

CONTRACT FOR LEO R. CROCE ELEMENTARY PARKING LOT FENCING PROJECT

REPAIRS, MAINTENANCE OR CONSTRUCTION SERVICES AWARDED PURSUANT TO THE "INFORMAL BIDDING" PROCEDURES OF PUBLIC CONTRACT CODE § 22000, ET SEQ. (THE UNIFORM PUBLIC CONSTRUCTION COST ACCOUNTING ACT ("CUPCAA") OVER \$60,000 AND UP TO \$200,000

THIS CONTRACT is made and entered into this 2nd day of March, 2022 ("Contract"), by and between **Westside Landscape & Concrete, Inc.** ("Contractor") and **Livermore Valley Joint Unified School District** ("District"). Contractor and District may be referred to herein individually as a "Party" or collectively as the "Parties."

1. **Contract Price & Services.** After the District has issued a Notice to Proceed, the Contractor shall furnish to the District for a total price of **One Hundred Eleven Thousand Nine Hundred Sixty-two Dollars (\$111,962.00)** ("Contract Price"), the repairs, maintenance or construction services identified below and as more fully described in Exhibit A attached hereto ("Services" or "Work"):

The project scope is to remove and demolish existing chain link fence (approximately 280LF) and remove and demolish existing four-foot-tall decorative fence (approximately 225LF). The existing decorative fence will need to be cut from the adjacent fencing and painted and patched back to match the existing finish. Additionally, a new six-foot-tall decorative fence (approximately 235LF) with three pedestrian gates and two rolling fire lane gates will be added to replace the four-foot-tall decorative fence. See attached plans for width and locations of gates. The new decorative fence is to match the existing adjacent decorative fence. Prior to any work, contractor will be responsible for providing an underground utility scan survey. Refer to Exhibit A for the Request for Proposal and attached site plans for the complete scope of work.
2. **Payment.** Payment for the Work shall be made in accordance with the Terms and Conditions to Contract ("Terms and Conditions") attached hereto.
3. **Site.** Contractor shall perform the Work at Leo R. Croce Elementary School ("Premises" or "Site"). The "Project" is the scope of Work performed at the Site.
4. **Contract Time & Liquidated Damages.** Work shall be completed by **July 15, 2022**. Contractor agrees that if the Work is not completed within the Contract Time and/or pursuant to the completion schedule, construction schedule, or project milestones developed pursuant to provisions of the Contract, it is understood, acknowledged, and agreed that the District will suffer damage which is not capable of being calculated. Pursuant to Government Code section 53069.85, Contractor shall pay to the District, as fixed and liquidated damages for these incalculable damages, the sum of **Five Hundred Dollars (\$500.00)** per day for each and every calendar day of delay beyond the Contract Time or beyond any completion schedule, construction schedule, or Project milestones established pursuant to the Contract.
5. **Bonds & Insurance.**
 - a. **Payment Bond & Performance Bond:** Contractor shall not commence the Work until it has provided to the District, a Payment (Labor and Material) Bond and a Performance Bond, in the forms attached hereto, each in an amount equivalent to one hundred percent (100%) of the Contract Price issued by a surety admitted to issue bonds in the State of California and otherwise acceptable to the District. **The District reserves the right to waive this requirement in writing at its sole discretion in the event the Contract Price is below \$25,000.**
 - b. **Insurance:** Contractor shall have and maintain in force during the term of this Contract, with the minimum indicated limits, the following insurance:

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| Commercial General Liability , with Products and Completed Operations Coverage | \$2,000,000 per occurrence; \$4,000,000 aggregate |
| Automobile Liability, Any Auto , Combined Single Limit | \$1,000,000 per occurrence |
| Workers Compensation | Statutory limits pursuant to State law |
| Employers' Liability | \$1,000,000 |
| Builder's Risk (Course of Construction) | Issued for the value and scope of work. |

DISTRICT MAY ADJUST THESE LIMITS, IN WRITING, AT THE DISTRICT'S SOLE DISCRETION BASED ON SIZE AND SCOPE OF THE CONTRACT.

Contractor shall provide to the District certificate(s) of insurance and endorsements satisfactory to the District. The policy(ies) shall not be amended or modified, and the coverage amounts shall not be reduced without thirty (30) days written notice to the District prior to cancellation. Except for worker's compensation insurance, the District, the Architect, and the Project Manager shall be named as an additional insured on all policies. Contractor's policy(ies) shall be primary; any insurance carried by the District shall only be secondary and supplemental. Contractor shall not allow any subcontractor, employee, or agent to commence Work on this Contract or any subcontract until the insurance required of Contractor, subcontractor, or agent has been obtained, and the certificate(s) of insurance and endorsements have been provided to the District; provided, however, that the District reserves the right to reject an insurance policy(ies) if they do not conform with the above insurance requirements.

- 6. **Project Oversight.** Inspection and acceptance of the Work shall be performed by Livermore Valley Joint Unified School District and Kitchell CEM, Construction Manager consultants to the District Bond Program.
- 7. **Terms & Conditions.** The Contractor agrees to comply with the Terms and Conditions.
- 8. **Contract Documents.** The Contract Documents include only the following documents, as indicated:

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| <input checked="" type="checkbox"/> Bid Form | <input checked="" type="checkbox"/> Drug-Free Workplace Certification |
| <input checked="" type="checkbox"/> Bid Bond | <input checked="" type="checkbox"/> Lead-Product(s) Certification |
| <input checked="" type="checkbox"/> Notice to Proceed | <input type="checkbox"/> Roofing Contract Financial Interest Certification |
| <input checked="" type="checkbox"/> Terms and Conditions to Contract | <input checked="" type="checkbox"/> Insurance Certificates and Endorsements |
| <input checked="" type="checkbox"/> Noncollusion Declaration | <input checked="" type="checkbox"/> Performance Bond |
| <input checked="" type="checkbox"/> Prevailing Wage Certification | <input checked="" type="checkbox"/> Payment Bond |
| <input checked="" type="checkbox"/> Workers' Compensation Certification | <input checked="" type="checkbox"/> Exhibit A ("Scope of Work") |
| <input checked="" type="checkbox"/> Criminal Background Investigation Certification | <input checked="" type="checkbox"/> Plans |
| <input checked="" type="checkbox"/> Asbestos & Other Hazardous Materials Certification | <input checked="" type="checkbox"/> Work Specifications |
| <input checked="" type="checkbox"/> Tobacco-Free Certification | <input checked="" type="checkbox"/> Exhibit B ("Project Schedule") |

- 9. **Notice.** Any notice required or permitted to be given under this Agreement shall be deemed to have been given, served, and received if given in writing and either personally delivered or sent by overnight delivery service addressed as follows:

District:
Livermore Valley Joint Unified School District
685 East Jack London Boulevard
Livermore, CA 94551
Attn: Kim McNeely, Bond Program Director

Contractor:
Westside Landscape & Concrete Inc.
27107 State Highway 33
Newman, CA 95360
Attn: Jaime I. Alvarado

Any notice personally given shall be effective upon receipt. Any notice sent by overnight delivery service shall be effective the business day next following delivery thereof to the overnight delivery service.

ACCEPTED AND AGREED on the date indicated below. By signing this Contract, Contractor certifies, under penalty of perjury, that all the information provided in the Contract Documents is true, complete, and correct:

Dated: _____

Dated: _____

Livermore Valley Joint Unified School District

Westside Landscape & Concrete Inc

By: _____

By: _____

Print Name: _____

Print Name: _____

Print Title: _____

Print Title: _____

Information regarding Contractor:

Type of Business Entity:

- Individual
- Sole Proprietorship
- Partnership
- Limited Partnership
- Corporation
- Limited Liability Company
- Other: _____

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| _____ Employer Identification and/or Social Security Number NOTE: United States Code, title 26, sections 6041 and 6109 require non-corporate recipients of \$600 or more to furnish their taxpayer identification number to the payer. The United States Code also provides that a penalty may be imposed for failure to furnish the taxpayer identification number. In order to comply with these rules, the District requires your federal tax identification number or Social Security number, whichever is applicable. |
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TERMS AND CONDITIONS TO CONTRACT

1. NOTICE TO PROCEED: District shall provide a Notice to Proceed to Contractor pursuant to the Contract at which time Contractor shall proceed with the Work.

2. SITE EXAMINATION: Contractor has examined the Site and certifies that it accepts all measurements, specifications and conditions affecting the Work to be performed at the Site. By submitting its bid and signing this Contract, Contractor warrants that it has made all Site examination(s) that it deems necessary as to the condition of the Site, its accessibility for materials, workers and utilities, and Contractor's ability to protect existing surface and subsurface improvements. No claim for allowance of time or money will be allowed as to any other undiscovered condition on the Site.

3. CONSTRUCTION SCHEDULE / SUBCONTRACTOR LIST:

Contractor shall provide the District a Construction Schedule for the Work and a Subcontractor List as indicated in Contractor's Bid Form. Both the Construction Schedule and Subcontractor List are subject to the District's approval.

4. EQUIPMENT AND LABOR: The Contractor shall furnish all tools, equipment, apparatus, facilities, transportation, labor, and material necessary to furnish the Services, the Services to be performed at such times and places as directed by and subject to the approval of the authorized District representative indicated in the Work specifications attached hereto. Contractor's obligations hereunder shall include, without limitation, providing personal protective equipment ("PPE") to its employees, and requiring that its subcontractors provide PPE equipment to its employees, to prevent the spread of COVID-19 or any other similar virus or derivative strain at the School Site(s).

5. SUBCONTRACTORS: Contractor shall comply with the Subletting and Subcontracting Fair Practices Act (Public Contract Code, section 4100 et. seq.) Contractor shall identify by name and location of the place of business of each subcontractor who will perform work or labor or render service in or about the construction of the Project in an amount in excess of one-half of 1 percent of the Contractor's contract price or ten thousand dollars (\$10,000) whichever is greater. Subcontractors, if any, engaged by the Contractor for any Service or Work under this Contract shall be subject to the approval of the District. Contractor agrees to bind every subcontractor by the terms of the Contract as far as such terms are applicable to subcontractor's work, including, without limitation, all indemnification, insurance, bond, and warranty requirements. If Contractor subcontracts any part of this Contract, Contractor shall be fully responsible to the District for acts and omissions of its subcontractor and of persons either directly or indirectly employed by itself. Nothing contained in the Contract Documents shall create any contractual relations between any subcontractor and the District.

6. TERMINATION: If Contractor fails to perform the Services and Contractor's duties to the satisfaction of the District, or if Contractor fails to fulfill in a timely and professional manner Contractor's obligations under this Contract, or if Contractor violates or otherwise breaches any of the Terms or Provisions of this Contract, the District shall have the right to terminate this Contract effective immediately upon the District giving written notice thereof to the Contractor. District shall also have the right in

its sole discretion to terminate the Contract for its own convenience. Termination shall have no effect upon any of the rights and obligations of the Parties arising out of any transaction occurring prior to the effective date of termination. Upon termination, Contractor shall provide the District with all documents produced maintained or collected by Contractor pursuant to this Contract, whether or not such documents are final or draft documents.

