PROJECT MANUAL

# REPLACEMENT OF PLAYGROUND EQUIPMENT AND MINOR SITE WORK

at

# WILLIAM ORR ELEMENTARY SCHOOL

**12130 S. JERSEY AVE.**
**Norwalk, California 90650**

for

## LITTLE LAKE CITY SCHOOL DISTRICT

10515 Pioneer Boulevard
Santa Fe Springs, California 90670

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DSA A# 03-121266

Prepared By


## ZIEMBA + PRIETO ARCHITECTS

601 South Glenoaks Boulevard, Suite 400
Burbank, California 91502
(818) 841-2585 • FAX (818) 841-7782


**ARCHITECT:** Jorge Prieto, AIA
Ziemba + Prieto Architects
601 S. Glenoaks Blvd., Suite 400
Burbank, CA 91502

Jorge Prieto, AIA

Signature and Stamp


**Civil:** Kurt Saxon
Saxon Engineering
2605 Temple Heights Dr., Suite A
Oceanside, CA 92056

Kurt Saxons, P.E.

Signature and Stamp

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# SECTION 01010

# SUMMARY OF WORK

## PART - GENERAL

1.01 DESCRIPTION: This section includes general requirements applicable to the entire work.

A. Work in this Section: Principal items include:

1. Project description.
2. Type of contract.
3. District's right to do work separately.
4. Contractor's use of premises.
5. Existing utility services.
6. Compliance with regulations.
7. Certificates required.
8. Tobacco, alcohol, narcotics restrictions.
9. Conduct of workers.

B. Secure and pay for as necessary for proper execution and completion of the work, all permits, government fees and licenses. The District has paid the general plan check fee.

C. Give required notices for testing and inspection 48 hours in advance.

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

E. Enforce strict discipline and good order among employees. Do not employ persons unfit for assigned work.

1.02 PROJECT DESCRIPTION: Refer to Main Scope of Work on drawings.

1.03 CONTRACT: Perform work under a Bid contract.

1.04 DESIGN INTENT: The intent of the drawings and specifications is that the work of construction is to be in accordance with the 2019 California Building Code. If any existing conditions, such as deterioration, non-complying construction, or accessibility to the playground equipment be discovered which is not covered by the contract documents, wherein the finished work will not comply with the 2019 California Building Code, a Construction Change Directive or a separate set of plans and specifications detailing and specifying the required work shall be submitted to and approved by DSA before proceeding with the work.

## 1.05 GENERAL INSTALLATION REQUIREMENTS:

A. Manufacturer's Recommendations: Unless otherwise specified to the contrary, all materials and equipment provided for the project shall be installed in accordance with product manufacturer's instructions and recommendations. Furnish manufacturer's instructions and recommendations to Architect, whether or not specifically required under respective sections.

## 1.06 WORK BY OTHERS:

A. The District reserves the right to let other contracts in accordance with the General Conditions of the Contract.

B. The Contractor shall coordinate and cooperate with other contractors, and shall execute the work of this contract in a timely manner so as to cause no delay in the work of other contracts. Where excavations and installations to be performed and provided under this contract are in common, or conjunction or connection with the work of another contract, the Contractor shall afford such other contractors ample opportunity to execute their work, shall perform such partial backfilling and other operations as are necessary therefore, and shall not complete backfilling operations nor enclose or cover the work of other contractors until such work has been inspected, tested as required, and such backfilling, covering, or enclosing is approved.

C. The operations of other contractors on adjacent projects may interfere with and cause some delay to the work of this contract. If Contractor is delayed by contractors on adjacent projects, or by the act of negligence of the District or the Architect, the Contractor's sole remedy shall be an extension of the time as determined by the Architect in accordance with the General Conditions. Disagreements between the Contractor and other contractors about concurrent use of work areas or access to the site which are not resolved by the participants shall be referred to the Architect and the Contractor agrees to abide by the Architect's determination as to concurrent use or priority of access, and to perform its work in compliance with the Architect's resolution at no additional cost to the District. In no event shall the Contractor be entitled to a monetary payment from District for any damages, for increased salaries, increased cost of materials and equipment, loss of anticipated profits, or increased overhead or indirect costs, caused by such delays.

D. As required for the work of other contracts, and when as directed by the Architect, the Contractor shall relocate storage areas and roads constructed by him, and shall make such other provisions as are necessary to furnish access to the site to other contractors for the execution of their work, at no additional cost to the District. Conversely, such other contractors are required to relocate their storage areas and roads, and make such other provisions as are necessary for Contractor to perform and provide the work of this contract in accordance with the coordinated and approved progress schedules and construction planning schedules and networks of the various contractors, all at no additional cost to the District.

## 1.07 CONTRACTOR USE OF PREMISES

A. Do not unreasonably encumber site with materials or equipment.

B. Assume all responsibility for protection and safekeeping of products stored on premises.

C. Move all stored products which interfere with operations of District or other contractors.

D. Obtain and pay for use of additional storage, work areas, or parking required for operations of Contractor's employees.

E. Use of Site:

1. Allow District access to maintain and operate other existing facilities.

2. Permit unimpeded access by fire fighting or rescue equipment.

3. Access to and egress from construction site shall be in strict conformance to prearranged routes approved by the District, with the understanding that curtailment of traffic or revision of access routes may be required on short notice if the District's operations mandate such changes because of excessive noise, or problems with safety, service or supply.

F. Contractor shall assure that all persons working on the site use only non-permanent markets, tapes and tags to indicate construction techniques and instructions, on construction in progress, and on existing construction. This includes markings on exterior and interior of building and on walks, curbs, walls and other site surfaces. Where work is damaged or defaced by use of permanent marking devices, such work will be subject to cleaning, repair or replacement, as the Architect may require.

## 1.08 EXISTING UTILITY SERVICES:

A. Contractor shall locate all existing underground utilities using a "line locator" update "as built" plant including any "unidentified lines". The Contractor shall relocate drainage or sewer lines, water, gas and other utility or electric service lines, piping, or conduits in the way of new work, and see that all such services which are to be removed are correctly capped pr plugged and made gas and water tight according to the applicable requirements of the governing authorities or utility firms. Such services to remain in place shall be relocated or rerouted by Contractor and this requirement applies to both exposed and concealed services whether or not indicated on drawings.

B. Requests for utility shutdowns shall be made to the District 7 days before the proposed time. Actual downtime shall be held to a minimum.

C. Cutoff of services shall be done as directed by the Architect in all cases, after it has been ascertained that the Contractor has the materials, labor force and equipment to complete the work within a minimum delay.

D. The District or the Architect may require that any utility shutdowns, power outages and interruption of services be performed on weekends or off hours, with no increase in contract costs.

1.09 COMPLIANCE WITH REGULATIONS: All materials shall comply with the current rules and regulations of the local air quality management district, with the rules regarding volatile organic compounds, and with FDA rules and regulations for dangerous materials in construction materials.

1.10 CERTIFICATES REQUIRED: At time of final application for payment, Contractor shall submit the following certificates:

A. PCB's and Asbestos: Provide certificate attesting that PCB's or asbestos containing materials have not been used in this project.

B. Volatile Organic Compounds: Provide certificate attesting that all materials containing volatile organic components are in strict compliance with all VOC requirements and regulations of EPA, OSHA and SCAQMD.

C. Hazardous waste: Provide certificate attesting that all hazardous waste, trash, debris, etc., have been disposed of in a manner which is in strict compliance with current regulations of EPA, state, county, city and local districts and authorities.

1.11 TOBACCO/ALCOHOL/NARCOTICS: The project site is a nonsmoking environment, and smoking will not be permitted anywhere on the premises. In addition, the use of alcoholic beverages and nonprescription narcotics is strictly prohibited by Contractor. Contractor shall rigidly enforce these regulations among his employees and visitors. Violators will be subject to prosecution. Contractor shall submit at the pre-construction meeting a signed "code of work ethics" to be implemented and proactively enforced by the Contractor throughout the project.

1.12 CONDUCT OF WORKERS:

A. Contractor shall enforce good conduct among his employees. Physical violence, coercion, intimidation, physical or verbal sexual overtures, and hostile and abusive language will not be tolerated at any, towards other employees of the Contractor, or towards District's personnel and students. Persons found to engage in any of these practices will be discharged from the campus, and if the abuse is severe, the District may elect to terminate the contract with the Contractor.

B. Dress: Shirts and shoes shall be worn by all persons on the site at all times.

C. Theft: In any person working on the contract should engage in theft of money, property, supplies, equipment, food or any other item, whether from the District's personnel, students, facilities, employees, visitors or from another of the Contractor's personnel or subcontractors, will be immediately dismissed from the site.

PART 2 – PRODUCTS Not applicable to this Section.

PART 3 – EXECUTION Not applicable to this Section.

END OF SECTION

# SECTION 01018

# OWNER-FURNISHED ITEMS

## PART 1 - GENERAL

### 1.01 DESCRIPTION:

This section includes general requirements for Owner-furnished, Contractor-installed materials and equipment, referred to collectively as OFCI items. It also includes description of responsibilities regarding Owner-furnished, Owner-installed items, referred to as OFOI items.

### 1.02 DEFINITIONS:

A. OFCI: Owner furnished, Contractor installed.

B. OFOI: Owner furnished, Owner installed.

### 1.03 SUBMITTALS:

Obtain all necessary information from Owner as to manufacturer, model, and type of each item to be incorporated in the project. Submit, or obtain from Owner as applicable, shop drawings showing dimensioned rough in diagrams for each Owner furnished item requiring utility connection, dimensional locations of backing plates required in walls and partitions and details of connections to supports of all items.

### 1.04 CONDITIONS:

In each case, the Contractor is responsible for correct and properly located installation of the OFCI items in accordance with the various manufacturers' specifications and instructions.

A. Conflicts: If a conflict occurs between requirements for OFCI items and actual field conditions, Contractor shall not install the affected items until the conflict is resolved. No extra payment will be made to the Contractor for correction of improper installation of OFCI items when reasonably adequate data and instructions for installation were furnished by the Owner or various OFCI item manufacturers.

B. Installation: Install OFCI items complete in every detail with each item accurately and correctly placed, connected, adjusted and tested.

C. Delivery: OFCI items will be delivered to site. Contractor shall receive and unload the OFCI items, verify that the items have not been damaged in transit, place in covered storage or enclosed building and be responsible therefore after delivery. OFCI items that are damaged, abused, lost or stolen while in Contractor's custody and control, or damaged or defaced during installation shall be repaired, replaced or otherwise made good to the Owner's satisfaction at the Contractor's expense.

D. Inspection of New Owner furnished Items: Within 10 working days after delivery of the items, Contractor shall open and uncrate the items for inspection. The Owner's representative and Contractor shall inspect each item and maintain a written record of all damage, missing parts and other defects disclosed, all of which will be made good by the Owner. After the inspection, Contractor shall be fully responsible for the equipment and items as specified above.

E. Protection of Existing Owner furnished items: Refer to Section 01120.

F. Additional Information: Contractor may request and receive from the Owner all necessary additional information, specifications, templates and similar items from any of the manufacturers of the OFCI items. The Contractor may request a manufacturer's representative to supervise installation of any OFCI item, but at no additional cost to Owner.

G. OFOI Items: The Owner will provide and install or have installed by others, certain items, which may or may not be indicated in detail on the drawings. Contractor shall allow the Owner access to spaces and facilities as required to perform the work. Refer to the General Conditions and Supplementary Conditions for provisions for work under separate contracts.

PART 2 - PRODUCTS

2.01 OFCI EQUIPMENT:

A. List: The list of OFCI items is shown below:
   a. Playground equipment;
   b. Resilient safety surfacing;

B. Installation Materials: Contractor shall provide attachments, fittings, fasteners, connectors and other ancillary material required for installation which is not usually furnished by the OFCI manufacturers, types as approved.

2.02 OFOI ITEMS:

The Owner will provide and install or have installed by others, certain items including irrigation modifications and other items which may or may not be indicated in detail on the drawings. Contractor shall allow the Owner access to spaces and facilities as required to perform the work.

PART 3 - EXECUTION

3.01 INSTALLATION:

Conform to each OFCI item manufacturer's specifications, templates and information including the necessary assembling of components of sub-assemblies.

3.02 TESTS:

Contractor shall operate and test each operable OFCI item when installed and connected. If malfunctions occur through no fault of the Contractor, the Owner will make the defect good; otherwise, the Contractor shall effect all necessary corrections so the OFCI item operates properly and as intended, at the Contractor's expense.

END OF SECTION

# SECTION 01048

# CONTRACTOR'S REQUESTS FOR INFORMATION

## PART 1 - GENERAL

### 1.01 DESCRIPTION:

All other sections of Division 1 apply to this Section. This Section covers the general requirements for Contractor's Requests for Information and pertains to all portions of the contract documents.

A. Related work specified elsewhere:

1. Project meetings
2. Submittals
3. Substitutions

### 1.02 DEFINITION:

A. Request for Information: A document submitted by the Contractor requesting clarification of a portion of the contract documents, hereinafter referred to as RFI.

### 1.03 CONTRACTOR'S REQUESTS FOR INFORMATION:

A. When the Contractor is unable to determine from the contract documents, the exact material, process or system to be installed, the Architect shall be requested to make a clarification of the indeterminate item. Wherever possible, such clarification shall be requested at the next appropriate project meeting, with the response entered into the meeting minutes. When clarification at the meeting is not possible, either because of the urgency of the need or the complexity of the item, Contractor shall prepare and submit an RFI to the Architect.

B. Contractor shall endeavor to keep the number of RFI's to a minimum. In the event that the process becomes unwieldly in the opinion of the Architect because of the number and frequency of RFI's submitted, the Architect may require the Contractor to abandon the process and submit all requests as either submittals, substitutions or requests for change.

C. RFI's shall be submitted on a form provided by or approved by the Architect. Forms shall be completely filled in and if prepared by hand, shall be fully legible after copying by xerographic process. Each page of attachments to RFI's shall bear the RFI number in the upper right corner.

D. RFI's from subcontractors or material suppliers shall be submitted through, reviewed by, and signed by the Contractor prior to submittal to the Architect.

E. Contractor shall carefully study the contract documents to assure that the requested information is not available therein. RFI's which request information available in the contract documents will not be answered by the Architect.

F. In all cases where RFI's are issued to request clarification of coordination issues for example, pipe and duct routing, clearances, specific locations of work shown diagrammatically and similar items, the Contractor shall fully lay out a suggested solution

using drawings or sketches drawn to scale, and submit same with the RFI. RFI's which fail to include a suggested solution will not be answered.

G. RFI's shall not be used for the following purposes:

1. To request approval of submittals.
2. To request approval of substitutions.
3. To request changes which entail additional cost or credit.
4. To request changes which entail additional time extensions or reductions.
5. To request different methods of performing work than those drawn and specified.

H. In the event the Contractor believes that a clarification by the Architect result in additional cost, Contractor shall not proceed with the work indicated by the RFI until a change order is prepared and approved. Answered RFI's shall not be construed as approval to perform extra work.

I. Unanswered RFI's will be returned with a stamp or notification: Not Reviewed.

J. Contractor shall prepare and maintain a log of RFI's and at any time requested by the Architect, Owner and DSA Field Engineer. Contractor shall furnish copies of the log showing all outstanding RFI's. Contractor shall note all unanswered RFI's in the log.

K. Contractor shall allow for 05 days review and response time for RFI's.

PART 2 – PRODUCTS – Not applicable to this Section.

PART 3 – EXECUTION – Not applicable to this Section.

To: **ZIEMBA + PRIETO ARCHITECTS**
601 South Glenoaks Boulevard, Suite 400
Burbank, CA 91502
(818) 841-2585

**RFI #**

Attention: Mr. Jose Perez (jperez@ziembaprietoarch.com)

Project: Playground Equipment Replacement
At Lakeview Elementary School

Contractor: *Company Name*
*Address*
*Contact Person*
*Phone Number / Email Address*

Spec Section: _____ Drawing No.: _____

Detail No.: _____

Request for Information:

_____

_____

_____

Contractor's Recommendation:

_____

_____

_____

_____

Cost Impact:_____yes _____no Time Impact:_____yes _____no

Requested By: _____
Name Title Firm

Response: _____

_____

_____

Response By: _____

# SECTION 01050

# FIELD ENGINEERING

## PART 1 - GENERAL

1.01 DESCRIPTION: Division 1 applies to this Section. Provide field engineering, complete.

A. Work specified in this Section

1. Layout of the work
2. Setting of monuments.
3. Record drawings of verification surveys, and monument setting.
4. Verification surveys for utilities.

B. Related work specified elsewhere: Record drawings, other than those specified above.

1.02 LAYOUT OF THE WORK: Contractor shall lay out the work from the drawings. The benchmarks, and shall establish all additional benchmarks, monuments, lines and levels necessary for the construction covered by the contract.

1.03 SURVEY CONTROL DATA: At locations shown on the drawings, coordinated control points and benchmarks have been established by the District at no cost to the Contractor. The Contractor shall protect and preserve the benchmarks and reference points. All costs in connection with resetting and re-establishing benchmarks shall be borne by the Contractor.

A. Employ a State of California licensed surveyor to lay out the entire work, set grades, lines, levels, control points, vertical and horizontal control, elevations, grids and positions. Before the commencement of work, surveyor shall, in conjunction with District provided engineering survey of the project site, locate all reference points and benchmarks, then lay out all lines, elevations, and measurements for the entire work including but not limited to, buildings, grading, paving and utilities.

B. All work under this contract shall be built in accordance with the lines and grades shown on the plans. Field survey for establishing these, and for the control of construction, shall be the responsibility of the Contractor. All such survey work including construction staking shall be done under the supervision of a California licensed Land Surveyor or authorized Civil Engineer. Staking shall be done on all items ordinarily requiring grade and alignment, at intervals normally accepted by the agencies and trades involved.

C. Prior to the start of construction, The Contractor’s licensed Land Surveyor or qualified Civil Engineer shall, in conformance with Section 8771 of the California State Business and Professions Code, locate all monuments (both of record and not of record), benchmarks, and centerline ties within the construction zone, i.e., within one hundred feet of the construction activity. Additional ties to monuments shall be set when ties are missing (min. 4 ties per monument). The Contractor’s Surveyor or qualified Civil Engineer shall prepare and submit for review to the Civil Engineer separate tie sheets and Corner Record sheets (monuments not of record shall have only tie sheets prepared). Corner Records shall conform to the County Engineers Association of

California's Guide to the Preparation of Records of Survey and Corner Records document as provided by the county of Los Angeles Land Surveyor's office. Upon review by the City Engineer, the Land Surveyor shall file the Corner Records with the county of Los Angeles Land Surveyor's office. Certified Corner Records shall be filed with the City Engineer of the city that the work is being completed in.

D. After construction and prior to final acceptance by the District, the Contractor's Land Surveyor or qualified Civil Engineer shall re-survey all field monuments and centerline ties within the construction zone, prepare tie sheets and corner record sheets as indicated above, and file them with the Architect for review. After review, The Land Surveyor shall file the corner records with the county Land Surveyor's office, and file certified copies of the Corner Records with the District (Where required by Land Surveyors Office).

E. The Land Surveyor shall provide a letter of certification for all monuments having four or more existing ties which are within 0.02 ft plus or minus of the original tie sheet records. When several monuments and ties appear on one tie sheet and one of the ties has changed the Land Surveyor shall re-measure all of the ties and re-file a new tie sheet with the city as required herein (Where required).

F. Permanent and temporary benchmarks within the construction zone shall be located by survey.

G. Provide grade stakes and elevations to construct rough and final grades, paved areas, curbs, gutters, sidewalks, building pads, landscaped areas, and other areas as required.

H. Provide adequate horizontal and vertical control to locate utility lines, including but not limited to, storm, sewers, water mains, gas, electrical and signal and provide vertical control in proportion to the slope of the line as required for accurate construction. Survey and record top of curb and flow line elevations on finished concrete or AC surfaces at key locations, such as grade breaks, corners and angle points in sufficient number to demonstrate the work complies with the intent of the Contract Documents.

I. Submit a certification signed by the surveyor confirming the elevations and locations of improvements are in conformance with the Contract Documents. The statement shall include survey notes for the actual measured elevations on the completed sub-grade, recorded to the nearest 0.01 foot. Pad tolerance will be +-0.10 foot.

PART 2 – PRODUCTS – Not applicable to this Section.

PART 3 – EXECUTION

3.01 LAYING OUT THE WORK: Employ a registered Civil Engineer or Land Surveyor (hereinafter referred to herein as surveyor) to lay out the entire work and set grades, lines, levels, and positions throughout the site. Before beginning work, locate all general reference points, establish permanent monuments, and take action as necessary to prevent their destruction; then lay out all lines, elevations, and measurements for entire work including buildings, grading, paving, utilities, and other work. Verify figures and dimensions shown on the drawings and accept responsibility for all errors resulting from failure to so verify. Establish permanent monuments on curbs, manholes, or pavements, or with concrete embedded steel

pipe with lead plug and brass nail, as approved. Show exact locations of the permanent monuments on the record drawings.

3.02 MONUMENT SETTING: Surveyor shall furnish and set monuments.

3.03 VERIFICATION SURVEYS FOR UTILITIES: While work is in progress, maintain a set of drawings and accurately mark the dimensions and elevations of each item required in Division 2 utilities sections. Submit a preliminary set of prints to the Architect for approval, and make changes and corrections as the Architect may require for final approval. Submit final, corrected reproducible drawings to the Architect 10 days prior to final job review.

END OF SECTION

# SECTION 01060

# REGULATORY REQUIREMENTS

## PART 1 - GENERAL

1.01 DESCRIPTION: This Section covers the general requirements for regulatory requirements pertaining to the work and is supplementary to all other regulatory requirements mentioned or referenced elsewhere in the contract documents.

1.02 REQUIREMENTS OF REGULATORY AGENCIES: All pertaining statutes, ordinances, laws, rules, codes, regulations, standards and the lawful orders of all public authorities having jurisdiction of the work are hereby incorporated into these contract documents the same as if repeated in full herein and such are intended where any reference is made in either the singular or plural to code or building code unless otherwise specified including, without limitation, those in the list below. Contractor shall make available at the site such copies of the listed documents applicable to the work as the Architect or Owner may request including mentioned portions of the California Building Code.

A. The list of applicable codes is shown on the drawings.

PART 2 – PRODUCTS Not applicable to this Section.

PART 3 – EXECUTION Not applicable to this Section.

END OF SECTION

# SECTION 01091

# SOURCES FOR REFERENCED MATERIAL

## PART 1 - GENERAL

### 1.01 DESCRIPTION:

All other sections of Division 1 apply to this Section. This Section covers the general information for obtaining referenced information, including standards, specifications, catalogs and other printed and electronic material pertaining to the work.

### 1.02 REFERENCE AND STANDARD SPECIFICATIONS:

A. Specifying by reference to a reference and standard specification document or to another portion of the contract documents shall be the same as if the referenced document or portion of the contract documents referred to were exactly repeated at the place where such reference is made. In case of a conflict between the requirements of regulatory agencies and the referenced reference and standard specification documents, Contractor shall conform to the most restrictive requirement if such conformance is legal.

B. Reference or standard specification documents shall be the current issues in effect on the date bids are received, unless otherwise specified or unless codes or statutes make reference to earlier editions. Contractor shall make available at the site such copies of reference or standard specification documents as Architect or Owner may request.

### 1.03 WEB SITES:

Because of the frequency of changes, web addresses are not given in the specifications. Contractor may contact specified manufacturers and trade associations by accessing 4specs.com (http://www.4specs.com/) and following the instructions for reaching the appropriate web site.

## PART 2 – PRODUCTS – Not applicable to this Section.

## PART 3 – EXECUTION – Not applicable to this Section.

END OF SECTION

# SECTION 01092

# SPECIFICATION ABBREVIATIONS

## PART 1 - GENERAL

### 1.01 DESCRIPTION:

This Section covers abbreviations for documents mentioned or referenced elsewhere in the contract documents, and language abbreviations used in the text of the Specifications. Abbreviations in drawings and specifications shall be interpreted according to recognized and well-known technical, industry or trade meanings.

