

Specifications for:

**Compton Lueders Park
Renovation Project
For Bidding Only**

February, 2016



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TECHNICAL SPECIFICATIONS

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SECTION 01010 - SUMMARY OF WORK

The provisions of the Standard Specifications for Public Works Construction (SSPWC), latest Edition, apply except as modified herein.

A. Work covered by Contract Documents:

The work covers park improvements to Lueders Park as listed on the construction drawings located in Compton, California. Work includes but not limited to demolition of various materials, clearing, grading, fencing, Basketball court all weather surfacing, outdoor basketball exercise equipment, site furnishings, concrete headers, walks, slabs and curbs, shade shelters, turf repair, and sod. The work to be performed shall include, but not be limited to, the items described. All work shall include the furnishing of labor, services, tools, equipment, materials, appurtenances and incidentals necessary to install and complete the work indicated per the plans and specifications.

B. Related Work Specified Elsewhere:

Construction Schedule: Section 01310
Schedule of Values: Section 01370
Temporary Facilities and Controls: Section 01500
Products and Materials: Section 10600
Landscape Planting: Section 02900

C. Contractor's Duties:

Arrange and pay for all off-site inspection of the work required by ordinance or governing authorities. The Contractor shall also arrange and pay for other inspections, including tests in connection therewith, as may be assigned to it in other sections of the specifications.

Comply with codes, ordinances, rules, regulations orders, and other legal requirements of public authorities which bear on performance of work.

D. Contracts:

Construct entire work under single lump sum price contract.

E. Allotted Working Space:

A reasonable space(s) will be assigned. All materials and equipment shall be kept within this space with no liability to the Agency.

F. Acceptance of Site:

The Contractor shall accept the sites and the character of the work as they exist on the first day of work under this contract.

G. Survey and Layout:

Contractor shall verify all dimensions on the drawings and shall report to the Agency Representative any discrepancies before proceeding with related work. Contractor shall perform all survey and layout work.

H. Maintenance of Existing Plantings:

The Contractor shall protect and maintain all existing trees and plantings to remain from the first day of work under this contract to acceptance.

I. Not in Contract:

Items shown on the contract drawings, but marked N.I.C., are not included in this contract.

J. Limits of Work:

Limits of work shall be the legal property boundaries unless modified by Contract limit lines indicated on the plans or as noted otherwise.

End of Section

SECTION 01030 - ALTERNATES

I. GENERAL

The provisions of the Standard Specifications for Public Works Construction (SSPWC), latest Edition, apply except as modified herein.

The contractor shall review and become familiar with pertinent specifications affected by listed Alternates.

This section describes the changes to be made under each Alternate.

Additional specification sections contain the pertinent requirements for materials and methods affecting the described Alternates.

Coordinate pertinent related work and modify surrounding work as required to complete the project under each Alternate designated in the Agreement.

A. Description of Alternates:

Lueders Park:

ADDITIVE ALTERNATE NO. 1. Include all labor, materials, services and equipment necessary for completion of the construction of decomposed granite path and concrete header as shown on plans. Adjust irrigation as necessary if alternate is not selected.

End of Section

SECTION 01045 - CUTTING AND PATCHING

I. GENERAL

The provisions of the Standard Specifications for Public Works Construction (SSPWC), latest Edition, apply except as modified herein.

A. Related Work Specified Elsewhere:

Summary of Work: Section 01010
Asphalt Concrete Paving: Section 02510
Concrete: Division 3

B. Description:

Execute cutting fitting or patching of work required to:

Make several parts fit properly;
Uncover work to provide for ill-timed work;
Remove and replace defective work;
Remove and replace work not conforming to the Contract Documents;
Remove samples of installed work as required for testing;
Install specified work in existing construction;
Properly join work by others.

In addition to contract requirements, upon written instructions of the Agency Representative:

Uncover work to provide for Agency Representative's observation of covered work;
Remove samples of installed materials for testing;
Remove work to provide for alteration of existing work.

Do not endanger any work by cutting or altering work or any part of it.

C. Submittals:

Prior to cutting which affects structural safety of work or work of another Contractor, submit written notice to the Agency Representative requesting consent to proceed with cutting, including:

Identification of the work;
Description of affected work;
Necessity for cutting;
Effect on other work, on structural integrity of the project;
Description of proposed work.
Designate:
Scope of cutting and patching;
Contractor and trades to execute work;
Products proposed to be used;
Extent of refinishing;
Alternatives to cutting and patching;
Designation of party responsible for cost of cutting and patching.

Prior to cutting and patching done on instruction of Agency Representative, submit cost estimate.

Should conditions of work or schedule indicate change of materials or methods, submit written recommendations to Agency Representative, including:

Conditions indicating change;
Recommendations for alternative materials or methods;
Submittals as required for substitutions.

Submit written notice to Agency Representative, designating time work will be uncovered, to provide for observation.

D. Payment for Costs:

Costs caused by ill-timed or defective work, or work not conforming to Contract Documents, including costs for additional services of the Landscape Architect shall be borne by Contractor.

Work done on instructions of the Agency Representative, other than defective or non-conforming work shall be borne by Agency.

II. PRODUCTS

Materials for replacement of work removed shall comply with specifications for type of work to be done.

III. EXECUTION

A. Inspection:

Inspect existing conditions of work, including elements subject to movement or damage during cutting and patching or excavating and back-filling.

After uncovering work, inspect conditions affecting installation of new products.

B. Preparation:

Before cutting provide shoring, and support as required to maintain structural integrity of project; provide protection for other portions of project; and provide protection from the elements.

C. Performance:

Execute fitting and adjustment of products to provide finished installation complying with specified tolerances and finishes.

Execute cutting and demolition by methods which will prevent damage to other work, and will provide proper surfaces to receive installation of repairs and new work.

Execute excavating and backfilling as specified in Section 02200 - Earthwork and Grading.

Restore work which has been cut or removed; install new products to provide completed work conforming to Contract Documents.

Refinish entire surfaces as necessary to provide an even finish:

Continuous surfaces - to nearest intersections.

Assembly - entire refinishing.

End of Section

SECTION 01340 - SHOP DRAWINGS, PROJECT DATA AND SAMPLES

I. GENERAL

The provisions of the Standard Specifications for Public Works Construction (SSPWC), latest Edition, apply except as modified herein.

A. Submit:

Submit to the Agency shop drawings, project data and samples required by specification sections.

B. Related Requirements Specified Elsewhere:

General Conditions
Summary of Work: Section 01010
Project Closeout: Section 01700
Products and Materials: Section 01600

C. Construction Schedule:

Designate dates for submission and dates reviewed shop drawings, project data and samples will be needed for each product.

II. SHOP DRAWINGS

Original drawings, prepared by Contractor, subcontractor, supplier or distributor which illustrate some portion of the work, showing fabrication, layout, setting or erection details.

Furnished at Contractor's expense by Contractor.
Prepared by qualified detailer.
Identify details by reference to sheet and detail numbers on Contract Drawings.
Minimum sheet size: 8 2" by 11".

A. Reproduction for Submittals:

Three reproducible prints

III. PROJECT DATA

A. Manufacturer's Standard Schematic Drawings:

Modify to delete information which does not apply.
Supplement standard information where applicable to work.

B. Manufacturer's Catalog Sheets, Brochures, Diagrams, Schedules, Performance Charts, Illustrations and other Standard Descriptive Data:

Clearly mark each copy to identify pertinent information.
Show dimensions and clearances required.
Show performance characteristics and capacities.
Show wiring diagrams and controls.

IV. SAMPLES

Physical examples to illustrate materials, equipment or workmanship, and to establish standards by which completed work is judged.

A. Office Samples:

Of size and quantity to clearly illustrate:

Functional characteristics of product or material, with integrally related parts and attachment devices.
Full range of color samples.

After review, samples may be used in construction project.

B. Field Samples and Mock-Ups:

Erect at project site at location acceptable to Engineer.
Construct complete, including work of all trades required in finished work.

V. CONTRACTOR'S RESPONSIBILITIES

Review shop drawings, project data and samples prior to submission.
Verify field measurements, field construction criteria, catalog numbers and similar data.

Coordinate each submittal with requirements of work and of Contract Documents.

A. Responsibility for Errors and Omissions in Submittals:

Not relieved by Landscape Architect's review of submittals.

B. Responsibility for Deviations in Submittals from Contract Documents:

Not relieved by Landscape Architect's review unless Landscape Architect gives written acceptance of specific deviations.

Notify Agency in writing at time of submission of deviations in submittals from requirements of Contract Documents.

Begin no work requiring submittals until return of submittals with Landscape Architect's stamp and signature indicating review.

Distribute copies after Landscape Architect's review.

VI. SUBMISSION REQUIREMENTS

Schedule all submittals not later than 30 days after Award of Contract.

The Agency will not be responsible for delays to the Contractor for any submittal not received within the specific time.

Contractor's distribution shall be as required, plus three copies for Agency's retention, or number of samples specified in pertinent section.

Transmittal letter shall be in duplicate, containing date, project title and number, Contractor's name and address, the number of each shop drawing, project data and sample submitted, notification of deviations from Contract Documents, and other pertinent data.

Submittal shall include:

Date and revision date;
Project title, number, park name or names.
Names of : Agency, Contractor, Subcontractor, Supplier, Manufacturer, separate detailer, where pertinent;
Identification of material;
Relation to adjacent structure or materials;
Field dimensions, clearly identified;
Specification section number;
Applicable standard, such as ASTM # or Federal Specification;
Space for Landscape Architect's stamp;
Identification of deviations from Contract Documents;

Contractor's stamp, initialed or signed, certifying review of submittal, verification of field measurements and compliance with Contract Documents.

VII. RESUBMISSION

A. Shop Drawings:

Revise initial drawings as required and resubmit as specified for initial submittal.

Indicate on drawings any changes which have been made other than those requested by Landscape Architect.

B. Project Data and Samples:

Submit new datum and samples as required for initial submittal.

VIII. DISTRIBUTION AFTER REVIEW

Distribute stamped copies of shop drawings and project data to:

Contractor's file
Job site file
Record Documents file
Subcontractor
Supplier
Fabricator.

A. Samples:

Distribute as directed.

End of Section

SECTION 01370 - SCHEDULE OF VALUES

I. GENERAL

The provisions of the Standard Specifications for Public Works Construction (SSPWC), latest Edition, apply except as modified herein.

A. Related Requirements Specified Elsewhere:

B. Submit to Agency:

Schedule of Values, at least twenty 20 calendar days prior to first progress payment estimate. Upon Agency Representative's request, support values given with substantiating data. Quantities of designated materials.

C. Schedule of Values:

Used only as a basis for Progress Payment.

II. FORM OF SUBMITTAL

Typewritten on 8 2" x 11" white bond paper.