7. SAFETY AND SECURITY: Contractor is responsible for maintaining safety in the performance of this Contract. Contractor shall be responsible for complying with the District's rules and regulations pertaining to safety, security, and driving on school grounds, particularly when children are present. Contractor is responsible for complying with, and the Contract Price includes the costs of complying with, all applicable federal, state, and/or local statutes, orders, rules, regulations, ordinances, and/or directives relating to construction site safety in connection with COVID-19, and/or any similar virus or derivative strain.

CHANGE IN SCOPE OF WORK: Any change in the scope of the Work, method of performance, nature of materials or price thereof, or any other matter materially affecting the performance or nature of the Work shall not be paid for or accepted by the District unless such change, addition, or deletion is approved in advance and in writing by a valid change order executed by the District. Contractor specifically understands, acknowledges, and agrees that the District shall have the right to request any alterations, deviations, reductions, or additions to the Project or Work, and the cost thereof shall be added to or deducted from the amount of the Contract Price by fair and reasonable valuations. Contractor also agrees to provide the District with all information requested to substantiate the cost of any change order and to inform the District whether the Work will be done by the Contractor or a subcontractor. If Contractor fails to reasonably substantiate any requested change in the scope of work, or Contractor fails to timely cooperate with the District to provide substantiation for the costs of any change order, Contractor waives any claim for additional compensation. In addition to any other information requested, Contractor shall submit, prior to approval of any change order, its request for a time extension (if any), as well as all information necessary to substantiate Contractor's belief that such change will delay the completion of the Work. If Contractor fails to submit its request for a time extension or the necessary supporting information, it shall be deemed to have waived its right to request such extension. Contractor waives any claim for additional compensation for any change in the scope of work if Contractor performs the work without written approval of the District.

8. TRENCH SHORING: If this Contract is in excess of \$25,000 and is for the excavation of any trench deeper than five (5) feet, Contractor must submit and obtain District's approval and acceptance, in advance of excavation, of 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 of such trench or trenches. If the plan varies from the shoring system standards, the plan shall be prepared by a registered civil or structural engineer.

9. EXCAVATIONS OVER FOUR FEET: If this Contract includes

excavations over four (4) feet, Contractor shall promptly, and before the following conditions are disturbed, notify the District, in writing, of any: (1) Material that the Contractor believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law; (2) Subsurface or latent physical conditions at the Site differing from those indicated; or (3) Unknown physical conditions at the Site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract. The District shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the Contractor's cost of, or the time required for, performance of any part of the Work shall issue a change order under the procedures described in the Contract. In the event that a dispute arises between the District and the Contractor regarding whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the work, the Contractor shall not be excused from any scheduled completion date provided for by the Contract, but shall proceed with all Work. Contractor shall retain any and all rights provided either by Contract or by law which pertain to the resolution of disputes and protests between the contracting parties.

10. LEAD-BASED PAINT: Pursuant to the Lead-Safe Schools Protection Act (Education Code Section 32240 et seq.) and other applicable law, no lead-based paint, lead plumbing and solders, or other potential sources of lead contamination shall be utilized on this Project, and only trained and state-certified contractors, inspectors and workers shall undertake any action to abate existing risk factors for lead. Contractor must execute the Lead-Based Paint Certification, if applicable.

11. WORKERS: Contractor shall at all times enforce strict discipline and good order among its employees and the employees of its subcontractors and shall not employ or work any unfit person or anyone not skilled in work assigned to him or her. Any person in the employ of the Contractor or a subcontractor whom the District may deem incompetent or unfit shall be dismissed from the Site and shall not again be employed at the Site without written consent from the District. Contractor shall ensure that all its employees and employees of its subcontractors shall comply with all applicable construction site safety requirements, including, without limitation, those related to COVID-19 or any other similar virus or derivative strain.

12. DRUG-FREE / TOBACCO FREE / SMOKE FREE POLICY: No drugs, alcohol, tobacco, and/or smoking are allowed at any time in any buildings and/or grounds on District property. No students, staff, visitors, consultants or contractors are to use drugs on these sites.

13. FINGERPRINTING: Contractor shall comply at all times with the provisions of Education Code section 45125.2 regarding the submission of employee fingerprints to the California Department of Justice and the completion of criminal background investigations of its employees, its subcontractor(s), and its subcontractors' employees. Verification of compliance with this section shall be provided in writing to the District prior to each individual's commencement of employment or performing any portion of the Services and prior to permitting contact with any student.

14. CORRECTION OF ERRORS: Contractor shall perform, at its own cost and expense and without reimbursement from the District, any work necessary to correct errors or omissions that are caused by the Contractor's failure to comply with the standard of care required herein. If Contractor fails to correct any those errors, the District reserves the right to deduct the value of the work from any payment(s) owed to Contractor, or to perform the work itself and deduct from any payment(s) owed to contractor the cost to perform the work.

15. FAILURE TO PERFORM. If the District at any time believes that the Contractor is behind schedule, is failing to construct the Project pursuant to the Contract Documents, or is otherwise failing to perform any provisions of this Contract, the District, after FORTY-EIGHT (48) hours written notice to the Contractor, may take any action necessary or beneficial to the District to complete the Project, takeover the Work of the Contract, terminate or suspend the Contract as indicated herein, or any combination or portion of those actions. The Contractor shall be liable to the District for any cost incurred by the District in those actions and the District has the right to deduct the cost thereof from any payment then or thereafter due the Contractor.

16. SUBSTITUTIONS: No substitutions of material from those specified in the Work Specifications shall be made without the prior written approval of the District.

17. CONTRACTOR SUPERVISION: Contractor shall provide competent supervision of personnel employed on the job Site to monitor the use of equipment, compliance with construction safety directives relating to COVID-19 or any other similar virus or derivative strain, and the quality of workmanship.

18. CLEAN UP: Debris shall be removed from the Premises. The Site shall be in order at all times when work is not actually being performed and shall be maintained in a reasonably clean condition.

19. ACCESS TO WORK: District representatives shall at all times have access to the Work wherever it is in preparation or in progress. Contractor shall provide safe and proper facilities for such access.

20. PROTECTION OF WORK AND PROPERTY: Contractor shall erect and properly maintain at all times, as required by conditions and progress of the Work, all necessary safeguards, signs, barriers, lights, and security persons for protection of workers and the public and shall post danger signs warning against hazards created by the Work. In an emergency affecting life and safety of life or of Work or of adjoining property, Contractor, without special instruction or authorization from District, is permitted to act at his discretion to prevent such threatened loss or injury.

21. ASSIGNMENT OF CONTRACT: Contractor shall not assign or transfer in any way any or all of its rights, burdens, duties, or obligations under this Contract without the prior written consent of the District.

22. TIME IS OF THE ESSENCE: Time is of the essence in the performance of and compliance with each of the provisions and conditions of this Contract.

23. OCCUPANCY: District reserves the right to occupy buildings at any time before formal Contract completion and such occupancy shall not constitute final acceptance or approval of any part of the Work covered by this Contract, nor shall such occupancy extend the date specified for completion of the Work.

24. FORCE MAJEURE CLAUSE: Contractor shall be excused from

performance hereunder during the time and to the extent that it is prevented from obtaining delivery, or performing by act of God, fire, strike, loss, or shortage of transportation facilities, lock-out, commandeering of materials, product, plant, or facilities by the government, when satisfactory evidence thereof is presented to the District, provided that it is satisfactorily established that the non-performance is not due to the fault or neglect of Contractor.

Any delay associated with Covid-19, or any derivative or similar strain thereof, or any federal, state, or local order relating thereto, shall not be considered a Force Majeure Event unless it renders Contractor's performance of the Work impossible, and that event was not reasonably foreseeable at the time of the execution of the Contract.

25. INDEMNIFICATION / HOLD HARMLESS CLAUSE: To the furthest extent permitted by California law, Contractor shall defend, indemnify, and hold free and harmless the District, its agents, representatives, officers, Contractors, employees, trustees, and volunteers ("the indemnified parties") from any and all claims, demands, causes of action, costs, expenses, liability, loss, damage or injury of any kind, in law or equity, including without limitation the payment of all consequential damages, arising out of, pertaining to or relating to, in whole or in part, the negligence, recklessness, errors or omissions, or willful misconduct of Contractor, its officials, officers, employees, subcontractors, Contractors, or agents directly or indirectly arising out of, connected with, or resulting from the performance of the Services or from any activity, work, or thing done, permitted, or suffered by the Contractor in conjunction with this Contract, unless the claims are caused wholly by the sole negligence or willful misconduct of the indemnified parties. The District shall have the right to accept or reject any legal representation that Contractor proposes to defend the indemnified parties.

26. PAYMENT: On a monthly basis, Contractor shall submit an application for payment based upon the estimated value for materials delivered or Services performed under the Contract as of the date of submission ("Application for Payment"). Within thirty (30) days after District's approval of the Application for Payment, Contractor shall be paid a sum equal to ninety-five percent (95%) of the value of the Work performed (as verified by Architect and Inspector and certified by Contractor) up to the last day of the previous month, less the aggregate of previous payments and amount to be withheld. The District may deduct from any payment an amount necessary to protect the District from loss because of: (1) liquidated damages which have accrued as of the date of the application for payment; (2) any sums expended by the District in performing any of Contractor's obligations under the Contract which Contractor has failed to perform or has performed inadequately; (3) defective Work not remedied; (4) stop notices as allowed by state law; (5) reasonable doubt that the Work can be completed for the unpaid balance of the total Contract Price or by the scheduled completion date; (6) unsatisfactory prosecution of the Work by Contractor; (7) unauthorized deviations from the Contract; (8) failure of the Contractor to maintain or submit on a timely basis proper and sufficient documentation as required by the Contract or by District during the prosecution of the Work; (9) erroneous or false estimates by the Contractor of the value of the Work performed; (10) any sums representing expenses, losses, or damages, as determined by the District, incurred by the District for

which Contractor is liable under the Contract; and (11) any other sums which the District is entitled to recover or withhold from Contractor under the terms of the Contract or pursuant to state law, including section 1727 of the California Labor Code. The failure by the District to deduct any of these sums from a progress payment shall not constitute a waiver of the District's right to recover those sums. The District shall retain five percent (5%) from all amounts owing as retention. Retention shall be paid pursuant to Public Contract Code sections 7107 and 7200.

27. PERMITS AND LICENSES: Contractor and all of its employees, agents, and subcontractors shall secure and maintain in force, at Contractor's sole cost and expense, all licenses and permits as are required by law, in connection with the furnishing of materials, supplies, or Services herein listed.

28. INDEPENDENT CONTRACTOR STATUS: While engaged in carrying out the Services of this Contract, the Contractor is an independent contractor, and not an officer, employee, agent, partner, or joint venture of the District. Contractor shall be solely responsible for its own Worker's Compensation insurance, taxes, and other similar charges or obligations. Contractor shall be liable for its own actions, including its negligence or gross negligence, and shall be liable for the acts, omissions, or errors of its agents or employees.

29. ANTI-DISCRIMINATION: It is the policy of the District that in connection with all work performed under contracts there be no discrimination against any employee engaged in the work because of race, color, ancestry, national origin, or religious creed, and therefore the Contractor agrees to comply with applicable Federal and California laws including, but not limited to the California Fair Employment Practice Act beginning with Government Code Section 12900 and Labor Code Section 1735. In addition, the Contractor agrees to require like compliance by all its subcontractor(s).