### 1.02 ORGANIZATION NAME ABBREVIATIONS:

These abbreviations include but are not limited to the following:

| | |
|---|---|
| AA | The Aluminum Association, Inc. |
| AABC | Associated Air Balance Council |
| AAIEE | American Institute of Electrical and Electronics Engineers |
| AAMA | American Architectural Manufacturers Association |
| AASHTO | American Association of State Highway and Traffic Officials |
| ACI | American Concrete Institute |
| ADA | Americans with Disabilities Act |
| ADAAG | Americans with Disabilities Act Accessibility Guidelines |
| AGA | American Gas Association |
| AGC | Associated General Contractors |
| AHA | American Hardwood Association |
| AI | Asphalt Institute |
| AIA | American Institute of Architects |
| AIMA | Acoustical and Insulating Materials Association |
| AISC | American Institute of Steel Construction, Inc. |
| AISI | American Iron and Steel Institute |
| AMCA | Air Moving and Conditioning Association, Inc. |
| ANSI | American National Standards Institute |
| APA | APA – The Engineered Wood Association |
| ARI | Air Conditioning and Refrigeration Institute |
| ASHRAE | American Society of Heating, Refrigerating and Air Conditioning Engineers |
| ASME | American Society of Mechanical Engineers |
| ASSE | American Society of Sanitary Engineers |
| ASTM | ASTM International (formerly American Society for Testing and Materials) |
| ATBCB | Architectural & Transportation Barriers Compliance Board |
| AWS | American Welding Society |
| AWWA | American Water Works Association |
| BHMA | Builders Hardware Manufacturers Association |
| CBM | Certified Ballast Manufacturers |
| CCR | California Code of Regulations |
| CFPA | Certified Forest Products Council |
| CFR | Code of Federal Regulations |
| CLFMI | Chain Link Fence Manufacturers Institute |

| | |
|---|---|
| CISPI | Cast-Iron Soil Pipe Institute |
| CRA | California Redwood Association |
| CRI | Carpet and Rug Institute |
| CRSI | Concrete Reinforcing Steel Institute |
| CS | Commercial Standard, US Department of Commerce |
| CSFM | California State Fire Marshal |
| CSI | Construction Specifications Institute |
| CTI | Cooling Tower Institute |
| CTIOA | Ceramic Tile Institute of America |
| DHI | Door and Hardware Institute |
| DOD | Department of Defense |
| DSA | Division of the State Architect, Office of Regulation Services |
| EIA | Electronic Industries Association |
| EPA | United States Environmental Protection Agency |
| ETL | Electrical Testing Laboratories |
| Fed Spec | Federal Specification or Standard |
| FIA | Factory Insurance Association |
| FM | Factory Mutual |
| FS | Federal Specifications |
| FSC | Forest Stewardship Council |
| GA | Gypsum Association |
| GANA | Glass Association of North America |
| HMMA | Hollow Metal Manufacturers Association |
| HPVA | Hardwood Plywood & Veneer Association |
| IAMPO | International Association of Plumbing and Mechanical Officials |
| ICBO | International Conference of Building Officials |
| IEEE | Institute of Electrical and Electronic Engineers |
| IES | Illuminating Engineering Society |
| IGMA | Insulating Glass Manufacturers Association |
| IPCEA | Insulated Power Cable Engineers Association |
| ISAT | International Seismic Application Technology |
| ISO | International Organization for Standardization |
| MFMA | Maple Flooring Manufacturers Association |
| MIA | Masonry Institute of America |
| MLMA | Metal Lath Manufacturers Association |
| MLSFA | Metal Lath/Steel Framing Association |
| NAAMM | National Association of Architectural Metal Manufacturers |
| NBFU | National Board of Fire Underwriters |
| NBS | National Bureau of Standards |
| NEC | National Electric Code |
| NEMA | National Electrical Manufacturers Association |
| NFC | National Fire Code |
| NFPA | National Fire Protection Association |
| NIOSH | National Institute for Occupational Safety and Health |

| | |
|---|---|
| NIST | National Institute of Standards and Technology |
| NLMA | National Lumber Manufacturers Association |
| NPDES | National Pollutant Discharge Elimination System |
| NRCA | National Roofing Contractors Association |
| NSF | National Sanitation Foundation |
| NSWMA | National Sold Wastes Management Association |
| NUSIG | National Uniform Seismic Installation Guidelines |
| PCA | Portland Cement Association |
| PDI | Plumbing and Drainage Institute |
| PEI | Porcelain Enamel Institute |
| PS | Product Standard, US Department of Commerce |
| RIS | Redwood Inspection Service |
| SAE | Society of Automotive Engineers |
| SCAQMD | South Coast Air Quality Management District |
| SDEI | Steel Deck Institute |
| SDI | Steel Door Institute |
| SFM | State Fire Marshal |
| SMACNA | Sheet Metal and Air Conditioning Contractors National Association |
| SPR | Simplified Practice Recommendations, U.S. Dept. of Commerce |
| SSPC | Steel Structures Painting Council |
| SWI | Steel Window Institute |
| TCA | Tile Council of America |
| UBC | Uniform Building Code |
| UBPPA | Uni-Bell PVC Pipe Association |
| UFAS | Uniform Federal Accessibility Standards |
| UL | Underwriters' Laboratories, Inc. |
| WCLIB | West Coast Lumber Inspection Bureau |
| WDMA | Window and Door Manufacturers Association (formerly National Wood Window and Door Association) |
| WI | Woodwork Institute (formerly Woodwork Institute of California) |
| WWPA | Western Wood Products Association |

1.03 TEXT ABBEVIATIONS:

Text abbreviations include but are not limited to the following:

| | |
|---|---|
| ac | Alternating current |
| amp | ampere |
| BTU | British thermal unit |
| cfh | Cubic feet per hour |
| cfm | Cubic feet per minute |
| cm | Centimeter |
| Co. | Company |
| COP | Coefficient of performance |
| Corp. | Corporation |
| d | Penny |

| | |
|---|---|
| db. | Decibel |
| DB | Dry bulb |
| dc | Direct current |
| EER | Energy efficiency ratio |
| F | Degrees Fahrenheit |
| fpm | Feet per minute |
| ft | Foot or feet |
| gph | Gallons per hour |
| gpm | Gallons per minute |
| HP | Horsepower |
| HVAC | Heating, ventilating and air conditioning |
| Hz | Hertz |
| Inc. | Incorporated |
| KHz | Kilohertz |
| Kip | thousand pounds |
| Ksf | Thousand pounds per square foot |
| Ksi | Thousand pounds per square inch |
| Kv | Kilovolt |
| KVA | Kilovolt amperes |
| KW | Kilowatt |
| KWH | Kilowatt hour |
| LF | Linear foot |
| MPH | Miles per hour |
| lb | Pound |
| LED | Light emitting diode |
| MBH | 1000 BTUs per hour |
| MHz | Mega hertz |
| mil | Thousandth of an inch |
| mm | Millimeter |
| mph | Miles per hour |
| oz. | Ounce |
| PCF | Pounds per cubic foot |
| pH | Acidity-alkalinity balance |
| psf | Pounds per square foot |
| psi | Pounds per square inch |
| psig | Pounds per square inch, gage |
| RF | Radio frequency |
| rpm | Revolutions per minute |
| SF | Square foot |
| SY | Square yard |
| V | Volt |
| WB | Wet bulb |

PART 2 – PRODUCTS – Not applicable to this Section.

PART 3 – EXECUTION – Not applicable to this Section.

END OF SECTION

# SECTION 01094

# DEFINITIONS

## PART 1 - GENERAL

### 1.01 DESCRIPTION:

This Section covers definitions supplementary to those given in the Conditions of the contract.

### 1.02 DEFINITIONS:

A. District or Owner: The term “District” or “Owner” refers to LITTLE LAKE CITY SCHOOL DISTRICT, 10515 South Pioneer blvd. Santa Fe Springs, California 90670, or their authorized representative. The terms are used interchangeably.

B. Architect: The term “Architect” refers to ZIEMBA + PRIETO ARCHITECTS, 601 South Glenoaks Boulevard, Suite 400, Burbank, CA 91502, or their authorized representative.

C. References to Drawings: Words such as “shown”, “indicated”, “detailed”, “scheduled”, “noted”, and words of similar meaning shall mean that reference is made to the information on the drawings unless stated otherwise.

D. Actions of Architect: Such words as “directed”, “designated”, “selected”, and words of similar meaning shall mean the direction, designation, selection, or similar action of the Architect is intended unless stated otherwise.

E. Required: The word “required” and words of similar meaning shall mean “as required to complete the Work” and “required by the Architect”, as is applicable to the context of the place where used, unless stated otherwise.

F. Perform: The word “perform” shall mean that Contractor, at Contractor’s expense, shall perform all the operations necessary to complete the Work or the mentioned portions of the Work, including furnishing and installing materials as are indicated, specified or required to complete such performance.

G. Provide: The word “provide” shall mean that Contractor, at Contractor’s expense, shall furnish and install the Work and mentioned portion of the Work, complete in place and ready for the intended use. These definitions apply the same to future, present and past tenses except “provided” may mean “contingent upon” where such is the context.

H. Equal: Words such as “equal”, “approved equal”, “equivalent”, and terms of similar meaning shall be understood to be followed by the phrase “in opinion of the Architect” unless stated otherwise.

I. Approval: The words “approved”, “approval”, “acceptable”, acceptance” and other words of similar meaning shall mean that approval or acceptance of Architect, or similar meaning, is intended unless stated otherwise.

J. Review: The word “review” and words of similar meaning shall mean the review and observation of the Architect is intended unless stated otherwise.

K. Submit: The words “submit”, “submittal”, “submission”, and other terms of similar meaning shall include the meaning of the phrase “submit to the Architect for approval” unless otherwise stated.

L. Expense: Such phrases as “at Contractor’s expense”, “at no extra cost to Owner”, “at no additional contract cost”, “with no extra compensation to Contractor”, or phrases of similar meaning shall mean that Contractor shall perform or provide the operation of work without increase in the contract price.

M. Fees and Charges: District reimburses contractor for utility fees charged by jurisdictional agencies. DSA fees are paid by District. Contractor is required to pay for all licenses and similar requirements that he must have in effect in order for him to accomplish his work.

N. Language: Specifications are written in a modified brief style consistent with clarity. Words and phrases requiring an action or performance, such as “perform”, “provide”, “erect”, “install”, “furnish”, “connect”, “test”, “coordinate”, and words and phrases of similar meaning, shall be understood to be preceded by the phrase “The Contractor shall” unless otherwise stated. Requirements indicated and specified apply to all work of the same kind, class and type, even if the word “all” is not stated. The use of the singular number implies the plural, if more than one of an item or unit is required; likewise the use of the plural number implies the singular, if only one of an item or unit is required.

O. Titling and Arrangement: Article, paragraph and subparagraph titles and other identifications of subject matter in the specifications are intended as an aid in locating and recognizing the various requirements in the specifications. Except where the titling forms a part of the text, such as beginning words of a sentence or where the title establishes the subject, the titles are subordinate to and do not define, limit or restrict the specification text. Underlining or capitalizing of any words in the text does not signify or mean that such words convey special or unique meanings having precedence over any other part of the contract documents. Specification text shall govern over titling and shall be understood to be and interpreted as a whole. The listings of various parts of work to be included or not included under various sections of the specifications are for convenience only and do not control the Contractor in dividing the work among the subcontractors or establish the extent of the work to be performed or provided by any subcontractor or trade. Contractor is solely responsible for providing the complete work without respect to where or how the various parts of the work may be indicated or specified. The sequence of articles, paragraphs, subparagraphs and sub-paragraphs in the specifications text is defined by the sequence 1.01A.1.a.(1)(a).

PART 2 – PRODUCTS – Not applicable to this Section.
PART 3 – EXECUTION – Not applicable to this Section.

END OF SECTION

# SECTION 01120

# ALTERATION PROCEDURES

## PART 1 - GENERAL

### 1.01 DESCRIPTION:

The requirements of all other sections of the specifications apply to this section. This Section covers the general requirements for special project procedures pertaining to the alteration of existing construction and is complementary to similar requirements indicated or specified.

A. Work In This Section: Principal items include:

1. Alterations and repairs to existing facilities as required to complete the work.
2. Relocation and reinstallation of existing construction and finish.

### 1.02 DESIGN INTENT:

The intent of the drawings and specifications is to construct the school building complex in accordance with Title 24, California Code of Regulations. If any conditions develop which are not covered by the contract documents wherein the finished work would not comply with said Title 24, California Code of Regulations, a change order detailing and specifying the required work shall be submitted to and approved by DSA before proceeding with the work.

### 1.03 SUBMITTALS:

A. Manufacturer's Data: Submit complete product data, test reports and application instructions for floor leveling materials.

### 1.04 QUALITY ASSURANCE:

A. Video Documentation: Refer to Division 1. Before starting work of this section, provide one video of existing conditions to be affected by the demolition work. Provide progress videos as the work progresses, at intervals as approved, illustrating substrates, connections, concealed conditions and other conditions which will benefit the Owner's permanent records.

### 1.05 JOB CONDITIONS:

A. General: Coordinate work of other sections and with the Owner to assure the correct sequence, limits, methods and times of performance. Arrange the work to impose minimum of hardship on operation and use of the facilities. Install protection for existing facilities, contents and new work against dust, dirt, weather, damage and vandalism, and maintain and relocate as work progresses.

B. Access: Confine entrance and exit operations to access routes designated by the Owner.

C. Verification of Conditions: Perform a detailed survey of existing site pertaining to the work before starting work. Report to Architect discrepancies or conflicts between the drawings and actual conditions in writing for clarification and instructions and do not perform work where such discrepancies or conflicts occur prior to receipt of Architect's instructions.

D. Site Security: Secure work areas in accordance with the Owner's instructions.

E. Safeguarding of Owner's Property: Contractor shall assume care, custody and responsibility for safeguarding all of the Owner's property of every kind, whether fixed or portable, remaining in the work area. Furnish all forms of security and protection necessary to protect the Owner's property. Regardless of cause, Contractor shall repair, replace or otherwise acceptably make good all of the Owner's property under the Contractor's care, custody and safeguarding that is damaged, injured, missing, lost or stolen from the time the area is turned over to the Contractor for the work until re-occupied by Owner, at Contractor's expense and as directed by Owner.

1.06 EXISTING CONDITIONS:

The intent of the drawings is to show existing site conditions with information developed from the original construction documents, field surveys and Owner's records, and to generally show the amount and types of demolition and removals required to prepare existing areas for new work. Contractor shall make a detailed survey of existing conditions pertaining to the work before commencing demolition. Report discrepancies between drawings and actual conditions to the Architect for instructions and do not perform any removal work where such discrepancies occur prior to receipt of the Architect's instructions.

PART 2 – PRODUCTS – Not applicable to this Section.

PART 3 – EXECUTION

3.01 CUTTING AND PATCHING:

Execute cutting, including excavation, fitting and patching of work required to make the several parts fit properly, to remove and replace defective work, to remove and replace work not conforming to requirements of the contract documents, and to install specified work in existing construction.

A. When directed by Architect, uncover work to provide for Architect's observation of covered work, remove samples of installed materials for testing and remove work to provide for alteration of existing work.

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

C. Do not cut or alter work of separate contractors without written consent of Architect.

D. If it is necessary to cut work which affects the structural safety of the project, or which affects the work of a separate contractor, submit written notice to Architect requesting consent to proceed with cutting. The request shall include the following items:

1. Description of affected work and necessity for cutting it.

2. Effect on other work and on the structural integrity of project.

3. Description of proposed work, including scope of cutting and patching, trades which will execute the work, products and materials to be used, and refinishing methods and extent.

4. Alternative methods, if any, to accomplish the work without cutting and patching.

5. Cost estimate, if additional cost is anticipated.

6. Notification of interruption of services, if applicable.

E. If conditions of work or schedule indicate a change of materials or methods, submit written commendations to Architect, stating the conditions which affect the change, recommendations for alternative materials or methods. Provide submittals as specified for substitutions for all materials and methods proposed to be changed.

F. Inspect all existing conditions of work, including elements subject to movement or damage during cutting and patching and during excavation and backfilling.

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

H. Restore work which has been cut or removed, install new products to provide completed work in accordance with the contract documents.

I. Refinish patched, new and existing surfaces to match adjacent, undisturbed construction. Where site paving repainting is necessary provide the architect with a layout for review prior to beginning the work.

J. Repair and patch offsite paving, concrete, landscaping and related work where disturbed by installation of playground equipment, and where damaged by the work of the contract.

3.02 ALTERATIONS AND REPAIRS:

A. Basic Requirement: Restore and refinish all new and existing construction and improvements that are cut into, altered, damaged, relocated, reinstalled or left unfinished by removals to original condition or to match adjoining work and finishes unless otherwise shown, specified, directed or required. Workmanship and materials shall conform to applicable provisions of other Sections. Provide new fasteners, connectors, adhesives and other accessory materials as required to fully complete approved reinstallations and restorations. Where restorations and refinishing are defective or are otherwise not acceptable to Owner, remove all the defective or rejected materials and provide new acceptable materials and finish at no extra cost to Owner.

B. Patching, Repairing and Finishing:

1. Concrete: Refer to drawings for patching detail. Finish new concrete to match existing. Provide 3,000 psi concrete for repairs and new concrete.

2. Landscaping and Planting: Where new construction damages existing planting and landscaping, repair the surfaces, prepare surfaces for planting and replace planting and landscaping with new materials to match existing. Provide all required soil preparation, soil amendments, fertilizers and plant materials necessary to accomplish this.

3. It is the Contractor's responsibility to verify the condition of utilities prior to accomplishing the work above and below grade. Exploration and sensing devices are required. Contractor is responsible for all utility coordination, depths required and correct inverts for a complete and operative system.

END OF SECTION

# SECTION 01150

# ENVIRONMENTAL PROTECTION

## PART 1 - GENERAL

### 1.01 DESCRIPTION:

All other sections of Division 1 apply to this Section, and the requirements of this Section apply to all sections where the work involves the protection of the environment. During the progress of the work, the Contractor shall protect the environment, both on-site and off-site, throughout and upon completion of the construction project.

A. Related work specified in other sections:

1. Cleaning.
2. Field engineering.

### 1.02 MITIGATION OF CONSTRUCTION IMPACTS:

A. Requirements: The Contractor's operations shall comply with all federal, state and local regulations pertaining to water, air, solid waste and noise pollution.

B. Definitions of Contaminants:

1. Sediment: Soil and other debris that has been eroded and transported by storm or well production runoff water.

2. Solid Waste: Rubbish, debris, garbage, vegetation and other discarded solid materials resulting from construction activities.

3. Chemical Waste: Includes petroleum products, bituminous materials, salts, acids, alkalies, herbicides, pesticides, organic chemicals and inorganic wastes.

4. Sanitary Wastes:

   a. Sewage: That which is considered as domestic sanitary sewage.

   b. Garbage: Refuse and scraps resulting from preparation, cooking, dispensing and consumption of food.

C. Contractor is to protect existing water system during construction from contamination. Water is to be tested as required for purity during construction. It is the Contractor's responsibility to provide a testing policy for the full duration of the project.

1.03 PROTECTION OF NATURAL RESOURCES:

A. General: It is intended that the natural resources within the project boundaries and outside the limits of permanent work performed under this Contract be preserved in their existing condition or be restored to an equivalent or improved condition upon completion of the work. The Contractor shall confine the construction activities to areas defined by the public roads, easements and work area limits shown on the drawings.

B. Temporary Construction: Remove all signs of temporary construction facilities such as haul roads, work areas, structures, foundations of temporary structures, stockpiles of excess or waste materials, or any other vestiges of construction as directed by the Architect. Level all temporary roads, parking areas and any other areas that have become compacted or shaped. Any unpaved areas where vehicles are operated shall receive a suitable surface treatment or shall be periodically wetted down to prevent construction operations from producing dust damage and nuisance to persons and property, at no additional cost to the Owner. Keep haul roads clear at all times of any object which creates an unsafe condition. Promptly remove any contaminants or construction materials dropped from construction vehicles. Do not drop mud and debris from construction equipment on public streets. Sweep clean turning areas and pavement entrances as necessary.

C. Land Resources: Do not remove, cut, deface, injure or destroy trees or shrubs outside the work area limits. Do not remove deface, injure or destroy trees within the work area without permission from the Architect. Such improvements shall be removed and replaced, if required, by the Contractor at his own expense.

1. Protection: Protect trees that are located near the limits of the Contractor's work areas which may possibly be defaced, bruised or injured or otherwise damaged by the Contractor's operations. No ropes, cables or guys shall be fastened to or be attached to any existing nearby trees or shrubs for anchorages. No vehicles or equipment shall be parked within the extents of the canopy of any tree.

2. Repair or Restoration: Repair or replace any trees or other landscape feature scarred or damaged by equipment or construction operations as specified below. The repair and/or restoration plan shall be reviewed and approved by the Architect prior to its initiation.

D. Water Resources: Contractor shall investigate and comply with all applicable Federal, state and local regulations concerning the discharge (direct or indirect) of pollutants to the underground and natural waters. All work under this contract shall be performed in such a manner that any adverse environmental impacts are reduced to a level that is acceptable to the Owner and regulatory agencies.

1. Oily substances: At all times, special measures shall be taken to prevent oily or other hazardous substances from entering the ground, drainage areas or local bodies of water in such quantities as to affect normal use, aesthetics or produce a measurable ecological impact on the area.

2. Mosquito Abatement: Construction activities shall be conducted such that ponding of stagnant water conducive to mosquito breeding habitat will not occur at any time.

E. Dust Control, Air Pollution and Odor Control: Take measures to avoid the creation of dust, air pollution and odors.

1. Unpaved areas where vehicles are operated shall be periodically wetted down or given an equivalent form of treatment to eliminate dust formation.

2. All volatile liquids, including fuels or solvents, shall be stored in closed containers.

3. No open burning of debris, lumber or other scrap will be permitted.

4. Equipment shall be properly maintained or reduce gaseous pollutant emissions.

1.04 NOISE CONTROL:

Perform demolition and construction operations to minimize noise. Perform noise producing work in less sensitive hours of the day or week as directed by the Architect.

A. Repetitive, high level impact noise will be permitted only between the hours of 8:00 AM and 6:00 PM, Monday through Friday. Repetitive impact noise on the property shall not exceed the following limitations:

| Sound level (dB) | Duration of impact noise |
|---|---|
| 70 | 12 minutes per hour |
| 80 | 3 minutes per hour |

B. Provide equipment, sound-deadening devices and take noise abatement measures that are necessary to comply with these requirements.

C. Maximum permissible construction equipment noise levels at 50 feet:

80 dB: Scrapers, stationary pavers, rock drills, pneumatic tools.
75 dB: All other construction equipment.

D. Whenever work is being performed which exceeds 55 dB noise level, measure the sound level every 5 days to determine noise exposure to the construction. Use the A weighing network of a general purpose sound level meter at slow response. Take measurements not less than six feet in front of building faces. Submit records to Architect.

1.05 CONSTRUCTION STORAGE AREAS:

Storage of construction equipment and materials shall be limited to designated work areas. Store and service equipment at the designated areas where oil wastes shall be collected. Oily wastes shall not be allowed to flow on to the ground or to enter surface waters.

1.06 DISPOSAL OPERATIONS:

A. Solid Waste Management: Supply storage containers. Remove daily all debris, such as cans, bottles, combustibles and litter. Convey contents only to a favorably reviewed sanitary landfill. Care shall be taken to prevent papers from blowing onto adjacent property. Personnel shall be encouraged to use refuse containers.

B. Chemical Waste Management: Supply containers to store spent chemicals used during construction operations. Chemicals shall be disposed of in a favorably reviewed sanitary landfill.

C. Garbage: Garbage shall be stored in covered containers, picked up daily and disposed of a favorably reviewed sanitary landfill.

1.07 PRESERVATION OF MONUMENTS AND EXISTING FEATURES:

All monuments, bench marks or property line stakes disturbed by construction operations shall be promptly re-established by a registered land surveyor or civil engineer.

1.08 SAFETY:

Comply with all rules and regulations of NIOSH, CAL/OSHA and local authorities concerning jobsite safety.

1.09 EXISTING UTLITIES:

The Contractor shall coordinate construction activities with the government agencies, land owners and utility companies, and operations shall be planned to allow access to all property and utility owners.

1.10 PROTECTION OF WORK:

The Contractor shall be responsible for the care of all work until its completion and final acceptance. Replace damaged or lost material and repair damaged parts of the work at no additional contract cost.

PART 2 – PRODUCTS – Not applicable to this Section.

PART 3 – EXECUTION – Not applicable to this Section.

END OF SECTION

# SECTION 01200

# PROJECT MEETINGS

## PART 1 - GENERAL

### 1.01 DESCRIPTION:

This Section covers the general requirements for the project meetings.

