by the City. In the event of our failure to make such repairs or replacements within the time specified after receipt of written notice from the City Representative, we authorize the City to proceed to have said repairs or replacements made at our expense and we will pay the costs and charges therefore upon demand.

PROJECT: _____
LOCATION: _____

SIGNED: _____
ADDRESS: _____

PHONE: _____

- C. After the system has been completed, the Contractor shall instruct the City Representative in the operation and maintenance of the system and shall furnish a complete set of operating instructions.
- D. Any settling of trenches which may occur during the one-year period following acceptance shall be repaired to City Representative satisfaction by the Contractor without any additional expense to the City. Repairs shall include the complete restoration of all damage to planting, paving or other improvements of any kind as a result of the work.

PART 2 - MATERIALS

2.01 GENERAL:

Materials or equipment installed or furnished that do not meet the City standards will be rejected and shall be removed from the site at no expense to the City.

2.02 PIPE:

- A. Non-pressure lines shall be Schedule 40.
- B. Pressure pipe shall be Class 200.

2.03 PLASTIC PIPE AND FITTINGS:

- A. All plastic pipe shall bear the following markings: manufacturer's name, nominal pipe size, schedule or class, type of material, pressure rating in psi, NSF seal of approval, and the date of extrusion.
- B. All plastic pipe shall be extruded of an improved PVC virgin pipe compound.
- C. Rubber gasket PVC pipe, couplings, and fittings shall conform to ASTM D 1784 Type I, Grade I, 2,000-psi design stress. Couplings, rubber gaskets, and fittings shall be as approved by the pipe manufacturer.
- D. Ring-type rubber gasket couplings shall permit a 5 degree deflection of the pipe at each coupling (2-1/2 degree each side) without exfiltration or infiltration, cracking or breaking.
- E. All fittings shall be standard weight Schedule 40 and shall be injection molded of an improved PVC fitting compound. Threaded plastic fittings shall be injection molded. All tees and ells shall be side gated.
- F. All threaded nipples shall be standard weight Schedule 80 with molded threads.
- E. All solvent cementing of plastic pipe and fittings shall be a two-step process, using primer and solvent cement applied per the manufacturer's recommendations. Cement shall be of a fluid consistency, not gel-like or ropy.

2.07 VALVES:

A. Remote Control Valves:

Valves shall be spring-loaded, self-cleaning, packless diaphragm activated, of a normally closed type.

2.08 VALVE BOXES:

- A. Valve boxes shall be fabricated from a durable, weather-resistant plastic material resistant to sunlight and chemical action of soils.
- B. The valve box cover shall be secured with a hidden latch mechanism or bolts.
- C. The cover and box shall be capable of sustaining a load of 1,500 pounds.
- D. Valve box extensions shall be by the same manufacturer as the valve box.
- E. Remote control valve boxes shall be rectangular plastic boxes with bolt-down covers marked "CONTROL VALVE"; and with the valve identification number heat branded in 2" high characters; AMETEK or approved equal.
- F. Colors of boxes shall be as called for on the plans.

2.09 ELECTRICAL:

- A. All electrical equipment shall be NEMA Type 3, waterproofed for exterior installation.
- B. All electrical work shall conform to local codes and ordinances.

2.10 WIRING:

- A. Remote control wire shall be direct-burial AWG-UF type, sized according to manufacturer's specifications, and in no case smaller than 14 gage.
- B. Connections shall be either epoxy-sealed packet-type or Penn-Tite connectors.
- C. Common wires shall be white in color. (Where two or more controllers are used, the common wires shall be white with a different color stripe for each controller.) Control wires shall be black (where two or more controllers are used, the control wires shall be a different color for each controller.) These colors shall be noted on as-built plans located on controller door.

2.11 SPRINKLERS:

Sprinklers shall be as called for on the plans.

PART 3 - EXECUTION

3.01 GENERAL:

A. Layout:

Layout irrigation systems and make minor adjustments required due to differences between site and drawings. Where piping is shown on drawings under paved areas, but running parallel and adjacent to planted areas, install the piping in the planted areas.