Use Table of Contents of this Specification for format for listing costs of work for Sections under Divisions 2 through 16.

Identify each line item with number and title.

III. PREPARING SCHEDULE OF VALUES

Itemize separate line item cost for work required by each section of this specification.

Break to indicate total installed cost, with overhead and profit.

Round off figures to nearest dollar.

Make sum of total costs of all items listed in schedule equal to total Contract sum.

IV. REVIEW AND RESUBMITTAL

After review by Agency Representative, revise and resubmit schedule as required. Resubmit revised schedules in same manner.

End of Section

SECTION 01420 - INSPECTION OF WORK

I. GENERAL

The provisions of the Standard Specifications for Public Works Construction (SSPWC), latest Edition, apply except as modified herein.

A. Inspection:

The Agency will inspect and approve all installations and operations. All submittals to, and communication between, the Agency and the Contractor related to the work of this Contract shall be directed to the Agency Representative.

B. Notice:

The Contractor shall give the Agency Representative or an authorized representative a twenty-four (24) hour notice prior to work inspections required elsewhere in these specifications or by public agencies.

The work shall be ready for inspection at the scheduled times arranged by the Contractor. If, in the Agency Representative's sole judgment, the work is not ready and the inspection must be rescheduled, the Contractor shall be notified, shall reschedule the inspection, and shall provide twenty-four (24) hours notice of the rescheduled inspection.

In order to allow for inspection, and in addition to any inspection required by the City Building and/or Safety Department or any inspection required elsewhere in these specifications, the Contractor shall notify the responsible agency sufficiently in advance of the permanent concealment of any materials or work.

If any work is concealed or performed without the prior notice specified above, then the work shall be subject to such tests or exposure as may be necessary to prove to the Agency Representative or responsible agency that the materials used and the work done are in conformity with the plans and specifications. All labor and equipment necessary for exposing and testing shall be furnished by the Contractor at his expense. The Contractor shall replace, at his own expense, any materials or work damaged by exposure or testing.

Any inspection or approval by any representative or agent of the Agency will not relieve the Contractor of the responsibility of incorporating in the work only those materials which conform to the specifications, and any non-conforming materials shall be removed from the project site whenever identified.

C. Final Inspection:

Upon the completion of the work, the Contractor shall notify the Agency Representative seven (7) days in advance of when he desires a final inspection of the work. Engineer will make such inspection as soon thereafter as possible.

D. Defective Work:

No work which is defective in its construction or deficient in any of the requirements of the specifications shall be considered as accepted. The Contractor shall correct any imperfect work whenever discovered, before the final acceptance of the work.

E. Inspection Overtime:

The Contractor shall compensate the Agency, either upon receipt of a bill therefor or by deduction from the final amount due the Contractor, for all hours worked by the Inspector or other authorized Agency employees on Saturdays, Sundays, or legal holidays at one and one-half (1 2) times the employees basic rate of pay, plus current rate for overhead.

End of Section

SECTION 01500 - TEMPORARY FACILITIES AND CONTROLS

I. GENERAL

The provisions of the Standard Specifications for Public Works Construction (SSPWC), latest Edition, apply except as modified herein.

The Contractor shall be responsible for all specific safety requirements promulgated by any governmental authority, including the requirements of the Occupational Safety and Health Act of 1970 (OSHA) and CAL OSHA.

II. ACCESS AND FACILITIES

A. Access:

Provide and maintain an adequate access to the site of the project. Also provide temporary roads if any are required for prosecution of the work.

B. Temporary Fencing:

Contractor shall erect a temporary chain link fence around the entire perimeter of the construction area for his own security. Locations and limits of fencing shall be approved by Agency and Architect at initial site meetings. Fencing shall be a minimum 6'-0" in height and shall have appropriate access gates. Fencing shall have a good appearance. At completion of project (or sooner), Contractor shall remove fencing from all sites with Agency permission.

C. Storage Sheds:

Provide and maintain on the premises, where directed, watertight storage sheds for all materials which might be damaged by weather, including storage facilities for concrete test samples or other material samples required for the work.

D. Sanitary Facilities:

1. The Contractor shall provide temporary toilet facilities for workers which may consist of portable chemical toilets. Number of toilets shall be based on number of workers - 1 per 15 workers.
2. Toilet facilities shall be kept supplied with toilet paper and be kept in a clean and sanitary condition until completion of the work and then be removed from the work site. Upon removal, that portion of the site shall be properly cleaned and graded.

III. TEMPORARY SIGNBOARDS

A. Identification Sign:

If so required by Agency, provide and maintain an identification sign in a prominent location approved by the Agency Representative, as directed. Signs shall be constructed of 3/4" exterior marine plywood, 4' x 8', with 1" x 4" D.F. stiffeners around all edges. Sign shall be mounted 3 feet above grade on 4" x 4" posts and adequately braced to withstand wind pressures.

Sign shall be constructed by a professional sign painter.

Sign colors shall be as selected by the Landscape Architect. Paints shall be exterior grade to maintain high quality appearance throughout construction period.

Contractor shall be responsible for layout of sign subject to approval of the Agency Representative. Sign shall contain the following:

(PROJECT NAME, CLIENT)
COUNCIL MEMBERS' NAMES
UNDER CONSTRUCTION.
SCHEDULED OPENING DATE _____

MIG, LANDSCAPE ARCHITECT
_____, GENERAL CONTRACTORS

IV. FIRE PROTECTION

Provide general temporary fire protection for the work under this contract.

V. TRASH REMOVAL AND CLEANING

Provide trash receptacles for collecting debris. Remove debris from job site at regular intervals.

End of Section

SECTION 01530 - PROTECTION AND RESTORATION OF EXISTING FACILITIES

PART 1 - GENERAL

1.1 GENERAL

- A. The Contractor shall protect all existing utilities and improvements not designated for removal and shall restore damaged or temporarily relocated utilities and improvements to a condition equal to or better than they were prior to such damage or temporary relocation, all in accordance with the requirements of the Contract Documents.
- B. All utility locates shall be the responsibility of the Contractor. Call USA Dig Alert - 1-800-422-4133 for locates of all underground utilities within the work limits prior to any work.
- C. The Contractor shall verify the exact locations and depths of all utilities and the Contractor shall make exploratory excavations of all utilities that may interfere with the work. All such exploratory excavations shall be performed as soon as practical after award of the contract and in any event, a sufficient time in advance of construction to avoid possible delay to the Contractor's work. Any utility or service in conflict with the work will be reburied by the contractor prior to beginning the work to avoid damage.
- D. The number of exploratory excavations required shall be that number which is sufficient to determine the alignment and grade of the utility.
- E. The Engineer shall be notified of the Contractor's field locate schedule.

1.2 RIGHTS OF WAY

- A. The Contractor shall not do any work that would affect any gas, sewer or water pipeline, any telephone, cable television or electric transmission or distribution line, any fence or any other structure, nor shall the Contractor enter upon the rights of way involved until notified by the Engineer that the Owner has secured authority therefore from the proper party. After authority has been obtained, the Contractor shall give said party notice of its intention to begin work, if required by said party, and shall remove, shore, support to otherwise protect such pipeline, transmission line, ditch, fence or structure or replace the same. When two or more contracts are being executed at one time on the same or adjacent land in such manner that work on one contract may interfere with that on another, the Owner shall determine the sequence and order of the Work. When the property of one contract is the necessary or convenient means of access for the execution of another contract, such privilege of access or any other reasonable privilege may be granted by the Owner to the Contractor so desiring to the extent, amount, in the manner and at the times permitted.
- B. No such decision as to the method or time of conducting the work or the use of property shall be made the basis of any claim for delay or damage, except as provided for temporary suspension of the work in the General Conditions of the Contract Documents.

1.3 PROTECTION OF SURVEY MONUMENTS, STREET AND/OR ROADWAY MARKERS

- A. The Contractor shall not destroy, remove or otherwise disturb any existing survey monuments or other existing street or roadway

markers without proper authorization. No pavement breaking or excavation shall be started until all survey or other permanent marker points that will be disturbed by the construction operations have been properly referenced. All survey monuments, markers or points disturbed by the Contractor shall be accurately re-established at the Contractors expense unless provided for elsewhere in the Contract Documents, after all street or roadway resurfacing has been completed. Re-establishment of all survey monuments shall be by a Registered Surveyor or Civil Engineer properly licensed in the State of California.

1.4 RESTORATION OF PAVEMENT

- A. General. All paved areas including asphalt concrete berms, cut or damaged during construction shall be replaced with similar materials and of equal thickness to match the existing adjacent undisturbed areas except where specific resurfacing requirements have been called for in the Contract Documents or in the requirements of the agency issuing the permit. All temporary and permanent pavement shall conform to the requirements of the affected pavement owner. All pavement which are subject to partial removal shall be neatly saw cut in straight lines.
- B. Temporary Resurfacing. Wherever required by the public authorities having jurisdiction, the Contractor shall place temporary asphalt concrete surfacing promptly after backfilling and shall maintain such surfacing for a period of time fixed by said authorities before proceeding with the final restoration of improvements.
- C. Permanent Resurfacing. In order to obtain a satisfactory junction with adjacent surfaces, the Contractor shall saw cut and trim the edge so as to provide a clean sound vertical joint before permanent replacement of an excavated or damaged portion of pavement. Damaged edges of pavement along excavations and elsewhere shall be trimmed back by saw cutting in straight lines. All pavement restoration and other facilities restoration shall be constructed to finish grades compatible with adjacent undisturbed pavement.
- D. Restoration of Sidewalks or Private Driveways. Wherever sidewalks or private roads have been removed for purposes of construction, the Contractor shall place suitable temporary sidewalks or roadways promptly after backfilling and shall maintain them in satisfactory condition for the period of time fixed by the authorities having jurisdiction over the affected portions before proceeding with the final restoration or if no such period of times is fixed, the Contractor shall maintain said temporary sidewalks or roadways until the final restoration therefore has been made.

1.5 EXISTING UTILITIES AND IMPROVEMENTS

- A. General. The Contractor shall protect all underground utilities and other improvements which may be impaired during construction operations. It shall be the Contractor's responsibility to ascertain the actual location of all existing utilities and other improvements that will be encountered in its construction operations, and to see that all such utilities or other improvements are adequately protected from damage due to such operations. The Contractor shall take all possible precautions for the protection of unforeseen utility lines to provide for

interrupted service and to provide such special protection as may be necessary.