30. DISABLED VETERAN BUSINESS ENTERPRISES: Section 17076.11 of the Education Code requires school districts using funds allocated pursuant to the State of California School Facility Program for the construction or modernization of a school building (SFP Funds) to have a participation of at least three percent (3%), per year, of the overall dollar amount expended each year by the school district, for disabled veteran business enterprises (DVBE). If this Contract uses School Facilities Program Funds, Contractor must submit, with its executed Contract, appropriate documentation to the District identifying the steps Contractor has taken to solicit DVBE participation in conjunction with this Contract.

31. WARRANTY/QUALITY: Unless a longer warranty is called for elsewhere in the Contract, Contractor, manufacturer, or their assigned agents shall guarantee the workmanship, product or Services performed against defective workmanship, defects or failures of materials for a minimum period of one (1) year from District's written acceptance of the Work. All workmanship and merchandise must be warranted to be in compliance with applicable California energy, conservation, environmental, and educational standards.

32. CONFIDENTIALITY: Contractor shall maintain the confidentiality of all information, documents, programs, procedures, and all other items that Contractor encounters while performing the Contractor's Services to the extent allowed by law. This requirement shall be ongoing and shall survive the expiration or termination of this Contract and specifically includes all student, parent, and

disciplinary information.

33. COMPLIANCE WITH LAWS: Contractor shall give all notices and comply with all laws, ordinance, rules and regulations bearing on conduct of the Work as indicated or specified. If Contractor observes that any of the Work required by this Contract is at variance with any such laws, ordinance, rules or regulations, Contractor shall notify the District, in writing, and, at the sole option of the District, any necessary changes to the scope of the Work shall be made and this Contract shall be appropriately amended in writing, or this Contract shall be terminated effective upon Contractor's receipt of a written termination notice from the District. If Contractor performs any work that is in violation of any laws, ordinances, rules or regulations, without first notifying the District of the violation, Contractor shall bear all costs arising therefrom.

34. DISPUTES/CLAIMS: Public Contract Code § 9204. Claims between the District and the Contractor shall be resolved in accordance with the procedures established in Public Contract Code § 9204.

▪ Claim. The term "Claim" means a written demand by the Contractor sent by registered mail or certified mail with return receipt requested for:

(1) An extension of the Contract Time, including relief from damages or penalties assessed by the District for delay;

(2) Payment of money or damages arising from work done by, or on behalf of, the Contractor pursuant to the Contract and payment that is not otherwise expressly provided for in the Contract Documents or to which the Contractor is not otherwise entitled; or

(3) Payment of an amount that is disputed by the District.

▪ Submission of Claim. A Claim arises upon the District's rejection of a request by the Contractor for a Change Order. The Contractor shall submit the Claim by registered mail or certified mail with return receipt requested to the District's Director of construction and Modernization, with a copy to the Project Manager/Construction Manager. The Contractor shall submit its Claim in writing, together with all Supporting Documentation no later than the earlier of either: (1) thirty (30) days after the date the Claim arises; or (2) sixty (60) days after the date of Completion. It is the intent of the District to evaluate and resolve Claims with the Contractor as close to the events giving rise to such Claims as possible and to avoid stale or late Claims, including late notice and documenting of Claims, and to timely mitigate the issue, event, condition, circumstance and/or cause of the Claim and any adverse impacts or damages related thereto.

▪ Contents of Claim. A Claim must include all Supporting Documentation and a statement identifying it as a Claim signed by an authorized agent or officer of the Contractor under penalty of perjury and including the following language immediately above or before the Contractor's signature: "I declare under penalty of perjury under the laws of the State of California that the information provided and statements made in this Claim are true and correct, substantiated and of merit." The Contractor recognizes and acknowledges that this requirement is not a mere formality but is intended to ensure that the Contractor only submits Claims that it believes are true and correct, substantiated and have merit.

▪ Subcontractor Claims. Pursuant to Public Contract Code § 9204(d)(5), a Subcontractor may request in writing, either on its own behalf or on behalf of a lower tier Subcontractor, that the Contractor submit to the District a claim for work which was performed by the Subcontractor or by a lower tier Subcontractor on behalf of the Subcontractor. The Subcontractor requesting that the claim be submitted to the District shall furnish reasonable documentation to support the claim. Regardless of whether or not the Contractor decides to submit the Subcontractor's claim to the District, Contractor shall provide a copy of the Subcontractor's written request, including all supporting documentation, to the Project Manager/Construction Manager within ten (10) days of Contractor's receipt of the request. In the event the Contractor agrees to submit a Subcontractor's claim to the District, the Contractor shall submit such claim as a request for a Change Order, unless such claim was previously submitted to the District as a request for a Change Order. Within forty-five (45) days of receipt of the Subcontractor's written request, the Contractor shall notify the Subcontractor in writing as to whether the Contractor submitted the claim to the District and, if the Contractor did not submit the claim, the Contractor shall provide the Subcontractor with a written statement of the reasons for not having done so and shall concurrently provide a copy of such written statement to the Project Manager/Construction Manager. In the event the Contractor includes supporting documentation with such written statement, the Contractor shall concurrently provide a copy of such supporting documentation to the Project Manager/Construction Manager. If the Contractor submits a Claim on behalf of a Subcontractor, the Claim shall include a statement in writing and signed by an authorized agent or officer of the Contractor under penalty of perjury that includes the following language immediately above or before the Contractor's signature: "I declare under penalty of perjury under the laws of the State of California that [insert name of Contractor] has thoroughly evaluated the claim of [insert name of Subcontractor] and determined that the information provided and statements made in the claim are true and correct, substantiated and of merit."

▪ District Review of Claim. Upon receipt of a Claim, the District shall review the Claim and, within a period not to exceed forty-five (45) days, shall provide Contractor a written statement identifying what portion of the Claim is disputed and what portion is undisputed. Upon receipt of a Claim, the District and the Contractor may, by mutual written agreement, extend the forty-five (45) day time period. The District shall process and make payment of any undisputed portion of a Claim within sixty (60) days after the District issues its written statement. Failure by the District to provide a written statement in response to a Claim from the Contractor within the forty-five (45) day time period, or within an agreed upon extended time period, shall result in the Claim being deemed rejected in its entirety. A Claim that is rejected by reason of the District's failure to respond, or failure to timely respond, to the Claim shall not constitute an adverse finding regarding the merits of the Claim or the claimant's responsibility or qualifications.

▪ Meet and Confer Meeting. If the Contractor disputes the

District's written response, or if the District fails to respond within the time frame prescribed above, the Contractor, within fifteen (15) days of the District's written response or, if the District fails to respond, within fifteen (15) days after the District's response was due, may demand, in a writing sent to the District's Superintendent by registered mail or certified mail, return receipt requested, with a copy to the District's Director of Construction and Modernization, and Project Manager/Construction Manager, an informal conference to meet and confer for settlement of the issues in dispute. The District shall schedule a meet and confer conference within thirty (30) days of its receipt of the Contractor's written demand.

▪ **Mediation.** Within ten (10) business days following the conclusion of the meet and confer conference, if the Claim or any portion of the Claim remains in dispute, the District shall provide the Contractor a written statement identifying the portion of the Claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the Claim shall be processed and made within sixty (60) days after the District issues its written statement. Any disputed portion of the Claim, as identified by the Contractor in writing, shall be submitted to nonbinding mediation. The expenses and fees of the mediator and the administrative fees shall be divided among the parties equally. Each party shall pay its own legal fees, witness fees, and other expenses. The District and the Contractor shall mutually agree to a mediator within ten (10) business days after the disputed portion of the Claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the Claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. The foregoing notwithstanding, pursuant to Public Contract Code § 9204(f), the parties may mutually agree in writing to waive mediation.

▪ Pending resolution of the dispute, Contractor agrees it will neither rescind the Contract nor stop the progress of the Work but will allow determination by the court of the State of California, in the county in which the District's administration office is located, having competent jurisdiction of the dispute.

▪ Nothing in this Article shall prevent the Parties from resolving any disputes or claims pursuant to Public Contract Code section 20104, et seq., if applicable.

▪ Nothing in this Contract, waives, modifies or tolls the Contractor's obligation to present a timely claim under Government Code § 910, et seq. Therefore, in addition to complying with the contractual Claims procedures, the Contractor is required to present claims to the District pursuant to Government Code § 910, et seq.

35. LABOR CODE REQUIREMENTS: Provided that the Contract Price is more than \$1,000, and the Work is a "public works" under the Labor Code, the parties agree as follows:

- The Work is subject to compliance monitoring and enforcement by the Department of Industrial Relations.
- District hereby provides notice of the requirements described in Labor Code § 1771.1(a) that a contractor or

subcontractor shall not be qualified to bid on, be listed in a bid or proposal, or engage in the performance of any contract for public work, unless currently registered and qualified to perform public work pursuant to Labor Code § 1725.5.

▪ Contractor acknowledges that all or a portion of the Services under this Contract are a public work, and that it and its subcontractors have complied with Labor Code § 1725.5, including, without limitation, the registration requirements thereof.

▪ Contractor shall post all required job site notices and shall comply with all applicable requirements prescribed thereby, including but not limited to Labor Code § 1771.4.

▪ Contractor shall comply with all applicable provisions of the Labor Code, Division 3, Part 7, Chapter 1, Articles 1-5, including, without limitation, the payment of the general prevailing per diem wage rates for public work projects of more than one thousand dollars (\$1,000).

▪ Copies of the prevailing rate of per diem wages are on file with the District.

▪ Contractor and each subcontractor shall comply with Chapter 1 of Division 2, Part 7 of the Labor Code, beginning with § 1720, and including §§ 1735, 1777.5 and 1777.6, forbidding discrimination, and §§ 1776, 1777.5 and 1777.6 concerning the employment of apprentices by Contractor or subcontractors. Willful failure to comply may result in penalties, including loss of the right to bid on or receive public works contracts. Contractor shall comply with Labor Code § 1777.5 pertaining to prevailing wage compensation to apprentices for preemployment activities.

36. PAYROLL RECORDS: Contractor and its subcontractor(s) shall keep accurate certified payroll records of employees and make them available to the District immediately upon request.

37. AUDIT: Contractor shall establish and maintain books, records, and systems of account, in accordance with generally accepted accounting principles, reflecting all business operations of Contractor transacted under this Contract. Contractor shall retain these books, records, and systems of account during the Term of this Contract. Contractor shall permit the District, its agent, other representatives, or an independent auditor to audit, examine, and make excerpts, copies, and transcripts from all books and records, and to make audit(s) of all billing statements, invoices, records, and other data related to the Services covered by this Contract. Audit(s) may be performed at any time, provided that the District shall give reasonable prior notice to Contractor and shall conduct audit(s) during Contractor's normal business hours, unless Contractor otherwise consents.

38. ANTI-TRUST CLAIM: Contractor and its subcontractor(s) agree to assign to the District all rights, title, and interest in and to all causes of action they may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the Contract or a subcontract. This assignment shall be made and become effective at the time the District tenders final payment to the Contractor, without further acknowledgment by the Parties.

39. GOVERNING LAW: This Contract shall be governed by and construed in accordance with the laws of the State of California

with venue of any action in a in the county in which the District's administration office is located.

40. PROVISIONS REQUIRED BY LAW DEEMED INSERTED: Each and every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein and this Contract shall be read and enforced as though it were included therein.