## PART 2 – PRODUCTS – Not applicable to this Section.

## PART 3 – EXECUTION

### 3.01 PROJECT MEETINGS:

A. Attendees: Unless otherwise specified or required by the District, meetings shall be attended by the District, Architect, Contractor, Contractor's Superintendent and the Inspector of Record. Subcontractors and consultants may attend the meetings when involved in matters to be discussed or resolved but only when requested by the District, Architect or Contractor.

B. Meeting Records: The Architect will record minutes of each meeting and furnish copies within a reasonable time thereafter to the District, Contractor, Inspector of Record and other attendees. Unless written objection to contents of the meeting minutes is received by Contractor within 3 days after presentation, it shall be understood and agreed that the minutes are a true and complete record of the meeting.

C. Meeting Schedule: Dates, times and locations for various meetings shall be agreed upon and recorded at pre-construction meeting. Thereafter, changes to the meeting schedule shall be agreed between the District and the Contractor, with appropriate written notice to all parties involved.

### 3.02 PRE-CONSTRUCTION MEETING:

A. General: Before issuance of Notice to Proceed, a pre-construction meeting shall be held at the location, date and time designated by District. In addition to attendees named herein, this meeting shall be attended by representatives of the regulatory agencies having jurisdiction, if required, and such other persons the District may designate.

B. Agenda: The matters to be discussed or resolved and the instructions and information to be furnished to or given by the Contractor at the preconstruction conference include:

1. Schedule of progress meetings.
2. Progress schedule and schedule of values submitted by Contractor.
3. Communication procedures between the parties.
4. Names and titles of all persons authorized by Contractor to represent and execute documents for Contractor, with samples of all authorized signatures.

5. The names, addresses and telephone numbers of all those authorized to act for the Contractor in emergencies.
6. Construction permit requirements, procedures and posting.
7. Public notice of starting Work.
8. Forms and procedures for Contractor's submittals.
9. Change Order forms and procedures.
10. Payment application forms and procedures and revised progress schedule reports to accompany the applications.
11. Contractor's designation of his organization's accident prevention member and his qualifications if other than the Superintendent.
12. Contractor's provisions for barricades, traffic control, utilities, sanitary facilities and other temporary facilities and controls.
13. Consultants and professionals employed by District and their duties.
14. Construction surveyor and initiation of surveying services.
15. Testing Laboratory or Agency and testing procedures.
16. Procedures for payroll and labor cost reporting by the Contractor.
17. Procedures to ensure nondiscrimination in employment.
18. Warranties and guarantees.
19. Long lead item status.
20. Other administrative and general matters as needed.

3.03 CONSTRUCTION PROGRESS MEETINGS:

Progress meetings shall be held according to the agreed schedule. All matters bearing on progress and performance of the Work since preceding progress meeting shall be discussed and resolved including, without limitation, any previously unresolved matters, deficiencies in the work or methods being employed for the work and problems, difficulties or delays which may be encountered.

3.04 PROGRESS MEETINGS:

Conduct progress meetings at the project site at regularly scheduled intervals. Coordinate dates of meetings with preparation of the payment request.

A. Attendees: In addition to representatives of the Contractor, District, and Architect each subcontractor, supplier or other entity concerned with current progress or involved in planning, coordination or performance of future activities shall be represented at these meetings by personnel familiar with the project and authorized to conclude matters relating to progress.

B. Agenda: Review and correct or approve minutes of the previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to the current status of the project.

C. Contractor's Construction Schedule: Review progress since the last meeting. Determine where each activity is in relation to the Contractor's construction schedule, whether on time or ahead or behind schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities

will be completed within the contract time. Provide a 2 week “look ahead” schedule at each construction progress meeting.

D. Look Ahead Schedule: Provide a 3 week “look ahead” schedule at each construction progress meeting. Look ahead schedule shall outline upcoming activities over the course of the upcoming 3 weeks. Schedule shall correlate with the project construction schedule and provide sufficient detail to outline all activities expected to be found on the job site.

E. Review the present and future needs of each entity present, including such items as interface requirements, time, sequences, deliveries, off-site fabrication problems, access, site utilization, temporary facilities and services, hours of work, hazards and risks, housekeeping, quality and work standards, change orders, documentation of information for payment requests.

F. Reporting: No later than 5 days after each progress meeting date, the architect will distribute copies of minutes of the meeting to each party present and to other parties who should have been present. Include a brief summary of progress since the previous meeting and report.

G. Schedule Updating: Contractor to revise the construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue the revised schedule concurrently with the report of each meeting.

3.05 SPECIAL MEETINGS:

After notice to other parties, special meetings may be called by the District, Architect or Contractor. Special meetings shall be held where and when designated by the District. Other special meetings, such as the pre-roofing conference, shall be conducted as specified in the various sections of the specifications.

3.06 POST-CONSTRUCTION MEETING:

This meeting shall be held prior to the final inspection of the work to discuss and resolve all unsettled matters. Bonds and insurance to remain in force and the other documents required to be submitted by the Contractor will be reviewed and any deficiencies determined. Schedule and procedures for the final inspection and for final correction of defects and deficiencies shall be agreed.

END OF SECTION

# SECTION 01300

# SUBMITTALS

## PART 1 - GENERAL

1.01 DESCRIPTION: All other Sections of Division 1 apply to this Section. Provide shop drawings, product data, samples, certificates, and other required submittal, in accordance with procedures specified herein, complete.

A. Work Specified in this Section:

1. Submittal procedures for electronic and hard copy process.
2. Proposed products list.
3. Product data.
4. Shop drawings.
5. Samples.
6. Design data.
7. Test reports.
8. Certificates.
9. Manufacturer's instructions.
10. Manufacturer's field reports.
11. Erection drawings.

B. Contractor has the option of providing either hard copy or electronic sets of the following, all as specified hereafter:

1. Proposed products list.
2. Product data.
3. Shop drawings.
4. Design data.
5. Test reports.
6. Certificates.
7. Manufacturer's instructions.
8. Manufacturer's field reports.
9. Erection drawings.

C. Submit for approval of Architect shop drawings, product data, and samples required by specification sections. Refer to General Conditions for additional requirements, including limitation of Architect's review responsibilities.

D. Prepare and submit, with construction schedule, a separate schedule listing dates for submission and dates reviewed shop drawings, product data and samples will be needed for each product.

E. Requests for submissions of materials and processes shall not be submitted as part of the submittal process specified herein. All requests for substitutions shall be separately submitted as specified in Section 01630.

F. Submittal shall not be made by use of RFI's. Submittals shall be separately made as specified herein.

G. Processing Time: Allow sufficient time for submittal review, including re-submittal as required. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittal sufficiently in advance of the work to permit review and re-submittal if required. Times as noted below are minimum; increase as required to assure conformance with project schedule.

1. Initial Review: Allow 7 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.

2. Re-submittal Review: Allow 7 days for review of each re-submittal.

1.02 SUBMITTAL PROCEDURES: GENERAL

A. Transmit each submittal with Architect accepted form. Sequentially number transmittal forms. Mark revised submittals with original number and sequential numerical suffix.

B. Identify project, Contractor, subcontractor and supplier; pertinent drawing and detail number, and specification section number, appropriate to submittal.

C. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with requirements of the work and contract documents.

D. Schedule submittals to expedite project, and deliver to Architect at business address, except for electronic submittal as specified hereafter. Coordinate submission of related items.

E. When revised for resubmission, identify changes made since previous submission. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report inability to comply with requirements.

F. Submittals not requested will not be recognized or processed.

G. Submittals shall be made for each individual specification section. Do not combine.

H. Submittals for each specification section shall be complete. Do not piecemeal submittals into more than one submittal for each section. Incomplete submittals will be returned without review.

I. For items required to be of selected and approved colors, patterns, textures or other finish sufficient samples to show the range of shades, tones, values, patterns, texture, or other features corresponding to the instructions, shall be submitted. Submit color samples of field-applied paint materials as specified for painting work. Selection of colors will not be made until all related items requiring selection have been submitted.

1.03 ELECTRONIC SUBMITTAL PROCEDURES:

A. Shop drawing and product data submittals shall be transmitted to Architect in electronic (PDF) format using email and Dropbox (Architect's Folder).

B. Submittal Preparation: Contractor may use either, or a combination, of the following options:

1. Subcontractors and Suppliers provide electronic (PDF) submittals to Contractor.

2. Subcontractors and Suppliers provide paper submittals to General Contractor, who electronically scans and converts to PDF format.

C. Contractor shall review and apply electronic stamp certifying that the submittal complies with the requirements of the contract documents including verification of manufacturer, product, dimensions and coordination of information with other parts of the work.

D. Contractor shall transmit each submittal to Architect using email or Dropbox. Dropbox submittals require an email notification to Architect.

E. Architect review comments will be made available on Dropbox for downloading. Contractor will receive an email notice of completed review.

F. Distribution of reviewed submittals to subcontractors and suppliers is the responsibility of the Contractor.

1.04 HARD COPY SUBMITTAL PROCEDURES:

A. Transmittals: Submittal of submittals to the Architect shall be made by the Contractor with a dated transmittal form or letter (not by sub-contractor or supplier) at least 15 days before dates reviewed submittals will be needed.

B. Provide shop drawings. Comments will be noted on the reproducible which will be returned to the Contractor. Contractor shall revise the documents and resubmit them in the same manner. When approved, the reproducible will be stamped and returned to the Contractor, who shall make distribution of copies as specified hereinafter.

C. Number of Copies: Contractor shall submit copies and make distribution as follows:

1. Initial Submittal: Reproducible and 6 copies to the Architect.

2. Re-submittals: Reproducible of revised original and 6 copies to the Architect.

3. Final Distribution: 3 copies to the Architect, and copies to those concerned.

1.05 SHOP DRAWINGS AND SCHEDULES:

A. Drawings and schedules shall be certified by the Contractor that they have been checked by him and conform to the Contract requirements. Drawings not dated, signed, certified, and/or completed by the Contractor will be returned unchecked.

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

C. When required by individual specification sections, provide shop drawings signed and sealed by professional engineer responsible for designing components shown on shop drawings. Include signed and sealed calculations to support design. Submit drawings and calculations in form suitable for submission to and approval by authorities having jurisdiction. Make revisions and provide additional information when required by authorities having jurisdiction. Make revisions and provide additional information when required by authorities having jurisdiction.

D. When the Contractor's drawings indicate previously approved deviations or approved changes from the contract drawings and specifications, the Contractor shall clearly indicate in the drawings all other changes required to correlate the work, and shall state in writing, his assumption of the costs of all other related changes.

E. Drawings shall include:
   1. Details of fabrication, assembly, erection and connection.

   2. Material used, including fasteners and attachments.

   3. Dimensions, including variations between dimensions shown on the contract drawings and actual conditions.

   4. Complete schedules, as applicable.

   5. All protective coatings and factory finishes, fully described as to materials, number of coats, plated finishes, treatments, ad similar information.

F. No changes shall be made to re-submittal drawings and schedules except those corrections noted by the Architect unless the resubmitted drawings are accompanied by a separate written notice from the Contractor precisely setting forth such additional changes and stating his assumption of costs as specified for deviations; and/or such changes as are approved by the Architect.

1.06 PROPOSED PRODUCT LIST:

A. Within 5 days after notice to proceed, submit list of major products proposed to use, with name of manufacturer, trade name, and model number of each product.

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

1.07 PRODUCT DATA:

A. A bound list of products to be used in the work shall be submitted according to the following procedure:

1. Within 5 days after agreement between District and Contractor is executed, submit bound copies to the Architect.

2. Submittals are due within 10 calendar days after Notice to Proceed, the Architect will notify the Contractor in writing of any disapproved items. Within 3 days after receipt of such notice, the Contractor shall submit proposed substitutions for disapproved items, number of copies, and distribution of the same as initial submittal for each re-submittal until approval is obtained for proposed substitutions. Re-submittals need not be bound, but the transmittal shall indentify each disapproved item and the proposed substitute therefore. The Architect will notify the Contractor in writing or approved substitutions.

3. Within 3 days after receipt of notice of approval, the Contractor shall submit corrected bound copies, 3 copies to the Architect, and copies to others concerned.

4. In determination of acceptability, the Architect will consider the ready availability of maintenance and replacement parts and materials, the availability of manufacturer's technical representative, and such other factors that relate to the maintenance and repair of installed items without excessive inconvenience to the District, as well as determination of conformance with the Contract Documents.

5. The Contractor shall provide those items included in the approved lists, without deviation, unless subsequently revised by change order procedure.

B. Manufacturer's standard schematic drawings shall be modified, delete information which in not applicable to project. Supplement the standard information to provide additional information applicable to project.

C. Manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations, and other standard descriptive data.

1. Clearly mark each copy to identify pertinent materials, products, or models. Show dimensions and clearances required. Show performance characteristics and capacities. Show wiring diagrams and controls. Clearly show each option, color selection, and accessory to be furnished.

2. All items shall be neatly bound in a loose-leaf binder with a project identification label and a table of contents.

1.08 SAMPLES:

A. Submittal of samples, where specified or directed, shall be made by Contractor with a dated transmittal for or letter, and not by subcontractor or supplier. Samples of manufactured or process materials and equipment will be submitted within 3 days after receipt of approved material list. Samples of field-applied paint materials and colors

shall be submitted not less than 3 days prior to start of field painting work. Unless otherwise specified, samples shall be submitted in triplicate; two to the Architect and one to the District, with copy of letter of transmittal.

B. Samples for selection as specified in product sections:

1. Submit to Architect for aesthetic, color, or finish selection.

2. Submit samples of finishes from full range of manufacturer's standard colors, textures, and patterns for Architect selection.

C. Submit samples to illustrate functional and aesthetic characteristics of products, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.

D. Include identification on each sample, with full project information.

E. Submit number of samples specified in individual specifications sections; Architect will retain one sample.

F. Reviewed samples which may be used in the work are indicated in individual specification sections.

G. Samples will not be used for testing purposes unless specifically stated in specification section.

H. After review, produce duplicates and distribute in accordance with Submittal Procedures article and for record documents purposes described in Section 01720.

I. Maintain one of each approved sample onsite.

1.09 DESIGN DATA:

A. Submit for Architect's knowledge as contract administrator or for District.

1.10 TEST REPORTS:

A. Submit for Architect's knowledge as contract administrator or for District.

1.11 CERTIFICATES:

A. When specified in individual specification sections, submit certification by manufacturer, installation/application subcontractor, or Contractor to Architect in quantities specified for production data.

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

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

D. Submit electronically as specified above.

1.12 MANUFACTURER'S INSTRUCTIONS:

A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, to Architect for delivery to District in quantities specified for product data.

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

C. Submit electronically as specified above.

1.13 MANUFACTURER'S FIELD REPORTS:

A. Submit report within 5 days of observation to Architect for information.

1.14 ERECTION DRAWINGS:

A. Data indicating inappropriate or unacceptable work may be subject to action by Architect or District.

PART 2 – PRODUCTS Not applicable to this Section.

PART 3 – EXECUTION Not applicable to this Section.

END OF SECTION

# SECTION 01310

# CONSTRUCTION PROGRESS SCHEDULE

## PART 1 - GENERAL

### 1.01 DESCRIPTION:

All other sections of Division 1 apply to this section. This Section covers the general requirements for providing construction progress schedules.

A. Section includes:

1. References
2. Quality assurance
3. Schedule format
4. Preliminary schedule
5. Schedules
6. Submittals
7. Updating schedules
8. Distribution

### 1.02 REFERENCES:

A. ***The Use of CPM in Construction—A Manual for General Contractors and the Construction Industry***, Washington, D.C., The Associated General Contractors of America (AGC).

B. ***CPM in Construction Management—Project Management with CPM***, O'Brien, McGraw-Hill Book Company, New York.

### 1.03 QUALITY ASSURANCE:

A. Scheduler: Contractor's personnel or Specialist Consultant specializing in CPM scheduling with one year minimum experience in scheduling construction work of complexity comparable to the Project, and having use of computer facilities capable of delivering detailed graphic printout within 48 hours of request.

B. Contractor's Administrative Personnel: 5 years minimum experience in using and monitoring CPM schedules on comparable projects.

### 1.04 SCHEDULE FORMAT:

A. Programs: ***Primavera Sure-Track***. ***Microsoft Project***. ***Excel*** and/or hand-drawn schedules are not acceptable.

B. Listings: in chronological order according to the start date for each activity. Identify each activity with the applicable specification section number.

C. Diagram sheet size: maximum 22 by 17 inches, or width required.

D. Sheet size: Multiples of 8½“ by 11“.

E. Scale and spacing: to allow for notations and revisions.

F. Submit electronic file on CD of each schedule revision.

1.05 PRELIMINARY SCHEDULE:

A. Prepare preliminary schedule in the form of a horizontal bar chart.

1.06 SCHEDULES:

1.07 FORMAT:

A. Prepare network analysis diagrams and supporting mathematical analyses using Critical Path Method, under concepts and methods outlined in AGC’s ***The Use of CPM in Construction—A Manual for General Contractors and the Construction Industry***.

B. Illustrate order and interdependence of activities and sequence of work; how the start of a given activity depends on completion of preceding activities, and how the failure to complete the activity may restrain the start of subsequent activities. Include permitting, Deferred Approval items, and local utility service provider plan checks as activities in the construction progress schedule.

C. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction, including final punch-list corrections.

D. Identify each item by specification section number.

E. Identify work of separate stages and other logically grouped activities.

F. Provide sub-schedules for each Phase and Increment of Work. Provide sub-schedules to define critical portions of the entire schedule.

G. Include conferences and meetings in schedule.

H. Show accumulated percentage of completion of each item, and total percentage of work completed, as of the first day of each month.

I. Include submittal dates for shop drawings, product data, and samples, owner-furnished products, products identified under Allowances, and dates that reviewed submittals will be required from Architect. Indicate decision dates for selection of finishes. Indicate delivery times. Allow review time as noted in Section 01300.

J. Indicate delivery dates for owner-furnished products.

K. Coordinate contents with schedule of values in Section 01327.

L. Provide legend for symbols and abbreviations used.

M. Submit list of major Contractor-furnished equipment, materials and building elements, and scheduled activities requiring Owner's Representative's prior approval. Show dates for the procurement, fabrication, delivery, and installation and testing of major equipment, materials, and building elements, and for scheduled activities designated by Owner's Representative and testing laboratory. Allot a minimum of 5 days for the Owner's Representative to review each submittal.

N. The presentation of each work activity on the Construction Progress Schedule shall include a brief description of the work activity, the duration of the work activity in days, and a responsibility code identifying the organization or trades performing the work activity.

1.08 SUBMITTALS:

A. Submit schedule as indicated in General Conditions Article 8.

B. Submit "two-week look ahead" schedule at each project meeting for review and discussion.

1.09 UPDATING SCHEDULES

A. Maintain schedules to record actual start and finish dates of completed activities.

B. Indicate progress of each activity to date of revision, with projected completion date of each activity. Annotate diagrams to graphically depict current status of work.

C. Identify activities modified since previous submittal, major changes in work, and other identifiable changes.

D. Indicate changes required to maintain Date of Substantial Completion. Submit reports required to support recommended changes.

E. Prepare narrative report to define problem areas, anticipated delays, and impact on schedule. Report corrective action taken or proposed and its effect, including effects of changes on schedules of separate contractors.

F. Prepare and submit to Owner's Representative an updated Construction Progress Schedule once each month.

1. Updated Construction Progress Schedule shall accurately represent the as-built condition of all completed and in-progress work activities as of the date of the update Construction Progress Schedule.
2. Updated Construction Progress Schedule shall incorporate all changes mutually agreed upon by Contractor and Owner during preceding periodic reviews, and all changes resulting from Change Orders and Field Orders.
3. Perform the work in accordance with the updated Construction Progress Schedule. Contractor may change the Construction Progress Schedule to modify the order or method of accomplishing the work only with prior agreement by Owner's Representative.

G. If, according to the critical path of the Schedule, the Contractor is 7 calendar days or more behind schedule, he shall be responsible to submit a revised Schedule which indicates methods of reducing the work plan by concurrence of operations, increased manpower, reducing critical work paths or a combination of both so that the Contractor's Schedule reflects compliance with the Contract Schedule. The Contractor's efforts to comply with the Contract Schedule shall be at his expense. At the Owner Representative's option, progress payments may be withheld until an acceptable revised Schedule is submitted by the Contractor and reviewed by the Owner's Representative.

H. Whenever it becomes apparent from the current Progress Schedule data that any milestone interface completion dates and / or Contract Completion Dates will not be met, take some or all of the following action at no additional cost to Owner:

1. Increase construction manpower in such quantities and crafts as will substantially eliminate, in the judgment of the Owner's Representative, the backlog of work.
2. Increase the number of shifts per work day, work days per week, or amount of construction equipment, or any combination of the foregoing sufficient to substantially eliminate, in the judgment of the Owner's Representative, the backlog of work.
3. Reschedule activities to achieve maximum practical concurrence of accomplishment.
4. All changes in the Schedule shall be submitted in writing by Contractor.

1.10 DISTRIBUTION:

A. Distribute copies of updated schedules to Contractor's project site file, to Subcontractors, suppliers, Construction Manager, Architect, Owner, and other concerned parties.

B. Instruct recipients to promptly report, in writing, problems anticipated by projections shown in schedules.

C. Submit to Owner's Representative the updated schedule on disk.

1.11 TIME IMPACT EVALUATION FOR CHANGE ORDERS, AND OTHER DELAYS:

A. When the Contractor is directed to proceed with changed work, the Contractor shall prepare and submit, within 7 days from the direction to proceed, a Time Impact Evaluation (TIE) which includes both a written narrative and a schedule diagram depicting how the changed work affects other schedule activities. The schedule diagram shall show how the Contractor proposes to incorporate the changed work in the schedule, and how it impacts the current schedule update critical path. The Contractor is also responsible for requesting time extensions based on the TIE's impact on critical path. The diagram must be tied to the main sequence of schedule activities to enable the Construction Manager to evaluate the impact of changed work to the scheduled critical path.

B. The Contractor shall be required to comply with the requirements of Paragraph 1.10.A for all types of delays such as, but not limited to, Contractor/Subcontractor delays, adverse weather delays, strikes, procurement delays, fabrication delays, etc.

C. The Contractor shall be responsible for all costs associated with the preparation of Time Impact Evaluations, and the process of incorporating them into the current schedule

update. Once agreement has been reached on a TIE, the Contract Times will be adjusted accordingly. If agreement is not reached on a TIE, the Contract Times may be extended in an amount the Construction Manager allows, and the Contractor may submit a claim for additional time.

1.12 TIME EXTENSIONS

A. The Contractor is responsible for requesting time extensions for time impacts that, in the opinion of the Contractor, impact the critical path of the current schedule update. Notice of time impacts shall be given in accord with Article 8.4 of the General Conditions.

B. Where an event for which the Owner, Architect or Construction Manager is responsible impacts the projected Substantial Completion date, the Contractor shall provide a written mitigation plan, including a schedule diagram, which explains how (e.g., increase crew size, overtime, etc.) the impact can be mitigated. The Contractor shall also include a detailed cost breakdown of the labor, equipment and material the Contractor would expend to mitigate the Owner, Architect or Construction Manager caused time impact. The Contractor shall submit its mitigation plan to the Construction Manager within 7 calendar days from the date of discovery of said impact. The Contractor is responsible for the cost to prepare the mitigation plan.

C. Failure to request time, provide TIE, or provide the required mitigation plan will result in Contractor waiving its right to a time extension and cost to mitigate the delay.

D. No time will be granted under this Contract for cumulative effect of changes.

E. The Construction Manager will not be obligated to consider any time extension request unless requirements of Contract Documents are complied with.

F. Failure of the Contractor to perform in accordance with the current schedule update shall not be excused by submittal of time extension requests. If the Contractor does not submit a TIE within the required 14 days for any issue, it is mutually agreed that the Contractor does not require a time extension for said issue.

PART 2 – PRODUCTS Not applicable to this Section.

PART 3 – EXECUTION Not applicable to this Section

END OF SECTION

# SECTION 01326

# APPLICATION FOR PAYMENT

## PART 1 - GENERAL

1.01 DESCRIPTION: All other Sections of Division 1 apply to this Section. This Section covers the general requirements for submitting applications for payment.

A. Related Work Specified Elsewhere:

1. Construction schedules and reports.
2. Schedule of values.

1.02 SUBMITTALS: Applications for payment shall be submitted as one original and 2 copies. The Architect will review the application, will retain one copy, and will transmit the original and one copy to the Owner.