- B. Utilities to be Relocated. In case it shall be necessary to relocate the property of any public utility or franchise holder, such utility company or franchise holder will, upon request of the Contractor be notified by the Owner to relocate such property within a specified reasonable time. When utility lines that are to be removed are encountered within the area of operations, the Contractor shall notify the Engineer a sufficient time in advance for the necessary measures to be taken to prevent interruption of service.
- C. Where proper completion of the work requires the temporary or permanent removal and/or relocation of an existing utility or other improvements which is indicated, the Contractor shall remove and without unnecessary delay, temporary replace or relocate such utility or improvement in a manner satisfactory to the Engineer and the owner of the facility. In all cases of such temporary removal or relocation, restoration to former location shall be accomplished by the Contractor in a manner that will restore or replace the utility or improvement as nearly as possible to its former locations and to as good or better condition than found prior to removal.
- D. Owners Right of Access. The right is reserved to the Owner and to the owners of public utilities and franchises to enter at any time upon any public street, alley right-of-way or easement for the purpose of making changes in their property made necessary by the work of this contract.
- E. Underground Utilities Indicated. Existing utility lines that are indicated or the locations of which are made known to the Contractor prior to excavation and that are to be retained, and all utility lines that are constructed during excavation operations shall be protected from damage during excavation and backfilling and if damaged shall be immediately repaired or replaced by the Contractor.
- F. Underground Utilities not Indicated. In the event that the Contractor damages any existing utility lines that are not indicated or the locations of which are not made known to the Contractor prior to excavation, a written report thereof shall be made immediately to the Engineer. If directed by the Engineer, repairs shall be made by the Contractor under the provisions for changes and extra work contained in the General Conditions.
- G. All costs of locating, repairing damage not due to failure of the Contractor to exercise reasonable care and removing or relocating such utility facilities not shown in the Contract Documents with reasonable accuracy and for equipment on the Project which was actually working on the portion of the work which was interrupted or idled by removal or relocation of such utility facilities and which was necessarily idled during such work will be paid for as extra work in accordance with the provisions of the General Conditions.
- H. Approval of Repairs. All repairs to a damaged utility or improvement are subject to inspection and approval by an authorized representative of the utility or improvement owner before being concealed by backfill or other work.
- I. Maintaining in Service. All power and telephone, cable television or the communication cable ducts, gas and water mains, irrigation lines, storm drain lines, poles, and overhead power and

communication wires and cables encountered along the line of work shall remain continuously in service during all the operations under the contract, unless other arrangement satisfactory to the Engineer are made with the owner of said pipelines, ducts, irrigation line, sewer, storm drain, pole, wire or cable. The Contractor shall be responsible for and shall repair all damage due to his operations and the provision of this section shall not be abated even in the event such damage occurs after backfilling or is not discovered until after completion of the backfilling.

- J. Irrigation Repairs. Existing irrigation within the parkways and adjacent to the work area shall be protected in place, relocated, modified and or extended by the Contractor as noted on the plans. Existing irrigation risers and heads shall be relocated to provide 100% coverage of landscape improvements. Contractor may reuse existing heads and risers to provide coverage. New PVC piping shall be installed as required to modify, extend or rework irrigation system currently installed and impacted by the work of this contract as approved by the Engineer.

1.6 TREES WITHIN STREET RIGHT-OF-WAY AND PROJECT LIMITS

- A. General. The Contractor shall exercise all necessary precautions so as not to damage or destroy any trees, or shrubs, including those lying within the street right-of-way and project limits noted for protection, unless such trees have been approved for trimming or removal by the jurisdictional agency or owner. All existing trees and shrubs which are damaged during construction shall be trimmed or replaced by the Contractor or a licensed landscaping company under permit from the jurisdictional agency or owner. Tree trimming and replacement shall be accomplished in accordance with the following paragraphs:
 - 1. Trimming. Symmetry of the tree shall be preserved, no stubs or splits or torn braches left, clean cuts shall be made close to the trunk or large branch. Spikes shall not be used for climbing live trees. All cuts over 1-1/2 inches in diameter shall be coated with an asphaltic emulsion material.
 - 2. Replacement. The Contractor shall immediately notify the jurisdictional agency and/or owner if any tree is damaged by the Contractors operations. If in the opinion of said agency or the owner, the damage is such that replacement is necessary, the Contractor shall replace the tree at its own expense. The tree shall be of a like size and variety as the tree damaged, or the Contractor shall pay to the owner of said tree a compensatory payment acceptable to the tree owner subject to the approval of the jurisdiction al agency or owner.

1.7 PROTECTION OF EXISTING STRUCTURES

- A. Compaction Equipment and Operations. The Contractor shall restrict compaction operations as necessary to assure no damage occurs to adjacent building. This may require the use of smaller compaction equipment than is usually employed for trench backfill and roadway embankment compaction operations when in the vicinity of buildings sensitive to vibrating or other impact-type activities. It shall be the Contractor's responsibility to determine in which areas of the project the compaction operations must be restricted, to avoid damage to existing buildings,

walkways and facilities to remain. The foregoing restrictions on the size of and magnitude of impact energy exerted by compaction equipment will in no way relieve the Contractor from the compaction requirements as specified in other sections of the Contract Documents.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01600 - PRODUCTS AND MATERIALS

I. GENERAL

The provisions of the Standard Specifications for Public Works Construction (SSPWC), latest Edition, apply except as modified herein.

A. Work Included:

Transportation and storage.
Products list.
"Or equal" and reference to trade names.
Contractor's options.
Substitutions.

B. Related Requirements Specified Elsewhere:

Schedule of Values: Section 01700.
Shop Drawings, Project Data and Samples: Section 01340.
Testing: Section 01410.
Inspection: Section 01420.

II. HANDLING

A. Transportation and Storage:

Products or materials to be incorporated in the work shall be transported, handled, and stored in such a manner as to assure the preservation of their quality and fitness for the work and to facilitate inspection.

III. PRODUCTS LIST

Within 30 days after date of Contract, submit to Engineer five (5) copies of complete list of all products which are proposed for installation.

Tabulate list by each specification section. For products specified under reference standards, include with listing of each product:

Name and address of manufacturer;
Trade name;
Model or catalog designation;
Manufacturer's data:
 Performance and test data
 Reference standards

IV. "OR EQUAL" AND REFERENCE TO TRADE NAMES

Whenever in the specifications any material or process is indicated or specified by patent or proprietary name or by name of manufacturer, such specifications shall be deemed to be used for the purpose of facilitating description of the material or process desired and shall be deemed to be followed by the words "or equivalent". However, if the material, process, or article offered by the Contractor is not, in the opinion of the Engineer, equal to that specified, then the Contractor must furnish the material, process or article specified, or one which in the opinion of the Agency Representative is the equal thereof in all essential characteristics.

If the Agency Representative shall decide to accept for use in the project a material which is not the equal of that specified, authority for the substitution shall be made in the manner described for "Extra Work and Changes", with appropriate monetary allowance for the difference in value.

V. CONTRACTOR'S OPTIONS

For products specified only by reference standards, select any product meeting standards, by any manufacturer.

For products specified by naming several products or manufacturers, select any product and manufacturer named.

For products specified by naming one or more products, but indicating the option of selecting equivalent products by stating "or equal" after specified product, Contractor must submit request, as required for substitution, for any product not specifically named.

VI. SUBSTITUTIONS

A. General:

The Contractor may offer any material or process which he believes to be equal in all essential characteristics to that so indicated or specified; and it shall be incumbent upon the Contractor to furnish sufficient evidence to the Agency Representative to support his claim of equality. Said offer and supporting evidence must be submitted to the Agency Representative within 5 working days prior to bidding. Contractor will be deemed to have waived his right to offer substitute materials and processes.

B. Submittal:

Submit five (5) copies of request for substitution. Include in request: Complete data substantiating compliance of proposed substitution with Contract Documents.

For products:

Product identification, including manufacturer's name and address.

Manufacturer's literature:

Product description
Performance and test data
Reference standards
Samples.

Name and address of similar projects on which product was used, and date of installation.

For construction methods:

Detailed description of proposed method.
Drawings illustrating methods.

Itemized comparison of proposed substitution with product or method specified. Data relating to changes in construction schedule.

Relation to separate contracts.

Accurate cost data on proposed substitution in comparison with product or method specified.

C. Contractor Warrants:

It has personally investigated proposed product or method, and determined that it is equal or superior in all respects to that specified.

It will provide the same guarantee for substitution as for product or method specified.

It will coordinate installation of accepted substitution into work, making such changes as may be required for work to be complete in all respects.

It waives all claims for additional costs related to substitution which consequently becomes apparent.

Cost data is complete and includes all related costs under its contract, but excludes:

Costs under separate contracts.
Landscape Architect's re-design.

D. Limitations:

Substitutions will not be considered if:

They are indicated or implied on shop drawings or project data submittals without formal request submitted within 35 days of award;

Acceptance will require substantial revision of Contract Documents.

Delays in delivery of specified materials will not be considered justification for substitutions.

End of Section

SECTION 01640 - CITY-FURNISHED MATERIALS

The City has purchased the following equipment for the referenced projects. Contractor shall coordinate with the City and/or manuf. for turn over of item, submittals, deferred submittals to building department, storage, installation, utility connections, etc. for all items listed. Contractor shall take responsibility for item once delivered to site until project turn over and or maintenance/ guarantee period.

Lueders Park:

1) 20'x30' Prefabricated Shade Shelter by Coverworks as Noted on Plans (1 total). Contractor shall install pre-fabricated shade shelter as supplied by the City. Shelter to meet all applicable codes and requirements. Contractor shall coordinate with shelter manuf. and City for all delivery, deferred submittal and installation requirements, and any related items necessary for complete installation of this item as necessary.

2) Fitness Equipment by Greenfield Fitness as Noted on Plans (6 pieces and announcement board). Contractor shall install fitness equipment as supplied by the City. Equipment installation to meet all applicable codes and requirements. Contractor shall coordinate with fitness equipment manuf. and City for all delivery, submittal and installation requirements, and any related items necessary for complete installation of this item(s) as necessary.

3) 6' Surface Mount Picnic Tables by Wabash Valley as Noted on Plans (7 Total). Contractor shall install picnic tables as supplied by the City. Equipment installation to meet all applicable codes and requirements. Contractor shall coordinate with equipment manuf. and City for all delivery, submittal and installation requirements and any related items necessary for complete installation of this item(s) as necessary.

4) 8' ADA Surface Mount Picnic Table as Noted on Plans (2 Total). Contractor shall install picnic tables as supplied by the City. Equipment installation to meet all applicable codes and requirements. Contractor shall coordinate with equipment manuf. and City for all delivery, submittal and installation requirements and any related items necessary for complete installation of this item(s) as necessary.

5) Precast Barbeques and Prep Tables by QuickCrete as Noted on Plans (2 Total). Contractor shall install Barbeques and Prep Tables as supplied by the City. Installation to meet all applicable codes and requirements. Contractor shall coordinate with manuf. and City for all delivery, submittal and installation requirements and any related items necessary for complete installation of this item(s) as necessary.