41. BINDING CONTRACT: This Contract shall be binding upon the Parties hereto and upon their successors and assigns, and shall inure to the benefit of the Parties and their successors and assigns.

42. DISTRICT WAIVER: District's waiver of any term, condition, covenant or waiver of a breach of any term, condition or covenant shall not constitute the waiver of any other term, condition or covenant or the waiver of a breach of any other term, condition or

covenant.

43. INVALID TERM: If any provision of this Contract is declared or determined by any court of competent jurisdiction to be illegal, invalid or unenforceable, the legality, validity or enforceability of the remaining parts, terms and provisions shall not be affected thereby, and said illegal, unenforceable or invalid part, term or provision will be deemed not to be a part of this Contract.

44. ENTIRE CONTRACT: This Contract sets forth the entire Contract between the Parties hereto and fully supersedes any and all prior agreements, understanding, written or oral, between the Parties hereto pertaining to the subject matter thereof. This Contract may be modified only by a writing evidencing the Parties' mutual consent.

CERTIFICATIONS TO BE COMPLETED BY CONTRACTOR

THE UNDERSIGNED MUST CHECK EACH BOX AND EXECUTE THIS FORM AND HEREBY CERTIFIES TO THE GOVERNING BOARD OF THE DISTRICT THAT:

- He/she is a representative of the Contractor,
- He/she is familiar with the facts herein certified and acknowledged,
- He/she is authorized and qualified to execute this Agreement and these certifications on behalf of Contractor and that by executing this Agreement he/she is certifying the following items.

Labor Code Sections 1860-1861 (Workers' Compensation). In accordance with Labor Code section 3700, every contractor will be required to secure the payment of compensation to his or her employees. I acknowledge and certify under penalty of perjury that I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.

Government Code Sections 8355-8357 (Drug-Free Workplace). I acknowledge and certify under penalty of perjury that I will provide a drug-free workplace by doing all of the following:

- (1) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited in the person's or organization's workplace and specifying the actions that will be taken against employees for violations of the prohibition.
- (2) Establishing a drug-free awareness program to inform employees about all of the following:
 - (A) The dangers of drug abuse in the workplace.
 - (B) The person's or organization's policy of maintaining a drug-free workplace.
 - (C) Any available drug counseling, rehabilitation, and employee assistance programs.
 - (D) The penalties that may be imposed upon employees for drug abuse violations.
- (3) Requiring that each employee engaged in the performance of the contract or grant be given a copy of the statement required by subdivision (a) and that, as a condition of employment on the contract or grant, the employee agrees to abide by the terms of the statement.

I also acknowledge that this Contract may be subject to suspension of payments under the contract or grant or termination of the contract or grant, or both, and the contractor or grantee thereunder may be subject to debarment, in accordance with the requirements of the above-referenced statute, if the contracting or granting agency determines that any of the following has occurred:

- (1) The contractor or grantee has made a false certification under Section 8355.
- (2) The contractor or grantee violates the certification by failing to carry out the requirements of subdivisions (a) to (c), inclusive, of Section 8355.

I also acknowledge that the Department of General Services shall establish and maintain a list of individuals and organizations whose contracts or grants have been canceled due to failure to comply with the above-referenced statute. This list shall be updated monthly and published each month. No state agency shall award a contract or grant to a person or organization on the published list until that person or organization has complied with the above-referenced statute.

Tobacco-Free Environment. Pursuant to, without limitation, 20 U.S.C. section 6083, Labor Code section 6400 et seq., Health & Safety Code section 104350 et seq. and District Board Policies, all District sites, including the Project site, are tobacco-free environments. Smoking and the use of tobacco products by all persons is prohibited on or in District property. District property includes school buildings, school grounds, school owned vehicles and vehicles owned by others while on District property.

I acknowledge and certify under penalty of perjury that I am aware of the District's policy regarding tobacco-free

environments at District sites, including the Project site and acknowledge and certify that I will adhere to the requirements of that policy and not permit any of my firm's employees, agents, subcontractors, or my firm's subcontractors' employees or agents to use tobacco and/or smoke on the Project site. The District also prohibits electronic cigarettes, "vaping" or similar product uses on District sites.

No Hazardous Materials. I acknowledge and certify under penalty of perjury that no Asbestos, or Asbestos-Containing Materials, polychlorinated biphenyl (PCB), or any material listed by the federal or state Environmental Protection Agency or federal or state health agencies as a hazardous material, or any other material defined as being hazardous under federal or state laws, rules, or regulations ("New Hazardous Material"), shall be furnished, installed, or incorporated in any way into the Project or in any tools, devices, clothing, or equipment used to affect any portion of Contractor's work on the Project for District. I have instructed our employees with respect to the above-mentioned standards, hazards, risks, and liabilities.

- (i) Asbestos and/or asbestos-containing material shall be defined as all items containing but not limited to chrysotile, crocidolite, amosite, anthophyllite, tremolite, and actinolite. Any or all material containing greater than one-tenth of one percent (.1%) asbestos shall be defined as asbestos-containing material. Any disputes involving the question of whether or not material is New Hazardous Material shall be settled by electron microscopy or other appropriate and recognized testing procedure, at the District's determination. The costs of any such tests shall be paid by Contractor if the material is found to be New Hazardous Material.
- (ii) All Work or materials found to be New Hazardous Material or Work or material installed with equipment containing "New Hazardous Material," will be immediately rejected and this Work will be removed at Contractor's expense at no additional cost to the District.

The Contractor must immediately notify the District within two (2) Business Days, if the Contractor finds and before it disturbs, any material that the Contractor believes may be hazardous waste, as defined in section 25117 of the Health and Safety Code, and requires removal to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law

I acknowledge and certify under penalty of perjury that this certification provides notice to the Contractor that:

- (1) The Contractor's work may disturb lead-containing building materials.
- (2) The Contractor must notify the District if any work may result in the disturbance of lead-containing building materials.

Lead as a Health Hazard. Lead poisoning is recognized as a serious environmental health hazard facing children today. Even at low levels of exposure, much lower than previously believed, lead can impair the development of a child's central nervous system, causing learning disabilities, and leading to serious behavioral problems. Lead enters the environment as tiny lead particles and lead dust disburse when paint chips, chinks, peels, wears away over time, or is otherwise disturbed. Ingestion of lead dust is the most common pathway of childhood poisoning; lead dust gets on a child's hands and toys and then into a child's mouth through common hand-to-mouth activity. Exposures may result from construction or remodeling activities that disturb lead paint, from ordinary wear and tear of windows and doors, or from friction on other surfaces.

Ordinary construction and renovation or repainting activities carried out without lead-safe work practices can disturb lead-based paint and create significant hazards. Improper removal practices, such as dry scraping, sanding, or water blasting painted surfaces, are likely to generate high volumes of lead dust.

Because the Contractor and its employees will be providing services for the District, and because the Contractor's work may disturb lead-containing building materials, **Contractor is hereby notified** of the potential presence of lead-containing materials located within certain buildings utilized by the District. All school buildings built prior to 1993 are presumed to contain some lead-based paint until sampling proves otherwise.

(i) **Overview of California Law**

Education Code section 32240 et seq. is known as the Lead Safe Schools Protection Act. Under this act, the

Department of Health Services ("DHS") is to conduct a sample survey of schools in the State of California for the purpose of developing risk factors to predict lead contamination in public schools. (Ed. Code, § 32241.)

Any school that undertakes any action to abate existing risk factors for lead is required to utilize trained and state-certified contractors, inspectors, and workers. (Ed. Code, § 32243, subd. (b).) Moreover, lead-based paint, lead plumbing, and solders, or other potential sources of lead contamination, shall not be utilized in the construction of any new school facility or the modernization or renovation of any existing school facility. (Ed. Code, § 32244.)

Both the Federal Occupational Safety and Health Administration ("Fed/OSHA") and the California Division of Occupational Safety and Health ("Cal/OSHA") have implemented safety orders applicable to all construction work where a contractor's employee may be occupationally exposed to lead.

The OSHA Regulations apply to all construction work where a contractor's employee may be occupationally exposed to lead. The OSHA Regulations contain specific and detailed requirements imposed on contractors subject to that regulation. The OSHA Regulations define construction work as work for construction, alteration, and/or repair, including painting and decorating. It includes, but is not limited to, the following:

- a. Demolition or salvage of structures where lead or materials containing lead are present;
- b. Removal or encapsulation of materials containing lead;
- c. New construction, alteration, repair, or renovation of structures, substrates, or portions thereof, that contain lead, or materials containing lead;
- d. Installation of products containing lead;
- e. Lead contamination/emergency cleanup;
- f. Transportation, disposal, storage, or containment of lead or materials containing lead on the site or location at which construction activities are performed; and
- g. Maintenance operations associated with the construction activities described in the subsection.

Because it is assumed by the District that all painted surfaces (interior as well as exterior) within the District contain some level of lead, it is imperative that the Contractor, its workers and subcontractors fully and adequately comply with all applicable laws, rules and regulations governing lead-based materials (including title 8, California Code of Regulations, section 1532. 1).

The Contractor must notify the District if any Work may result in the disturbance of lead-containing building materials. Any and all Work that may result in the disturbance of lead-containing building materials must be coordinated through the District. A signed copy of this Certification must be on file prior to beginning Work on the Project, along with all current insurance certificates.

(ii) **Renovation, Repair and Painting Rule, Section 402(c)(3) of the Toxic Substances Control Act**

In 2008, the U.S. Environmental Protection Agency, issued a rule pursuant to the authority of Section 402(c)(3) of the Toxic Substances Control Act, requiring lead safe work practices to reduce exposure to lead hazards created by renovation, repair and painting activities that disturb lead-based paint (Renovation, Repair and Painting Rule). Renovations in homes, childcare facilities, and schools built prior to 1978 must be conducted by certified renovations firms, using renovators with accredited training, and following the work practice requirements to reduce human exposures to lead.

Contractor, its workers and subcontractors must fully and adequately comply with all applicable laws, rules and regulations governing lead-based materials, including those rules and regulations appearing within title 40 of the Code of Federal Regulations as part 745 (40 CFR 745).

The requirements apply to all contractors who disturb lead-based paint in a six-square-foot area or greater indoors or a

20-square-foot area outdoors. If a DPH-certified inspector or risk assessor determines that a home constructed before 1978 is lead-free, the federal certification is not required for anyone working on that particular building.

(iii) **Contractor's Liability**

If the Contractor fails to comply with any applicable laws, rules, or regulations, and that failure results in a site or worker contamination, the Contractor will be held solely responsible for all costs involved in any required corrective actions, and shall defend, indemnify, and hold harmless the District, pursuant to the indemnification provisions of the Contract, for all damages and other claims arising therefrom.

If lead disturbance is anticipated in the Work, only persons with appropriate accreditation, registrations, licenses, and training shall conduct this Work.

It shall be the responsibility of the Contractor to properly dispose of any and all waste products, including, but not limited to, paint chips, any collected residue, or any other visual material that may occur from the prepping of any painted surface. It will be the responsibility of the Contractor to provide the proper disposal of any hazardous waste by a certified hazardous waste hauler. This company shall be registered with the Department of Transportation (DOT) and shall be able to issue a current manifest number upon transporting any hazardous material from any school site within the District.