B. Diagrammatic Intent:

The drawings are essentially diagrammatic. The size and location of equipment and fixtures are drawn to scale where possible. Provide offsets in piping and changes in equipment locations as necessary to conform with structures and to avoid obstructions or conflicts with other work.

C. Grades:

Before starting work, carefully check all grades to determine that work may safely proceed, keeping within the specified material depths with respect to finish grade.

D. Inspections:

1. Prior to all work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
2. Verify that irrigation system may be installed in strict accordance with all pertinent codes and regulations, the original design, the referenced standards, and the manufacturer's recommendations.

E. Discrepancies:

1. In the event of discrepancy, notify the City Representative and the Landscape Architect.
2. Do not proceed with installation in areas of discrepancy until all discrepancies have been resolved.

F. Field Measurements:

Make all necessary measurements in the field to ensure precise fit of items in accordance with the original design. Contractor shall coordinate the installation of all irrigation materials with all other work.

3.02 TRENCHING:

- #### A.
- Dig trenches and support pipe continuously on bottom of ditch. Lay pipe to an even grade. Trenching excavation shall follow layout indicated on drawings to the depths below finished

grade and as noted. Where lines occur under paved area, these dimensions shall be considered below subgrade.

- B. Provide minimum cover of 18 inches, maximum 24 inches for control wires.
- C. Provide minimum cover of 12 inches, maximum 16 inches for non-pressure lines.
- D. Provide minimum cover of 24 inches, maximum 30 inches for all pipe sleeved under paving.
- E. Where it is necessary to excavate adjacent to existing trees, the Contractor shall avoid injury to trees and tree roots. Excavation in areas where 2-inch and larger roots occur shall be done by hand. All roots 2 inches and larger in diameter shall be tunneled under and shall be heavily wrapped with wet burlap to prevent scarring or drying. Where trenching machine is run close to trees having roots smaller than 2 inches in diameter, the wall of the trench adjacent to the tree shall be hand trimmed, making a clean cut through the roots. Roots 1 inch and larger in diameter shall be painted with two coats of Tree Seal or approved equal. Trenches adjacent to trees shall be closed within 24 hours.

3.03 BACKFILLING:

- A. Initial backfill on all lines shall be of fine granular material with no foreign matter larger than 2 inch in size.
- B. Backfill shall be tamped in 4-inch layers under the pipe and uniformly on both sides for the full width of the trench and the full length of the pipe. Materials shall be sufficiently damp to permit thorough compaction, free of voids. Backfill shall be compacted to dry density equal to adjacent undisturbed soil and shall conform to adjacent grades.
- C. Flooding in lieu of tamping is not allowed without specific prior approval.
- D. Under no circumstances shall truck wheels be used to compact soil.
- E. Provide sand backfill a minimum of 6 inches over and under all piping under paved areas.

3.04 PIPING:

- A. Piping under existing pavement may be installed by jacking, boring, or hydraulic driving. No hydraulic driving is permitted under asphaltic concrete pavement.
- B. Cutting or breaking of existing pavement is not permitted.
- C. Carefully inspect all pipe and fittings before installation, removing dirt, scale, and burrs and reaming; install pipe with all markings up for visual inspection and verification.
- D. Exercise care in handling, loading, unloading, and storing plastic pipe and fittings; store plastic pipe and fittings under cover until ready to install; transport plastic pipe on a vehicle with a bed long enough to allow the pipe to lay flat, avoid undue bending and any concentrated external load.
- E. Remove all dented and damaged pipe sections.

- F. All lines shall have a minimum clearance of 6 inches from each other and 12 inches from lines of other trades.
- G. Parallel lines shall not be installed directly over one another.
- H. In solvent welding, use only the specified primer and solvent cement and make all joints in strict accordance with the manufacturer's recommended methods; allow solvent welds at least 15 minutes setup time before moving or handling and 24 hours curing time before filling.
- I. 360 degree applicators shall be used to apply primer and solvent on sizes 2 inches and larger.
- J. Centerload all plastic pipe prior to pressure testing.
- K. All threaded plastic-to-plastic connections shall be assembled using Teflon tape.
- L. For plastic-to-metal connections, work the metal connections first. Use a non-hardening pipe dope on all threaded plastic-to-metal connections, except where noted otherwise.