6) Trash Receptacles w/ Dome Lids by Wabash Valley as Noted on Plans (3 Total). Contractor shall install Barbeques and Prep Tables as supplied by the City. Installation to meet all applicable codes and requirements. Contractor shall coordinate with manuf. and City for all delivery, submittal and installation requirements and any related items necessary for complete installation of this item(s) as necessary.

End of Section

SECTION 01700 - PROJECT CLOSEOUT

The provisions of the Standard Specifications for Public Works Construction (SSPWC), latest Edition, apply except as modified herein.

I. NOTICE

At least seven (7) working days notice shall be required for final inspection; such notices shall be given to the Agency Representative.

II. REMOVAL OF PLANT AND CLEAN-UP

Upon completion of the work, the Contractor shall remove all its plant, tools, materials, and other articles from the property of the Agency. Should it fail to take prompt action to this end, the Agency, at its option and without waiver of such other rights as it may have, may on seven (7) days' notice treat them as abandoned property. The Contractor shall also sweep all floors broom clean, clean all exterior work and windows and remove all rubbish from the property of the Agency.

III. DAMAGE

Damage to existing utilities, trees, pavements or other property caused by the Contractor shall be restored to original condition at the Contractor's expense, prior to final inspection.

IV. GUARANTEES

All guarantees required by the following Divisions of these Specifications shall be presented in writing to the Agency prior to final acceptance of the work and shall be in addition to the requirements set forth in the Special Provisions of these Specifications.

V. RECORD DOCUMENTS

Submit to the Agency prior to final acceptance all record documents required by the other Divisions of these Contract Documents.

End of Section

SECTION 01720 - PROJECT RECORD DOCUMENTS

I. GENERAL

The provisions of the Standard Specifications for Public Works Construction (SSPWC), latest Edition, apply except as modified herein.

A. Related Requirements Specified Elsewhere:

Shop Drawings, Project Data, and Samples: Section 01340.
Products and Materials: Section 01600.
Project Closeout: Section 01700.

II. MAINTENANCE OF DOCUMENTS

Maintain at job site, one copy of:

Contract Drawings;
Specifications;
Addenda;
Reviewed Shop Drawings;
Change Orders;
Other Modifications to Contract;
Field Test Records;
Construction Schedules;
"As-Built" Drawings.

A. Storage:

Maintain documents in clean, dry, legible condition.

B. Use and Availability:

Not for construction purposes.
Available at all times for inspection by Engineer.

III. RECORDING

A. General:

Provide red ballpoint pen for all marking.
Label each document "PROJECT RECORD" in large, printed letters.
Keep record documents current.
Do not permanently conceal any work until required information has been recorded.
These drawings shall be up-to-date and so certified by the Project Inspector at each progress payment request submittal.

B. Marking:

Contract Drawings. Legibly mark to record actual construction:

Depths of various elements of foundation in relation to finish floor elevation;
Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements;
Location of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure;
Field changes of dimension and detail;
Changes made by Change Order or Field Order;
Details not on original contract drawings.

Specifications and Addenda. Legibly mark up each section to record:

Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed;
Changes made by Change Order or Field Order;
Other matters not originally specified.

Shop Drawings. Maintain as record documents; legibly annotate drawings to record changes made after review.

"As-Built" Drawings. Agency will furnish the Contractor with one set of black line prints showing all work required for the use of the Contractor as "as-built" drawings. The Contractor shall clearly mark on each set as specified above.

IV. SUBMITTAL

At completion of project, deliver record documents to Engineer. Accompany submittal with transmittal letter, in duplicate, containing:

Date;
Project title and number;
Contractor's name and address;
Title and number of each record document;
Certification that each document as submitted is complete and accurate;
Signature of Contractor or its authorized representative.

NOTE: Prior to final payment, Contractor shall submit all Record Documents for review, correct all deficiencies, obtain required approvals, and deliver all approved Record Documents to the Engineer.

End of Section

SECTION 02100 - SITE PREPARATION

I. GENERAL

The provisions of the Standard Specifications for Public Works Construction, Section 300, latest Edition, apply except as modified herein.

A. Scope:

Protection of all improvements to remain.
Protection of all light poles, fire hydrants, and other utilities to remain.
Protection of trees to remain.
Clearing and grubbing of the site of work as noted on drawings.
Removal and disposal of all deleterious materials.
Furnishing, developing, applying and providing watering equipment as required for the project.
Demolition and removal from the site of all materials, as shown on the drawings and as required for the new work, including the following:
 (1) All structures, appurtenances, footings and improvements. All fencing and fence fabric, as noted, with footings.
 (2) All concrete, concrete bumpers and asphalt paving, curbs, and all play equipment with footings, etc., as shown and/or as needed for grading operations and other improvements.
Removal and disposal of any additional items not specifically mentioned herein which may be found within the work limits.
Electrical removals.
Special handling and disposal of any toxic wastes (including asbestos and lead).

B. Related Work Specified Elsewhere:

Landscape work: Section 02900.
Irrigation systems: Section 02810.

C. Acceptance of Site:

Contractor shall accept the site and the character of the work as they exist on the first day of work under this contract. All existing conditions are not necessarily shown on the drawings or noted herein and can be determined only by actual examination of the sites and adjoining premises by the Contractor.

D. 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.

E. Protection and Safety:

Conform to all requirements of CAL OSHA "Construction Safety Orders" of the State of California Division of Industrial Safety, and applicable ordinances of the County of Los Angeles and City of Compton.

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 work 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 source.

F. Salvage Materials:

All salvage material remaining on the site after official notification of vacation by the Agency shall be property of the Contractor, except as noted on the plans and herein.

II. EXECUTION

A. General Removal Work:

Demolition and removal work shall be carefully performed to avoid damage to existing facilities as indicated on the plans to remain.

All removal work (except as noted) shall be disposed of off-site, in legal manner, at Contractor's expense.

B. Site Clearance and Disposal:

Contractor shall contact Rainbow Environmental Services at 714-847-3581 for renting the disposal bins for all construction and demolition wastes unless using its own disposal bin.

Clear the site to be improved of grass, weed growth, rubbish, debris, pavement, concrete, inactive or abandoned facilities (verified by the Agency), etc., that are to be removed for construction of improvements to the limits and depths shown on the plans, details or manuf. specs or details, necessary for construction of new items.

Abandoned underground facilities (verified by the Agency), roots three inches in diameter, rocks and broken masonry larger than four inches in any dimension shall be removed to a minimum depth of 12" below finish grade.

Miscellaneous inactive or abandoned underground facilities located 12 inches or more below finish grade may be removed with Agency approval.

Miscellaneous active lines within 12 inches of finish grade that are uncovered during the grading operations shall be protected.

All deleterious materials within the limits of the work shall be disposed of off the site by the Contractor, who shall make all necessary arrangements and pay all related costs.

The contractor shall salvage and or recycle for reuse a min. of 50% of the non-hazardous construction waste in accordance with 2013 California Green Building Standards Code section 5.408.1,5.408.1.2 or 5.408.1.3; or meet local construction and demolition waste management ordinance, whichever is more stringent.

The contractor shall use recycled materials, including rock materials, landscape materials, pavement materials and other recycled content from sources available.

C. Utilities:

Active utilities shall be protected by and at expense of the Contractor. Keep any required utility in operating condition during entire period of work, including irrigation system for landscape maintenance.

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 Agency Representative who will determine further procedure.

D. Debris Burning:

Burning of debris will not be permitted except by written permission of the Air Pollution Control Authorities and governing fire authorities.

E. Sawcut Paving:

The Contractor shall carefully saw cut existing concrete or a.c. paving in the location shown on the drawings, and shall carefully remove the designated portion without damage to facilities to remain.

F. Special Handling and Disposal of Any Toxic Wastes

Existing improvements are to be demolished on the project. It is the responsibility of the Bidders to ascertain for themselves (by thorough site inspection) the presence of any toxic materials (including any products containing asbestos). They shall make proper allowances in their Bid Proposals to cover all contingencies (as required by public agencies) including health hazard in handling and required and proper disposal off site.

G. Turf Eradication:

Existing turf shall be killed with a City approved contact/systemic herbicide (Roundup or equal) applied by a certified applicator. After the treatment has been confirmed effective by the Agency representative, the dead material shall be removed from the site and properly disposed by the Contractor. The subsurface dead material shall be processed with grading and soil preparation operations.

End of Section

SECTION 02547 - GRANULAR SURFACING

I. GENERAL

The provisions of the Standard Specifications for Public Works Construction (SSPWC), latest Edition, apply except as modified herein.

A. Work Included in this Section:

- Fine finish grading.
- Furnishing and installing sand.
- Furnishing and installing decomposed granite.
- Furnishing and installing stabilized decomposed granite

B. Work not Included:

- Site demolition.
- Rough and finish grading.
- Irrigation.
- Fencing.
- Concrete.
- Play Equipment.

C. Related Work Specified Elsewhere:

Soil Treatment, Section 02280.

D. Approvals:

All rough and finish grading shall be inspected and approved before start of any work of this section.

All sprinkler work affecting the work of this section shall be inspected and approved before installation of topping.

II. MATERIALS

A. Sand:

Sand for use in designated areas shall be APlayground Sand #5200" washed bunker sand as available through Southwest Boulder Supply (800) 540-1147 or equal.

Playground sand shall meet the following particle distribution.

SAND: PARTICLE DISTRIBUTION ANALYSIS (Individual Retained Percentages)

mm	2.0	1.0	.50	.25	.15	.106	.053	Total Sand	.002	<.002
									Silt	Clay
US	#10	#18	#35	#60	#100	#140	#270			
<hr/>										
%	1.18	8.55	24.33	39.38	18.05	2.86	1.64	96.0	3.5	0.5

B. Decomposed Granite:

Decomposed granite shall meet the requirements of Standard Specifications for Public Works Construction, Section 400-2.3.1, Disintegrated Granite, except that grading shall be as follows:

Sieve Size % Passing

3/4"	100
2"	95 - 100
No. 4	50 - 100
No. 30	25 - 55
No. 200	5 - 18

C. Stabilized Decomposed Granite for Trail:

Decomposed granite shall meet the following Sieve Analysis (Cal Trans 202) as follows:

<u>Sieve Size</u>	<u>% Passing</u>
2" (12.5 mm)	100
3/8" (9.5 mm)	97
No. 4 (4.75 mm)	78
No. 8 (2.36 mm)	61
No. 16 (1.18 mm)	46
No. 30	33
No. 50	23
No. 100	15
No. 200	9

The R value shall be a minimum of 70.

The dry static coefficient of friction shall be greater than .60.