The Contractor shall provide the District with any sample results prior to beginning Work, during the Work, and after the completion of the Work. The District may request to examine, prior to the commencement of the Work, the lead training records of each employee of the Contractor.

I acknowledge and certify under penalty of perjury, that:

1. I have received notification of potential lead-based materials on the District's property;
2. I am knowledgeable regarding and will comply with all applicable laws, rules, and regulations governing work with, and disposal of, lead.

Imported Materials. All soils, aggregate, or related materials ("Fill") that Contractor, a Subcontractor, agent or supplier, in any way, provides or delivers and/or supplies to the Project Site shall be free of any and all hazardous material as defined in section 25260 of the Health and Safety Code, shall satisfy the requirements of any environmental review of the Project performed pursuant to the statutes and guidelines of the California Environmental Quality Act, sections 21000 et seq. of the Public Resources Code ("CEQA"), and shall comply with the requirements of sections 17210 et seq. of the Education Code, including requirements for a Phase I environmental assessment acceptable to the State of California Department of Education and Department of Toxic Substances Control. I acknowledge that, to the furthest extent permitted by California law, the indemnification provisions in the Contract Documents apply to, without limitation, any claim(s) connected with providing, delivering, and/or supplying Fill.

Roofing Contract Financial Interest Certification (Public Contract Code § 3006)

I, _____ **[Your Name]**, _____ **[Firm Name]**
certify that I have not offered, given, or agreed to give, received, accepted, or agreed to accept, any gift, contribution, or any financial incentive whatsoever to or from any person in connection with a roof project contract or subcontract on the Project. As used in this certification, "person" means any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

I, _____ **[Your Name]**, _____ **[Firm Name]**
certify that I do not have, and throughout the duration of the Contract, I will not have, any financial relationship in connection with the performance of the Contract with any architect, engineer, roofing consultant, materials manufacturer, distributor, or vendor that is not disclosed below.

I, _____ **[Your Name]**, _____ **[Firm Name]**
have the following financial relationships with an architect, engineer, roofing consultant, materials manufacturer,

distributor, or vendor, or other person in connection with the following roof project contract:

Name of firm ("Firm"): _____

Mailing address: _____

Address of branch office used for this Project: _____

If subsidiary, name and address of parent company: _____

For Projects without substantive roofing components, check the following box and execute this certification:

- The Work on the Contract (1) does not include the replacement or repair of a roof or (2) is a repair of twenty five percent (25%) or less of the roof, (3) or is a repair project that has a total cost of twenty one thousand dollars (\$21,000) or less.

I acknowledge and certify under penalty of perjury that I am duly authorized to legally bind the Contractor to all provisions and items included in these certifications, that the contents of these certifications are true, and that these certifications are made under the laws of the State of California.

Date: _____

Proper Name of Contractor: _____

Signature: _____

Print Name: _____

Title: _____

CRIMINAL BACKGROUND INVESTIGATION / FINGERPRINTING CERTIFICATION

The undersigned does hereby certify to the governing board of the District that he/she is a representative of the Contractor, is familiar with the facts herein certified, is authorized and qualified to execute this certificate on behalf of Contractor; and that the information in this Criminal Background Investigation / Fingerprinting Certification is true and correct.

1. **Education Code.** Contractor has taken at least one of the following actions with respect to the Project (check all that apply):

The Contractor has complied with the fingerprinting requirements of Education Code section 45125.1 with respect to all Contractor's employees and all of its subcontractors' employees who may have contact with District pupils in the course of providing services pursuant to the Contract, and the California Department of Justice ("DOJ") has determined (per the DOJ process for Applicant Agencies described more fully on its website, located at:) that none of those employees have been convicted of a felony, as that term is defined in Education Code section 45122.1. A complete and accurate list of Contractor's employees and of all of its subcontractors' employees who may come in contact with District pupils during the course and scope of the Contract is attached hereto; and/or

Pursuant to Education Code section 45125.2, Contractor has installed or will install, prior to commencement of work, a physical barrier at the Project site, that will limit contact between Contractor's employees and District pupils at all times; and/or

Pursuant to Education Code section 45125.2, Contractor certifies that all employees will be under the continual supervision of, and monitored by, an employee of the Contractor who the California Department of Justice has ascertained has not been convicted of a violent or serious felony. The name and title of the employee who will be supervising Contractor's employees and its subcontractors' employees is:

Name: _____ **Title:** _____

The Work on the Contract is at an unoccupied school site and no employee and/or subcontractor or supplier of any tier of Contract shall come in contact with the District pupils.

2. **Megan's Law (Sex Offenders).** I have verified and will continue to verify that the employees of Contractor that will be on the Project site and the employees of the Subcontractor(s) that will be on the Project site are **not** listed on California's "Megan's Law" Website (<http://www.meganslaw.ca.gov/>).

Contractor's responsibility for background clearance extends to all of its employees, subcontractors, and employees of subcontractors coming into contact with District pupils regardless of whether they are designated as employees or acting as independent contractors of the Contractor.

I certify that to the best of my knowledge, the contents of this disclosure are true, or are believed to be true.

Date: _____

Proper Name of Contractor: _____

Signature: _____

Print Name: _____

Title: _____

EXHIBIT A ("SCOPE OF WORK")

PLANS AND WORK SPECIFICATIONS

- "LEO R. CROCE ELEMENTARY PARKING LOT FENCING PROJECT SUMMARY_1-28-2022"
- EXHIBIT A – SCOPE OF WORK & SPECIFICATIONS DATED 01-28-2022 (49 PAGES)
- "Leo R Croce Parking Lot Fencing Project_ADD#1 2022-02-11"



Livermore Valley Joint Unified School District
685 East Jack London Blvd. Livermore, CA 94551

CUPCCAA Bid for

Leo R. Croce Elementary Parking Lot Fencing Project

This is an informal LVJUSD CUPCCA project bid for summer construction by a C13 Licensed Fencing Contractor. Bidders must be on the CUPCCA approved list of contractors for LVJUSD and meet all CUPCCA requirements.

Project: Leo R. Croce Elementary Parking Lot Fencing Project

- Address: 5650 Scenic Ave, Livermore, CA 94551
- Client: Livermore Valley Joint Unified School District
- Construction Managers:
 - Kristine Magpantay, Brian Jemo
 - Kitchell CEM
 - kmagpantay@kitchell.com; bjemo@kitchell.com
 - 510-909-6463; 650-208-7824
- **Bid Due Date: February 15, 2022 @ 3:00 pm**
- **Bids to be received at the Board Room at LVJUSD, 685 East Jack London Blvd, Livermore, CA 94551**
- Drawings: See Attachments and Scope Statement below
- Mandatory job walk will be held on February 9, 2022 @ 2pm. Meet in front of school parking lot shade structures at 5650 Scenic Ave, Livermore, CA 94551.
- Estimated Project Construction Schedule: June 15, 2022 – July 15, 2022

General description of scope: The project scope is to remove and demolish existing chain link fence (approximately 280LF) and remove and demolish existing four-foot-tall decorative fence (approximately 225LF). The existing decorative fence will need to be cut from the adjacent fencing and painted and patched back to match the existing finish.

Additionally, a new six-foot-tall decorative fence (approximately 235LF) with three pedestrian gates and two rolling fire lane and vehicle gates will be added to replace the four-foot-tall decorative fence. See attached plans for width and locations of gates. The new decorative fence is to match the existing adjacent decorative fence.



IDENTIFICATION STAMP
DATE: 1-11-2022
PROJECT: LEO R. CROCE
SCALE: 1/4" = 10'-0"

LIVERMORE VALLEY JOINT UNIFIED SCHOOL DISTRICT
Leo R Croce ES
5550 Bonnie Avenue, Livermore, CA 94551
OVERALL SITE PLAN

REVISION SCHEDULE

| NO. | DESCRIPTION | DATE |
|-----|------------------|------------|
| 1 | ISSUE FOR PERMIT | 01/28/2022 |

OPPORTUNITY
PROJECT
DATE
DRAWN BY
DATE

SITE PLAN LEGEND

NEW PATH OF TRAVEL (SEE NOTE 1)
EXISTING PATH OF TRAVEL
ASSUMED PROPERTY LINE

NOTES:
1. THIS PROJECT IS SUBJECT TO THE CITY OF LIVERMORE'S DEVELOPMENT ORDINANCES AND THE LIVERMORE VALLEY JOINT UNIFIED SCHOOL DISTRICT'S DEVELOPMENT ORDINANCES. THE PROJECT IS SUBJECT TO THE CITY OF LIVERMORE'S DEVELOPMENT ORDINANCES AND THE LIVERMORE VALLEY JOINT UNIFIED SCHOOL DISTRICT'S DEVELOPMENT ORDINANCES. THE PROJECT IS SUBJECT TO THE CITY OF LIVERMORE'S DEVELOPMENT ORDINANCES AND THE LIVERMORE VALLEY JOINT UNIFIED SCHOOL DISTRICT'S DEVELOPMENT ORDINANCES.

PATH OF TRAVEL NOTES

1. THIS PROJECT IS SUBJECT TO THE CITY OF LIVERMORE'S DEVELOPMENT ORDINANCES AND THE LIVERMORE VALLEY JOINT UNIFIED SCHOOL DISTRICT'S DEVELOPMENT ORDINANCES. THE PROJECT IS SUBJECT TO THE CITY OF LIVERMORE'S DEVELOPMENT ORDINANCES AND THE LIVERMORE VALLEY JOINT UNIFIED SCHOOL DISTRICT'S DEVELOPMENT ORDINANCES. THE PROJECT IS SUBJECT TO THE CITY OF LIVERMORE'S DEVELOPMENT ORDINANCES AND THE LIVERMORE VALLEY JOINT UNIFIED SCHOOL DISTRICT'S DEVELOPMENT ORDINANCES.