3.05 ASSEMBLIES:

- A. Install all assemblies specified herein according to the respective detail drawings or specifications, using best standard practice.
- B. Valves shall be installed in shrub areas whenever possible per City standards.
- C. Each valve box shall be installed on a foundation of pea gravel backfill, 3 cubic feet minimum. Valve boxes shall be installed with their tops 3/4 inch above the surface of surrounding finish grade in lawn areas.

3.06 WIRING:

- A. Wiring shall occupy the same trench and shall be installed along the same route as the pressure supply lines and shall be located below the supply lines wherever possible.
- B. Where more than one wire is placed in a trench, the wiring shall be taped together at intervals of 8' feet.
- C. All connections shall be of an approved type and shall occur in a valve box. Provide an 18-inch service loop at each connection.
- D. An expansion loop of 12 inches shall be provided at each wire connection and/or directional turn, and one of 24 inches shall be provided at each remote control valve.
- E. A continuous run of wire shall be used between a controller and each remote control valve. Under no circumstances shall splices be used without prior approval.

3.07 FLUSHING THE SYSTEM:

- A. Prior to installation of sprinkler heads, the valves shall be opened and a full head of water used to flush out the lines and risers.
- B. Sprinkler heads shall be installed after flushing the system has been completed.

3.08 SPRINKLER HEADS:

- A. Sprinkler heads shall be installed as designated on the drawings and per City standards.
- B. Spacing of heads shall not exceed maximum indicated on the drawings.

3.09 ADJUSTING THE SYSTEM:

- A. Contractor shall adjust valves, align heads, and check coverage of each system prior to coverage test.
- B. If it is determined by the City Representative that additional adjustments or nozzle changes will be required to provide proper coverage, all necessary changes or adjustments shall be made prior to any planting.
- C. The entire system shall be operating properly before any planting operations commence.

3.10 COMPLETION CLEANING:

Upon completion of the work, Contractor shall smooth all ground surfaces; remove excess materials, rubbish, debris, etc.; sweep adjacent streets, curbs, gutters, walkways, and trails; and remove construction equipment from the premises.

END OF SECTION

SECTION 02445 - TEMPORARY CHAINLINK FENCING

1.01 TEMPORARY FENCING:

Install a 6' tall (min.) temporary construction fence prior to beginning any site work, at the perimeter of active work. The fence shall be chain link (new or used), free of openings or breaks in the fabric, with fence posts at 10' O/C maximum. Fencing shall incorporate green "tennis court" windscreen material, securely fastened to top and bottom of chain link fabric, for the entire secured perimeter of the fence line. The fence shall be maintained in place throughout the construction phase period through to the end of the ninety (90) day landscape maintenance period. Install "No Trespassing" signs minimum 150' o.c., with wording presented in both English and Spanish. The temporary fence shall be removed prior to final inspection/project acceptance at the end of the maintenance period.

END OF SECTION

SECTION 02480 - PLANTING

PART 1 - GENERAL

1.01 SCOPE OF WORK:

The work required is indicated on the drawings and includes, but is not necessarily limited to: soil preparation; finish grading; planting trees; guying and staking trees; maintenance; plant establishment period; guarantees; and replacement.

1.02 GUARANTEE:

- A. All trees installed under the contract shall be guaranteed against any and all poor, inadequate or inferior materials and/or workmanship for a period of one (1) year.
- B. During the guarantee period, any material found to be dead, missing, or in poor condition shall be replaced by the Contractor within ten (10) days of written notification. The City's representative shall be the sole judge as to the condition of the material.
- C. Replacement shall be made in accordance with these specifications and the plans.
- D. Material and labor involved in replacing plant material shall be provided by the Contractor at no additional cost to the City.