Stabilizer® organic binder supplied by Stabilizer Solutions, Inc. (800)336-2468, info@stabilizersolutions.com, shall be incorporated with granite fines by the use of a pug mill that includes a weight belt feeder to insure proper ratio of Stabilizer® to granite fines (12 pounds per ton of granite fines). Blending procedures are performed only by a licensed Stabilized Decomposed Granite blender by Stabilizer Solutions, Inc.

For the trail the stabilized granite shall be placed to a minimum depth of 3" compacted.

Decomposed granite shall be 1/4" Gold as supplied by Stabilizer Solutions, Inc. (800)336-2468, info@stabilizersolutions.com. Stabilized Decomposed Granite with Stabilizer can only be sold through a licensed Stabilizer® dealer.

Prior to installation, samples shall be taken from each 300 tons delivered on site and submitted for Stabilizer® Content Test by Turf Diagnostic & Design, 613 E. 1st Linwood, KS 66052.

III. EXECUTION

A. Sand:

Distribute sand to limits and to depths shown on plans. Finish depth of sand shall be measured after settlement.

B. Decomposed Granite:

Subcut to 3 inches below finish grade. Maintain uniform subgrade slope to drain. Treat grade area with a non-translocating, pre-emergent herbicide (see Soil Treatment - Section 02280).

Evenly distribute decomposed granite to bring grades to required level after incorporation and compaction.

Grade to uniform slope. Thoroughly moisten without flooding and compact to minimum 90%.

C. Stabilized Decomposed Granite

Base shall be 3" compacted layer of Cal Trans recommended crushed granular road base.

Pre-soak base material with water and compact to 95% prior to installing Stabilized decomposed granite.

Install proper drainage to ensure no standing water on surface or adjacent to stabilized decomposed granite, including downspouts when placed under roof overhang.

Place stabilized decomposed granite on prepared base at a 3" thickness. Level to desired grade and cross section.

Water heavily for full-depth moisture penetration of the stabilized decomposed granite profile. Water activates Stabilizer®. To achieve saturation of Stabilized pathway profile, 25 to 45-gallons of water per 1-ton must be applied. During water application randomly test for depth using a probing device, which reaches full depth.

Compact stabilized decomposed granite to 85%-95% relative compaction by equipment such as; a 2 to 4-ton double drum roller. DO NOT use a vibratory plate compactor or vibration function on roller as vibration separates large aggregate particles. Do not begin compaction for 6 hours after placement and up to 48 hours.

Allow surface to dry completely before permitting heavy traffic.

D. Maintenance:

Remove all vegetation in infield areas and in decomposed granite areas as it appears. Contractor may use a contact weed killer that does not stain or leave a residue to control vegetation.

End of Section

SECTION 02770 - SITE CONCRETE WORK

PART 1 GENERAL

Application and construction procedures shall conform with the requirements of the Standard Specifications for Public Works Construction (SSPWC) and any supplements.

1.1 DESCRIPTION

- A. Provisions of the General and Supplementary Conditions and Division 01 apply to this section.
- B. Section Includes:
 - 1. Portland cement concrete pavement, cement walks, curbs, gutters, trash pick-up area, ramps, mowing strips, fence post footings, sliding gate concrete tracks, catch basins, pipe bedding and encasements, thrust blocks, transition structures, flagpoles and light standard bases and footings, athletic equipment footings and equipment pads.
- C. Related Sections:
 - 1. Section 02201: Clearing and Grubbing.
 - 2. Section 02319: Base Course
 - 3. Section 321216: Asphalt Concrete Paving
 - 4. Section 03303: Sidewalk, Curb, and Gutter
 - 5. Geotechnical Reports For: Bolsa Chica, Bowling Green, Buckingham, Gillespie, Margie L Rice (Indian Village), Park West and Westminster Parks

1.2 SUBMITTALS

- A. Shop Drawings: Submit plans, elevations and details of concrete site Work.
- B. Product Data: Submit mix designs and manufacturer's technical data for materials and products.

1.3 QUALITY ASSURANCE

- A. Comply with Standard Specifications For Public Works Construction and Geotechnical report recommendations when applicable.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Concrete, Mortar and Related Materials: Comply with applicable provisions of Standard Specifications for Public Works Construction, Section 201 - Concrete, Mortar and Related Materials:
1. Concrete: 28-day compressive strength 3250 psi, unless specified otherwise.
 2. Steel Reinforcing Bars: ASTM A 615, or ASTM A 706 deformed grade 40 billet steel unless otherwise specified or indicated.
 3. Reinforcing Mesh: ASTM A 185, 6x6 /W1.4 x W1.4 welded wire mesh.
 4. Expansion Joint Filler: Preformed expansion joint filler, bituminous type, complying with ASTM D 994.
- B. Form Materials:
1. Side forms: Douglas fir, Construction Grade or Better or metal forms.
 2. Stakes: Douglas fir, Construction Grade or Better or metal stakes.
- C. Concrete Parking Bumpers:
1. Precast concrete, smooth and free of pits and rock pockets, providing a minimum 28-day compressive strength of 3,500 psi. Size at least 7-1/2 inches wide, 5-1/2 inches high and 6 feet long. Reinforce with 2 #5 reinforcing bars. Provide 2-3/4 inch diameter pre-drilled holes for anchor installation.
 2. Bumper Anchors: Provide 1/2-inch diameter x 18-inch long galvanized steel pipe.
 3. Bumper Adhesive: Provide adhesive recommended by bumper manufacturer/installer for fastening bumpers to concrete pavement.
- D. Metal Bollards
1. Metal bollards shall be Round Post Collapsible as manufactured by Traffic Guard Direct (877-727-7347) or approved equal. Bollards shall be 36" in height and furnished with lockable bracket.

PART 3 EXECUTION

3.1 CONSTRUCTION OF FORMS FOR CAST-IN-PLACE STRUCTURES

- A. Concrete Pavement: Install Portland cement concrete pavement in compliance with the Standard Specifications for Public Works Construction, Section 302- Roadway Surfacing.
- B. Miscellaneous Exposed Concrete: Install concrete curbs, walks, gutters, cross gutters, access ramps, driveways, catch basins, yard boxes, vaults and similar structures, in compliance with the Standard Specifications for Public Works Construction, Section 303 - Concrete and Masonry Construction.
- C. Exposed Concrete Bases: Install bases, such as for post, flagpole, light standards and similar bases, in compliance with the Standard Specifications for Public Works Construction, Section 303 - Concrete and Masonry Construction.
- D. Post, flagpole, light standard footings below grade, underground conduit bedding, encasements, thrust blocks and similar structures may be deposited directly in excavations conforming to the required sizes.
- E. Reinforcement installation and concrete placement, surface finishes, curing and removal of forms shall be installed in compliance with applicable provisions of Standard Specifications for Public Works Construction, Section 303 - Concrete and Masonry Construction.
- F. Provide heavy Broom Finish at slopes exceeding 5% and medium broom finish at slopes up to 5%.

3.2 INSTALLATION OF PARKING BUMPERS

- A. Install bumpers as indicated on the Drawings. On bituminous paving, install anchors through pavement and into the ground a minimum of 12 inches. On concrete pavement, install bumpers in a continuous bed of adhesive. Anchors shall be set flush with top of concrete bumper.

3.3 INSTALLATION OF METAL BOLLARDS

- A. Metal bollards shall be secured to concrete surfacing with masonry concrete anchor bolts per manufacturers recommendations. Bollard shall be furnished with factory applied yellow finish and high visibility reflective tape.

3.4 CLEAN UP

- A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

3.5 PROTECTION

- A. Protect the Work of this section until Substantial Completion.

END OF SECTION

SECTION 02870 - SITE FURNISHINGS

I. GENERAL

A. Scope of Work:

Furnishing and/or installing trash containers.
Furnishing and/or installing picnic tables.
Furnishing and/or installing barbecues.
Furnishing and/or installing shade shelters
Furnishing and installing Bollards (Removable and stationary)

B. Work not Included:

Play equipment.
Athletic equipment.

II. PRODUCTS

A. Litter Receptacles:

As noted on plans.

B. Picnic Tables:

As noted on plans

C. Serving Tables:

As noted on plans

D. Barbecues:

As noted on plans.

E. Shade Shelters:

As noted on plans. Submit shop drawings for approval. Submit footing and shelter structural calcs and details for approval.

III. INSTALLATION

A. General:

Installation shall be in the locations shown on the drawings after approval of precise location by Consultant. Install according to manufacturer's written instructions or according to approved shop drawings. Install all metal supports and post in footings prior to installing any concrete slabs. Any item not imbedded shall be surface mounted to a concrete slab using minimum 3/8" x 3" long lag screws in expansion shields.

Concrete Footings: All site furnishings which are embedded in the ground shall have a 12" x 18" minimum concrete footing. If the manufacturer has a specified method of installation, it shall take precedence over the above footing.

End of Section

SECTION 02900 - LANDSCAPE PLANTING

I. GENERAL

The provisions of the Standard Specifications for Public Works Construction (SSPWC), latest Edition, Sections 212 and 308 apply except as modified herein.

A. Work Included in this Section:

Finish grading (fine).
Weed abatement.
Soil preparation.
Furnishing plants and planting.
Fertilizer, soil amendment.
Watering.
Project maintenance period.

B. Work not Included in this Section:

Rough grading.
Finish grading.
Irrigation system.

C. Approvals:

All sprinkler work shall be inspected and approved before starting any work of this section, except that specimen trees shall be installed prior to beginning sprinkler work.

All turf areas shall be planted and all landscape planting shall be installed and approved prior to the commencement of the plant establishment period.

II. MATERIALS

A. Landscape Finish Grading:

Site topsoil material shall be used.

B. Soil Amendments and Fertilizer for Bid Purposes:

All turf areas shall receive soil amendments per soil analysis recommendations. See specs. (Use the following quantity per 1,000 sq. ft. for bidding purposes).

1. 6 cubic yards nitrogen stabilized organic amendments.
2. 15 lbs. commercial fertilizer (6-20-20 either incorporated into the soil or incorporated into the hydromulch slurry as specified).
3. 20 lbs. of gypsum

C. Turf Seed Mixes:

All seed shall be fresh, clean, new crop seed, premixed by mechanical mixer to proportions specified. Minimum purity and germination as follows:

<u>Turf Mix</u>	<u>Proportion by Weight</u>	<u>Purity</u>	<u>Germination</u>
Ryegrass (50% Pennfine, 50% Derby by count)	20%	95%	90%
Bluegrass (50% Rugby, 50% Parade by count)	40%	98%	80%
Bermuda grass* (certified Arizona Common)	40%	98%	85%

* Hulled seed shall be used if planted April through September.
 Unhulled seed shall be used if planted October through March.
 Seeding rate: 350 pounds per acre. (8 pounds per 1000 square feet).

D. Sod:

Sod shall be as called out on the drawings. Prior to delivery to the site, the Contractor shall submit a square yard sample of proposed sod with the name of the supplier to the landscape architect for review and approval.