1.03 FORMAT: Applications for payment shall be submitted on AIUA Documents G702 and G703, unless another format is approved. Computer generated applications may be submitted for approval, providing all information required by G702 and G703 is contained thereon.

A. Line items on the applications for payment shall match line items on the construction schedule, and on the schedule of values.

B. Applications shall be signed by an authorized representative of the contractor, shall be notarized, and shall be accompanied by conditional releases of lien for all work for which payment is requested, together with final releases of lien for all previously paid applications.

C. Provide a draft application for payment for review by Architect and Owner at the regularly schedule construction meeting. This review is intended to ascertain that the proper form, procedure, schedule of values, percentages of completion and change orders are included, to prevent delays in processing the application.

D. Make all changes required as a result of the review, and submit the application on or about the last day of the month.

1.04 FINAL PAYMENT: The final application for payment will not be made until all project closeout requirements specified in Section 01700 are completed. The final application shall be accompanied by a complete release of lien for all work performed under the contract. In any case, final payment will not be made until 35 days following recording of the notice of completion.

1.05 LIEN RELEASES: An unconditional progress lien release must be submitted with each progress application in the amount of the previous payment, and with the final application for the amount of all previous payments. A conditional final lien release must be submitted within 10 days of the receipt of final payment. Releases will be required of all subcontractors, material suppliers and labor. Retention will not be paid until all lien release are in order.

PART 2 – PRODUCTS Not applicable to this Section.

PART 3 - EXECUTION Not applicable to this Section.

END OF SECTION

# SECTION 01327

# SCHEDULE OF VALUES

## PART 1 - GENERAL

1.01 DESCRIPTION: All other Sections of Division 1 apply to this Section. This Section covers the general requirements for providing a detailed breakdown of the contract price showing values allocated to the various parts of the work.

1.02 QUALITY ASSURANCE: If required by Architect, provide copies of subcontracts or other data acceptable to the Architect, substantiating the prices listed.

1.03 SUBMITTALS:

A. Within 3 days after award of the contract, submit a proposed schedule of values to the Architect and the District.

B. Meet with the Architect and District and determine additional data, if any, required to be submitted.

C. Secure the Architect's and the District's approval of the schedule of values prior to submitting the first application for payment. The approved schedule shall serve as a basis for computing values for progress payments during construction.

1.04 FORM AND CONTENT:

A. Submit in form, acceptable to the Architect and District, proposed for submitting breakdown of costs on applications for payment.

B. Identify the schedule with the name of the project, location and nature of work. Provide the name of the Architect, District and Contractor, and the date of submission.

C. Schedule shall list the installed value of the component parts of the work in sufficient detail to serve as a basis for computing values for progress payments during construction. Line items shall be listed in the order indicated on the Table of Contents of Volume 2 of the Project Manual, with subsections as proposed by Contractor, and approved by Architect, to delineate completely each portion of the work.

D. Each item shall include a proportional amount of the Contractor's overhead and profit.

E. Line items on schedule of values shall match line items on the construction progress schedule required under Section 01310, and line items on the applications for payment required by Section 01326, unless otherwise approved by the Architect.

F. When payment will be requested for stored material, indicate the costs of the materials, including delivery, handling and taxes. Show as a separate item the costs of installation, including labor and equipment.

G. The sum of all values listed in the schedule shall equal the contract price.

H. Materials shall be stored in a bonded warehouse.

PART 2 – PRODUCTS Not applicable to this Section.

PART 3 - EXECUTION Not applicable to this Section.

END OF SECTION

# SECTION 01380

# DIGITAL CONSTRUCTION PHOTOGRAPHS

## PART 1 - GENERAL

1.01 DESCRIPTION: All other Sections of Division 1 apply to this Section. Provide digital construction photographs, complete.

1.02 SUBMITTALS:

A. Digital Photographs: Maintain in project files and deliver to Architect and District as specified.

1.03 QUALITY ASSURANCE:

A. Digital Camera Operator: May be a member of the Contractor's staff, such as the superintendent or one of his assistants. Digital camera operator shall be able to demonstrate familiarity with the equipment and an understanding of the ongoing construction process, so that digital camera images can be made of all significant operations.

B. Associated Services: Cooperate with the digital photographer's work. Provide reasonable auxiliary services as requested, including access and use of temporary facilities including temporary lighting.

B. Ownership: Digital photographs become the property of the District.

## PART 2 – PRODUCTS

2.01 EQUIPMENT:

A. Digital Camera: High resolution. Cell phone cameras may be used where the quality of the photographs is acceptable to Architect and District. Provide samples to review.

B. Provide pdf software and provisions to enable digital camera images to be sent by email to District and Architect. Label each image or set of images with the following information:

1. Name of the Project.
2. Date or dates the digital photo was taken.
3. Name of person taking the digital photo.
4. Description of vantage points, in terms of location and direction (by compass point).

## PART 3 – EXECUTION

3.01 PRE-CONSTRUCTION PHOTOGRAPHS: Before starting construction, take digital photographs of the site and surrounding properties from different points of view as directed. Take digital photographs in sufficient number to show existing conditions adjacent to the property before starting work. Take photographs of existing buildings either on or adjoining the property in sufficient detail to record accurately the physical conditions at the start of construction.

3.02 CONSTRUCTION RECORDS:

A. Provide an ongoing digital photographic record of construction progress. Provide photographs to indicate locations of buried utilities.

B. In addition, during each of the following construction phases take not less than 2 of the required shots from the same vantage point each time to create a time lapse sequence:
   1. Initial conditions, prior to start of work.
   2. Demolition, each phase or portion.
   3. Utilities, buried in ground.
   4. Excavation.
   5. Site improvements, each area, each component.
   6. Completion of each area.

C. When RFI's are submitted to Architect, when change order or field order conditions arise during the work, and at other times when action by the Architect is required for clarification of conditions, provide digital photographs together with written documentation required for each instance, to indicate and define applicable conditions.

3.03 DELIVERY OF RECORDS: Transmit digital construction photographs to Architect and District at monthly intervals, or more frequently as required. In addition, transmit images electronically whenever required for immediate consideration.

END OF SECTION

# SECTION 01400

# TESTS AND INSPECTIONS

## PART 1 - GENERAL

### 1.01 DESCRIPTION:

This Section covers testing and inspection procedures.

A. Requirements not in this Section:

1. Specific test requirements are specified in each section where they occur.
2. Verification of conditions.
3. Tolerances nomenclature.

### 1.02 PAYMENT FOR TESTING:

A. District will employ and pay for services of an independent testing laboratory approved by Owner to perform specified inspection and testing, including required continuous inspection. Contractor shall reimburse the District for excessive inspection costs incurred by the District because of the following:

1. Contractor's failure to complete entire work within the contract time stated in Agreement, and any previously authorized extensions thereof.
2. Claims between separate contractors.
3. Covering of work before required inspections or tests are performed.
4. Extra inspections for Contractor's correction of defective work.
5. Overtime costs for acceleration of work for Contractor's convenience.

B. Contractor shall pay cost of the following:

1. Additional tests necessitated if materials fail to meet contract requirements.
2. Tests required by Architect to substantiate proposed substitutions.
3. Tests required to determine code compliance.
4. Costs of concrete mix designs.

### 1.03 LIMITATIONS OF AUTHORITY OF TESTING LABORATORY:

A. Laboratory is not authorized to:

1. Release, revoke, alter or enlarge on the requirements of the contract documents.
2. Approve or accept portion of the work.
3. Perform any duties of the Contractor.
4. Stop work.

B. Work of the testing laboratory shall in no way limit Contractor's quality control procedures or relieve Contractor of his obligation to perform work in accordance with the contract documents.

1.04 ADDITIONAL TESTING:

A. If the Architect determines that any work requires additional inspection, testing or approval, District will direct the Contractor to order such special inspection, testing or approval.

B. If special inspection, testing or approval reveals a failure of the work to comply with the contract documents, the Contractor shall reimburse the District for the costs, including additional services made necessary by such failure.

C. If special inspection, testing or approval indicates that the work complies with the contract documents, the District will bear the costs.

1.05 GENERAL QUALITY CONTROL REQUIREMENTS:

A. General Test Requirements: Materials to be furnished under the Contract are subject to testing and inspection for compliance with the requirements of drawings and inspections.

B. Testing laboratory: The licensed testing laboratory certified as meeting requirements of ASTM D3666, D3740, E329, E543 and E548, as applicable to work involved and approved by District, referred to hereafter as the testing laboratory. Perform testing under the supervision and control of a California registered professional engineer employed by testing laboratory.

C. Disqualified Material: Material shipped or delivered to the site by Contractor from the source of supply prior to having satisfactorily passed the required testing and inspection, or prior to the receipt of a notice from the Architect that such testing and inspection will not be required, shall not be incorporated in the work.

D. Notification of Field Tests: Architect and District reserve the right to be present at field testing as required by the contract documents. Contractor shall notify the Architect not less than 24 hours in advance of field testing.

E. Disqualified Work: Work in place which fails to conform to test requirements shall be removed and replaced without cost to the District. Where feasible, and subject to the approval of the Architect, disqualified work may be repaired, strengthened or otherwise modified to bring it into conformance with test requirements.

1.06 TEST PROCEDURES:

A. Materials to be furnished under the Contract shall be subject to testing for compliance with the contract documents. Tests will be made in accordance with the applicable standard methods of the ASTM, AASHTO or procedure herein specified.

B. Materials so specified herein, including such others as the Architect may direct, shall be tested. The Contractor shall furnish samples of the materials prepared for tests as required to the testing laboratory providing adequate time for testing before need at the project. The materials represented by samples under tests shall not be incorporated in the work without the approval of the Architect.

C. Test Procedures: Testing laboratory shall perform tests according to ASTM or other methods of test specified for various materials in other sections. If no procedure or test method is specified, testing shall conform to the material specification referenced except as otherwise directed. Testing laboratory shall tag, seal, label, record or otherwise adequately identify materials for testing and no such materials, shall be used or installed in the work until test result reports are submitted and approved, excepting only those materials specified to be placed or installed prior to testing.

D. Test Repeating: Repeat applicable tests at specified intervals, whenever source of supply is changed, or whenever the characteristics of materials change or vary in the opinion of District or Architect.

1.07 COORDINATION AND COOPERATION:

The Contractor shall initiate and coordinate testing and inspections required by the contract documents and public authorities having jurisdiction of the work. Notify the testing laboratory sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include but not limited to:

A. Providing access to the work and furnishing incidental labor and facilities necessary for inspections and tests.

B. Taking adequate quantities of representative samples of materials that require testing or assisting the agency in taking samples.

C. Providing facilities for storage and curing of test samples and delivery of samples to testing laboratories.

D. Providing testing laboratory with a preliminary design mix proposed for use for materials mixes that require control by the testing agency.

E. Security and protection of samples and test equipment at the project site.

D. Furnish copies of mill test reports.

1.08 TEST REPORTS:

A. Reports shall be provided of tests. Such reports shall include tests made, regardless of whether such tests indicate that the material is satisfactory or unsatisfactory. Samples taken but not tested shall also be reported. Records of special sampling operations as required shall also be reported. The reports shall show that the material or materials were sampled and tested in accordance with the requirements of CBC and with the approved specifications. Test reports shall show the specified design strength. They

shall also state definitely whether or not the material or materials tested comply with requirements.

B. Furnish and deliver copies of each test report, signed and certified by the testing laboratory professional engineer, as follows:

No. of Copies:

| | |
|---|---|
| 1 | District |
| 1 | Architect |
| 2 | Contractor |
| 1 | Inspector |

C. Promptly notify the Architect of observed irregularities or deficiencies in the work or in products to be used in the work.

D. Each report shall include:

1. Date issued.
2. Project title and number.
3. Testing laboratory name, address and telephone number.
4. Name and signature of laboratory inspector.
5. Date and time of sampling or inspection.
6. Record of temperature and weather conditions.
7. Date of test.
8. Identification of product and specification section.
9. Location of sample or test in the project.
10. Type of inspection or test.
11. Results of tests and compliance with contract documents.
12. Interpretation of test results, when requested.

1.09 VERIFICATION OF TEST REPORTS:

Each testing agency shall submit to the District and Architect a verified report in duplicate covering the tests which are required to be made by that agency during the progress of the project. Such report shall be furnished each time that work on the project is suspended, covering the tests up to that time, and at the completion of the project, covering the tests.

1.10 REPORTING TEST FAILURES:

Immediately upon determination of a test failure, the laboratory will telephone the results of the test to the Architect. On the same day, the laboratory will send written test results to those named on the above distribution list.

1.11 AVAILABILITY OF SAMPLES:

A. Contractor shall make materials available to the laboratory and assist in acquiring these materials as directed by the District's Inspector. The samples shall be taken under the immediate direction and supervision of the testing laboratory or inspector.

B. If work which is required to be tested or inspected is covered up without prior notice or approval, such work may be uncovered at the discretion of the Architect at no additional cost to the District.

C. Unless otherwise specified, the Contractor shall notify the testing laboratory a minimum to 10 working days in advance of required tests and a minimum of 2 working days in advance of required inspections. Extra laboratory expenses resulting from a failure to notify the laboratory will be paid by the District and reimbursed by the Contractor.

D. The Contractor shall give sufficient advance notice to the testing laboratory in the event of cancellation or time extension of a scheduled test or inspection. Charges due to insufficient advance notice of cancellations or time extension will be paid for by the District and reimbursed by the Contractor.

1.12 REMOVAL OF MATERIALS:

Unless otherwise directed, materials not conforming to the requirements of the contract documents shall be promptly removed from the site.

1.13 INSPECTOR - DISTRICT'S:

A. A Project Inspector and special inspectors will be employed by the District, by the 2013 CBC.

B. The work of construction in all stages of progress shall be subject to the personal continuous observation of the Inspector. He shall have free access to any or all parts of the work at any time. The Contractor shall furnish the Inspector reasonable facilities for obtaining such information as may be necessary to keep him fully informed respecting the progress and manner of the work and the character of the materials. Inspection of the work shall not relieve the Contractor from any obligation to fulfill this contract.

1.14 INSPECTOR – DISTRICT – FIELD OFFICE

The District will provide a field office for the inspector if required.

1.15 SPECIAL INSPECTIONS:

A. Special inspections shall be performed by an inspection agency approved by the code officials and paid for by the District. The special inspection agency shall be accredited, approved special inspection agency, in accordance with CBC. The special inspector shall be responsible to the Architect. Accreditation of the agency shall be as specified in ASTM E 329, unless code requires another means of accreditation.

B. The special inspections shall be performed in accordance with documented methods and procedures which establish acceptance criteria. Instructions, standards, procedures and checklists relevant to the work shall be maintained continuously and kept available for use.

C. Inspections or tests shall not be performed if the safety of the special inspector is in question because of job site conditions. Contractor is responsible for maintaining a safe work site at all times.

D. Prior to the commencement of special inspections, the special inspector shall confer with and obtain approval of, the Architect regarding the inspection and testing procedures or specifications to be followed, including appropriate ASTM methods, code requirements, and project specification requirements.

E. The special inspector shall observe the appropriate work for conformance with the contract drawings and specifications.

F. The special inspector shall furnish daily reports to the Architect, the District and the building department at not more than weekly intervals. The reports shall include the following as a minimum:

1. Site name and address.
2. Architect's name and address.
3. District's name and address.
4. Name of municipal building inspector.
5. Unique identification of the report and of each page.
6. Description of the type of special inspection performed.
7. Unresolved deviations, exclusions and additions to or from the approved drawings and specifications relevant to the specific inspection or test.
8. Compliance findings and references.
9. Description of the location where the inspection was performed within the project.
10. Time and date of the inspection.
11. Measurements, examinations and derived results supported by tables, graphs, sketches or photographs as appropriate.
12. The name, title, signature and identification number, as appropriate, of the special inspector performing the inspection.
13. Identification of subcontractors employed to carry out the tests or parts of tests.

G. Discrepancies shall be brought to the immediate attention of the contractor for correction. The Architect and the EOR shall be notified of discrepancies which are not corrected.

H. Upon completion of the portion of the work under inspection, the special inspector shall submit a final, signed report stating whether the work requiring special inspection was, to the best of the special inspector's knowledge, completed in conformance with the approved drawings and specifications and the applicable workmanship provisions of the building code.

I. Approved Fabricators: Special inspections are not required when the work is performed on the premised of a fabricator registered and approve by the building department to perform such work without special inspection. The certificate of registration shall be subject to revocation by the building department if it is determined that the work done pursuant to the approval is in violation of the building code. The approved fabricator shall submit a certificate of compliance that the work was performed in accordance with the approved drawings and specifications. The certificate shall be submitted to the Architect and the building department. The approved fabricator's qualifications shall be contingent on compliance with the following:

1. The fabricator has developed and submitted a detailed fabrication procedural manual reflecting key quality control procedures. The manual will provide a basis for inspection control of the fabrication plan and workmanship.

2. Verification of the fabricator's quality control procedures, capabilities, plan and personnel as outlined in the fabrication procedural manual shall be by an approved inspector or quality control agency.

1.17 REQUIRED TESTS AND INSPECTIONS: Tests and inspections, as set forth in the 2013 California Building Code (CBC) of the following will be required.

TITLE 24, PART 2 VOLUME 1

A. Sitework, Demolition & Construction – CBS Chapter 33

TITLE 24, PART 2 VOLUME 2

A. Excavations, Foundations & Retaining Walls – CBC Chapter 18A and 33

1. Earth fill compaction: 1704A.7.

2. Inspection of excavation/earth fill installation: 1704A.7.

B. Concrete – CBC Chapter 19A

1. Materials:

a. Portland Cement: 1903A, 1913A

b. Concrete Aggregates: 1903A.6

c. Reinforcing Bars: 1903A.8, 1913A.2

2. Concrete Quality:

a. Proportions of Concrete: 1904A

b. Strength Tests of Concrete: 1904A, 1913A

3. Concrete Inspection:

a. Job Site: 1705A.3.5, 1705A.3.6

b. Batch Plant: 1705A.3.2

c. Waiver of Batch Plant: 1705A.3.3

d. Reinforcing Bar Welding: Tbl. 1705.2.2

PART 2 – PRODUCTS Not applicable.

PART 3 – EXECUTION Not applicable.

END OF SECTION

# SECTION 01410

# QUALITY ASSURANCE/QUALITY CONTROL

## PART 1 - GENERAL

### 1.01 DESCRIPTION:

The requirements of this Section apply to, and are a component part of each section, of the specifications.

### 1.02 DEFINITIONS:

A. Quality Control: Activities performed by the Contractor to assure compliance with the contract documents.

B. Quality Assurance: Activities performed by the Owner, the Architect, or persons or firms employed and paid by them to assure compliance with the contract documents.

### 1.03 SUBMITTALS:

The following shall be submitted in accordance with Section 01300, in sufficient detail to show full compliance with the specification:

A. Certificates: Submit qualifications of Contractor's Quality Control Representative and required special certifications.

B. Contractor's Quality Control Plan: Describe the Contractor's Quality Control (QC) plan and procedures that will be implemented to meet the project quality requirements of the specifications. The system shall address:

1. Management and organization.
2. Identification and data retrieval.
3. Procurement and subcontract.
4. Quality control.
5. Nonconformance control.
6. Drawings and change control.
7. Control of field services.
8. Quality records.
9. Handling and storage.

C. Records: Records shall include all quality control data; factory tests of manufacturer's certifications, quality control coordinating actions, quality training/certifications, concrete pour records and records of inspections and tests.

## 1.04 QUALITY CONTROL PLAN:

The Contractor shall establish a quality control plan which shall include procedures to assure that the construction, and all components thereof, conform to the contract documents. The Contractor shall assign competent personnel as Contractor Quality Control Representative (CQCR) to provide the inspection and direction to ensure the implementation of the Contractor's quality control plan.

A. The Contractor's quality system shall encompass management and supervisory actions required to ensure the quality of the completed construction work.

B. The CQCR shall report to the Contractor's management and shall have the necessary authority to discharge contractual responsibilities.

C. Contractor shall be responsible for ensuring that the activities and work of its suppliers and subcontractors meet contractual quality requirements.

D. The Contractor shall be responsible for controlling procurement and subcontracts to ensure that the quality requirements of the project are properly specified. The CQCR shall maintain a site receiving inspection system that ensures procured materials and equipment are inspected and tested. Records of site receiving inspection shall be maintained by the Contractor and made available to the Architect for review. Records shall show the results of inspections and tests, including defects, discrepancies and waivers.

E. Quality Control Records shall be maintained at the site. Maintenance of quality records shall not relieve the Contractor from submitting samples, test data, detail drawings, material certificates, or other information required by each section in the specification. Contractor shall ensure that each record is identified and traceable to specific requirements in the specification and drawings.

F. Nonconformance Control: Control nonconformances discovered by the CQCR, the Contractor, Subcontractors or Owner's quality representatives to prevent their use and to correct deficient operations. Monitor and correct deficient operations.

G. Quality Audits: The Architect may verify the Contractor's implementation of the Quality Control plan at any time during the performance of the work.

H. Contractor Responsibilities: The Contractor shall be responsible for:

1. Maintaining a site receiving inspection system that ensures procured materials and equipment are inspected and tested;

2. Ensuring that any nonconformance identified is documented and controlled;

3. Notifying the Architect of the completion of work or activities identified in the QA/QC Plan as hold or witness points;

4. Maintaining the calibration of measuring and test equipment used for the performance of the work within the required accuracy;

5. Maintaining results of any inspection and tests performed by the Contractor and making them available to the Architect for review;

6. Generating monthly summary report of all quality system activities, including inspections and tests, nonconformances, discrepancies and corrective action taken; and

7. Maintaining quality records.

1.05 QUALITY ASSURANCE:

A. The owner will provide testing and inspection as the Owner may required to assure that the construction, and the Contractor's quality control efforts are sufficient to protect the interests of the Owner under the contract. In addition, as described in Section 01400, the Owner will provide for testing laboratory services to perform tests as required by the specifications.

B. Inspections and tests performed by or for the Owner are for the sole benefit of the Owner and do not:

1. Relieve the Contractor the responsibility for providing adequate quality control measures;

2. Relieve the Contractor of responsibility for damage to or loss of the material before acceptance;

3. Constitute or imply acceptance; or

4. Affect the continuing right of the Owner after acceptance of the completed work under paragraph I below.

C. The Architect has the right to observe and evaluate the work performed or being performed under the contract, and the premises where the work is being performed, at all reasonable times and in a manner that will not unduly delay the work. If the Architect performs observation or evaluation on the premises of the Contractor or a subcontractor, Contractor shall furnish and shall require subcontractors to furnish all reasonable facilities and assistance for the safe and convenient performance of these duties.

1.06 VERIFICATION OF CONDITIONS:

Prior to installing any portion of the work, inspect the work in place to receive the work to be installed and arrange for correction of defects in the existing workmanship, material or conditions that may adversely affect work to be installed. Such inspections shall include test applications of the materials to be installed as required to establish the correct condition of surfaces involved. Installation of materials on work in place constitutes acceptance of such work in place as being in proper condition to receive the materials to be applied and waiver of

claim that the work in place is defective as pertains to warranty requirements, excluding unascertainable or concealed conditions. Where the specifications require a material to be installed under the supervision or inspection of the material manufacturer or his representative, the manufacturer or his representative also shall inspect the work in place and issue a letter of approval to Architect.

1.07 TOLERANCES NOMENCLATURE:

A. Tolerance of Numbers: Unless other tolerances are indicated or specified elsewhere, specified numbers such as gauges, weights, temperatures and similar references, but specifically not including dimensions and time, will be acceptable if within formally established, written and recognized commercial tolerances established for the affected trade. In the absence of formally written and recognized commercial tolerances, plus or minus 1 percent will be acceptable. If a specified number cannot be obtained, the number shall be interpreted as the next larger, provided it meets other requirements of the contract documents including sufficient space being available as indicated on the drawings.

B. Tolerances of Specified Words: Unless otherwise specified, the following words shall have the following meanings. Construction executed within these tolerances will be considered acceptable.

1. “Straight”: Allowed deviations from an absolutely straight line of sight shall be plus or minus 1/16” in one foot, plus or minus 1/8” in 10 feet, and plus or minus 1/4” for the entire length of a particular construction. These deviations shall be non-accumulative. Straight lines or planes on drawings shall conform to these tolerances.