1.03 INSPECTIONS:

Inspections will be required. The Contractor shall contact the City's representative at least 48 hours (2 working days) in advance of an anticipated inspection. An inspection will be required at each of the steps listed below:

- A. Upon completion of fine grading, and prior to commencement of soil preparation, for acceptance of fine grading work and taking of soils samples.
- B. Inspection of completed finish grading work per this section following soil amendment work.
- C. When trees are spotted for planting, but before planting holes are excavated.
- D. When planting and all other indicated or specified work has been completed.
- E. During application of pre-emergent chemical.
- F. At start of plant establishment and maintenance period.
- G. At the end of the plant establishment period, concurrent with final acceptance of the project for maintenance by the City. This acceptance for maintenance will be confirmed in writing by the Landscape Architect.

1.04 SOILS TEST:

Contractor shall notify Landscape Architect upon completion of fine grading and prior to commencement of soil preparation work. The Contractor will obtain agronomic soils tests for all

planting areas after completion of fine grading and prior to start of soil preparation work. Tests will be performed by City approved agronomic soils testing laboratory and will include a fertility and suitability analysis with written recommendations for soil preparation, planting backfill mix, auger hole requirements, and post plant fertilization program. The soils report recommendations shall take precedence over the minimum amendment and shall be approved by the Landscape Architect PRIOR to planting in writing, and fertilizer application rates specified herein only when they exceed the specified minimums. A copy of the soils report shall be submitted to the City for approval.

1.05 SUBMITTALS:

- A. The following written certifications are required to be submitted to the Landscape Architect upon delivery of the respective materials to the job site:
 - Total Quantity of commercial fertilizers by type
 - Total Quantity of soil amendments and conditioners by type
 - Total Quantity of mulch
 - Total Quantity of iron sulphate
- B. All bagged products (seed, fertilizers, etc.) shall stay on the site in a neat and orderly manner until the final approval by the Landscape Architect.

PART 2 - MATERIALS

2.01 FERTILIZER, SOIL AMENDMENTS AND CONDITIONERS:

- A. Planting Tablets: Tightly compressed long-lasting, 12 month slow-release fertilizer tablets weighing 7 grams, and having an analysis of 12-8-8 derived from the sources listed in the following guaranteed analysis:

GUARANTEED ANALYSIS:

Total Nitrogen(N)	12%
Derived from urea formaldehyde	
7.0% water soluble nitrogen	
13.0% water insoluble nitrogen	
Available Phosphoric Acid (P ₂ O ₅)	8%
Derived from triple super phosphate	
Soluble Potash (K ₂ O)	8%
Combined Sulfur (S)	3.5%
Derived from ferrous and potassium sulphates	
Iron (expressed as elemental Fe)	2.0%
Derived from ferrous sulphate	

- B. Commercial fertilizer shall bear the manufacturer's guaranteed statement of analysis and shall meet the following minimum requirements: 14% nitrogen, 7% phosphoric acid, 7% potash with 30% humus and 6% humic acids.

C. Organic Soil Amendment:

Shall be nitrogen fortified redwood, cedar, or fir sawdust and shall contain minimum 1% available nitrogen. Material containing manure, pine, or other material will not be accepted.

D. Mulch:

Shall be nitrogen fortified redwood, cedar or fir shavings and shall contain minimum 1% available nitrogen.

E. Soil Conditioner/Fertilizer:

Shall be composted higher plant form life below the fibrous stage to support bacterial culture analysis: 5% nitrogen, 3% phosphorus, 1% potash, 50% humus, 15% humic acid, with bacteria included and 1% soil penetrant. (Gro-Power Plus) Available through Gro-Power, Inc. (800) 473-1307.

F. Soil Conditioners:

Inorganic conditioners shall be agricultural grade gypsum, soil sulfur and iron sulphate. Iron sulphate shall be ferric sulphate or ferrous sulphate in pelleted or granular form containing not less than 18.5% iron, expressed as metallic iron, and shall be registered as an agricultural mineral with the State Department of Agriculture in compliance with Article 2 "Fertilizing Materials", Section 1030 of the Agriculture Code.