E. Commercial Fertilizers:

Planting Tablets. Tightly compressed, long-lasting, slow-release fertilizer tablets weighing 21 grams, with a potential acidity of not more than 5% by weight and having an analysis of 20-10-5 derived from the sources listed in the following guaranteed analysis:

Guaranteed Analysis

Total Nitrogen.....	20.0%
Derived from urea-formaldehyde.	
7.0% water soluble Nitrogen, 13.0% water insoluble Nitrogen	
Available Phosphoric Acid.....	10.0%
Derived from calcium phosphate.	
Soluble Potash.....	5.0%
Combined Calcium.....	2.6%
Derived from calcium phosphates.	
Combined Sulfur.....	1.6%
Derived from ferrous and potassium sulfates.	
Iron (expressed as elemental Fe).....	35%
Derived from ferrous sulfate.	
Potential Acidity: 5% or 100 lbs. Calcium Equivalent per ton.	

Fertilizer 6-20-20 XB (for turf areas): Premium high performance pre-plant fertilizer compound having an N-P-K ratio of 6-20-20, and shall be derived from the sources listed in the following analysis in a high quality homogeneous pellet.

Guaranteed Analysis

Total Nitrogen.....	6.0%
Ammoniacal Nitrogen	
Available Phosphoric Acid.....	20.0%
Soluble Potash.....	20.0%
Sulfur.....	5.5%
Iron (Fe) expressed as Elemental.....	1.5%
Potential Zinc.....	0.75%

Fertilizer 16-6-8: (for Maintenance) Fertilizer shall be a fertilizer compound having an N-P-K ratio of 16-6-8, and shall be derived from the sources listed in the following analysis in a high quality homogeneous pellet.

Guaranteed Analysis

Total Nitrogen.....	16.0%
Ammoniacal Nitrogen	
Available Phosphoric Acid.....	6.0%
Soluble Potash.....	8.0%
Sulfur.....	16.0%
Iron (Fe) expressed as Elemental.....	1.5%
Potential Zinc.....	0.1%

Ammonium Sulfate: Conforming to the requirements of the Agricultural Code of the State of California.

Iron Sulfate: Ferric sulfate or ferrous sulfate 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 Agricultural Code.

Soil Amendment: Standard Specifications Section 212-1.2.4 shall apply. Soil amendment shall be an organic wood base product, Type I, composted Redwood or Cedar only.

F. Hydromulch Materials:

Water. General precautions should be observed when drawing water from sources other than main pressure. The use of filters may be required when directed. Such water must be free of impurities.

Seed: Turf and native plant seed as previously specified.

Wood Fiber Mulch. Fiber shall be produced from cellulose such as wood pulp or similar organic material and shall be of such character that it will disperse into a uniform slurry when mixed with water. The fiber shall be of such character that when used in the applied mixture an absorptive or porous mat, but not a membrane, will result on the surface of the ground. Materials which inhibit germination or growth shall not be present in the mixture.

Fertilizer 6-20-20 XB pellet form. Add to slurry mix at 650 lbs/acre.

III. EXECUTION

A. Finish Grading:

Before any planting operations start in any area, all trash and deleterious materials on the surface of the ground shall be removed and disposed of. After completion of fine grading and prior to soil preparation, the Contractor shall adhere to the Agronomic Soils Test and Report recommendations as required, except for the minimums specified herein.

Turf areas shall be graded so that after cultivation, amendment and settlement, the soil shall be 1" below the top of curb or paving. 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.

All turf planting areas shall be cultivated until the soil is brought to a loose friable condition to a depth of 6". Remove all rocks and debris 1" or larger in size. Evenly distribute soil amendments, and thoroughly incorporate into upper 6" of soil with mechanical tiller.

B. Weed Abatement:

All weed growth in planting areas shall be removed. Common Bermuda grass found growing in areas not designated to be planted with Bermuda grass, shall be killed with an approved herbicide or fumigant with materials approved by the Agency.

Contractor shall irrigate for a minimum of twenty-one (21) days all banks and other areas that will be hydroseeded with plants other than turf to germinate existing weeds. Weeds shall be removed or killed by a contact herbicide to provide a complete kill. Soil surface shall be free of excessive vegetative material so that hydromulch is in contact with the soil surface.

C. Turf Installation:

Grade smooth all surfaces to be seeded. Soil surface shall be 1" below adjacent walks after settling. Roll lightly and fill in all soil depressions. Under mechanical seeding method incorporate 15 lbs./1,000 sq. ft. 6-20-20 in the upper 6" of soil.

Soil shall be level, smooth and moist before seeding.

The seed bed shall be inspected by the Agency Representative to determine its suitability prior to seeding. The Contractor shall obtain such approval before seeding grass. No seeding shall be performed until all other construction operations have been completed, except by authorization of the Agency Representative.

Seed bed mulch will be required according to the seeding method selected by the Contractor, which shall be approved by the Agency Representative.

D. Sodding:

Sod shall be as specified on plan and shall be installed within 24 hours after harvesting.

Sod area shall be rolled lightly and watered to a depth of 6" the day prior to installing sod. Fill or regrade any areas as necessary. Lightly water again just prior to laying sod.

Sod shall be laid in staggered pattern, with tight joints and in the same direction each time. On slopes, install sod from the bottom up. Protect the newly laid sod by walking on boards as the installer moves upward, sod on slopes shall be pinned down with wooden pegs.

Roll sod with adequately weighted roller to smooth out sod bed.

Keep sod thoroughly moist to a depth of 6" until established. No foot traffic should be allowed for 2 to 3 weeks after installation.

E. Watering:

Apply water to all planted areas during operations and thereafter, until acceptance of work.

Plants which cannot be watered efficiently with the existing water system shall be watered by means of a hose.

Immediately after planting, apply water to each tree and shrub. 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.

Apply water in sufficient quantities and as often as seasonal conditions require to keep the planted areas wet at all times, well below the root system of grass and plants.

All ground cover planting shall be immediately sprinkled to avoid drying out until the entire planted area is thoroughly watered and the soil soaked to the full depth of each plant hole.

All hydromulch and seeds should be kept damp at all times and irrigation should be adjusted accordingly. This normally would involve four to six watering periods daily; each watering period (ON) regulated to just dampen the mulch and seed, without creating runoff. Intervals between irrigations (OFF) should be judged by the length of the time mulch and seeds remain damp. Once mulch and seeds begin to dry out, the watering (ON) should be repeated.

F. Turf Mowing:

The turf shall be edged whenever necessary. The turf shall be mowed with a sharp mower before it exceeds 2" in height. The turf will be cut to not less than 1 2" and, during the period of maintenance, the turf will not be allowed to exceed 2" in height. Hybrid bermuda turf shall be cut using a reel type mower. A rotary type mower is not acceptable.

G. Project Maintenance:

Project maintenance consists of a minimum 30 day plant establishment period and a subsequent 60 day maintenance period, constituting a total minimum 90 day maintenance period.

The plant establishment period commences when all plants and all turf (grass) has been planted. The establishment period will continue until all turf areas have been mowed to the specified height at least once, but not less than 30 days.

Water turf until acceptance of work. The areas shall be kept moist, but not glistening wet, until time for the first cutting of turf. After first cutting, water turf to maintain a thriving condition. Any areas where the seeds fail to germinate satisfactorily shall be immediately reseeded. The Contractor shall maintain the turf areas until an even, close stand of turf is obtained.

Where sod has been installed, the Contractor shall topdress with Agency approved silica sand and roll as necessary to fill seams between sod strips and/or low points in order to produce a firm even stand of turf. The contractor shall repeat this process as necessary to achieve a uniform turf condition to the satisfaction of the Agency representative.

The establishment period shall be extended beyond the 30 day minimum at no cost to the City until all turf areas have been mowed to the specified height and a close stand of turf is attained to the satisfaction of the Agency Representative.

Project maintenance work shall commence after the Agency Representative has approved plant establishment and shall continue for 60 additional days.

Project maintenance work shall consist of applying water, fertilizing all areas, weeding, caring for plants, sweeping walks, litter pickup, and performing all general project maintenance.

The Contractor shall be responsible for detecting nutrient deficiencies and turf diseases and pests as soon as their presence is manifested. He shall take immediate action to identify the problem and shall immediately apply remedies. If the above and following conditions are not complied with, the Contractor shall re-plant the grass and maintain the turf until a healthy,

mature turf is re-established, and shall maintain that area for an additional 60 days at no additional cost to the Owner.

During the project maintenance period, all plants and planted areas shall be kept well watered and kept weed free at all times. Weeds, Dallas and Johnson grass, and Bermuda grass shall be removed and disposed of (except Bermuda grass will be allowed to remain in turf areas). Provide special attention for watering slopes planted to lawn on the windward and/or sunny side so that turf will adequately be watered at all times.

Immediately after the second cutting of turf, where trees occur in turf areas, the turf shall be turned under and neatly edged 18" away from the plants. The turf edges shall be maintained in a neat condition until acceptance of the work.

Workmen shall not be allowed to walk on turf areas unnecessarily before, during or after seeding operations. Turf areas that have been damaged or compacted shall be recultivated and reseeded at the Contractor's expense.

The Contractor shall provide supplemental feedings of fertilizer as required to maintain a healthy turf and all other plantings including slope areas. Minimum requirement: 16-6-8 at 6.2 lbs. per 1000 s.f. 35 days after initial planting, and just prior to final inspection.

In order to carry out the project maintenance work the Contractor shall maintain a sufficient number of personnel and adequate equipment to perform the work herein specified from the time any planting is done until the end of the project maintenance period or until the final approval.

The Contractor may be relieved from maintenance work required in these special provisions when the project maintenance work has been satisfactorily completed.

Damage to planting areas shall be repaired immediately.

Contractor shall continue to pick up rocks that surface and are 1" or greater in diameter.

H. Inspections:

A written notice requesting an inspection should be submitted to the Agency Representative at least ten (10) days prior to the anticipated date. Prior to this inspection, the site must be thoroughly cleaned up and all excess material and debris removed.

The following inspections are required:

Prior to the start of the 90 calendar day plant establishment and project maintenance period, the Contractor will be required to have a complete inspection and approval of all landscape construction items.

At 30th calendar day.

At 60th calendar day.

At completion of the maintenance period.

I. Certification:

Written certifications required which are to be submitted to the Agency Representative upon delivery to the job site include:

Quantity of commercial fertilizer used.
Quantity of soil amendments.

Quantity of seed.
Quantity of iron sulfate.
Quantity of soil sulfur.
Quantity of agricultural gypsum.
Quantity of hydromulch materials.
Quantity of sod.
Quantity of shredded wood mulch.