SHEET NOTES

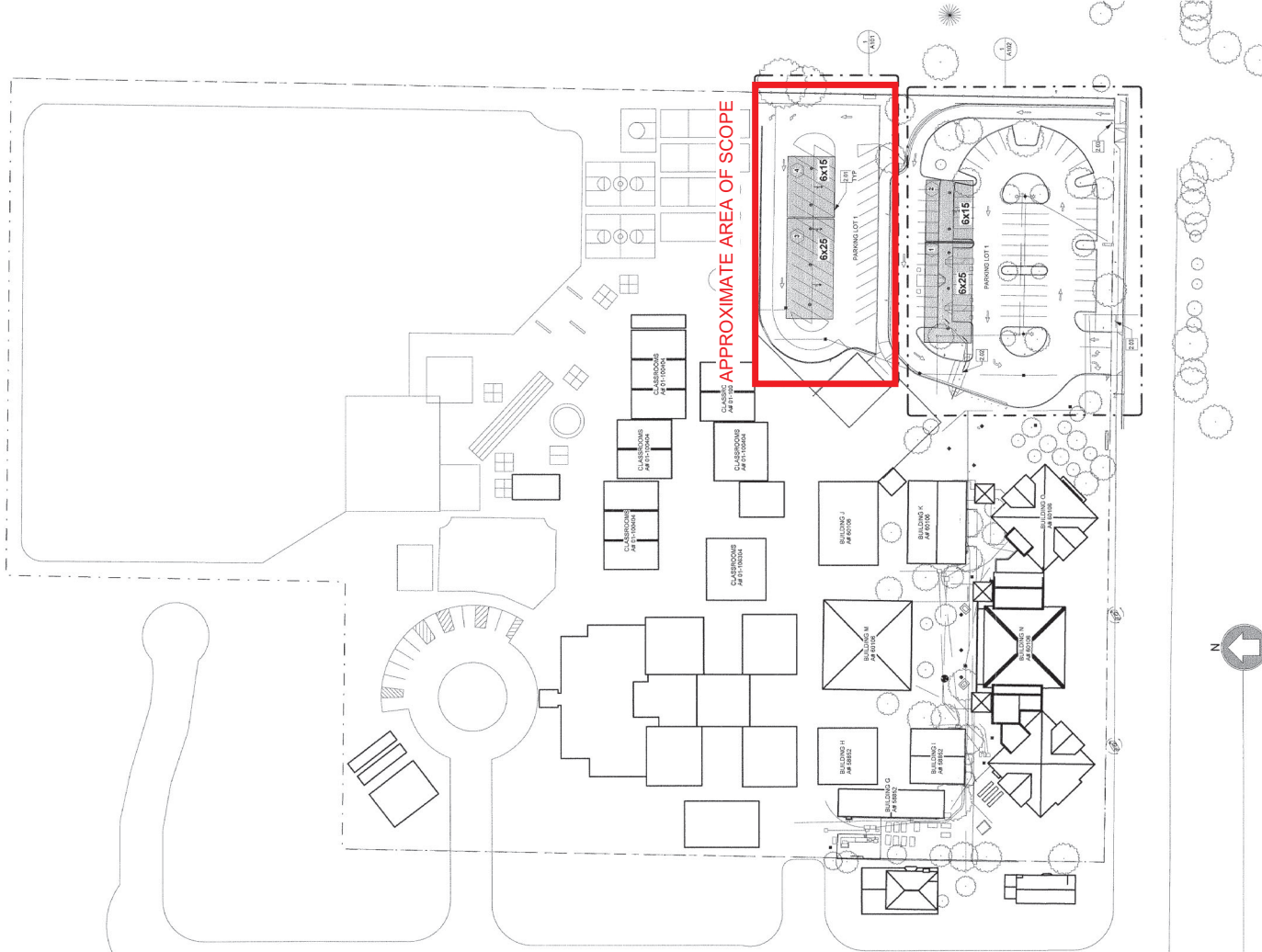
1. SOIL REPORTS SHALL BE SUBMITTED WITHIN 30 DAYS OF THE DATE OF THE PERMIT APPLICATION. THE SOIL REPORTS SHALL BE SUBMITTED WITHIN 30 DAYS OF THE DATE OF THE PERMIT APPLICATION. THE SOIL REPORTS SHALL BE SUBMITTED WITHIN 30 DAYS OF THE DATE OF THE PERMIT APPLICATION.

ARRAY CODE ANALYSIS

| ROW | COLUMN | AREA | PERCENTAGE | PERMITS | PERMITS | PERMITS |
|-----|--------|-----------|------------|---------|---------|---------|
| 1 | 1 | 12,000 SF | 100% | 1 | 1 | 1 |
| 2 | 2 | 12,000 SF | 100% | 1 | 1 | 1 |
| 3 | 3 | 12,000 SF | 100% | 1 | 1 | 1 |

PARKING COUNT SUMMARY

| STANDARD PARKING | ACCESSIBLE PARKING | TOTAL PARKING |
|------------------|--------------------|---------------|
| 111 | 9 | 120 |



**LEO R. CROCE
ELEMENTARY PARKING
LOT FENCING PROJECT
PAGE 1 OF 11**










FOR REFERENCE ONLY

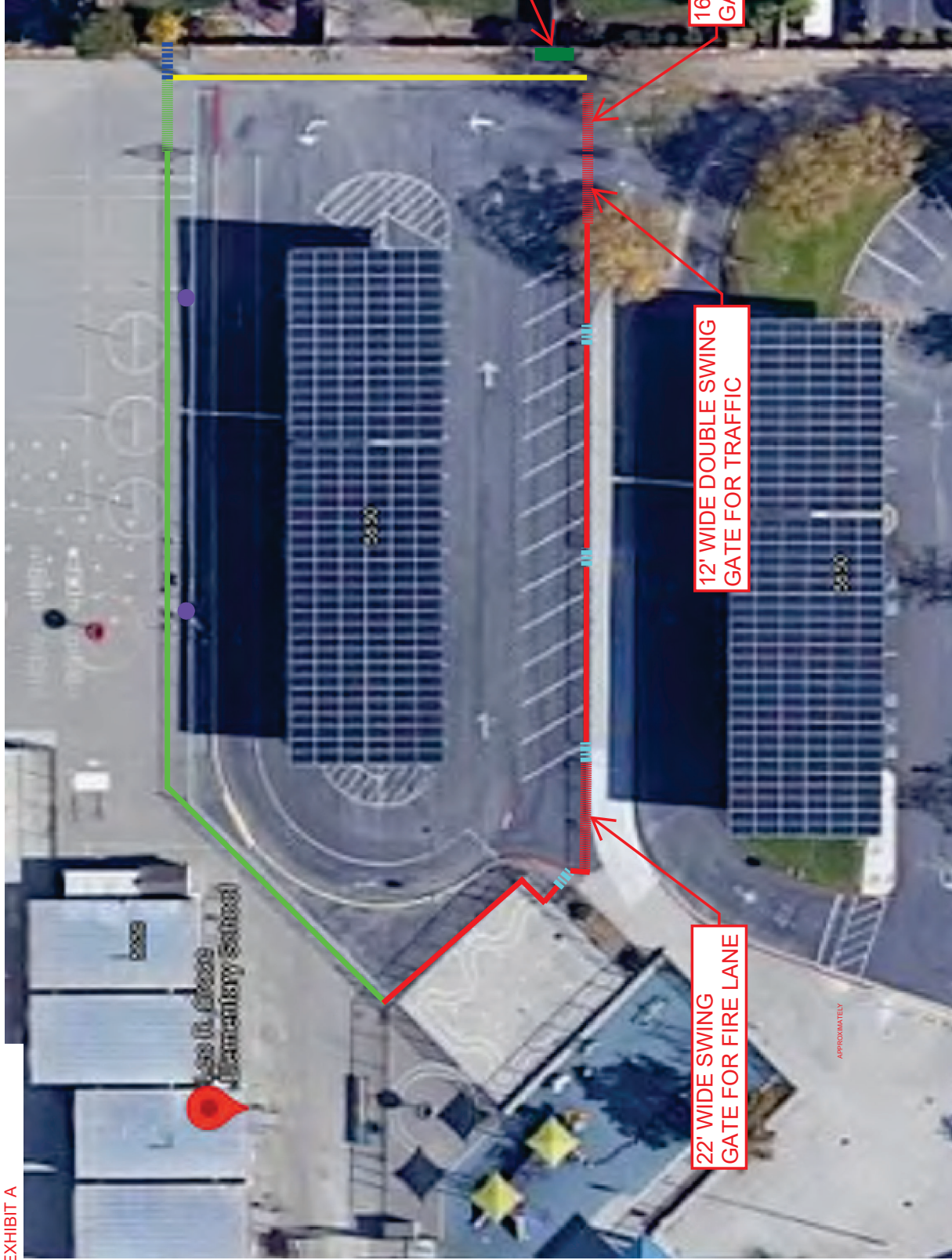
1 OVERALL SITE PLAN
1" = 40'-0"



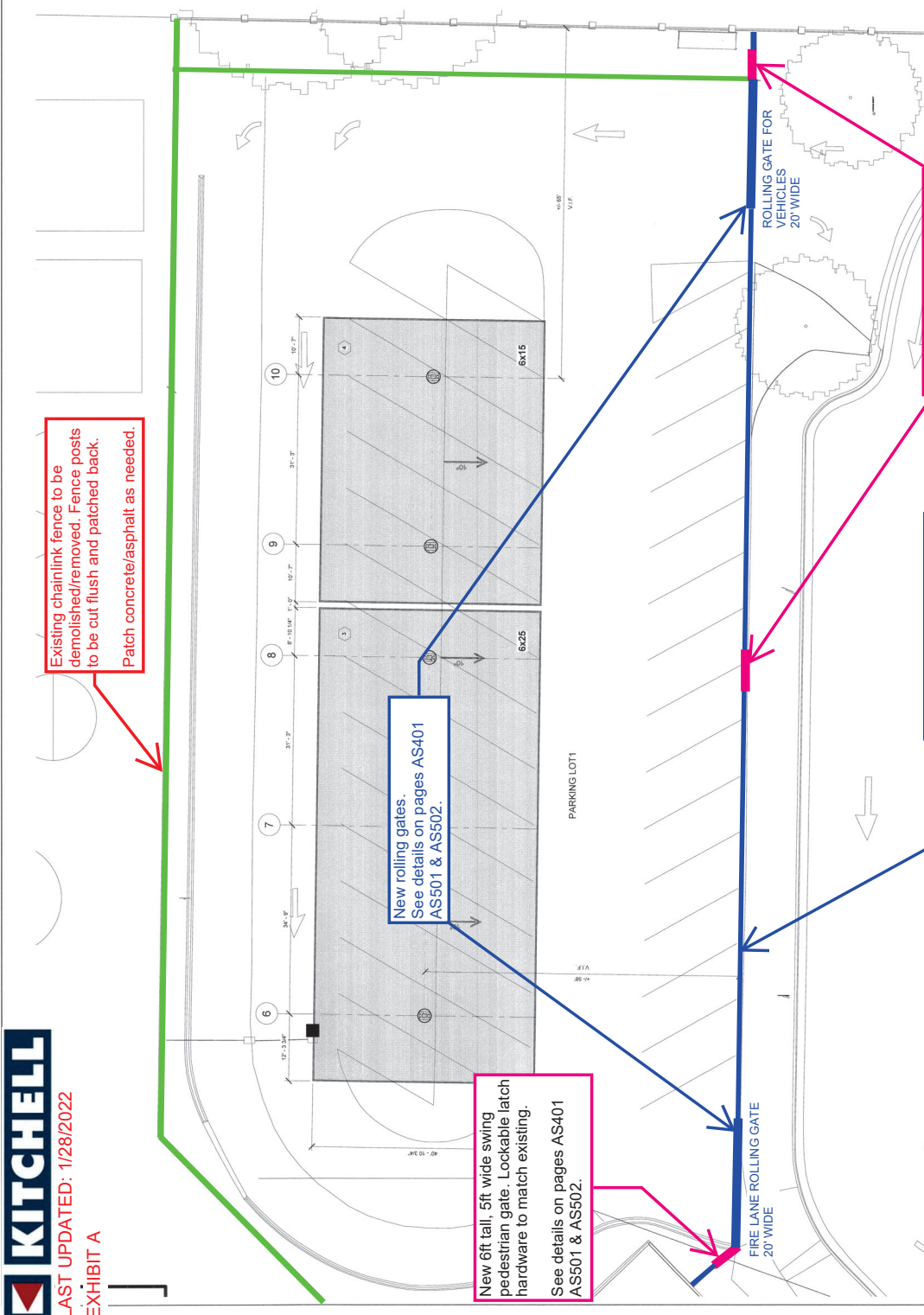
LAST UPDATED: 1/28/2022

EXHIBIT A

-  Existing 4' Chain Link Fence
-  Existing 6' Chain Link Fence
-  Existing 6' Chain Link Swing Double Gate
-  Existing 6' Chain Link Swing Pedestrian Gate
-  Existing 4' Decorative Fence
-  Existing Chain Link Swing Double Gate
-  Existing Chain Link Swing Pedestrian Gate
-  Gas Meter Enclosure
-  Approximate locations of signage posts