2.02 PLANTS:

A. All plants shall be true to name, and one of each bundle or lot shall be tagged with the name and size of plants in accordance with the standards of practice recommended by the American Association of Nurserymen. The root condition of plants furnished in containers shall be determined by removal of earth from the roots of not less than two plants nor more than 2% of the total number of plants of each species or variety except when container-grown plants are from several different sources: in which case, the roots of not less than two plants of each species or variety from each source shall be checked by the City's Representative at his option. The selection of plants to be checked will be made by the City's Representative. All plants rendered unsuitable for planting shall be considered as samples, and replacements shall be provided at no additional cost. In case the sample plants are found to be defective, the entire lot or lots of plants represented by the defective samples will be rejected.

B. All trees supplied by Contractor shall be of the specified standard height and diameter set by the American Standard for Nursery Stock. The height of the trees shall be measured from the root crown to the last division of the terminal leader and the diameter shall be measured six (6) inches above the crown roots. The trees shall stand erect without support.

C. Bare root stock shall conform to the American Nurseryman's Association standards. Minimum caliper shall be 2" diameter and minimum height shall be 12 feet.

2.03 BACKFILL MATERIAL:

A. Topsoil shall be free from noxious weed seed and shall be of a loam characteristic, fertile and friable.

- B. Wood shavings shall be leached nitrogen fortified and shall be free of foreign matter.
- C. Soil used for backfill of planting pits shall be enriched using the following blend per cubic yard (agronomic soil test recommendations to be reviewed prior to soil mixing) and have written approval by Landscape Architect before planting.

- 60% site soil or approved import
- 40% wood shavings
- 17 lbs. soil condition/fertilizer (Gro-Power Plus)
- 1 lb. iron sulphate

All plant pits shall be backfilled with backfill mix as specified above.

- D. All soil backfill shall be bulk mixed, not individually mixed at each plant pit.

2.04 STAKES AND TIES:

- A. Tree stakes shall be 3" dia. x 10 foot long straight- grained copper naphthanate treated lodgepole pine. Stakes shall be free from knots, checks, splits, or disfigurements.
- B. Tree ties shall be "Twist Brace" supplied by V.I.T. Co., Escondido, California, (760) 480-6702. For 15 gallon - 24" box trees, Model TB24; for 36" box trees, Model TB36.

2.05 HERBICIDE ERADICATION:

Gro-Safe as manufactured by Target Chemical Co. (714) 821-9020; or approved equal.

PART 3 - EXECUTION

3.01 LANDSCAPE GRADING:

The Contractor shall complete preliminary grading filling as needed or removing surplus dirt, removing rocks and debris over 1 inch in diameter within the top 2" of soil in flat and slope areas, and removing rocks over 2" in diameter within the top 6" of soil in areas with slopes less than 3:1. Bring all areas to be landscaped to finish grade. All areas shall slope to drain. Flow lines shall be established to existing road curbs and/or sidewalks as shown on the plans and as directed.

3.02 WEED CONTROL MEASURES:

- A. Upon completion of all fine grading work and prior to soil preparation, perform weed control measures as follows:
 - 1. Irrigate all areas designated to be planted for a minimum of 10 minutes per setting, two settings per day for seven days to germinate all weed seed possible.
 - 2. Apply a contact weed killer and allow sufficient time to obtain complete kill of all weeds germinated.
 - 3. Repeat step one above.