2. “Flat”: Allowed deviations from an absolutely flat plane shall be plus or minus 1/1000 inch in one square inch, within plus or minus 1/16 inch in one square foot, within plus or minus 1/8 inch in an area ten feet by ten feet, and within plus or minus 1/4 inch for the entire area of a particular construction item. Flat planes on drawings shall conform to these tolerances.

3. “Level”: Allowed deviation from an absolutely horizontal plane shall be 1/2 degree of angle. Horizontal lines or planes on drawings shall conform to this tolerance.

4. “Plumb”: Allowed deviation from an absolutely vertical plane of plus or minus 1/2 degree of angle. Vertical lines or planes on drawings shall conform to this tolerance.

END OF SECTION

# SECTION 01500

# TEMPORARY FACILITIES AND CONTROLS

## PART 1 - GENERAL

### 1.01 DESCRIPTION:

Provide temporary facilities and controls, complete.

## PART 2 – PRODUCTS – Not applicable to this Section.

## PART 3 – EXECUTION

### 3.01 TEMPORARY UTILITIES:

Except as otherwise specified below, District will furnish electrical power, water and gas from existing outlets designated by the District without charge to Contractor for quantities used for the work. Provide all temporary piping, fittings, wiring and lighting necessary to supply utilities in sufficient quantities at locations required by the work. Contractor shall carefully conserve utilities, and if, in the opinion of the District, the usage is excessive, Contractor may be required to provide separate services from serving utility companies.

A. Electrical Power in the Buildings: Characteristics of current furnished by the District is limited to that existing and available; if current of other characteristics or quantity is required by Contractor, the Contractor shall supply the power as necessary at no extra cost to the District. Power for small tools and lighting may be taken from the existing 120-volt 60 Hz 1-phase convenience receptacles provided there is no disturbance to occupants and functions, cables and conductors do not prevent or interfere with closing of fire-labeled doors, and load connected to any single or duplex outlet does not exceed 12 amperes. Total load connected to any circuit shall not exceed 25% of circuit capacity as labeled in panelboard. Contractor shall repair and make good damage to existing electrical facilities caused by his use, as directed and approved, at no extra cost of the District.

    1. Electrical Power for the Project Offices and Trailers: Contractor shall arrange for service with serving utility and pay all costs directly.

    2. Temporary Lighting: Provide lighting and outlets wherever necessary for proper performance and inspection of work. If operations are performed during hours of darkness and whenever natural lighting is deemed insufficient by Architect, provide adequate floodlights, clusters and spot illumination, as required to facilitate reading of drawings and specifications.

B. Water:

1. Construction Water: District will furnish water from such existing outlets as do not interfere with the normal operation of the facilities. In general, obtain water from outlets in janitor, mechanical and similar utility rooms. If used, do not run water hoses down corridors or across doorways in use by occupants. Provide temporary backflow prevention devices as required by Code or directed by the District.

2. Drinking Water: Maintain on the site at all times, adequate supply of drinking water. Provide bottled water, dispenser and disposable cups. Keep the equipment and the area around the equipment clean and dry at all times.

C. Gas: Limit quantity used to the amount that causes no interference to existing gas-fired devices and equipment.

3.02 TEMPORARY TELEPHONE SERVICE:

Site superintendent to be available Via cell phone for the duration of the project.

3.03 TEMPORARY SANITARY FACILITIES:

A. Provide and maintain temporary portable chemical toilet facilities for duration of operation. Properly proportion number of units for number of workers employed. Provide weathertight and floored structures, maintained in clean and sanitary condition acceptable to the District and Architect.

B. Handwash Facility: Near each temporary toilet, provide hand sanitizer and paper towel dispenser, mounted at a convenient height and a minimum 50 gallon trash can. Keep dispensers filled, and trash can be emptied at frequent intervals.

3.04 TEMPORARY FIRE PROTECTION AND SAFETY REQUIREMENTS:

A. The Contractor shall take necessary precautions to guard against and eliminate fire hazards and to prevent damage to construction work, building materials, equipment, temporary field offices, storage sheds and public and private property. The Contractor shall be responsible for providing, maintaining and enforcing the following conditions and requirements during the entire construction period. Comply with 2013 GFC Chapter 33 during all phases of the project.

1. Fire Inspection: The Contractor's Superintendent shall inspect the entire project at least once each week to make certain that the conditions and requirements are being adhered to.

2. Fires: Employees shall not be allowed to start fires with gasoline or kerosene or other highly flammable materials. No open fires shall be allowed.

3. Flammable Building Materials: Only a reasonable working supply of flammable building material shall be located inside of, or on the roof of, any storage facility.

4. Combustible Waste Materials: Oil-soaked rags, papers and other highly combustible materials must be stored in closed metal containers at all times, and shall be removed from the site at the close of each day's work and more often where necessary, and placed in metal containers with tight hinged lids.

5. Gasoline and other flammable or polluting liquids/materials shall not be poured into sewers, manholes or traps, but shall be disposed of, together with flammable or waste material subject to spontaneous combustion, in a safe manner meeting all applicable laws and ordinances. Make appropriate arrangements for storing these materials outside of the building.

6. Provide and maintain fire extinguishers during construction, conveniently located for proper protection, one fire extinguisher for each 5,000 square feet of area or less. Fire extinguishers shall be ten-pound ABC type. Extinguishers shall meet approval of Underwriters' Laboratory, and shall be inspected at regular intervals and recharged as necessary.

B. All self-propelled construction equipment, except light service trucks, panels, pickups, station wagons, crawler type cranes, power shovels and draglines, whether moving alone or in combination, shall be equipped with a reverse signal alarm (hub-cap type).

C. Trenching and excavation operations with regards to the following:

1. Pursuant to Labor Code 6706, the Contractor shall include in his base bid to pay all costs incident to the provision of adequate sheeting, shoring, bracing or equivalent method for the protection of life or limb, which shall conform to applicable Federal and State safety orders.

2. Before beginning any excavation five feet or more in depth, the Contractor shall submit to the Architect a detailed plan showing the design of shoring, bracing, sloping or other provisions to be made for worker protection from the hazard of caving ground during the excavation. The proposed plan shall comply with the standards established the State of California Construction Safety Orders and Title 24 of the California Code of Regulations. If the detailed plan varies from such shoring system standards, it shall be prepared by a registered Civil or Structural Engineer whose name and registration number shall be indicated on the drawing. If a dispute arises as to whether the plan must be prepared by a registered Civil or Structural Engineer, the Engineer's determination of the matter shall be deemed to have been included in the contract price for the work as specified.

3. Neither the review nor approval of any plan showing the design of shoring, bracing, sloping or other provisions of work protection, shall relieve the Contractor from his obligation to comply with Construction Safety order Standards and Title 24 CCR for the design and construction of such protective work, and the Contractor shall indemnify the Owner and the Architect from any and all claims, liability, costs, actions and causes of action arising out of or related to the failure of such protective systems. The Contractor shall defend the Owner, its officers, employees and agents and the Architect in any litigation or proceeding brought with respect to the failure of such protective systems.

## 3.06 TEMPORARY ELECTRONIC COMMUNICATIONS:

Contractor shall provide at the office, an experienced data processing and digital camera operator, and the following equipment for the use of the Contractor, Owner and Architect:

A. CPU

1. Intel Core i5 processor
2. 4 GB RAM
3. 300 GB hard drive
4. High Speed Internet Service Capable
5. Ports for digital camera connection
6. Read/write/DVD drive
7. Battery backup system
8. Windows 7 or higher.
9. Office 2013

B. Digital Camera

1. 1152 x 864 minimum image resolution
2. Built in flash
3. Software to download images to on-site CPU
4. Software to optimize images for speedy e-mail transmission
5. Battery supply sufficient for continuous use of camera

C. Internet Service

1. E-mail address for the contact person.
2. Internet software.
3. High speed internet service.

## 3.08 TEMPORARY GUARDS, BARRICADES AND LIGHTS:

A. Provide construction, fences, and warning signs necessary and required by law, and take necessary precautions required to avoid injury or damage to any and all persons and property.

B. Construction Site Fencing: Construct fence around construction site at exact location as indicated or directed, of chain link fence fabric not less than 6 feet high. Use 1-3/4” mesh not lighter than 9 gauge galvanized fabric with knuckled selvages. Use round posts, top tension wire and bottom tension wire, and bracing as required for rigidity. Provide steel gates and frames of not less than 1.90” OD, 0.120” minimum wall thickness galvanized tubing. Provide gates as required for access of vehicles and pedestrians. Equip swinging gates with galvanized hinges and latch. Provide change and double padlocks, arranged so that unlocking of either padlock will open the gate. Contractor provide on padlock for his use. District will provide the other padlock. Set posts for support of fences into sleeves or buried direct in ground. Hold posts aligned and plumb.

## 3.10 PROTECTION OF WORK AND FACILITIES:

A. Protect all adjacent property, roads, streets, curbs, shrubbery, lawns, erosion control materials and planting during construction operations. All damaged material shall be replaced and/or repaired at the expense of the Contractor.

B. Upon completion deliver the entire work to the Owner in proper, whole and unblemished condition.

1. Parts of work in place that are subject to injury, because of operations being carried on adjacent thereto, shall be covered, boarded up, or substantially enclosed with adequate protection.

C. The Owner may provide such watchman services deemed necessary to protect the Owner's interest, but any protection so provided by the Owner shall not relieve the Contractor of the responsibility for the safety and condition of the work and material until the completion and acceptance thereof. The Contractor shall employ such watchman services as he may deem necessary to properly protect and safeguard the work and material.

## 3.11 DUST CONTROL:

Throughout the entire Contract period, effectively dust-palliate the working area, roads and storage areas constructed under this Contract and involved portions of the site, except during such periods that other contractors may be performing work of separate contracts in these areas. Such application shall consist of intermittent watering and sprinkling of such frequency as will satisfactorily allay the dust during all hours that work is being performed. At no time shall water be allowed to pond or puddle. Ponds and puddles shall be removed immediately and steps taken to remove or dry the mud resulting from the ponds or puddles.

## 3.12 WATER CONTROL:

Surface or subsurface water or other fluid shall not be permitted to accumulate in excavations or under the structures. Should such conditions develop or be encountered, the water or other fluid shall be controlled and suitably disposed of by means of temporary pumps, piping, drainage lines and ditches, dams or other methods approved by the Architect.

## 3.13 CONTRACTOR VEHICLES ON CAMPUS:

Contractor's vehicles shall be restricted to access routes established by the Owner. Parking of Contractor's employees vehicles will be limited to offsite parking areas as arranged by Contractor, not necessarily adjacent to the site.

## 3.14 REMOVAL OF TEMPORARY CONSTRUCTION:

Remove temporary office facilities, toilets, storage sheds, fences and other construction of temporary nature from site as soon as progress of work permits. Recondition and restore portions of site occupied by same to a condition acceptable to Architect.

END OF SECTION

# SECTION 01630

# SUBSTITUTIONS

## PART 1 - GENERAL

### 1.01 DESCRIPTION:

Division 1 applies to this Section. This Section covers provisions for, and restrictions on, substitutions of material, equipment and processes.

1.02 DISTRICT STANDARDS: Wherever products are identified as being a “District Standard”, the District has established that these products are required in order to accommodate maintenance, stocking of parts and training of personnel. Substitutions for these items will not be permitted.

### 1.03 SUBSTITUTIONS:

A. Wherever catalog numbers and specific brands or trade names, whether or not followed by the designation “or equal” are used in conjunction with a designated material, product, thing or service mentioned in these specifications, they are used to establish the standards of quality, utility and appearance required.

B. Substitutions which are considered equal in quality, utility, performance and appearance to those specified will be reviewed, subject to the following provisions:

1. All substitutions must be reviewed and approved by the Architect in writing prior to fabrication and installation.

2. For this purpose, submit to the Architect 10 days prior to the bid due date, a typewritten list containing a description of each proposed substitute item, material or assembly.

3. No substitutions will be allowed within 10 days of the bid date for review.

4. Contractor shall comply with the General Conditions in regard to submittal of substitutions.

5. Append to the list, a complete side-by-side comparison between the specified item and the substitute item; include sufficient data, drawings, samples, long lead status, literature, guranry, warranty cost, or other detailed information as will demonstrate to the Architect that the proposed substitute is equal or better in quality, utility, performance and appearance to the material specified.

6. The Architect will approve, in writing, such proposed substitutions as are in the Architect’s opinion, equal in quality, utility, performance and appearance to the items or material specified.

7. Such approval shall not relieve the Contractor from complying with the requirements of the drawings and specifications, and the Contractor's own expense for any changes resulting from the Contractor's proposed substitutions which affect other parts of the Contractor's own work or the work of others, time required to review the drawings and details.

8. If such substitutions impact the design of the project, the Contractor shall reimburse the District for the cost of revisions of contract documents by the Architect and design team.

C. Failure of the Contractor to submit proposed substitutions for review and approval in the manner described above, and within the time prescribed, shall be sufficient cause for disapproval by the Architect of any substitutions otherwise proposed.

D. If specified items are listed in the following format or similar format: "First manufacturer and model number, equivalent second manufacturer and model number, or equal" the Contractor wishing to submit any "equivalent named manufacturer" shall so do in accordance with this provision.

E. Wherever catalog numbers and specific bands or trade names not followed by the designation "or equal" are used in conjunction with a designated material, product, assembly, thing or service mentioned in these Specifications, no substitutions will be approved.

F. Contractor shall notify the Owner at the time of bid if any product being supplied is per the plans and specifications or if it is intended to be an or equal substitution. Refer to B.2 above.

PART 2 – PRODUCTS – Not applicable to this Section.

PART 3 – EXECUTION – Not applicable to this Section.

END OF SECTION

# SECTION 01650

# PRODUCT HANDLING AND PROTECTION

## PART 1 - GENERAL

### 1.01 DESCRIPTION:

This Section covers the requirements for handling and protection of materials and equipment to be incorporated into the work.

A. Transport, deliver, handle and store materials and equipment at the job site in such manner as to prevent damage, including damage which might result from the intrusions of foreign matter or moisture from any source. Comply with:

1. Material and equipment manufacturer's instructions.

2. Other environmental conditions which are required to maintain the original quality of the materials and equipment.

3. Handle materials to prevent damage to products and finishes.

B. Packaging:

1. Maintain packaged materials in manufacturer's original containers with seals unbroken and labels intact until they are incorporated into the work.

2. Packaged material shall bear the name of the manufacturer, the product, including brand name, color, stock number and all other complete identifying information.

C. Remove all damaged or otherwise unsuitable materials and equipment promptly from the job site.

D. Storing:

1. Locate storage piles, stacks or bins so as to avoid being disturbed. Provide barricades as required to protect storage from damage.

2. Store all materials and equipment in accord with manufacturer's instructions, above grade and properly protected from weather and construction activities.

E. Protection:

1. Protect all finished surfaces.

2. Provide protection for resilient safety surfacing in traffic areas before allowing any materials and equipment to be moved over those finished surfaces.

3. Maintain all finished surfaces clean, unmarred and suitably protected until occupied by Owner.

4. Consult individual Specification Sections for any additional specific product handling and protection requirements.

PART 2 – PRODUCTS – Not applicable to this Section.

PART 3 – EXECUTION – Not applicable to this Section.

END OF SECTION

# SECTION 01700

# PROJECT COMPLETION

## PART 1 - GENERAL

### 1.01 DESCRIPTION:

Division 1 applies to this Section. Perform duties specified herein for project completion, complete.

### 1.02 SUBSTANTIAL COMPLETION:

A. When the work is considered substantially complete, submit to Architect a written notice that the work, or designated portion thereof, is substantially complete, and a list of items to be completed or corrected.

B. After receipt of such notice, Architect will make an inspection to determine the status of completion.

C. If Architect determines that the work is not substantially complete, Architect will promptly notify the Contractor in writing, giving the reasons therefore. Contractor shall remedy the deficiencies in the work and send a second written notice of substantial completion to the Architect. Architect will revisit the work.

D. When Architect concurs that the work is substantially complete, he will prepare a Certificate of Substantial Completion on AIA Form G704, accompanied by Contractor's list of items to be completed or corrected, as verified and amended by the Architect. Architect will submit the Certificate to Owner and Contractor for their written acceptance of the responsibilities assigned to them in the Certificate.

### 1.03 FINAL COMPLETION:

A. When the work is considered complete, submit written certification that:

1. Contract Documents have been reviewed.
2. Work has been inspected for compliance with Contract Documents.
3. Work has been completed in accordance with Contract Documents.
4. Equipment and systems have been tested in the presence of the Owner's representative and are operational.
5. Work is completed and ready for final inspection.

B. Architect will make a visitation to verify the status of completion with reasonable promptness after receipt of such certification.

C. If Architect considers that the work is incomplete or defective, he will promptly notify the Contractor in writing, listing the incomplete or defective work. Contractor shall take

immediate steps to remedy the stated deficiencies and send a second written certification to Architect that the work is complete. Architect will reinspect the work.

D. When the Architect finds that the work is acceptable to the requirements of the Contract Documents, he will request the Contractor to make closeout submittals.

1.04 PROJECT CLOSEOUT:

The following items shall be completed and approved prior to the approval of the final certificate of payment.

A. Warranties and Guarantees: Provide as specified in Section 01740. Unless otherwise provided elsewhere, warranties and guarantees shall commence with the date of final acceptance of the project. Verify date with the Architect, execute the forms and deliver to Architect for transmission to the Owner.

B. Final cleaning: Perform final cleaning as specified in Section 01710, immediately prior to final inspection.

C. Project Record Documents: Deliver to Architect record documents specified in Section 01720 at time of final inspection.

D. Operations and Maintenance Manuals and Parts: Deliver all documents and parts specified in Section 01730 at time of final inspection.

E. Instructions: Instruct the Owner's maintenance personnel in proper maintenance of equipment and similar items which were provided as part of the work. Submit evidence that such instruction has been satisfactorily completed to Architect.

F. Provide all documentation required by the jurisdictional agency CBC.

G. Certificate of Insurance for Products and Completed Operations: Furnish to Owner at time of final inspection.

1.05 OBSERVATION FEES:

Should Architect perform observation due to failure of work to comply with the claims of status of completion made by the Contractor:

A. Owner will compensate Architect for such additional services.

B. Owner will deduct the amount of such compensation from the final payment to the Contractor.

1.06 FINAL ADJUSTMENT OF ACCOUNTS:

A. Submit a final statement of accounting to Architect.

B. Statement shall reflect all adjustments to the Contract Sum:

1. The original Contract Sum.

2. Additions and deductions resulting from:

   a. Previous Change Orders.
   b. Allowances.
   c. Unit Prices.
   d. Deductions for uncorrected work.
   e. Deductions for liquidated damages.
   f. Deductions for re-inspection payments.
   g. Other adjustments.

3. Total Contract Sum, as adjusted.

4. Previous payments.

5. Sum remaining due.

C. Architect will prepare a final Change Order, reflecting approved adjustments to the Contract Sum which were not previously made by Change Orders.

1.07 FINAL APPLICATION FOR PAYMENT:

Submit the final Application for Payment in accordance with procedures and requirements stated in the Conditions of the Contract.

1.08 INSTRUCTIONS:

Instruct the Owner's maintenance personnel in proper operation and maintenance of systems, equipment and similar items which were provided as part of the work.

PART 2 – PRODUCTS – Not applicable to this Section.

PART 3 – EXECUTION– Not applicable to this Section.

END OF SECTION

# SECTION 01710

# CLEANING

## PART 1 - GENERAL

### 1.01 DESCRIPTION:

Division 1 applies to this Section. Provide cleaning, complete.

A. Maintain premises and public properties from accumulations of waste, debris and rubbish caused by operations.

B. At completion of work, remove waste materials rubbish, tools, equipment, machinery and surplus materials, and clean all exposed surfaces; leave project clean and ready for occupancy.

## PART 2 – PRODUCTS

### 2.01 MATERIALS:

A. Use cleaning materials recommended by manufacturer of surface to be cleaned.

B. Use each type of cleaning material on surfaces recommended by manufacturer.

## PART 3 – EXECUTION

### 3.01 DURING CONSTRUCTION:

A. Execute cleaning to ensure that the grounds and public properties are maintained free from accumulations of waste materials and rubbish.

B. Wet down dry materials and rubbish to prevent blowing dust.

C. Daily during progress of work, clean construction site and utilized public properties, and dispose of waste materials, debris and rubbish.

D. Provide on-site containers for collection of waste materials, debris and rubbish. Provide for frequent emptying or pickup.

E. Remove waste materials, debris and rubbish from site and legally dispose of at public or private dumping areas off Owner’s property.

F. Schedule cleaning operations so that residue and other contaminants resulting from cleaning process will not fall on resilient safety surfacing.

3.02 FINAL CLEANING:

A. Employ experienced workers, or professional cleaners, for final cleaning. Clean all surfaces which have been installed.

B. Exterior: Clean surfaces of the construction and site including equipment, surfacing, walkways, paving, and similar surfaces, and adjoining private and public property to the extent soiled by the Contractor's operations.

C. Contaminated Earth: Final clean up operation includes the removal and disposal of earth that is contaminated or suitable for support of plant life in planting areas, and filling of resulting excavations with suitable soil as directed and approved. Contaminated areas include those used for disposal of waste concrete, mortar, plaster, masonry and similar materials, areas in which washing out of concrete mixers or washing of tools and like cleaning operations have been performed, and all areas that have been oiled, paved or chemically treated. Do not dispose of waste oil, solvents, paints, solutions or like penetrating material by depositing or burying on Owner's property.

END OF SECTION

# SECTION 01720

# PROJECT RECORD DOCUMENTS

## PART 1 - GENERAL

Provide project record documents, complete.

### 1.01 MAINTENANCE OF DOCUMENTS:

A. Maintain at job site at all times during construction and until final acceptance, one copy of:

1. Contract drawings and specifications.
2. Addenda, bulletins, change orders and construction change directives.
3. Reviewed and approved shop and erection drawings.
4. Samples, manufacturer's product data and installation instructions.
5. Field test reports.
6. Project correspondence and transmittals.
7. Other documents relevant to work.

B. These documents shall be latest current issue and shall bear, as applicable, all approvals and revisions.

C. Securely store documents apart from documents used for construction. File documents in accordance with project filing format of CSI Masterformat. Maintain documents in clean, dry legible condition.

D. Do not use record documents for construction purposes. Make documents available at all times for inspection.

### 1.02 RECORD DRAWINGS:

A. Record drawings are required for all construction. Record drawings shall conform to the following requirements.

1. Maintain, and keep up to date, a complete record set of blue line prints which shall be corrected daily to show every change from the original contract drawings. In addition, the prints shall be marked to show the precise horizontal and vertical location of concealed work and equipment, including concealed or embedded piping and conduit. Prints for this purpose shall be obtained from the Owner at no cost to the Contractor for original issue. This shall not be construed as authorization for the Contractor to make changes in the layout or work without definite instructions in each case.

2. At completion of the work, obtain from the Architect a set of transparent reproducible drawings. Enter the changes on one sheet and submit a print of that sheet to the Architect for review of the quality of the draftsmanship. The required quality is that

the record entries shall be equal to that of the original drawings. Following acceptance of the quality of work, record all changes neatly in ink on the reproducibles. Submit one set of corrected drawings to Architect for review, and following review, make corrections as required, stamp each sheet “Record Drawing”, stamp Contractor’s name, print and sign name of preparer, and date the drawings. Each sheet shall be signed by an authorized representative of the Contractor. Upon completion, deliver the set of drawings to the Architect for transmittal to the Owner.

PART 2 – PRODUCTS – Not applicable to this Section.

PART 3 – EXECUTION– Not applicable to this Section.

END OF SECTION

# SECTION 01730

# OPERATIONS AND MAINTENANCE MANUALS AND PARTS

## PART 1 - GENERAL

### 1.01 DESCRIPTION:

This Section covers the general requirements for operations and maintenance manuals, spare parts and extra material.

### 1.02 SUBMITTALS:

A. Conform all submittals under this Section to applicable requirements of Section 01300.

B. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of work. Architect will review draft and return one copy with comments.

C. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit documents within ten days after acceptance.

D. Submit 1 copy of completed volumes 15 days prior to final inspection. This copy will be reviewed and returned, with Architect comments. Revise content of all document sets as required prior to final submission.

E. Submit two sets of revised final volumes in final form within 10 days after final inspection.

### 1.03 QUALITY ASSURANCE:

Prepare instructions and data by personnel experienced in maintenance and operation of described products.

### 1.04 FORMAT:

A. Prepare data in the form of instructional manuals.

B. Binders: Commercial quality, 8-1/2 x 11 inch, three D side ring binders with durable plastic covers; 2 inch maximum ring size. When multiple binders are used, correlate data into related consistent groupings.

C. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of project; identify subject matter of contents.

D. Provide tabbed dividers for each separate product and system, with typed description of product and major component parts of equipment.

E. Text: Manufacturer's printed data, or typewritten data on 20 pound paper.

F. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

G. Arrange content by systems under section numbers and sequence of table of contents of this project manual.

1.05 CONTENTS, EACH VOLUME:

A. Table of Contents: Provide title of project; names, addresses and telephone numbers of Architect, subcontractors and Contractor with name of responsible parties; schedule of products and systems, indexed to content of the volume.

B. For each Product of System: List names, addresses and telephone numbers of subcontractors and suppliers, including local source of supplies and replacement parts.

C. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.

D. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use project record documents as maintenance drawings.

E. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

F. Warranties: As specified in Section 01740.

1.06 MANUAL FOR MATERIALS AND FINISHES:

A. Building Products, Applied Materials and Finishes: Include product data, with catalog number, size, composition and color and texture designations. Provide information for re-ordering custom manufactured products.

B. Instructions for Care and Maintenance: Include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.

C. Moisture Protection and Weather Exposed Products: Include product data listing applicable reference standards, chemical composition and details of installation. Provide recommendations for inspections, maintenance and repair.

D. Additional Requirements: As specified in individual product specifications sections.

E. Provide a listing in table of contents for design data, with tabbed fly sheet and space for insertion of data.

1.07 MANUAL FOR EQUIPMENT AND SYSTEMS:

A. Each Item of Equipment and Each System: Include description of unit or system and component parts. Identify function, normal operating characteristics and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and model number of replaceable parts.

B. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair and reassembly instructions; and checking instructions.

C. Include manufacturer's printed operation and maintenance instructions.

D. Provide original manufacturer's parts list, illustrations, assembly drawings and diagrams required for maintenance.

E. Additional Requirements: As specified in individual product specification sections.

1.08 INSTRUCTION OF OWNER PERSONNEL:

A. Before final inspection, instruct Owner's designated personnel in operation, adjustment and maintenance of products, equipment and systems, at agreed upon times.

B. Use operation and maintenance manuals as basis for instruction. Review contents of manual with personnel in detail to explain all aspects of operation and maintenance.

C. Prepare and insert additional data in operation and maintenance manual when need for such data becomes apparent during instruction.

PART 2 – PRODUCTS – Not applicable to this Section.

PART 3 – EXECUTION

3.01 MAINTENANCE MATERIALS AND SPARE PARTS:

Furnish and deliver special tools, instruments, accessories, spare parts and maintenance materials required by the contract documents, and manufacturer to the District. Unless otherwise specified or directed, deliver the items to the Owner with the Contractor's written transmittal accompanying each shipment, in the manufacturer's original containers labeled to describe the contents and the equipment for which it is furnished. Deliver a copy of each transmittal to Architect for record purposes.

END OF SECTION

# SECTION 01740

# WARRANTIES AND GUARANTEES

## PART 1 - GENERAL

### 1.01 DESCRIPTION:

This section specifies the general requirements for written warranties and guarantees required by the Contract Documents. Final payment under the contract will not be made until the warranties and guarantees have been submitted in acceptable form.

### 1.02 WARRANTIES AND GUARANTEES:

A. General: Provide all warranties and manufacturer's guarantees with Owner named as beneficiary. For equipment and products, or components thereof, bearing a manufacturer's warranty or guarantee that extends for a period of time beyond the Contractor's warranty and guarantee, so state in the warranty or guarantee.

B. Specific Warranty and Guarantee Requirements: Refer to Divisions 2 through 10.

C. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties shall not relieve the Contractor of warranty on the work that incorporates the products, nor shall they relieve suppliers, manufacturers and installers required to countersign special warranties with Contractor.

D. Related Damages and Losses: When correcting warranted work that has been found defective, remove and replace other work that has been damaged as a result of such defect or that must be removed and replaced to provide access for correction of warranted work.

E. Reinstatement of Warranty: When work covered by a warranty has been found defective and has been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to be original warranty with an equitable adjustment for depreciation.

F. Replacement Cost: Upon determination that work covered by a warranty has been found to be defective, replace or reconstruct the work to a condition acceptable to Owner, complying with applicable requirements of the contract documents. Contractor shall be responsible for all costs for replacing or reconstructing defective work regardless of whether Owner has benefited for use of work through a portion of its anticipated useful service life.

G. Owner's Recourse: Written warranties made to the owner are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights or remedies.

H. Rejection of Warranties: The Owner reserves the right to reject warranties and to disallow the use of products with warranties in conflict with contract document requirements.

I. Warranty as Condition of Acceptance: The Owner reserves the right to refuse to accept work for the project where a special warranty, certification or similar commitment is required until evidence is presented that those required to countersign such commitments are willing to do so.

1.03 PREPARATION OF WARRANTY AND GUARANTEE SUBMITTALS:

A. Number of Copies: 2, unless otherwise specified, or directed.

B. Special Project Warranty and Manufacturer's Guarantee Forms: Forms for Special Project Warranties and for Manufacturer's Guarantees are included at the end of this Section. Prepare a written document utilizing the appropriate form, ready for execution by the Contractor, or the Contractor and subcontractor, supplier or manufacturer. Submit a draft to the Owner through the Architect for approval prior to final execution.

1. Refer to Divisions 1 through 16 for specific content requirements, and particular requirements for submittal of special project warranties.

2. Prepare standard product warranties and product guarantees, excepting manufacturer's standard printed warranties and guarantees, on Contractor's sub-contractor's material supplier's or manufacturer's own letterhead, addressed to Owner.

3. Warranty and guarantee letters shall be signed by all responsible parties and by Contractor in every case, with modifications only as approved by Owner to suit the conditions pertaining to the warranty or guarantee.

C. Manufacturer's Guarantee Form: Manufacturer's guarantee forms may be used in lieu of special project forms included at the end of the Section. Manufacturer's guarantee forms shall contain appropriate terms and identification, ready for execution by the required parties.

1. If proposed terms and conditions restrict guarantee coverage or require actions by Owner beyond those specified, submit draft of guarantee to Owner through Architect for review and acceptance before performance of the work.

2. In other cases, submit draft of guarantee to Owner through Architect for approval prior to final execution of guarantee.

D. Signatures: By persons authorized to sign warranties and guarantees, on behalf of entity providing the warranty or guarantee. All signatures shall be notarized.

E. Co-Signature: All warranties, except manufacturer's printed guarantees, shall be co-signed by the Contractor.

1.04 FORM OF WARRANTY SUBMITTALS:

A. At final completion, compile 2 copies of each required warrantee and guarantee properly executed by the Contractor, or by the Contractor and sub-contractor, supplier or manufacturer. Collect and assemble all written warranties and guarantees into binders and deliver binders to Architect for final review and acceptance.

B. Prior to submission, verify that documents are in proper form, contain all required information and are properly signed.

C. Organize the warranty documents into an orderly sequence based on the Table of Contents of the Project Manual.

D. Include Table of Contents for the finder, neatly typed, following order and Section names and numbers of the Project Manual.

E. Bind warranties and guarantees in heavy-duty, commercial quality, 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, with clear front and spine to receive inserts, and sized to receive 8-1/2” by 11” paper.

F. Provide heavy paper dividers with celluloid or plastic covered tabs for each separate warranty. Mark tabs to identify products or installation, and Section number and title.

G. Include on a separate typed sheet, if information is not contained in warranty or guarantee form, a description of the product or installation, and the name, address, telephone number and responsible person for applicable installer, supplier and manufacturer.

H. Identify each binder on front and spine with typed or printed inserts with title “WARRANTIES AND GUARANTEES”, the project title and the name of the Contractor. If more than one volume of warranties and guarantees is produced, identify volume number on binder.

I. When operating and maintenance data manuals are required for warranted construction, include additional copies of each required warranty in each required manual. Coordinate with requirements specified in Section 01730.

1.05 TIME OF WARRANTY AND GUARANTEE SUBMITTALS:

A. Preliminary Submittal: Unless otherwise specified, obtain preliminary copies of warranties and guarantees within 10 days of completion of applicable item or work. Prepare and submit preliminary copies for review as specified herein.

B. Final Submittal: Submit fully executed copies of warranties and guarantees within 10 days of date of substantial completion by not later than 3 days prior to date of application for final payment.

C. Date of Warranties and Guarantees: Unless otherwise directed, the commencement date for warranty and guarantee periods shall be the date of substantial completion.

1. Warranties for work accepted in advance of date of Notice of Completion: Commencement date will be the date of acceptance of such work.

2. Warranties for work not accepted as of the date of substantial completion: Commencement date will be the date of acceptance of such work.

PART 2 – PRODUCTS – Not applicable to this Section.

PART 3 – EXECUTION – Not applicable to this Section.

END OF SECTION

# WARRANTY/GUARANTEE

FOR _____ WORK

We, the undersigned, do hereby warranty and guarantee that the parts of the Work described above which we have furnished and/or installed for:

PLAYGROUND EQUIPMENT and RELATED MATERIALS
VINE ELEMENTARY SCHOOL
WEST COVINA UNIFIED SCHOOL DISTRICT

1901 E. Vine Avenue
West Covina, CA 91791

is in accordance with the Contract Documents and that all said Work as installed will fulfill or exceed all of the Warranty and Guarantee requirements. We agree to repair or replace Work installed by us, together with any adjacent Work which is displaced or damaged by so doing, that proves to be defective in workmanship, material or operation with a period of _____( ) year(s) from the date of final acceptance by Owner or from the Date of Certificate of Substantial Completion, whichever is earlier, ordinary were and tear and unusual neglect or abuse excepted.

In the event of our failure to comply with the above–mentioned conditions within a reasonable time period determined by the Owner, after notification in writing, we, the undersigned, all collectively and separately, hereby authorize the Owner to have said defective Work repaired and/or replaced and made good, and agree to pay to the Owner upon demand all moneys that the Owner may expend in making good said defective Work, including all collection cost and reasonable attorney fees.

_____
(Subcontractor, Subsubcontractor, Manufacturer or Supplier)

By_____

Title_____

State_License_No._____Date_____

_____
(Contractor)

By_____

State_License_No._____Date_____

Local_Representative. For Maintenance, repair or replacement service, contact:

Name:_____

Address_____

Phone Number_____

# SECTION 02050

# DEMOLITION

## PART 1 - GENERAL

### 1.01 SUMMARY:

A. Work In This Section: Division 1 applies to this Section. Perform demolition and removals as indicated, specified and required:

1. Demolish and remove sand, earth, and wood chips as required for new scope of work.
2. Demolish and remove existing site improvements including walks, curbs, paving, and fences to extent indicated.
3. Make all necessary arrangements and remove abandoned on-site utilities including capping and sealing underground services at points of connection indicated or directed.
4. Clean up and disposal of demolition and removal debris.
5. Refer to contract drawings for reminder of demolition.

B. Related Work Specified Elsewhere:

1. Temporary facilities.
2. Clean-up.
3. Earthwork.

### 1.02 SUBMITTALS:

Prepare and submit a detailed demolition plan of the work procedures proposed for use in the identification, demolition, handling, removal, transportation and salvage or disposal of removed materials. For each item to be salvaged and delivered to the District for future use, indicate proposed sizes, weights, handling, packaging and labeling methods.

### 1.03 RECORD DRAWINGS:

Provide record drawings as specified in Division

1. Identify and accurately locate capped utilities and other subsurface structural, electrical or mechanical conditions.

### 1.04 QUALITY ASSURANCE:

A. Requirements of Regulatory Agencies: Secure and pay for demolition and removal permits required by public agencies having jurisdiction. Give notices and comply with requirements of SCAQMD rule 1403.

B. Demolition Firm Qualifications: Engage an experienced firm that has successfully completed demolition work similar to that indicated for this project.

C. Public Utilities: Give all required notices, pay fees and charges, and arrange for disconnection and removal of abandoned public utilities and meters.

D. Photo Documentation: Refer to Division 1. Before starting work of this section, provide a CD of photos documenting the existing conditions to be affected by the demolition work. Provide progress photos as the work of demolition progresses, at intervals as approved, illustrating substrates, connections, concealed conditions, and other conditions which will benefit subsequent work.

1.05 DEFINITIONS:

The following terms have the meanings indicated when used in this Section and on related drawings.

A. Remove: Remove and legally dispose of items except those indicated to be reinstalled, salvaged or to remain the District's property.

B. Remove and Salvage: Items indicated to be removed and salvaged remain the District's property. Remove, clean and pack or crate items to protect against damage. Identify contents of containers and deliver to District's designated storage area.

C. Remove and Reinstall: Remove items indicated; clean, service and otherwise prepare them for reuse; store and protect against damage. Reinstall items in locations indicated.

D. Existing to Remain: Protect construction indicated to remain against damage and soiling during demolition. When permitted by the Architect, items may be removed to a suitable, protected storage location during demolition and then cleaned and reinstalled in their original locations.

1.06 MATERIALS OWNERSHIP:

District has first right of ownership. Except for items or materials indicated to be reused, salvaged or otherwise indicated to remain the District's property, demolished materials shall become the Contractor's property and shall be removed from the site with further disposition at the Contractor's option.

1.07 ENVIRONMENTAL CONDITIONS:

A. Noise Control: Perform all work in a manner and at times which will keep production of objectionable noise to a minimum amount of noise. Instruct all workers in noise control procedures. Noise that adversely affects adjacent properties will not be tolerated. Such conditions shall be the District's determination.

B. Dust Control: Take appropriate action to check the spread of dust, and to avoid the creation of a nuisance in the surrounding area. Do not use water if it results in hazardous or objectionable conditions, such as flooding or pollution. Comply with all dust regulations imposed by local air pollution agencies. Remove dust and dirt from work area at least daily or more frequently as needed or directed.

1.08 PROJECT SITE AND BUILDING CONDITIONS:

A. The intent of the drawings is to show existing site conditions with information developed from the original construction documents, field surveys and District's records, and to generally show the amount and types of demolition and removals required to prepare existing areas for new work. Contractor shall make a detailed survey of existing conditions pertaining to the work before commencing demolition. Report discrepancies between drawings and actual conditions to the Architect for instructions, and do not perform any demolition or removals where such discrepancies occur prior to receipt of the Architect's instructions.

B. Extent: Perform removals to extent required plus such additional removals as are necessary for completion even though not indicated or specified. More or less of the existing construction may be removed is such variation will expedite the work and reduce cost to the District, subject to prior approval in each case.

C. At completion of removal and demolition work, the Contractor shall compare existing conditions with drawings and with new construction to be attached to, aligned with or otherwise influenced by said existing conditions. In all cases where modifications may be required because of differences between existing conditions and assumed conditions shown or not shown on the drawings, the Contractor shall provide detailed information, dimensions, limitations and other documentation to enable the Architect to design the necessary modifications.

1.09 PROTECTION:

A. Existing Work: Protect existing work which is to remain in place, that is to be reused, or which is to remain the property of the District by temporary covers, shoring, bracing and supports. Items which are to remain and which are to be salvaged and which are damaged during performance of the work shall be repaired to original condition or replaced with new.

B. Weather Protection: Protect all materials and equipment from the weather at all times until installations of all materials is complete.

C. Trees: Protect trees within the project site, which might be damaged during demolition and which are indicated to be left in place, by a 6-foot high fence. Erect fence a minimum of 5-feet from the trunks at the outer perimeter of branches of individual trees or follow the outer perimeter of branches of clumps of trees. Restore trees scarred or damaged by Contractor equipment or operations to the original condition or replace as determined by the Architect.

D. Fire Protection: Maintain fully charged fire extinguishers.

E. Precaution Against Movement: Provide shoring and bracing or other supports to prevent movement, settlement or collapse of equipment.

F. Security: Take appropriate measures, as approved, to protect the work from theft and vandalism.

1.10 EXPLOSIVES:

Use of explosives will not be permitted.

1.11 BURNING:

Burning will not be permitted.

PART 2 – PRODUCTS

2.01 FILL:

As specified for fill soils in Division 2 and civil drawings

PART 3 – EXECUTION

3.01 EXAMINATION:

Verify that utilities have been disconnected and capped at construction area. Utilize within the construction area shall be relocated at no cost to the District and be fully operational.

3.02 PREPARATION:

Conduct demolition operations and remove debris to ensure minimum interference with roads, streets, walks and other adjacent occupied and used facilities. Do not close or obstruct streets, walks or other adjacent occupied or used facilities without permission from the District and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.

3.03 UTILITIES:

A. Drain, purge, or otherwise remove, collect and dispose of chemicals, gases, explosives, acids, flammables, or other dangerous materials before proceeding with demolition operations.

B. Prior to demolition or in the event unrecorded utilities are encountered, notify the District or serving utility companies, as applicable, for work necessary and scheduled to be performed. Coordinate responsibility for limits of utility removals and be responsible for the removal of all utility installations both above and below grade except for those installations the utility companies agree to move. Use care to protect utility lines to remain in service, repair all damage which does occur, and remove those not to remain in service.

C. Interruption of Service: In the event existing utility service requires interruption to accomplish the demolition work, obtain written approval by the District for interruption of service. Request approval not less than 48 hours prior to the proposed scheduled interruption. State the exact services involved and the expected duration. Except in an emergency affecting life and limb, do not cause any interruption of utility service without written authorization from the District.

D. Provide for protection of utility lines to remain in service. Repair damage done to these facilities as a result of the work of this Section, to the satisfaction of the District. Locations of existing utilities to remain shall be identified on record drawings, and their physical location shall be indicated by tags or stakes as applicable.

E. Provide approved paths of travel over utility trenches, etc. Use trench plates. School circulation shall be maintained at all times. Provide plates, bridges, protective barriers and guardrails as required to accomplish this.

3.04 WORKMANSHIP:

A. Protection of work to remain: Establish cut off points between work to be removed and work to remain.

B. Partial demolition and removal: When portions of pavement, slabs, sidewalks, curbs, curb and gutters and cross-gutters are to be removed, cut with a concrete saw to the full depth along all joint lines, unless noted otherwise on drawings, before breaking off the portion to be removed.

3.05 DEMOLITION OF SITE IMPROVEMENTS:

A. Site Improvements: Remove walks, curbs, and pavement, including herbicide treated base courses and fences, and miscellaneous improvements.

B. Paving and Slabs: Remove, sawcut concrete and asphaltic concrete paving and slabs including aggregate base as indicated.

3.06 SALVAGE AND DISPOSAL:

A. General: Existing items the District intends to retain are indicated on drawings or will be designated by the District prior to start of work. Contractor shall carefully remove, salvage, box or bundle as approved, and deliver such items to storage as directed.

B. Disposal: All removed material other than items to be salvaged or reused shall become Contactor’s property and be removed from the District’s property. Clean up and dispose of debris promptly and continuously as the work progresses, and do not allow to accumulate. Sprinkle water on the surface to prevent dust nuisance. Secure and pay for required hauling permits and pay dumping fees and charges.

END OF SECTION

# SECTION 02210

# EARTHWORK

## PART 1 - GENERAL

### 1.01 DESCRIPTION:

Division 1 applies to this Section. Provide and perform earthwork as required for new slabs, paving, foundations and utility trenches, complete.

A. Work In This Section: Principle items include:

1. Site clearing.
2. Excavation, filling, backfilling and compaction.
3. Imported fill material as required.
4. Subgrade preparation for aggregate concrete and AC paving.
5. Clean up and disposal.

B. Related Work Not In This Section:

1. Excavating and backfilling for underground utility systems.
2. Landscaping including planting fill and irrigation systems.

### 1.02 QUALITY ASSURANCE:

A. Source Quality Control: Obtain approval by the Inspector of imported fill material before material is brought to site, and same approval of excavated material for use in fills or backfills prior to placing. Imported material shall be tested for toxic substances by an independent testing laboratory approved by the District.

B. Foundation Soils: Excavate for foundations to sizes indicated, clean, and leave in condition ready for concrete placement. Prior to placement of forms, reinforcing or concrete, obtain approval of Inspector for proper conditions and suitable bearing materials

### 1.03 SUBMITTALS:

Provide certification, signed by an authorized representative of an approved testing laboratory, that proposed imported fill material and other earthwork materials to be brought to the site, are free from toxic substances, and are in conformance with applicable state and local regulations.

### 1.04 JOB CONDITIONS:

A. Protection: Provide and maintain protection to retain earth banks and to protect adjoining grades and structures from caving, sliding, erosion or other damage. Provide suitable protection against all bodily injury. Construct all bulkheads and shoring to

requirements of State and Local codes and regulations. Shore vertical banks or slope banks back as required for stability and safety. Erect temporary barricades located at least 5-feet away from the top of slopes and provide temporary berms as required to prevent slope erosion from water.

PART 2 – PRODUCTS

2.01 MATERIALS:

Provide approved imported material as required if the quantity of approved site and excavated material is insufficient to complete the work.

A. Earthwork Materials: Approved excavated or imported granular soil such as silty sand of the non-expansive type (that undergoes no undesirable volumetric change with changes in the moisture content) and containing not more than 20% by weight of material passing the No. 200 sieve, free from trash, roots, organic material, clay lumps and rocks over 6” size.

B. Gravel Fill Material: From approved source, 90% to 100% passing a 3/4" sieve, 0% to 10% passing a No. 4 sieve and 0% to 3% passing a No. 100 sieve.

PART 3 – EXECUTION

3.01 SITE CLEARING AND PREPARATION:

Before starting grading operations, remove trash and strip all vegetation on the site, including roots.

3.02 EXCAVATION:

Perform excavation to the dimensions and elevations indicated on Drawings, with additional space allowed as required for the installation and stripping of forms, and inspection of the various types of work, except where approval may be given to deposit certain miscellaneous concrete directly against earth banks. Avoid loosening of soils in bottoms or sides of excavations.

A. Adverse Subsurface Conditions: Notify Architect should unsuitable bearing soil or other adverse subsurface conditions be found which are not indicated by the Drawings or Specifications.

3.03 SUBGRADE PREPARATION FOR CONCRETE:

Prepare subgrade for concrete items by excavating, filling, and grading as required, and bring to optimum moisture content. Finish the subgrade within 3/8 inch tolerance when tested along a 10-foot straightedge in any direction at any location. Compact to 90 percent of maximum dry density and maintain moisture content until concrete is placed. Refer to drawings for base materials where occurs.

## 3.04 COMPACTION:

Moisten or aerate all material to specified moisture content, then uniformly compact the fills and backfills in maximum 8" thick loose layers to 90% of the maximum dry density determined by ASTM D1557. Flooding or jetting is not allowed.

## 3.05 DISPOSAL:

Clean up and remove all trash, debris, waste and surplus and rejected earthwork materials from the site to a legal disposal area. Conform to pertaining laws, codes and regulations, obtain and pay for required hauling and dumping permits, and pay all dumping charges. Perform trucking and material handling in a careful manner to prevent spillage and dusting or damage to surfaces and structures. Remove planks used to protect surfaces subject to public traffic at finish of each day's operations. Maintain public streets and sidewalks in broom clean condition.

## 3.06 FIELD QUALITY CONTROL:

A. Testing: Testing Laboratory will take test samples and perform materials, moisture content, compaction densities, and other tests to the extent and by the methods directed by Inspector.

END OF SECTION

# SECTION 02510

# ASPHALT CONCRETE PAVING

## PART 1 - GENERAL

### 1.01 DESCRIPTION:

Division 1 applies to this Section. Provide asphalt concrete paving as indicated, specified and required.

A. Work Specified in this Section:

1. Patching and repair of existing pavement and new paving.
2. Fog seal coat with screenings over existing paved surfaces.

B. Related Work Not in this Section:

1. Earth subgrade preparation for asphaltic paving.
2. Pavement striping.

### 1.02 PROTECTION OF EXISTING INSTALLATIONS:

A. Protect existing installations, and if any such installations are damaged or broken by operations of this Section, they shall be repaired or replaced to the satisfaction of the Architect.

### 1.03 TESTING AND CONTROL OF MATERIALS:

All material shall meet the requirements specified herein. Laboratory tests of all materials will be required. Costs of such tests shall be paid by the Contractor.

### 1.04 QUALITY ASSURANCE:

A. Reference Specifications: Conform to the “Standard Specifications for Public Works Construction”, 2015 Edition, published by Building News Inc., Los Angeles, California, hereafter referred to as Green Book. The term “Engineer” in the reference specifications shall be understood to mean “Architect”. Requirements for measurement or payment in reference specifications are hereby deleted; include Work of this Section under the Contract Sum for entire work.