End of Section

SECTION 03200 - CONCRETE REINFORCEMENT

I. GENERAL

The provisions of the Standard Specifications for Public Works Construction (SSPWC) latest edition apply except as modified herein.

A. Work Included in this Section:

Bundle reinforcement and tag with suitable identification to facilitate sorting and placing.
Store all reinforcement to protect from rust, oil, dirt, and splash.

B. Related Work Specified Elsewhere:

Miscellaneous Metals: Section 05010

C. Quality Assurance:

Material quality standards and testing procedures shall be in accordance with the American Society for Testing Materials, hereinafter referred to as "ASTM". All ASTM standards and testing procedures shall be the latest requirements.

Fabrication and installation of reinforcing steel shall be in conformance with the Manual of Standard Practice for Detailing Reinforced Concrete Structures ACI 315.

Tests and Inspections:

Tests and inspections shall be made by a testing laboratory approved by the Structural Engineer.

The cost of sampling and testing required by these Specifications shall be borne by the Owner.

Sampling of reinforcing steel shall be done by a representative of the testing laboratory.

One tensile and one bend test shall be made of each ten tons or fraction thereof for each size reinforcing steel bar #5 and larger. These tests shall be performed only if required by the Test and Inspection Request Form prepared by the Structural Engineer.

Prepare and distribute copies of test reports to City Engineer.

Additional tests shall be made when and as directed by the Structural Engineer. Costs of test shall be borne by the Contractor.

D. Submittals:

The Contractor is not required to submit placing drawings for approval. All reinforcing will be checked in its installed position.

II. PRODUCTS

A. Materials:

Reinforcing steel bars shall be of the Intermediate Grade conforming to ASTM A615, Grade 40, and shall be rolled from new billets. All bars shall be identified by mill. heat numbers.

Steel reinforcing bar supports shall be CMU support (Adobi) blocks with attached wire ties or approved equal.

Tie wire shall be 16 gauge annealed wire.

Welded wire fabric shall conform to ASTM A-185.

B. Fabrication:

Fabricate bars of indicated size. Accurately form to shapes and lengths indicated by methods not injurious to the materials. Do not heat reinforcement for bending. Bars with kinks or bends not scheduled will be rejected.

III. EXECUTION

A. Placing:

Coordinate all work with other trades.

All bars shall be as shown on the drawings, accurately placed and wired in position by 16 gauge annealed wire. Tie stirrups to bars at both top and bottom. Bend wire ties away from forms.

Maintain proper distance and clearance between parallel bars and forms. Provide metal spreaders and spacers to hold steel in position as necessary.

Support steel at proper height upon approved support system, transverse steel bars with hangers, or in other manner as necessary to accurately place and secure bars. Maintain clear spacing between parallel bars of not less than 1/2 times the bar diameter, but in no case less than 1/2". Lap and splice bars in the manner and at the locations shown on the drawings.

Bars on footings or slabs on grade shall be supported on concrete blocks. Reinforcing steel in beams and suspended slabs shall be supported on steel chairs.

Provide additional reinforcing bars at sleeves and openings.

Before placing reinforcing and again before concrete is placed, clean reinforcement of loose mill scale, oil or other coating that might destroy or reduce bond.

Splices shall be made with a lap of 30 bar diameters unless noted otherwise.

End of Section

SECTION 03303 - SIDEWALK, CURB AND GUTTER

PART 1 GENERAL

1.01 DESCRIPTION

- A. The WORK under this Section includes providing all labor, materials, tools, and equipment necessary for furnishing and installing concrete pavement, sidewalk, curb, and gutter as shown on the Drawings and Standard Details.

1.02 Related Work

Section 01530 Protection and Restoration of Existing Facilities

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Materials shall conform to the requirements of Section 201, Concrete, Mortar and Related Materials of the Standard Specifications for Public Works Construction, or approved equal.
- B. Colored concrete additives shall be provided by the Contractor for areas to have integral color.
- C. Truncated Dome tactile material shall be installed by the contractor in conformance with Federal Access Guidelines.
- D. Concrete pavement shall be Class A mix design, and concrete for sidewalks and curbs shall be class C mix design. Strength of concrete shall be a minimum of 3250 psi for all concrete work.

PART 3 - EXECUTION

3.01 METHODS OF CONSTRUCTION

- A. Sidewalk, concrete slabs, curb and gutter, and valley gutter shall conform to the applicable requirements of Section 02770 - Site Concrete Work, and as shown on the Drawings.
 - 1. The curing compound shall be sprayed on the surface with a low-pressure sprayer immediately following the finishing operation.
 - 2. The entire surface shall be kept wet for 30 minutes by brooming excess material onto the dry spots or by re-spraying them immediately. No areas on the concrete surface shall be allowed to dry during the initial 30 minute period.
 - 3. As the curing compound begins to dry into the surface and becomes slippery, lightly sprinkle the surface with water to aid the penetration of the curing compound and to bring any alkali to the surface.
 - 4. After 30 to 40 minutes, squeegee or broom the surface to remove any excess curing compound and alkali or other impurities brought to the surface. All WORK required for the application of the curing compound shall conform to the manufacturer's recommendations.
- B. All exposed or unprotected edges of sidewalks shall be tooled to a radius of not more than one-half inch. After floating, trowel finish the entire surface using steel trowels. Final finish shall be obtained by brooming the surface, including the tooled edge, to a gritty finish after all free moisture has disappeared from the surface. Sprinkling of cement or sand for blotting will not be permitted.
- C. Concrete curb and gutter, curb, and valley gutter shall be integral, one course construction, and molded in place on a prepared and compacted

subgrade surface. The face forms of the integral curb and gutter shall be removed as soon as practicable. The top and inclined surface shall then be worked with float or steel trowels to a gritty finish. Glazing, sprinkling of sand or cement, or blotting will not be permitted. Both front and back edges shall be tooled to a radius of one-half inch.

- D. Use of monolithic curb and gutter machines will be permitted only on the written approval of the ARCHITECT. Mortar may be added to the curb machine in a quantity approved by the ARCHITECT.
- E. Expansion joints shall be placed at 30-foot, maximum, intervals along all structures and about all features that project into, through, or against the concrete. An expansion joint shall be constructed at the intersection of sidewalks, between sidewalk crossings and sidewalks and at the beginning and end of curb returns. Expansion joints shall not be placed between the sidewalk and the curb. See plans for location of all joints.
- F. Expansion joint material shall conform to the requirements of AASHTO M 213. This material shall extend the full width of the structure and shall be cut to such dimensions that the base of the expansion joint shall extend to the subgrade and the top shall be depressed not less than one-quarter inch nor more than one-half inch below the finished surface of the concrete. The material shall be one piece in the vertical dimension and shall be securely fastened to the existing concrete face against which fresh concrete is to be poured. Expansion joints shall be sealed with rubberized polyurethane material to seal expansion joint. Sealant shall be grey in color.
- G. Transverse contraction joints (score lines), cut to a depth of one-half inch prior to the final set of the concrete, shall be tooled in the sidewalk at intervals approximately equal to the width of the sidewalk, and at ten foot intervals in the curb and gutter. Where the sidewalk adjoins the curb (parallel to it), contraction joints in the sidewalk and curb shall be made to match where practicable. See plan for location of all joints.
- H. The top and face of the finished curb shall be true and straight and the top surface of curbs shall be of uniform width, free from lumps, sags, or other irregularities. When a straightedge 10 feet long is laid on the top or face of the curb, or on the surface of gutters, the surface shall not vary more than 0.02 foot from the edge of the straightedge except at grade changes or curves. All discolored concrete shall be cleaned at the CONTRACTOR's expense. The concrete may be cleaned by abrasive blast cleaning or other methods approved by the ARCHITECT. Repairs shall be made by removing and replacing the entire unit between scoring lines or joints.
- I. Sidewalks at driveway approaches shall have a minimum thickness of Eight (8) inches.
- J. Colored concrete shall be placed in areas designated on the Plans. The Contractor shall provide color samples to ARCHITECT for review and approval prior to placement of final concrete. Contractor shall determine the quantity of color additive to be added to the mix to achieve desired color match. Contractor shall supply a sample pour and finish of 2' x 2' for review and approval by ARCHITECT.
- K. Truncated dome material shall be installed by the Contractor on all curb ramps and sidewalks as shown on the plans. Color shall be yellow, or as approved by the ARCHITECT. Contractor shall not install truncated dome material until concrete surfacing has sufficiently cured and ready for placement of truncated dome material. Minimum curing time shall be 21 calendar days or as approved by the ARCHITECT.

END OF SECTION

SECTION 03350 - CONCRETE FINISHES

I. GENERAL

The provisions of the Standard Specifications for Public Works Construction (SSPWC) latest Edition apply except as modified herein.

A. Scope:

Furnish materials and perform labor required to execute this work as indicated on the drawings, as specified, and as necessary to complete the Contract, including, but not limited to, these major items:

Finish of all concrete.
Curing of flatwork.
Sealers.

B. Related Work Specified Elsewhere:

Formwork.
Reinforcement.
Curing vertical surfaces.
Patching and repair of formed surfaces.

C. General Requirements:

1. Field Conditions.

Verify drawing dimensions with actual field conditions. Inspect related work and adjacent surfaces.

This section supplements Concrete, Section 03310.

Finish all surfaces to present a uniform appearance throughout the area involved, and throughout adjacent areas with the same treatment.

Where finishing occurs adjacent to finished metal or other finished surfaces, particularly where serrated or indented, remove all traces of cement film before it hardens. This applies particularly to stair nosings and similar items.

2. Samples.

In accordance with Section 1.34, submit duplicate samples of proposed finishes requested by the Architect; sizes as directed. Finished work shall match samples as approved by Architect.

II. MATERIALS

A. Portland Cement:

Per Section 03300.

B. Aggregates:

Per Section 03300.

C. Water:

Per Section 03300.

D. Curing and Protection Paper:

Sisalkraft Orange Label or other conforming to ASTM C171, as approved by the Architect.

E. Divider Strips Embedded in Concrete Finish:

One piece extruded zinc alloy strips of the type and size required by Duggan Manufacturing Co., Los Angeles, or approved equal.

F. Expansion Joint Sealer for Use Except Where Sealants Specified Under Caulking and Sealants are Required:

"Igas Joint Sealer", by Sika Chemical Corp., or other approved by the Architect.

G. Curing and Hardening Compound:

For use on finish indicated to be left exposed. Material shall contain a fugitive dye. Approved products include West "Concrete Floor Treatment", Upco "Polyclear", Hunt "MD7C", Tock Bros. "Cureetox", and Sonneborn "Kure-n-Seal".

H. Sealer:

Hunt "MD-7C", Sonneborn "Kure-n-Seal", or Upco "Polyclear". Apply in accordance with manufacturer's recommendations.