Leo R. Croce Elementary - Existing Conditions



SCOPE OF WORK

1 ENLARGED SITE PLAN
1/8" = 1'-0"

SITE PLAN LEGEND

- NEW PATH OF TRAVEL (SEE NOTE 1)
- EXISTING PATH OF TRAVEL
- ASBUILT PROPERTY LINE
- LINE TO BE REMOVED OR REMOVED TO ASBUILT CONDITION (SEE NOTE 1)
- REMOVING AND REINSTALLING EXISTING UTILITY

PATH OF TRAVEL NOTES

1. The term "Path of Travel" includes any path which is used for ingress or egress. It shall include all paths that are used for ingress or egress, whether or not they are shown on the site plan. The term "Path of Travel" shall also include any path that is used for ingress or egress, whether or not it is shown on the site plan. The term "Path of Travel" shall also include any path that is used for ingress or egress, whether or not it is shown on the site plan. The term "Path of Travel" shall also include any path that is used for ingress or egress, whether or not it is shown on the site plan.
2. The term "Path of Travel" shall also include any path that is used for ingress or egress, whether or not it is shown on the site plan. The term "Path of Travel" shall also include any path that is used for ingress or egress, whether or not it is shown on the site plan. The term "Path of Travel" shall also include any path that is used for ingress or egress, whether or not it is shown on the site plan.
3. The term "Path of Travel" shall also include any path that is used for ingress or egress, whether or not it is shown on the site plan. The term "Path of Travel" shall also include any path that is used for ingress or egress, whether or not it is shown on the site plan. The term "Path of Travel" shall also include any path that is used for ingress or egress, whether or not it is shown on the site plan.
4. The term "Path of Travel" shall also include any path that is used for ingress or egress, whether or not it is shown on the site plan. The term "Path of Travel" shall also include any path that is used for ingress or egress, whether or not it is shown on the site plan. The term "Path of Travel" shall also include any path that is used for ingress or egress, whether or not it is shown on the site plan.

SHEET NOTES

1. Solid support structures to be installed such that they do not interfere with the approved ADA path of travel access.
2. All gates shall be constructed in accordance with the approved ADA path of travel access.
3. For each column bearing refer to the section drawings.
4. If the paving to be installed, solid parking and dimensions shall be 2'-0" wide x 18'-0" long. Concrete is existing foundation. Underpinning/Underpinning, footings, 5/8" diameter immediately with any discrepancies per the section drawings.
5. For every time required, see 15(g)(1)(1), Minimum "Threshold"/Chassis Elevation shall be provided by the Contractor at the discretion of the District. If "Threshold" is not provided, the Contractor shall be responsible for providing the "Threshold" at the discretion of the District.

ARRAY CODE ANALYSIS

| Array ID | Code | Area (sq. ft.) | Volume (cu. ft.) | Height (ft.) | Area (sq. ft.) | Volume (cu. ft.) | Height (ft.) |
|----------|------|----------------|------------------|--------------|----------------|------------------|--------------|
| 1 | A-1 | 1,200 | 1,200 | 10 | 1,200 | 1,200 | 10 |
| 2 | A-2 | 1,200 | 1,200 | 10 | 1,200 | 1,200 | 10 |
| 3 | A-3 | 1,200 | 1,200 | 10 | 1,200 | 1,200 | 10 |
| 4 | A-4 | 1,200 | 1,200 | 10 | 1,200 | 1,200 | 10 |
| 5 | A-5 | 1,200 | 1,200 | 10 | 1,200 | 1,200 | 10 |
| 6 | A-6 | 1,200 | 1,200 | 10 | 1,200 | 1,200 | 10 |
| 7 | A-7 | 1,200 | 1,200 | 10 | 1,200 | 1,200 | 10 |
| 8 | A-8 | 1,200 | 1,200 | 10 | 1,200 | 1,200 | 10 |
| 9 | A-9 | 1,200 | 1,200 | 10 | 1,200 | 1,200 | 10 |
| 10 | A-10 | 1,200 | 1,200 | 10 | 1,200 | 1,200 | 10 |

PARKING COUNT SUMMARY

| Category | Count | Percentage |
|------------|-------|------------|
| Total | 111 | 34% |
| Car | 88 | 79% |
| Motorcycle | 4 | 4% |
| Vanpool | 1 | 1% |
| Other | 18 | 16% |

KEYNOTES

2011 New PV Structural Category
2012 Existing Accessible Path of Travel
2013 Existing Accessible Path of Travel

SUNPOWER™
1414 Harbour Way South
Richmond, CA 94804 USA
(510) 540-0550

IDENTIFICATION STAMP
APR 13 11 17 AM
08/11/2017

LIVERMORE VALLEY JOINT UNIFIED SCHOOL DISTRICT
Leo R. Croce ES
5550 Scenic Avenue, Livermore, CA 94551

ENLARGED SITE PLAN

REVISION SCHEDULE

| Design No. | Description |
|------------|-------------|
| 9130377 | |

OPPORTUNITY: 11716
PROJECT: 9130377
DATE: 9/13/17
DRAWN BY: DR

SCALE: 1/8" = 1'-0"



LAST UPDATED: 1/28/2022

EXHIBIT A



DEMO/REMOVE SWING GATES. REPLACE WITH (1) 20' WIDE ROLLING GATE

DEMO/REMOVE FENCE AND PEDESTRIAN GATES



DEMO/REMOVE SWING GATES. REPLACE WITH (1) 16' WIDE ROLLING GATE



DEMO/REMOVE 4' DECORATIVE FENCE & FOOTINGS

SCOPE OF WORK

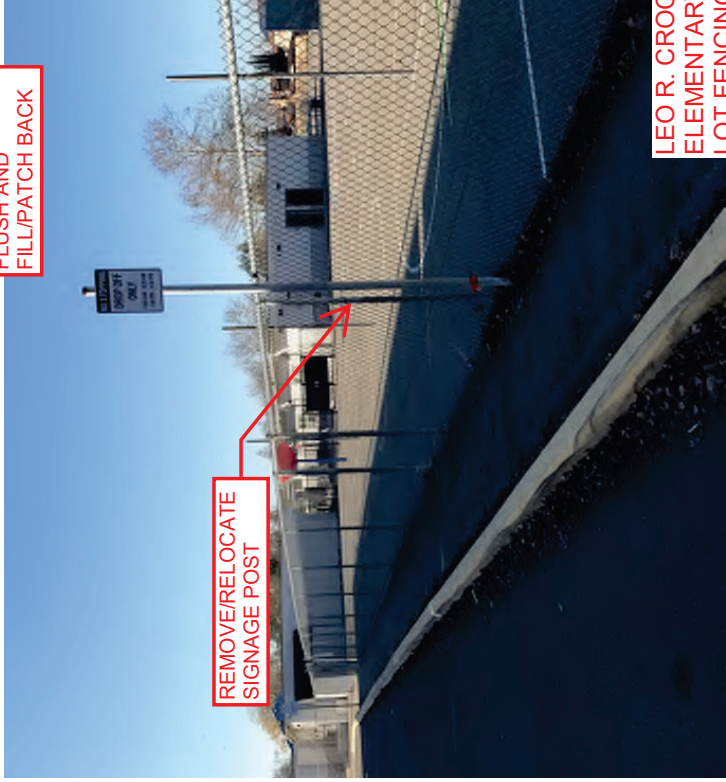


LAST UPDATED: 1/28/2022

EXHIBIT A



DEMO/REMOVE CHAIN LINK FENCE.
CUT FENCE POSTS FLUSH AND FILL/PATCH BACK



REMOVE/RELOCATE SIGNAGE POST



REMOVE/RELOCATE SIGNAGE

Protect existing 6' decorative fence



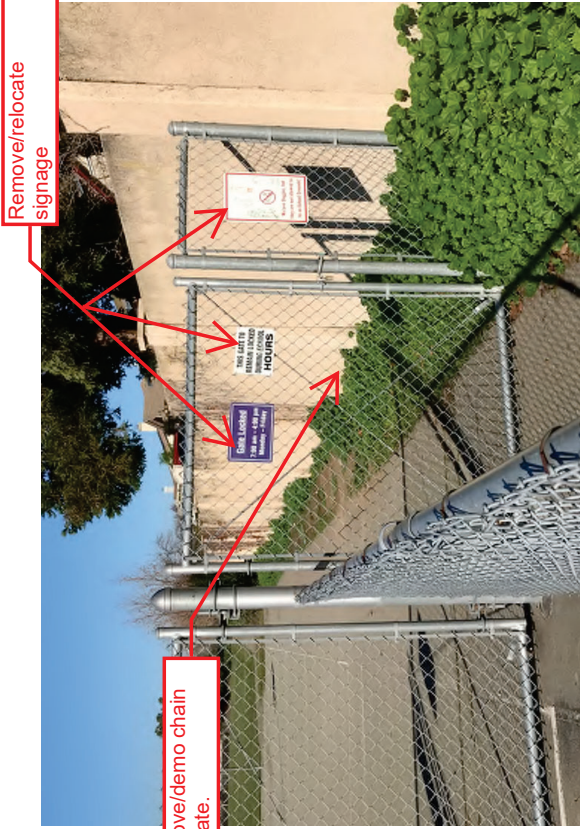
LAST UPDATED: 1/28/2022

EXHIBIT A



Existing 6' decorative fence to remain as is. Protect fence.

Patch/paint to match existing.



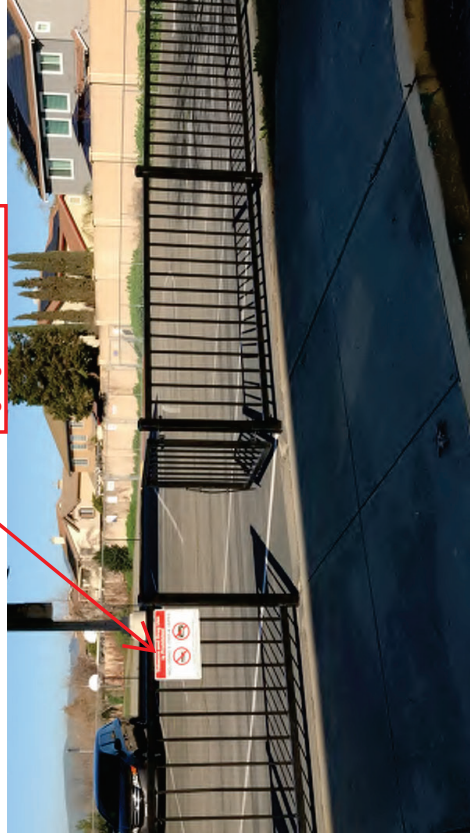
Remove/demo chain link gate.