4. Repeat step two above.

3.03 SOIL PREPARATION:

- A. All fine grading and mounding and all weed control measures shall be completed prior to soil preparation.
- B. This work shall not commence until the agronomic soils test has been completed. Should 30 calendar days elapse between completion of soil preparation and commencement of planting, all areas shall be prepared again.
- C. In planting areas with gradients less than 3:1, a layer of soil amendments shall be spread and rototilled into the soil to a minimum depth of 4 inches, or as recommended by the soils report, so that the soils shall be loose, friable, and free from all rocks, sticks, and other objects undesirable to planting.
- D. The following soil amendments shall be added per 1,000 square feet to all planting areas with gradients less than 3:1 (agronomic soil test recommendations shall take precedence where these minimum amounts are exceeded) and need written approval by the Landscape Architect before planting.
 1. 3 cubic yards organic amendment.
 2. 200 pounds soil conditioner/fertilizer (Gro-Power Plus)
 3. 25 pounds gypsum.

All landscape areas shall be finish graded to "dress out", maintain, and/or reestablish grades and flow lines as approved prior to amending the soil. Finish grades will be inspected upon completion. Contractor shall not proceed with planting work until finish grades have been inspected and accepted by the Landscape Architect.

3.04 FINISH GRADING:

After completion of all soil preparation work the Contractor shall finish grade all planting areas filling as needed or removing surplus dirt, removing rocks and debris over 1 inch in diameter, and floating to a smooth uniform grade. All areas shall slope to drain. Flow lines shall be established to existing road curbs and/or a sidewalk as shown on the plans and as directed.

3.05 PLANTING:

- A. Trees: Plant holes shall be dug to size as indicated in the drawings. Before trees are set in the holes, a water test should be made as follows:

All plant holes shall be filled to the brim with water and allowed to drain before any planting is done. If water does not drain out of hole within 24 hours, this fact must be brought to the attention of the Landscape Architect so that corrections can be made. Correctional work shall be considered as an extra, at additional expense.

- B. Soil surrounding planting pit shall be in a friable condition and moist to a depth of 8".
- C. Backfill using specified soil mix to within 8" of finish grade. At this depth, place the plant fertilizer tablets Gro-Power planting tablets, 12-8-8, 7 grams each or equal. A minimum of 3 tablets for 1 gallon; 8 tablets for 5 gallons; 15 tablets for 15 gallons, and 22 tablets for a 24" box. Complete backfilling to finish grade.
- D. Trees shall be planted at such a depth that the crown roots bear the same relative position to finish grade as they did to the soils where they were grown. Backfill after planting shall be compacted carefully into place without injuring the roots of the tree or breaking up the ball of earth surrounding the roots.

3.06 TREE STAKING:

Stake trees as per planting details. No metal wire shall circle any part of any tree.

3.07 WATERING:

- A. It shall be the Contractor's responsibility to maintain a balanced watering program to ensure proper growth until final acceptance of the work.
- B. Immediately after planting, apply water to each tree. Apply water in a moderate stream in the planting hole until the material about the roots is completely saturated from the bottom of the hole to the top of the ground.
- C. Apply water in sufficient quantities and as often as seasonal conditions require to keep the planted areas moist at all times, well below the root system of plants.
- D. Irrigation:
 - 1. Contractor shall properly and completely maintain the irrigation system. A balanced water program shall be maintained to ensure proper growth until final acceptance of the work. Plants which cannot be watered efficiently with the irrigation system shall be watered by means of a hose.
 - 2. All controllers are to have each station individually adjusted on a weekly basis. System shall be set considering the application rate each area is capable of receiving. The system shall operate on short intervals, with the cycle repeating at a later time to reduce runoff.

3.08 MAINTENANCE:

- A. All areas landscaped by Contractor under this contract shall be maintained by him for a minimum plant establishment period of not less than ninety (90) days from the date of written acceptance for start of the plant establishment period.
- B. Contractor shall maintain existing planted areas which are within the work limits of the contract as shown on the plans. This maintenance shall continue for the duration of the construction period. The contractor shall provide and allow access by City maintenance people into or through work limit areas for the purpose of normal maintenance of existing

park areas remaining outside of the work limit areas.