B. Proportioning of Plant Mix: Determine the exact proportions of bituminous binder and mineral aggregate required to produce a mixture equal to mix quality specified.

## PART 2 – PRODUCTS

### 2.01 MATERIALS:

A. Tack Coat: Asphalt paint conforming to Section 203-8 of the GreenBook.

B. Prime Coat: Grade SC-250 liquid asphalt or Grade SC-70, as approved.

C. Paving Asphalt: Conform to Section 203-1 of the Green Book, Grades AR 4000 or AR 8000 as appropriate for conditions and temperature of placement.

D. Asphaltic Concrete Surface Course: Conform to Section 203-6 of the Green Book, asphalt type AR-4000 or AR-8000, aggregate graded as specified in Table 203-6.4.4, Type D-1 Open Fine, 1/2 inch mix.

E. Fog Seal Coat: Conform to Section 203-9 Green Book.

PART 3 – EXECUTION

3.01 OVERLAYING OR PATCHING EXISTING PAVEMENT:

Where new paving joins existing, and where trenches are cut in existing paving, patch with asphalt concrete. Prior to patching, sawcut edges at least 6” back from all ragged edges and compact subgrade to a firm, unyielding subgrade.

A. Asphalt Concrete: Conform to Green Book Subsection 302-5 including the requirements for smoothness and density. Smoothness shall be appropriate for school playgrounds and walking surfaces. Construct paving to minimum compacted thickness indicated.

1. Where thickness of more than 2-inches is shown, install asphalt surface materials in two courses, leveling course and surface course, total compacted depth as scheduled.

B. Field verify extent and location of paving scheduled for overlaying, replacement, repair and resurfacing. The work includes filling trenches in existing paving, where indicated or required because of utility construction.

C. Coordinate junction of new and existing pavement. For patching, saw cut existing pavement to provide a uniform straight line transition. Meet existing surface levels and maintain drainage slopes. Feathering of transitions is not acceptable.

D. Apply emulsion or hot liquid asphalt tack coat to the area to be overlayed or the sawcut edges prior to patching. Apply and compact asphalt concrete pavement making neat edges where new and existing join.

3.04 CRACKS IN EXISTING PAVEMENT:

Clean cracks prior to and overlay area or repair area, remove weeds and dirt. Place herbicide in cleaned cracks. Fill cracks less than 1/4” with emulsion slurry and cracks 1/4” and larger with hot liquid asphalt.

3.05 FOG SEAL COAT:

Apply to new and existing asphalt concrete paving within the contract area. Seal coat shall conform to State Standard Spec Section 37. Spray apply at rate of 0.05 to 0.10 gallons per square yard, the exact quantity as required to fully seal paving surface, as approved. Spread

screenings immediately after application of emulsion at rate of 12 to 20 pounds per square yard. Cover and protect adjoining surfaces from staining.

3.06 PROTECTION AND CLEANING:

A. Protect newly placed material from traffic by barricades or other suitable methods acceptable to the Architect. Protect asphalt paving from construction and vehicular damage until project acceptance.

B. Sweep asphalt paving and wash free of stains, discolorations, dirt and other foreign material immediately before project acceptance. If stains remain after cleaning, apply a coat of sealer.

3.07 CLEAN-UP:

Clean-up paved areas prior to acceptance of the Work. All dirt, spoil and debris of any nature shall be removed, and the entire site shall present a clean, workmanlike appearance. Damage to paint work from paving or seal-coating operations shall be corrected.

END OF SECTION

# SECTION 02520

# SITE CONCRETE WORK

## PART 1 - GENERAL

1.01 DESCRIPTION: Division 1 applies to this Section. Provide on-site and off-site exterior concrete work, including curbs, walks, landings, and pavement, as indicated, specified, and required.

1.02 SUBMITTALS:

A. Layout Drawings: Provide a layout drawing showing locations of each type of pavement and construction, and dimensioned locations of all expansion and control joints.

B. Product Data: Submit for expansion and control joint material.

C. Site Samples: Prepare samples at the site, cast in the directed locations and orientations. Samples are required to show match of new with existing. Approved samples may be part of permanent construction if meeting all other requirements shown and specified and are so approved.

1.03 QUALITY ASSURANCE:

A. Conform to requirements specified on the drawings.

B. Fly ash may be used in the amount not to exceed 25 percent of the total cementitious materials in the mix.

C. Portland cement concrete paving shall have a medium salted (medium broom) finish on all surfaces sloped less than 6% and slip resistant (heavy broom finish) on all surfaces sloped greater than 6 percent.

1.04 ENVIRONMENTAL REQUIREMENTS

A. Placing During Cold Weather: Do not place concrete when the air temperature is below 35 degrees F. Mixing water shall be heated as necessary to result in the temperature of the in-place concrete being between 50 and 85 degrees F. Covering and other means shall be provided for maintaining the concrete at a temperature of at least 50 degrees F for not less than 72 hours after placing.

B. Placing During Warm Weather: The temperature of the concrete as placed shall not exceed 85 degrees F except where an approved retarder is used. The mixing water and/or aggregates shall be cooled, if necessary, to maintain a satisfactory placing temperature. The placing temperature shall not exceed 95 degrees F at any time.

## PART 2 - PRODUCTS

2.01 MATERIALS:

A. Concrete:

1. Portland cement: ASTM C150, Type II, low alkali.

2. Aggregates: ASTM C33, from approved source to insure uniform quality and grading. Deliver so that moisture content variations will not decrease production of reasonably uniform concrete. Do not use aggregates that are reactive with alkalis.

3. Water: Clean, fresh and potable.

B. Strength: Minimum ultimate compressive strength of 3,000 psi. Refer to Division 1 for testing requirements.

C. Reinforcing:

1. Bars: ASTM A615, grade 60.

2. Wire: ASTM A82.

D. Expansion and Control Joints:

1. Expansion joints for slabs: Conform to GreenBook. Subsection 201-3, ASTM D 1751, premolded expansion joint filler, conforming to ASTM D 1751, 1/2 inch thick, unless otherwise indicated.

2. Expansion joints for curbs: Asphalt impregnated fiber filler material, 1/2 inch thick.

3. Control Joints: "Zip Strip" as distributed by S.C.A. Construction Supply, Santa Fe Springs, Calif., or equal.

E. Curing Compound: Conform to GreenBook. Subsection 201-4, white pigmented membrane-forming curing compound conforming to ASTM C 309, Type 2.

F. Polyethylene Film: Clear, minimum 6 mil thick. Provide compatible tape for sealing joints.

PART 3 – EXECUTION

3.01 ON-SITE CONCRETE WORK:

Construct all site concrete of 3,000 psi concrete unless otherwise indicated or specified. Provide reinforcing bars or mesh where indicated. Form accurately to profiles shown, using wood, metal or plastic forms as approved. Place and handle concrete in manner that will avoid segregation of ingredients. Refer to drawings for additional requirements.

3.02 SUBGRADE PREPARATION: Refer to Section 02210.

A. General: Conform to GreenBook. Subsections 301-1.2 through 301 - 1.4, inclusive, performed under the supervision of the Soils Engineer.

B. Maintenance of subgrade: The subgrade shall be maintained in a smooth, compacted condition, in conformity with the required section and established grade until the concrete is placed.

3.03 CONCRETE SLABS, PADS, WALKS, CURBS AND OTHER EXTERIOR CONCRETE FLATWORK:

A. Form Setting: Conform to Green Book. Subsection 303-5.2.1. Concrete surfaces, where left exposed, shall be formed on all sides with plywood with taped joints to give a smooth, uniform straight finish.

B. Reinforcing steel shall be securely tied in place. Do not use bars with kinks or bends not shown on drawings. Reinforcing steel shall be clean, free from rust, oil, scale, or any foreign material. Place all reinforcing as detailed and comply with typical detail for bends, splices, clearance, etc., and with requirements of the California Building Code.

C. Placing Concrete: Conform to GreenBook Subsection 303-5.3 and Section 03300.

D. Expansion Joints:

1. Concrete Curbs: Provide 1/2" thick expansion joints at beginning and at end of curves, intersections, and 20-foot intervals between, set plumb, square, and to same profile as the curbs. Edge curb tops to 1/2" radius and vertical joints to 1/4" radius.

2. Concrete Walks: Provide 1/2" expansion joints as specified for curbs and where walks abut rigid structures, aligned with joints in curbs where adjoining. Provide expansion joints at 20 foot intervals in concrete walks. Unless otherwise indicated.

E. Control Joints: Control joints shall be a formed joint. Tops of joints shall be installed flush with the concrete surface. Depth of joint shall be a minimum of 1/4 the thickness of slab. Use control joints on all curbs, curbs and gutters, and cross gutters at maximum intervals of 20 feet on center. Sawed joints may be used in lieu of the above, providing they are at least one inch deep.

3.04 SLAB FINISHES:

A. Description of Finishes: Produce finish slab surfaces level or sloped as shown with maximum deviation of 1/8" from a 10-foot straightedge. Keep surface moist with a fine fog spray of water as necessary. Dusting with dry cement or sand during finishing operations is not permitted. Finish all slab edges and joints with an edging tool. Match the approved sample panels. Apply the following finishes as indicated, specified, directed, and applicable.

1. Monolithic Trowel Finish: After surface water disappears and floated surfaces are adequately hardened, steel trowel and retrowel concrete to a smooth surface. After concrete has set sufficiently to ring the steel trowel, retrowel twice to a smooth uniform finish free of trowel marks and blemishes. Avoid excessive retroweling that produces burnished areas.

2. Broom Finish: Same as for monolithic steel trowel finish less the second retroweling. When ready, apply approved coarse texture finish by sliding a wire or stiff bristle broom in one direction along a straightedge guide set at right angles to

the direction of traffic. At walking areas, smooth finish 1" wide at edges, expansion joints, and scoring.

B. Locations of Finishes: Unless otherwise indicated, provide the following finishes on areas as specified:

1. Broom finishes:

a. Fine broom finishes: On level sidewalks, pavement, stair treads and landings, curbs, and other flatwork, unless other finishes are indicated. Score walks in direction and pattern indicated or directed. Provide 3 inch wide trowelled finish at flow lines of gutters.

b. Medium broom finishes: On ramps of slopes less than 6 percent. Perpendicular to the slope.

c. Heavy broom finishes: On ramps of slopes 6 percent and greater. Perpendicular to the slope. Concrete paving and concrete finishes along accessible routes of travel to be at least as slip resistant as that described as a medium salted finish for slopes of less than 6%, and slip resistant at slopes of 6% or greater.

3.05 CURING: Concrete work shall be properly cured and protected against injury and defacement of any nature during construction operations. If weather is hot or surface has dried out, spray surface with fine mist of water, starting not later than 2 hours after final troweling. Surface of finish shall be kept continuously wet for at least 10 days. Wetting is considered emergency work and shall be performed on weekends and holidays if necessary.

A. In lieu of water curing, within 24 hours after finishing, the concrete which is not to receive special finishes, may be cured with an approved clear liquid curing compound, applied in accordance with the manufacturer's recommendations.

3.06 BACKFILLING: After curing, debris shall be removed and the area adjoining the work shall be backfilled, graded, and compacted to conform to the surrounding area in accordance with lines and grades indicated.

3.07 PROTECTION: Completed work shall be protected from damage until accepted. The Contractor shall remove damaged concrete and clean concrete discolored during construction. Work that is damaged shall be removed and reconstructed for the entire length between regularly scheduled joints at no expense to the owner. Refinishing the damaged portion will not be acceptable. Removed damaged portions shall be disposed of as directed.

3.08 REMOVAL OF FORMS: Do not remove forms until the concrete has attained adequate strength to prevent damage. Take extreme care in stripping to avoid breaking off corners, marking concrete or defacing the finish surface in any way. Minimum stripping time at walls shall be 3 days.

3.09 CLEANING AND PATCHING: After stripping forms, clean all exposed concrete surfaces and all adjoining work stained by leakage of concrete. Remove all fins, burrs, and projections by grinding. Patch all voids, rock pockets, holes, cracks, etc., by chipping loose concrete and exposing clean sound aggregate. After inspection, dampen prepared recesses for 2 hours

minimum and fill with drypack to within 1/4" of surface. Keep drypack damp for 2 days minimum. Apply mortar to final surface and keep patch damp for 5 days minimum. Entire surface of concrete to be sacked with neat cement and water after surface is cleaned and patched.

3.10 FLOOD TEST: All concrete gutters and concrete pavement shall be given a flood test. All concrete work where water ponds and does not run off in a reasonable amount of time, shall be removed to the nearest score or joint line and replaced to provide proper drainage.

3.11 DEFECTIVE CONCRETE:

A. If concrete tests indicate that the strengths do not meet those specified, or if concrete has excessive pockets, or if reinforcing steel is exposed, or if concrete does not comply with the drawings and specifications, the defective concrete shall be removed and replaced as directed.

B. Concrete paving that shows evidence of cracking prior to final acceptance of the project or during a 60-day period thereafter shall be replaced at no cost to the Owner. Such replacement shall include the entire panel of concrete in which the cracking occurs, to the nearest expansion or control joints, as approved.

END OF SECTION

# SECTION 02580

# PAVEMENT MARKING

## PART 1 - GENERAL

1.01 DESCRIPTION: Division 1 applies to this Section. Provide pavement paint marking and striping, complete.

A. Related Work Not in this Section:

1. Asphalt Concrete Paving

1.02 SUBMITTALS:

A. Manufacturer's Data: Submit manufacturer's technical product data covering recommended preparation and application methods with paint coverage rates.

B. Lay out markings in place on surface, and obtain approval of layout prior to commencement of striping. Notify Owner 72 hours in advance of time approval is required.

C. Submit certification of compliance with regulations required below.

1.03 WEATHER LIMITATIONS: Apply paint to clean, dry surfaces, and unless otherwise approved, only when air and pavement temperatures are above 40 degrees F and less than 95 degrees F. Maintain paint temperature within these same limits.

## PART 2 - PRODUCTS

2.01 TRAFFIC PAINT: Manufactured for pavement line markings, conforming to Fed Spec TT-P-1952B and bearing approval of SCAOMD. Paint shall be slip resistant, having minimum static coefficient of friction of 0.6.

A. Benjamin Moore Latex Safety Zone Marking M58-10

B. Vista Paint Co. Traffic Line Paint 6800 On-Line Semi-gloss (2.5-3.5 mils OFT) or 6700 On-Line Flat.

2.02 COLORS: As selected by District. Allow for striping, and similar items to be in different colors for playground game courts.

## PART 3 - EXECUTION

3.01 PROTECTION: Protect surfaces including cars, planting, site improvements and all other surfaces not to be painted to avoid damage from overspray and wind-carried paint.

3.02 SURFACE PREPARATION:

A. General: All surfaces to be marked shall be thoroughly cleaned before application of the paint. Dust, dirt, and other granular surface deposits shall be removed by sweeping, blowing with compressed air, rinsing with water or a combination of these methods as required.

B. Layout: Game striping damaged or removed. Obtain from Owner the exact striping required, and layout all markings on the surface.

C. New pavement surfaces shall be allowed to cure for a period of not less than 30 days before application of marking materials.

D. Existing Pavement:

1. Rubber deposits, surface laitance, existing paint markings, and other coatings adhering to the pavement shall be completely removed with scrapers, wire brushes, sandblasting, approved chemicals, or mechanical abrasion as directed. If approved, and if demonstration of method is satisfactory, existing striping may be obliterated by use of paint matching surface color.

2. Where oil or grease are present on old pavements to be marked, affected areas shall be scrubbed with several applications or trisodium phosphate solution or other approved detergent or degreaser, and rinsed thoroughly after each application. After cleaning, oil- soaked areas shall be sealed with cut shellac to prevent bleeding through the new paint.

3. Obliteration of Existing Markings: Where existing markings are obliterated to provide new markings, the existing lines and other markings shall be painted with paint to match existing paving to remain. Paint color shall be adjusted as required to match. Provide not less than 2 coats, or additional as required for complete obliteration of existing marking. Blend edges of marking into existing paving.

3.03 APPLICATION- GENERAL: Paint shall be applied to clean, dry surfaces. Paint shall be applied pneumatically with approved equipment at rate of coverage specified herein. Provide guide lines and templates as necessary to control paint application. Special precautions shall be taken in marking numbers, letters, and symbols. Edges of markings shall be sharply outlined. Lines shall be straight, or curved as applicable, to within 1/4" in 15 feet. Greater deviations shall be removed or obliterated and lines reapplied. The maximum drying time requirements of the paint specifications will be strictly enforced, to prevent undue softening of bitumen, and pickup, displacement, or discoloration by tires of traffic. If there is a deficiency in drying of the markings, painting operations shall be discontinued until cause of the slow drying is determined and corrected.

3.04 RATE OF APPLICATION: 105 ± 6 square feet per gallon. Apply two coats minimum or more if required to obtain complete opacity. Dry film thickness shall be 10 mils minimum.

3.05 COMPLETION: Remove paint droppings and overspray, and repair all damaged or stained surfaces as approved.

END OF SECTION

# SECTION 02796

# RESILIENT SAFETY SURFACING

## PART 1 - GENERAL

1.01 DESCRIPTION: Division 1 applies to this Section. Provide resilient safety surfacing, complete.

A. Work Specified In This Section: Principal items include:

1. Preparation of surface to receive resilient safety surfacing.

2. Resilient safety surfacing.

B. Related Work Not In This Section:

1. Type II rock base course below resilient safety surfacing.

2. Playground equipment.

1.02 QUALITY ASSURANCE:

A. Qualifications:

1. Manufacturer: Company specializing in manufacture of resilient safety surfacing with a minimum of 10 continuous years of documented experience, and having successfully completed not fewer than 5 local projects.

2. Installer: Company with a minimum of 5 years documented experience in the installation of resilient safety surfacing, trained and certified by manufacturer of resilient safety surfacing, and capable of showing not less than 5 satisfactory, local installations.

1.03 PERFORMANCE REQUIREMENTS:

A. Resilient safety surfacing shall meet or exceed the performance requirements of the CBC, ADA and Fall Height Test ASTM F 1292. The surface shall yield both a peak deceleration of not more than 200 G maximum and a Head Injury Criteria (HIC) value of no more than 1,000 for a head-first fall from the highest accessible portion of play equipment shown on the drawings.

B. Accessibility: Areas covered with resilient safety surfacing shall be in compliance with the UFAS FED-STD-795, the Architectural and Engineer Instructions (9AEI) Design Criteria, and requirements of ADAAG 28 CFR Part 36.

C. Provide and indicate destination surface material under and around playground equipment, to comply with the following most current standard, referenced by the federal guidelines: CBC 1008.2.6.

1. Ground surfaces shall be inspected and maintained regularly and frequently to ensure continued compliance with ASTM F 1951 for Determination of Accessibility of Surface Systems.

2. Ground surfaces shall comply with ASTM F 1292 for Impact Attenuation of Surface Systems.

1.04 SUBMITTALS:

A. Shop Drawings: Submit fully detailing subgrade and resilient safety surfacing course, including all edge and termination conditions.

B. Samples: Provide samples, not smaller than 6 inches square, showing each component of resilient safety surfacing. Provide samples of all available colors.

C. Product Data: Submit resilient safety surfacing manufacturer's technical data and installation recommendations covering all installation conditions of the work of this section.

D. Manufacturer's Experience Record: Submit evidence showing satisfactory experience over a period of 5 years, together with not less than 5 local projects furnished over a period of not less than 5 years. Include contact names and phone numbers.

E. Installer's Experience Record: Submit certification from manufacturer of resilient safety surfacing that installer is trained and authorized to install the materials, and has satisfactorily completed not fewer than 5 local installations within the last 5 years.

F. Test Reports:

1. Provide certificates from an independent testing laboratory showing compliance with comply with ADA and CPSC guidelines specified above.

2. Physical Properties: Submit certified test reports from an approved independent testing laboratory, showing compliance with physical properties specified below.

G. Manufacturer's Representative: Provide the service of an authorized representative of the manufacturer, experienced in installation of playground safety surface to assure that the installation is performed in accordance with these specifications and the manufacturer's recommendations, and to ensure that the safety surfacing meets the impact attenuation requirements as specified herein.

1.05 JOB CONDITIONS:

A. Weather Conditions: Do not install surfacing materials when moisture in any form is present on substrate or when inclement weather or rain is imminent.

B. Coordination: Coordinate work of preparation of subgrade and placement of aggregate base course, and playground equipment.

1.06 WARRANTY: Furnish to District a written warranty against all defects in materials or workmanship for 2 years.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS:

Spectra Turf, Inc.
500 E. Rincon Street, Suite 100
Corona, CA 92879
(800) 875-5788
FAX (951) 734-3630

Dave Bang Associates Inc.
1885 N. Main St,
Orange, CA 92865
(800) 669-2585

2.02 SYSTEM DESCRIPTION: Resilient safety surfacing shall be SpectraPour, consisting of a dual durometer poured-in-place system with a wearing layer upper membrane and an underlying impact attenuation cushion layer. The finished surface shall be porous and capable of being installed at varying thickness to comply with Critical Fall Height requirements of playground equipment installed in conjunction with the surface.

A. Resilient safety surfacing shall be manufactured from EPDM and SBR rubber compounds mixed with a 100 percent MDI based polyurethane resin. Polyurethane containing TDI will not be acceptable. Surfacing to meet all Health Codes.

B. Cushion course shall be a mixture of shredded and one to four mm SBR rubber particles of heterogeneous distribution bonded by a polyurethane binder applied to 100 percent of the rubber.

C. Wearing surface shall be a mixture of black EPDM or colored EPDM one to 4 mm granules bonded by a polyurethane binder applied to 100 percent of the granules and applied to a minimum thickness of 3/8” over the cushion layer. Colors of wearing surface shall be as selected.

D. Finish Texture: Pebble Grain.

2.03 BINDER

A. Binder: Binder for safety surfacing shall be that which is specifically designed for use with rubber granule material for outdoor installations. Binder for the EPDM wear layer must be **ALIPHATIC.**

B. No toluene diphenel isocyanate (TDI) shall be used.

C. No filler materials shall be used in urethane such as plasticizers and the catalyzing agent shall contain no heavy metals.

D. Weight of polyurethane shall be no less than 8.5 lbs/gal (1.02 Kg/1) and no more than 9.5 lbs/gal (1.14 Kg/1)

PART 3- EXECUTION

3.01 INSPECTION:

A. Finished Grade: Verify that finished elevations of adjacent areas are as indicated on the drawings, that the appropriate subgrade elevation has been established, and that the base course has been installed in a true, even plane, and slope to drain as indicated in drawings.

3.02 INSTALLATION:

A. Poured in Place Surfacing: Components of the poured in place surfacing shall be mixed on site in a rotating tumbler to ensure components are thoroughly mixed and are in accordance with manufactures recommendations. Installation of surfacing shall be seamless up to 2,000 square feet per day. Material shall cover all foundations and fill around all elements penetrating the surface.

B. Cushion layer shall be installed in one continuous pour on the same day of up to 2,000 square feet. Cushion course shall be installed to a designated thickness as required by the Consumer Product Safety's Commission's Guidelines and ASTM F1292. When a second pour is required, fully coat the edge of the previous work with polyurethane binder to ensure 100 percent bond with new work. Apply adhesive in small quantities so that new cushion layer can be placed before the adhesive dries.

C. Wear Course: Wearing surface shall be bonded to cushion layer using adhesive recommended by safety surfacing manufacturer. Apply adhesive to cushion layer in small quantities so that wear course can be applied before adhesive dries. Surface shall be hand toweled to a smooth, even finish. Except where wear course is composed of differing color patterns, pour shall be continuous and seamless up to 2,000 square feet per day. Where seams are required due to color change, a step configuration will be constructed to maintain wear course integrity. The edge of initial pour shall be coated with adhesive and wearing surface mixture shall be immediately applied. Pads with multiple seams are encouraged to include a top coat of urethane before being placed into use. Butt joint seams are not acceptable.

D. Perimeter

1. Surfacing shall terminate at concrete curbs as detailed. The resilient safety surfacing shall be rolled down inside the void between the surfacing and the curb. Adhesive shall be applied to the contact area of the curb. The final 2 inches of the

cushion layer shall be tapered to allow the wear surface material to be a minimum of 1" thick where it joins the concrete edge.

2. Where resilient safety surfacing adjoins engineered wood surfacing, install the resilient safety surfacing first. Taper and curve the resilient safety surfacing as detailed.