III. EXECUTION

A. Floating:

Bring slabs to proper level, using screeds and strikeoff with a straightedge. Remove excess water and laitance. Compact by rolling with weighted rollers and by tamping with grid tampers. Float with power rotary floating machine. Thoroughly hand tamp areas not accessible for rolling. Float areas not accessible for power floating by hand, using a wood float. Test surface with a 10' straightedge, and eliminate high and low spots of 1/8" or more. Cumulative tolerances are not allowed.

1. Screeds.

Of such type and construction, and so spaced and located as to provide surface tolerances specified. Use continuous screeds to provide surface over which to drag straightedges. Refer to requirements under Concrete Section which apply to this work.

B. Metal Divider Strips:

Where concrete floors finish against other materials, set combination screed and divider strip, secured in place and protected by shores until concrete on opposite side is installed. Insure that top of screed is at the exact required relationship with the top of the two finished surfaces to finish flush.

C. Embedded Items:

Set items as exact required elevations, level and in proper relationship to other work. Where items have a drainage function, insure that slabs slope to them properly. Adjust finish work to properly connect and fit to other work.

D. Defective Finishing:

Finish which is not true to line and plane, which is not thoroughly troweled and properly surfaced as required, which varies in excess of requirements along a 10' straightedge, which scuffs or has a rough top surface (except where required), which does not connect properly to adjoining work, which does not slope to drains, which does not match approved samples, or is not properly cured, will be deemed defective. Remove and replace with proper work and material conforming with contract requirements, and to limits directed by the Architect.

E. Protection:

Protect all finished work from damage by impact or from building rubbish. Protect work of others from damage by this work. Protect exposed slabs and slabs which receive applied coatings from soiling from foot traffic and subsequent work performed after finishing; use protective paper cover hereinbefore specified. Maintain protection in effective condition as long as the need exists. Control the use of water within the building so that no damage to previously installed work or existing structure and finish occurs.

F. Markings:

At expansion joints and elsewhere as indicated on the drawings, provide markings with a rounded edging or marking tool to a 1/4" radius.

In textured work, edge and mark with a combination edging and smoothing tool approximately 1 2" wide.

Where so indicated, or where required tooled markings may have been inadvertently omitted, provide markings cut into surface of cured concrete with a diamond abrasive saw. Properly coordinate this work with the work of other trades in order to avoid damage to adjacent surfaces. Unless detailed otherwise, cut sawed markings 1/8" wide by 3/4" deep.

Make marking lines straight or curved where required by the drawings, equally spaced and parallel to adjacent lines or walls, edges and other construction, and of uniform depth and cross section, with intersections accurately formed.

G. Bases:

Provide cement base where indicated. Mix: Two parts fine aggregate to one part Portland cement with a minimum amount of water to make a relatively dry mixture. Shape all work true to detail.

H. Schedule of Finishes:

The applicator of process concrete finishes must examine the substrate and the conditions under which work is to be performed and notify the Contractor in writing of unsatisfactory conditions. Do not proceed with the work until satisfactory conditions have been corrected in a manner acceptable to the applicator.

Comply with air pollution and safety regulations of governing authorities.

Protect adjacent materials and finishes from dust, dirt, and other surface or physical damage during finishing operations. Provide all protection as may be required and remove from site at completion of the work.

Float finish all slab surfaces which are to receive trowel finishes and other surface or physical damage during finishing operations. Provide all protection as may be required and remove from site at completion of the work.

Float finish all slab surfaces which are to receive trowel finishes and other finishes as specified and noted on drawings. After screeding and consolidating slabs, begin floating when surface water has disappeared or when concrete has stiffened sufficiently to permit operation of power-driven floats, or both. Hand-float in areas inaccessible to power units. Check and level surface plane to a tolerance not exceeding 1/8" in 10' when tested with a 10' straight edge. Uniformly slope surfaces to drains. Immediately after leveling, refloat surface to a uniform, smooth, granular texture.

1. Slab Finishes:

a. Steel Trowel Finish:

Same as monolithic trowel finish, except omit burnish troweling. Apply on garage floor surfaces.

b. Wood Float Finish:

Float to screeds. When ready, finish with wood floats to a uniformly textured surface. Apply on surfaces to receive waterproofing membranes, resilient floorings, carpet and wood flooring.

c. Sweat Trowel Finish:

Same as steel float finish, except perform last troweling with circular motion and slight lifting of trowel to produce uniformly swirling nonslip finish. Apply on exposed floors in mechanical equipment rooms and spaces.

d. Rough Finish:

Float to screeds. When surface water disappears, roughen surface in two directions with stiff wire brooms or garden rakes. Apply on slabs to receive mortar underbeds.

e. Abrasive Finish:

Same as steel trowel finish. Just before final troweling, uniformly apply abrasive aggregate at minimum rate of 1/4 pound per square foot, and lock into cement matrix with last troweling. Lightly brush green, set concrete surface to expose grains and remove cement film. Apply on all concrete stair treads and landings. **A medium broom finish to all paving unless otherwise specified.**

f. Broom Finish:

Provide a rough broom finish on all slabs scheduled to receive a ceramic tile floor on setting bed.

g. Steel Trowel Finish:

Provide steel trowel finish to all concrete surfaces as noted on drawings and hereinafter specified.

After concrete is sufficiently hardened to prevent drawing moisture and fines to the surface, finish trowel in two operations. Perform first operation with a power rotary trowel until matrix no longer accumulates on the trowel. Do not use cement, sand, or a mixture thereof to absorb excess moisture and do not add water to facilitate troweling. Perform second troweling until there is a distinct ringing sound under the trowel and a smooth, hard-burnished surface is obtained. Use liquid curing membrane.

Location: Under resilient flooring, wood floor, carpet, thin set tile and at all interior exposed floors not otherwise indicated.

Sealing: Just prior to final inspection, those floors which will be left exposed shall be scrubbed with detergent and water using a mechanical scrubber. Apply Sonneborn "Son-No'Mar" or equal product approved by the Architect, in accordance with manufacturer's recommendations. Provide manufacturer's 5 year guarantee against dusting.

End of Section

SECTION 09860 - ANTI-GRAFFITI COATINGS

I. GENERAL

A. Summary:

1. Section includes Graffiti Resistant Coatings

B. Submittals:

1. Product Data

In accordance with the provisions of Section 01340, submit complete manufacturer's literature and specifications. Include complete lists of materials proposed for use, giving the manufacturer's name, product numbers, and product information sheets for each specified item (four copies).

2. Samples

When specified system requires that the graffiti resistant coating be applied over a paint color, submit sample of system showing each coat. The architect will use this sample to approve color.

3. Application and Safety

Submit the manufacturer's recommended methods of installation, including limitations, safety and environmental cautions, material safety data sheets, and application rates.

C. Quality Assurance

1. Qualifications

- a. Use products by manufacturers regularly engaged in manufacturing of this product and with a history of at least three successful applications within the last three years.
- b. Use skilled workers who are thoroughly trained and experienced and who are complete familiar with the specified requirements and methods.

2. Regulatory Requirements

Comply with applicable codes and regulations. All products must comply with current VOC requirements for the air quality management district where application takes place. Where those requirements conflict with this Specification, comply with the more stringent provisions.

3. Field Samples

Apply the system as specified in a designated area in accordance with Section 01340. This will serve as an indication that applicator can provide acceptable results and will be used as the standard for the rest of the work.

D. Delivery, Storage, and Handling

1. Acceptance at Site

Materials shall be delivered to Project in original containers, complete sealed and bearing name of coating contained therein.

2. Storage and Protection

Use all means necessary to protect the materials of this Section before, during, and after installation.

E. Project Conditions

1. Project Conditions

Do not apply coatings when surface temperature is more than 90 °F in the shade, or when the relative humidity is more than 70 percent. Do not apply coating when adverse weather conditions are imminent.

II. PRODUCTS

A. Manufacturers

1. Prosoco Blok-Guard & Graffiti Control II (800) 255-4255 "or equal" apply per manuf. specifications.

B. Materials

1. Clear Finish Over Concrete, Brick, and Stone
- a. Waterborne sealer with an active solids content of 6% ASTM D 5090.
 - b. Clear Finish. A water based- silicone emulsion. Prosoco Blok-Guard & Graffiti Control II or Equal. Clean surfaces and apply per manuf. specs. Supply Defacer Eracer Graffiti Wipe or Enviro Klean SafStrip during contractor maint. Period and additional material for City use after maint. period.

III. EXECUTION

A. Examination:

1. Verification of Conditions

Prior to the commencement of the Work of this Section, examine the installed work of other trades and verify that all such work is completed or properly corrected to the points where this installation may properly commence. Commencement of work will indicate that applicator has accepted the conditions.

B. Preparation:

1. Protection

Protect and cover finished work and materials of all other trades that may be affected by work of this Section during coating application. Protect all surrounding vegetation and adjacent areas from overspray.

2. Surface Preparation

- a. Substrates to receive sealers or primers prior to graffiti resistant coatings must be cleaned of all dirt, bondbreakers, and all other foreign materials that will adversely affect the required appearance of the finished product.
- b. Power wash all surfaces in accordance with manufacturer's recommendations.

C. Application:

1. General

- a. Apply primers, paints, and coatings in strict accordance with the manufacturer's recommendations as accepted by the Agency.
 - b. The number of coats specified is the minimum that will be applied. Apply additional coats when undercoats, stains, or other conditions show through final paint coat, until paint film is of uniform color and appearance.
 - c. When additional coats of the graffiti resistant coating are required, allow no more than 48 hours between coats.
 - d. Apply a total dry film thickness of not less than 1.2 mils for primers and paint finishes and not less than 1.5 mils for graffiti resistant coatings.
- D. Cleaning, Touch-Up, and Refinishing
- 1. General
 - a. Carefully remove all splatters, spots, and blemishes caused by work of this Section.
 - b. Upon completion of the work, remove all rubbish, cans, and accumulated materials. All areas must be left in a clean and orderly condition.
 - c. Runs, sags, misses, holidays, stains, and other defects in the coated surfaces, including inadequate coverage and mil thickness will be satisfactorily touched-up or refinished.
 - 2. Removal of Graffiti
 - a. Defacer Eracer Graffiti Wipe or Enviro Klean SafStrip by Prosoco
 - 3. Curing of Polyurethane Enamels.
 - a. Seven to ten days curing time required in order for coating to resist graffiti
- E. Finish Schedule:
- Stucco, Concrete, Brick (Clear semi gloss over Paint)(Concrete BBQ's)
- | | |
|----------|---|
| One Coat | EFF-STOP, Concrete Sealer (W 709) |
| One Coat | EVERSHIELD, Exterior Masonry Finish (W 701) |
| One Coat | Prosoco Blok-Guard & Graffiti Controll II or Equal. |

End of Selection