3.09 START OF PLANT ESTABLISHMENT:

A. Criteria for start of plant establishment period:

1. The plant establishment period shall not start until all elements of the project that impact the landscape are completed in accordance with the contract documents. Projects will not be segmented into phases.
2. Permanent Power to remote controllers shall be established.
3. Written acceptance of the City must be obtained to the start of the plant establishment period.
4. If the project maintenance fails to continuously meet standards required, the plant establishment period "day count" will be suspended and will not recommence until Contractor has corrected all deficiencies.

3.10 MAINTENANCE TASKS:

A. General:

During the contract period provide all watering, weeding, fertilizing and cultivation, and spraying necessary to keep the trees in a healthy growing condition and to keep the planted areas neat and attractive. All trees planted under the contract shall be pinched and pruned as necessary to encourage new growth and to eliminate sucker growth. Old wilted flowers and dead foliage shall be immediately pinched or cut off. Do no tree pruning without the written approval of the Landscape Architect.

B. Iron Chlorosis:

After planting and during the plant establishment period in the event that trees exhibit iron chlorosis symptoms, apply FE 138 Geigy or equivalent at manufacturer's recommended rates.

C. Replacement Plantings:

During the plant establishment period, should the appearance of any plant indicate weakness, that plant shall be replaced immediately with a new, healthy plant. At the end of the plant establishment period, all plant materials shall be in a healthy, growing condition and spaced as indicated on the plans.

D. Planting Establishment:

Any planting areas that do not show a prompt establishment of plant material shall be replanted at 10-day intervals until the plant material is established. If a good rate of growth has not been demonstrated within 30 days of first planting, the Contractor shall be responsible to determine the appropriate horticultural practices necessary to obtain good growth. The Contractor shall obtain agronomic soils testing of all areas not showing good growth and shall provide copies of the test results to the City to verify the appropriateness of all maintenance work performed. If additional soil amendments are needed, up to a maximum 25% beyond

the amount specified, such amendments shall be provided by the Contractor at no additional cost to the City.

E. Grading and Drainage:

During the plant establishment period all flow lines shall be maintained to allow for free flow of surface water. Displaced material which interferes with drainage shall be removed and placed as directed. Low spots and pockets shall be graded to drain properly. Jute netting shall be installed at flow lines and other locations where erosion is evident, when directed by the inspector.

1. Damage to planting areas shall be repaired immediately and throughout the plant establishment period. Depressions caused by vehicles, bicycles, or foot traffic shall be filled and leveled. Replant damaged areas.
2. All paved areas shall be washed and maintained in a neat and clean condition at all times.
3. Debris and trash shall be removed from the site weekly at a minimum.
4. All subsurface drains shall be periodically flushed with clear water to avoid build up of silt and debris. Keep all drain inlets clear of leaves, trash, and other debris.

F. Disease and Pest Control:

Throughout the plant establishment period, all plants shall be maintained in a disease and pest free condition. A licensed pest control operator shall be retained by the Contractor to recommend and apply all pesticides, herbicides, and fungicides. Exterminate gophers, moles, and all other rodents, and repair damage.

G. Trash:

Debris and trash shall be removed from the site weekly at a minimum.

3.11 END OF PLANT ESTABLISHMENT PERIOD:

- (1) When the Contractor believes he has completed the plant establishment period and the entire project is ready for final acceptance, he shall request inspection of the project. The Landscape Architect will inspect the project for final acceptance. Deficiencies noted during inspection shall extend the plant establishment period until all are corrected.
- (2) All planting areas shall show a good rate of growth and shall be well established "filled in" plantings free of voids. Bare areas will be unacceptable. Contractor shall provide sod or planting from flats as necessary to fill in all bare areas. Such sod or plantings shall be planted a minimum of 10 days prior to the end of the plant establishment period and shall have roots "knit-in" to the native soil.
- (3) Final acceptance shall occur only upon written acceptance of the project for maintenance by the Landscape Architect.

3.18 CLEAN UP:

Upon completion of the work, the Contractor shall smooth all ground surfaces; remove excess materials, rubbish, debris, etc.; sweep adjacent streets, curbs, gutters, walkways, and trails; and remove construction equipment from the premises.

END OF SECTION