E. Thickness: 3 ½" min., verify with manufacturer. Use screeds to assure full thickness throughout.

F. Protection:

1. Curing: The synthetic safety surface shall be allowed to fully cure in accordance with manufacturer's recommendations. The surface shall be protected from all traffic during the curing period of 48 hours, or as recommended by manufacturer for ambient weather conditions at time of placement of surfacing.

2. Completed surfacing: Protect completed surfacing when the finished surfaces are used for subsequent construction operations. Place plywood, planks, polyethylene sheeting, or other protection as required. Repair all damage to surfacing as approved at the expense of the party responsible for the damage and at no extra cost to the Owner.

END OF SECTION

# SECTION 02830

# CHAIN LINK FENCE

## PART 1 - GENERAL

1.01 DESCRIPTION: Division 1 applies to this Section. Provide galvanized chain link fence and gates, complete.

A. Work Specified In This Section:

1. Layout and staking of fence lines.
2. Excavation and backfill for post foundations.
3. Concrete post foundations.
4. Fence supports, fabric, gates, slats, and other accessories shown or required to complete the work.

1.02 QUALITY ASSURANCE:

A. Reference Standards: Except as otherwise indicated or specified, conform to the CLFMI Product Manual, and to Standards for Chain Link Fence Installation; all as published by the Chain Link Fence Manufacturers Institute, 1776 Massachusetts Avenue N.W., Suite 500, Washington, D.C. 20036, (202) 659-3537 FAX (202) 857-1220hereinafter referred to as CLFMI Standards.

B. Gates in path of travel must comply with door requirements. CBC Section 11B-404.1.

C. Hand-activated gate opening hardware, handles, pulls, latches, locks, and other operating devices on accessible gates shall have a shape that is easy to grasp with one hand and does not require tight grasping, tight pinching, or twisting of the wrist to operate. CBC Section 11B-404.2.7.

D. The lever of lever actuated latches or locks shall be curved with a return to within 1/2" of the (face of) gate to prevent catching on the clothing or persons.

E. The bottom 10" of an accessible gate shall have a smooth, uninterrupted surface on each side. The bottom of the gate shall be within 3" of the finish surface of the path of travel. The maximum effort to operate a gate shall not exceed 5 lbf (22.2 N). CBC Section 11B-404.2.9.

1.03 SUBMITTALS:

A. Shop Drawings: Submit showing details of each typical installation. Indicate post spacing and location, location and size of bracing, connection details, and method of attachment of hardware.

B. Product Data: Submit for approval, with manufacturer's catalog data.

C. Samples: Submit samples on fence fabric and tubular framing shapes.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS:

Acorn Fence and Construction

2041 164th Street, Hammond IN

(800) 293-4472

2.02 MATERIALS: All fencing, posts, rails, accessories and hardware except locks and closers, shall have minimum 2.0 ounce metallic zinc coating, Conform to CLFMI standards where recommended sizes and weights exceed those specified.

A. Chain Link Fence Fabric: Provide fabric of sizes indicated for each condition, not lighter than 9 gauge, all fabric in one piece height Fabric shall be metallic zinc coated conforming to ASTM A 392, Type II, Class 2, 2.0 oz./sq. ft. with zinc coating applied after weaving. Fabric shall be knuckled at both selvages.

B. Posts and Rails: As indicated on drawings. Tie wires and fittings shall be zinc coated to match fencing.

1. Type I Pipe: Steel pipe conforming to ASTM F 1083, plain ends, standard weight (Schedule 40) for posts, rails, etc.

2. Swing Gate Posts: galvanized steel, ASTM A 120 or ASTM A 123.

3. Top and Brace Rail: 1.66" diameter, 2.30 lbs./ft., plain end. Provide in manufacturer's longest lengths, with expansion type couplings, approximately 8 inches long, for each joint. Provide means for attaching top rail securely to each gate comer, pull and end post.

4. Fittings: Comply with ASTM F 626 to suit manufacturer's standards.

C. Tension Wire: 7 gauge thick high-carbon steel coil-spring wire, single strand, galvanized ..

D. Tension Bar: 3/16" thick by 3/4" wide steel, not more than 2" shorter than fabric height, galvanized.

E. Tension Strap: 1/8" thick galvanized steel.

F. Tie Wire: 9 gauge galvanized steel wire.

G. Post Tops: Provide ornamental post top of cast steel galvanized; sized to post diameter, set screw retainer. Provide hole in post top for passage of top rail.

H. Swinging Gates: Construct as detailed. Provide hardware as shown.

I. Gate Hardware: As detailed for accessible and non-accessible gates.

J. Concrete for Setting Posts: Conform to ASTM C94, Normal Portland cement, 3,000 p.s.i. minimum strength at 28 days, 3" slump; 1" nominal sized coarse aggregate. Conform to requirements of Division 3.

## PART 3- EXECUTION

3.01 INSTALLATION: Conform to approved submittals and to CLFMI Standards unless more stringent requirements are specified.

A. Clearing: Existing fencing shall be removed and post cut at concrete, unless noted otherwise. Smooth and fill as detailed. Where new fencing is installed, clear fence line of brush, and other obstacles to install fencing. Establish a graded, compacted fence line prior to fencing installation. Compact fill used to establish fence line.

B. Install fence on prepared surfaces to line and grade indicated.

C. Excavation: Drill or hand-excavate holes for footing posts at spacing indicated.

D. Setting Posts: Set posts in concrete. Center and align posts as detailed. Check posts to insure that they are set level. Place concrete around posts and vibrate or tamp for consolidation. Extend concrete footings 2 inches above grade in grass areas and flush to grade in paved areas and smooth trowel to a crown to shed water. Allow concrete to cure a minimum of 72 hours before performing other work on posts.

E. Fence Gate Frames: Secure fastening and hinge hardware in place to fence framework by peening or welding. Allow for proper operation of components. Coat peened or welded areas with a repair coating matching original coating. Install fence in accordance with fence manufacturer's written installation instructions except as detailed.

F. Fabric: Place on side of posts as indicated. Pull fabric taut and secure fabric to top rail and bottom rail, close to both sides of each post and at maximum intervals of 24 inches on center. Secure fabric to posts using stretcher bars, ties or clips spaced 16 inches on center, or by integrally weaving to integral fastening loops of end, corner, pull, and gate posts for full length of each post. Install fabric so that bottom of fabric is 2 inches above ground level. Where tie wires are used, they shall be twisted at least 2 full turns. Bend ends of wires to eliminate sharp points.

G. Gates: Allow clearance of gates of 1-1/2" at bottom and 1" at top. Construct gates set in sloping areas to conform to the grade. Provide an opening in each gate for access to locking device or padlock. Knuckle ends of fabric cut for opening to eliminate hazards. Install in accordance with CLFMI Standards and manufacturers' recommendations.

H. Accessories: Install top rail, post caps, bottom tension wire, truss rods at end panels, and gates, all in accordance with CLFMI Standards.

3.02 FINISH TOUCH-UP: Touch up finish on fencing with material compatible to factory finish.

END OF SECTION

SECTION 02880

PLAYGROUND EQUIPMENT (NIC)

PART 1 - GENERAL

1.01 DESCRIPTION: Division 1 applies to this Section. Provide playground equipment, as indicated, specified, and required.

A. Work In This Section: Principal items include playground equipment for primary grade children.

B. Related Work Specified Elsewhere:

1. Rubberized surfacing on play equipment areas.
2. Concrete for equipment footings.
3. Earthwork for foundation.

1.02 SUBMITTALS:

A. Product Data: Submit for each item, including technical data and installation instructions. Submit printed specification data for each component. Submit technical data on adhesives and fasteners.

B. Shop Drawings: Submit detailed shop drawings of each item of equipment. Provide plans with model numbers, descriptive labels, component names, and deck heights. Show component parts, connection devices, welding, and colors. Show complete installation and anchorage details. Coordinate numbering of parts and components with technical data specified above.

C. Certification:

1. Submit IPEMA certificates attesting that equipment furnished under this section is in compliance with ASTM F 1487.

2. Submit evidence of installer's qualifications, including list of similar projects installed over the past 5 years, and certification of training and acceptance by manufacturer.

3. Submit certification showing compliance with CPSC requirements and ADA "Final Accessibility Guidelines for Play Areas" requirements.

D. Samples

1. Submit color cards showing available colors for each item.

2. Submit 12 inches square or 12 inches long, sample of each finish in each color selected.

E. Maintenance Materials: Provide the following:

1. Finish Paint: Provide two 4.5 ounce cans of aerosol spray paint matching each color used on the project for touch-up purposes.

2. Primer: Provide two 4.5 ounce cans of rust resistant gray primer spray aerosol as a first coat for component touch-up.

3. Graffiti Remover: Provide two 8 ounce container of liquid graffiti remover. Ingredients consist of biodegradable surfactans, solvents, and citrus distillate.

4. Sandpaper: Provide two sheets each of 80, 100, and 150 grit sandpaper.

5. Handware for Pipe Systems: Provide a bag of assorted hardware, hex wrenches and screw driver bits of all sizes used on the project.

F. Maintenance Instructions: Conform to requirements of Section 01730. Provide a 3 ring binder containing system guidelines, a structure drawing, installation instructions, maintenance documents, and warranty information. Include playground safety tips, preventive maintenance schedule, and inspection check list.

1.03 WARRANTY: Refer to Section 01740. In addition to warranties specified in Section 01740, provide warranties as follows:

A. Lifetime Warranty against structural failure due to weather corrosion or defects in materials and workmanship on aluminum deck posts, steel deck posts, clamping/fastening, and associated fastening hardware.

B. 15 Year Warranty against structural failure due to weather corrosion or defects in materials and workmanship on steel support legs and components on play system steel components including railings, rungs, and rigid climbers.

C. One Year Warranty against structural failure caused by defective materials or defective workmanship on main support materials and decks and seats for swings, and moving parts including swing hangers, swivels, chains, whirls, trolleys and flexible climbers.

PART 2 – PRODUCTS

2.01 ACCEPTABLE MANUFACTURER (DISTRICT STANDARD):

Dave Bang Associates, Inc.
1885 N. Main St.
Orange, CA 92865
(800) 669-2585

2.02 EQUIPMENT: See drawings for type, style, configuration, size and height of playground equipment, structure or modular unit. Colors shall be as indicated.

A. Components List for Primary Playground Equipment:

**Posts**

| | | | |
|---|---|---|---|
| 1 | ZZPM0016 | 5in OD X 120in STEEL POST W/ RIVETED CAP | 4 |
| 2 | ZZPM0026 | 5in OD X 132in STEEL POST W/ RIVETED CAP | 2 |
| 3 | ZZPM0357 | 5in x 84in STEEL POST w/CAP | 5 |
| 4 | ZZPM0385 | 5in OD X 162in SHADE POST (24in AND 36in DECKS) | 12 |
| 5 | ZZPM0387 | 5in OD x 210in LARGE SHADE HAT POST- (72in & 84in DECK) | 6 |

**Decks & Kick Plates**

| | | | |
|---|---|---|---|
| 6 | ZZPM0619 | HEX COATED DECK ASSEMBLY | 4 |
| 7 | ZZPM2530 | 12in DECK TO DECK KICK PLATE | 2 |

**ADA Items**

| | | | |
|---|---|---|---|
| 8 | ZZPM7536 | GROUND TO DECK WHEELCHAIR RAMP W/ BARRIERS (12in RISE) | 1 |
| 9 | ZZPM7538 | DECK TO DECK WHEELCHAIR RAMP W/ BARRIERS (12in RISE) | 2 |
| 10 | ZZUN7369 | RAMP TO BERM CONNECTOR | 1 |
| 11 | ZZUN9390 | 6in WHEELCHAIR RAMP CENTER SUPPORT | 1 |
| 12 | ZZUN9400 | 18in WHEELCHAIR RAMP CENTER SUPPORT | 1 |
| 13 | ZZUN9410 | 30in WHEELCHAIR RAMP CENTER SUPPORT | 1 |

**Slides**

| | | | |
|---|---|---|---|
| 14 | ZZPM2658 | GLIDE SLIDE (60in DECK) | 1 |
| 15 | ZZPM3205 | SLITHER SLIDE ENTRY/ SLIDE-A-SIDE | 1 |

| | | | |
|---|---|---|---|
| 16 | ZZPM3215 | SLITHER SLIDE BALCONY/ SLIDE-A-SIDE | 1 |
| 17 | ZZPM3537 | SLIDE- NUVO 360 SPIRAL SLIDE | 1 |
| 18 | ZZUN3207 | SLITHER SLIDE 2.0 (STRAIGHT SECTION) | 3 |
| | **Activity Panels** | | |
| 19 | ZZPM4318 | FIND THE WAY HOME PANEL | 1 |
| 20 | ZZPM4328 | ANIMAL LOCATOR PANEL | 1 |
| 21 | ZZPM4386 | DRIVER PANEL | 1 |
| 22 | ZZPM4646 | STOREFRONT PANEL | 1 |
| 23 | ZZPM4671 | PM PANEL FRAME- DECK LEVEL | 1 |
| 24 | ZZPM4672 | PM PANEL FRAME- GROUND LEVEL | 1 |
| 25 | ZZUN4300 | STEERING WHEEL (PIPE WALL MOUNT) | 1 |
| 26 | ZZUN4673 | A-MAZE-ING INSERT | 1 |
| 27 | ZZUN4677 | VERY BURIED INSERT | 1 |
| | **Barriers** | | |
| 28 | ZZPM4090 | CENTERLINE PIPE WALL BARRIER | 2 |
| 29 | ZZPM4288 | ACCESS GATE | 1 |
| 30 | ZZPM4811 | OVAL BUBBLE PANEL (DECK MOUNT) | 1 |
| | **Climbers** | | |
| 31 | ZZPM7086 | CLIMBING SQUARES BLOCK CLIMBER (24in) | 1 |
| 32 | ZZPM7948 | SILO CLIMBER (24in DECK) | 1 |
| 33 | ZZPM8120 | BEANSTALK CLIMBER (60in DECK) | 1 |
| 34 | ZZPM8180 | TREE CLIMBER (36in DECK) | 1 |
| | **Balance** | | |
| 35 | ZZUN7136 | UNITY STEPPER - SMALL | 1 |

**Audible Activities**

| | | | |
|---|---|---|---|
| 36 | ZZPM4467 | GROUND TO GROUND BABBLE-ON | 1 |
| 37 | ZZPM4587 | DRUM PANEL (GROUND LEVEL) | 1 |
| 38 | ZZPM4588 | BELL PANEL | 1 |
| 39 | ZZPM4714 | 17ft HEX HAT SHADE | 2 |
| 40 | ZZPM4715 | 26ft HEX HAT SHADE | 1 |
| 41 | ZZPM9727 | PM HEX HAT POST BRACES | 1 |

**Stairs and Ladders**

| | | | |
|---|---|---|---|
| 42 | ZZPM9170 | 24in ACCESSIBLE STEPPED PLATFORM (DECK TO DECK) | 1 |
| 43 | | UNITY DOME WITH SENSORY PANELS | 1 |
| 44 | | JUNGLE GYM | 1 |
| 45 | | LARGE UNITY CANOPY | 1 |
| 46 | | 2-BAY, 5” OD ARCH SWING W/ 4 BELT SEATS AND ADA SEATS AT 8’ HIGH | |

PART 3 – EXECUTION

3.01 INSPECTION: Report in writing all conditions that prevent or interfere with correct installation of work of this section.

3.02 INSTALLATION: Locate as shown. Install each item of equipment as detailed on drawings, and as shown on approved submittals. The installation shall conform to CPSC guidelines for public playgrounds.

A. Anchor playground equipment to the ground using concrete footings in accordance with approved manufacturer's installation instructions. Secondary footings (galvanized steel tubing support at slide brackets, climbers, and similar items) shall have a minimum diameter of 12 inches and a minimum depth of 18 inches below the resilient surfacing.

B. Provide a minimum clearance of 3 inches minimum from the edges of all steel posts to grade and 2 inches minimum from all edges of recycled plastic posts to grade. Concrete used for footings shall have a minimum strength of 3,000 psi.

END OF SECTION

# SECTION 03100

# CONCRETE FORMWORK

## PART 1 - GENERAL

### 1.01 DESCRIPTION:

Division 1 applies to this Section. Provide concrete formwork, complete.

A. Work In This Section: Principal items include:

1. Formwork.
2. Setting in forms, anchor bolts, metal inserts, sleeves, and similar items embedded in concrete.

B. Related Work Specified in Other Sections:

1. Screeds for slabs.
2. Furnishing inserts in concrete for work of other sections.

### 1.02 QUALITY ASSURANCE:

Construct forms conforming to tolerances specified in ACI 301, “Specifications for Structural Concrete for Buildings”, as specified, unless exceeded by requirements of regulatory agencies or otherwise indicated or specified.

## PART 2 – PRODUCTS

### 2.01 MATERIALS:

Furnish materials conforming to following requirements:

A. Form lumber: WCLIB “Construction” grade or better, WWPA No. 1 or better, or equal.

B. Form plywood: PS 1-95, Group I, Exterior Grade B-B Plyform or better, minimum 5-ply and 5/8” thickness, grade marked, not mill oiled. Plywood having medium or high density overlay is acceptable.

C. Foam coating: Resin type coating free of oil, silicone, wax, and non-drying material, not grain-raising.

## PART 3 – EXECUTION

### 3.01 WORKMANSHIP:

A. Rigidly construct forms to prevent mortar leakage, sagging, displacement or bulging between studs. Use clean, sound, approved form material, coated with specified materials only, not oil. Provide backing on plywood joints. Sides of footings shall be

formed, unless permission of the Architect is obtained to place concrete directly against earth. Where this permission is granted, the footing dimension shall be increased 3". Remove formwork prior to backfilling operations.

B. Foundation concrete may be placed directly into neat excavations provided the foundation trench walls are stable as determined by the Architect (Structural Engineer), subject to the approval of DSA in each case. The minimum formwork shown on the drawings is mandatory to insure clean excavations immediately to and during the placing of concrete.

C. Reglets, Rebates and Chases: Form as indicated or required for work of other sections. Verify sizes and locations before forming.

D. Sleeves: Clear space between sleeves shall be 3 times average sleeve or opening dimension, and not less than 6" center to center for small sleeves. Submit proposed location of sleeves in structural members for approval.

E. Embedded Items: Coordinate work with related sections. For slabs on grade, provide 3" minimum above and below conduit. Do not place conduit below bottom layer of reinforcing bars. Verify sizes, locations, and other requirements for anchor bolts, inserts, and like items, and provide or obtain necessary templates corresponding to approved shop drawings. Accurately and securely place in forms to prevent displacement after removing any substances deleterious to bond.

F. Forms shall accurately conform to the lines and dimensions of concrete as indicated on the drawings. They shall be tight and securely braced to prevent any possibilities of movement. Removal of forms and shoring shall conform to latest ACI Codes and government directives.

G. Formwork shall be designed in accordance with ACI 318, parts 1-2-3, ACI 347, ACI SP-4, and ACI 301, and requirements of local authorities.

H. Forms shall be thoroughly cleaned before reusing. Where form release compounds are used to facilitate removal of forms, they shall be types which will not stain or injure concrete, or finish material or cause injury to the bond of the final material to be applied.

I. Wood formwork, including that used in void spaces, pockets and other similar places shall be removed.

J. Tops of slabs shall not vary more than 1/4" from designated elevations.

3.02 PREPARATION FOR CONCRETE PLACING:

A. Debris: Remove foreign matter in forms and rigidly close parts and openings left in formwork. No concrete shall be placed until forms are clean.

B. Wetting: Wet wood forms sufficiently to tighten up cracks. Wet other materials sufficiently to reduce suction and maintain concrete workability.

C. Equipment: Thoroughly clean tools before and after each use.

D. Earth Sub-grade: Lightly dampen 24 hours in advance of concrete placing, but not muddied. Reroll where necessary for smoothness and remove loose material.

3.03 REMOVAL OF FORMS:

Conform to CBC 1906A.2.1.

A. Remove forms only after concrete has developed sufficient strength such that it will not be damaged by form removal operations, and after concrete can safely sustain its own weight and superimposed loads, as determined by testing field-cured concrete cylinders, but not sooner than specified in ACI 347.

B. Use care when removing forms that concrete surfaces are not marred or gouged, and corners are true, sharp and unbroken. Do not pry against concrete when removing forms.

C. Cut off nails flush in concealed concrete surfaces. Cut back tie wires and nails in exposed concrete surfaces at least 1-1/2 inches. Remove rod and cone ties and separators or similar devices and pull inward away from finished surfaces.

END OF SECTION

# SECTION 03200

# CONCRETE REINFORCEMENT

## PART 1 - GENERAL

### 1.01 DESCRIPTION:

Division 1 applies to this Section. Provide reinforcing steel, complete.

A. Work In This Section: Principal items include:

1. Reinforcing bars for cast-in-place concrete.
2. Accessories, including but not limited to, chairs and tie wires.
3. Furnishing and delivery of steel bar reinforcing for concrete masonry.

### 1.02 QUALITY ASSURANCE:

A. Source Quality Control: Refer to Section 01400 for general testing requirements and to following paragraphs for specific procedures. Testing Laboratory shall perform following conformance testing, shall select test samples of bars, ties, and stirrups from the material at the site or from place of distribution, each sampling including at least two 18" long pieces, and perform the following tests according to ASTM A615.

1. Identified Bars: If samples are obtained from bundles as delivered from the mill, identified as to heat number, accompanied by mill analyses and mill test reports, and properly tagged with Identification Certificate so as to be readily identified, perform one tensile and one bend test of each size of bars. Submit mill reports when samples are selected.

2. Unidentified Bars: When positive identification of reinforcing bars cannot be made and when random samples are obtained, perform tests for each 2.5 tons or fraction thereof, one tensile and one bend test from each size of bars.

### 1.03 MARKING AND SHIPPING:

Bundle bars, tag with identification, and transport and store so as not to damage any material. Use metal tags indicating size, length and other marking shown on placement drawings. Maintain tags after bundles are broken.

## PART 2 – PRODUCTS

### 2.01 MATERIALS:

A. Reinforcing bars: ASTM A615, Grade 60 or A706, Grade 60, except Grade 40 for No. 3 bars.

B. Tie wire: Annealed copper-bearing steel, 16 gage minimum.

C. Supports for Reinforcement: Bolsters, chairs, spacers, and other devices for spacing, supporting and fastening reinforcement in place.

1. Use wire bar type supports complying with CRSI, Chapter 3 unless otherwise shown.

2. For slabs on grade, use supports with sand plates, precast concrete blocks or horizontal runners where base material will not support chair legs.

2.02 FABRICATION OF REINFORCING BARS:

Fabricate bars of the indicated sizes and bend and form to required shapes and lengths by methods not injurious to materials. Do not heat reinforcement for bending. Bars with unscheduled kinks or bends are subject to rejection. Use only tested and approved bar materials.

PART 3 – EXECUTION

3.01 WORKMANSHIP:

A. Clean bars extending through construction joints of concrete while encrustations are soft, or sandblast.

B. Additional Reinforcing Bars: Where reinforcement is interrupted by sleeves and openings, provide additional bars as shown or required to maintain total reinforcement.

C. All reinforcing steel shall be thoroughly cleaned of rust, scale or other coating or foreign matter. Bars shall be accurately placed in position and secured in place by means of wire ties. Horizontal and vertical wall bars shall be securely wired together at each point of contract.

D. Reinforcing bars shall be lapped as indicated on structural general notes, at all horizontal and vertical splices, and around all corners and intersections. All reinforcing bars shall dowel through all horizontal and vertical construction joints as indicated on structural drawings, and bars may be wired together at these locations.

E. Provide a minimum of protective concrete coverings of reinforcing bars as follows: 3” on bottom and sides of footings placed directly on the ground; 2” for formed concrete exposed to earth; 1-1/2” for walls above grade.

F. All slab and footing reinforcement shall be supported on precast concrete chairs or spacers of proper thickness to support the reinforcement. Blocks shall be spaced not to exceed 6”-0” o.c.

G. Reinforcement shall be placed so that where temperature bars occur the temperature bars shall not be closer to the top of the slab than 1-1/2”. Remove all tags from reinforcing bars after installation.

3.02 FIELD QUALITY CONTROL:

A. Inspection: Obtain inspection and approval of reinforcing before concrete is placed.

B. Welding Inspection: Whether welding is done in the shop or at the site, perform welding of reinforcing bars under inspection of the Testing Laboratory Welding Inspector who is specially qualified.

END OF SECTION