Remove/relocate signage



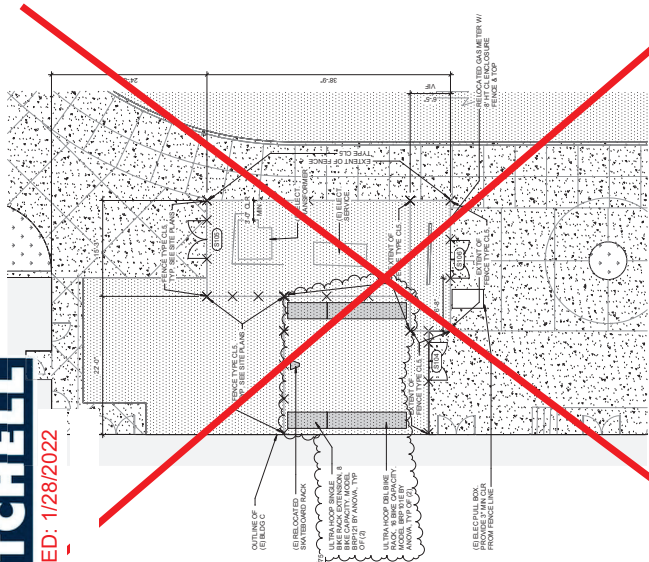
Protect/Remain as is.

Hand dig fence posts in this area.

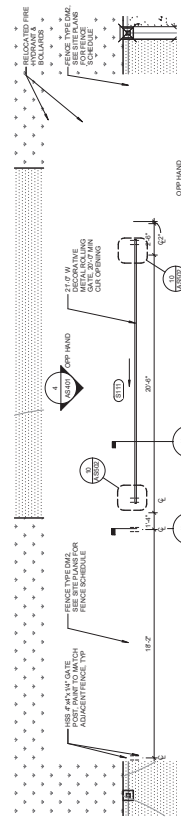


Remove/relocate signage

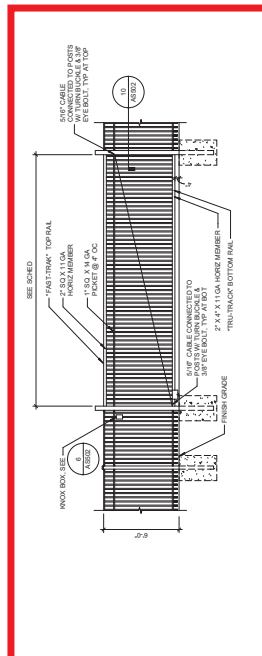
ROLLING GATE HARDWARE



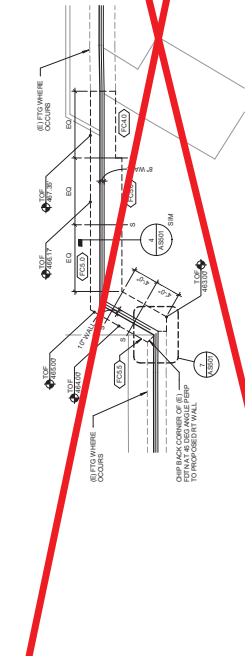
1 ENLARGED SITE PLAN - UTILITY YARD
SCALE 1/8" = 1'-0"



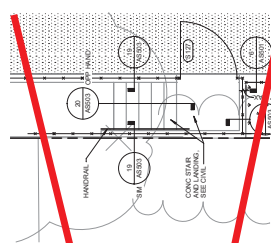
3 ENLARGED FENCING PLAN - DECORATIVE METAL ROLLING GATE
SCALE 1/8" = 1'-0"



4 DECORATIVE METAL ROLLING GATE - ELEVATION
SCALE 1/8" = 1'-0"



5 ENLARGED SITE PLAN - RETAINING WALL
SCALE 1/8" = 1'-0"



6 ENLARGED SITE PLAN - SITE STAIR @ CATWALK
SCALE 1/8" = 1'-0"



PROJECT: JOE MICHELL K8
INCREMENT #2
1001 ELAINE AVENUE
LIVERMORE, CA 94550

CLIENT: LIVERMORE VALLEY JUNT UNIFIED
SCHOOL DISTRICT
685 EAST JACK LONDON BOULEVARD
LIVERMORE, CA 94551

| NO. | DATE | DESCRIPTION |
|-----|----------|---------------------|
| 1 | 08/12/19 | NO. 1 - 08.12.2019 |
| 2 | 09/10/19 | NO. 2 - 09.10.2019 |
| 3 | 10/15/19 | NO. 3 - 10.15.2019 |
| 4 | 11/15/19 | NO. 4 - 11.15.2019 |
| 5 | 12/15/19 | NO. 5 - 12.15.2019 |
| 6 | 01/15/20 | NO. 6 - 01.15.2020 |
| 7 | 02/15/20 | NO. 7 - 02.15.2020 |
| 8 | 03/15/20 | NO. 8 - 03.15.2020 |
| 9 | 04/15/20 | NO. 9 - 04.15.2020 |
| 10 | 05/15/20 | NO. 10 - 05.15.2020 |
| 11 | 06/15/20 | NO. 11 - 06.15.2020 |
| 12 | 07/15/20 | NO. 12 - 07.15.2020 |
| 13 | 08/15/20 | NO. 13 - 08.15.2020 |
| 14 | 09/15/20 | NO. 14 - 09.15.2020 |
| 15 | 10/15/20 | NO. 15 - 10.15.2020 |
| 16 | 11/15/20 | NO. 16 - 11.15.2020 |
| 17 | 12/15/20 | NO. 17 - 12.15.2020 |

MANAGER: [Name]
DESIGNER: [Name]
CHECKED BY: [Name]
DATE: 10/15/20

FILE NO. 1-18
LIVERMORE, CA

LEO R. CROCE
ELEMENTARY PARKING
LOT FENCING PROJECT
PAGE 9 OF 11

FOR REFERENCE ONLY

| NO. | DESCRIPTION | DETAIL | HOW | PANEL | HEIGHT | COMMENTS |
|-----|----------------------------------|--------|--------|--------|--------|----------------------------------|
| 1 | RETAINING WALL | 1 | 12'-0" | 12'-0" | 12'-0" | RETAINING WALL |
| 2 | RETAINING WALL | 2 | 12'-0" | 12'-0" | 12'-0" | RETAINING WALL |
| 3 | CHAIN LINK FENCE | 3 | 4'-0" | 4'-0" | 4'-0" | CHAIN LINK FENCE |
| 4 | CHAIN LINK FENCE | 4 | 4'-0" | 4'-0" | 4'-0" | CHAIN LINK FENCE |
| 5 | CHAIN LINK FENCE | 5 | 4'-0" | 4'-0" | 4'-0" | CHAIN LINK FENCE |
| 6 | CHAIN LINK FENCE | 6 | 4'-0" | 4'-0" | 4'-0" | CHAIN LINK FENCE |
| 7 | RETAINING WALL | 7 | 12'-0" | 12'-0" | 12'-0" | RETAINING WALL |
| 8 | FENCE AT BUILDING | 8 | 4'-0" | 4'-0" | 4'-0" | FENCE AT BUILDING |
| 9 | FENCE FOOTING - UP TO 6'-0" HIGH | 9 | 11'-0" | 11'-0" | 11'-0" | FENCE FOOTING - UP TO 6'-0" HIGH |
| 10 | CHAIN LINK FENCE | 10 | 4'-0" | 4'-0" | 4'-0" | CHAIN LINK FENCE |
| 11 | CHAIN LINK FENCE | 11 | 4'-0" | 4'-0" | 4'-0" | CHAIN LINK FENCE |
| 12 | FENCE POST MOUNTING AT BUILDING | 12 | 11'-0" | 11'-0" | 11'-0" | FENCE POST MOUNTING AT BUILDING |
| 13 | CHAIN LINK SWING SINGLE GATE | 13 | 11'-0" | 11'-0" | 11'-0" | CHAIN LINK SWING SINGLE GATE |
| 14 | CHAIN LINK SWING SINGLE GATE | 14 | 11'-0" | 11'-0" | 11'-0" | CHAIN LINK SWING SINGLE GATE |
| 15 | CHAIN LINK FENCE | 15 | 4'-0" | 4'-0" | 4'-0" | CHAIN LINK FENCE |
| 16 | CHAIN LINK SWING SINGLE GATE | 16 | 11'-0" | 11'-0" | 11'-0" | CHAIN LINK SWING SINGLE GATE |
| 17 | CHAIN LINK DOUBLE SWING GATE | 17 | 11'-0" | 11'-0" | 11'-0" | CHAIN LINK DOUBLE SWING GATE |
| 18 | CHAIN LINK FENCE | 18 | 4'-0" | 4'-0" | 4'-0" | CHAIN LINK FENCE |
| 19 | CHAIN LINK FENCE | 19 | 4'-0" | 4'-0" | 4'-0" | CHAIN LINK FENCE |
| 20 | CHAIN LINK SWING SINGLE GATE | 20 | 11'-0" | 11'-0" | 11'-0" | CHAIN LINK SWING SINGLE GATE |

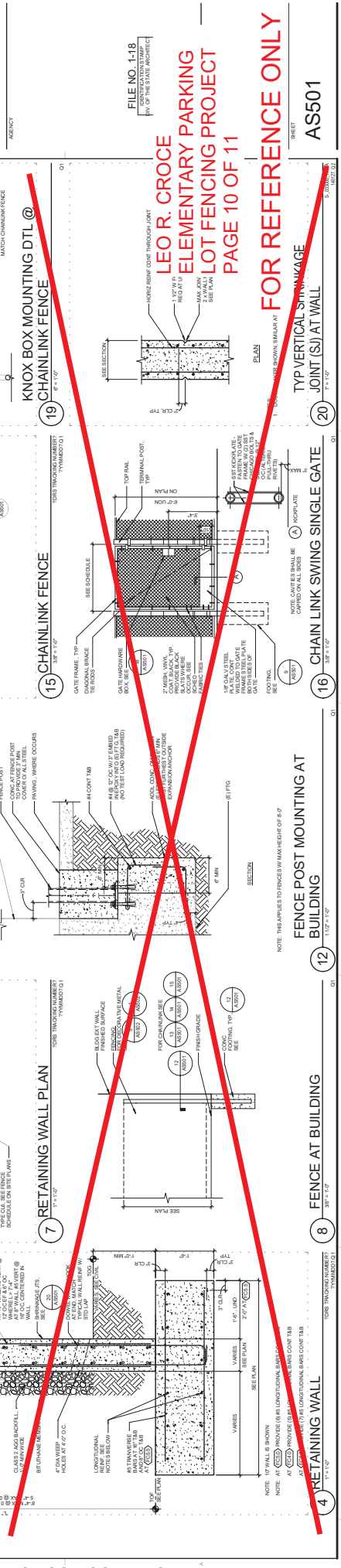
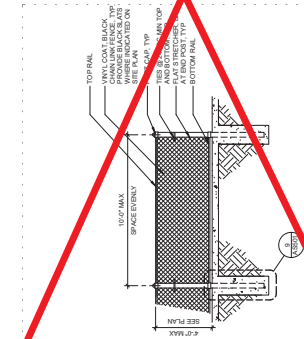
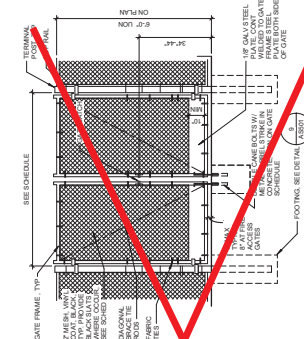
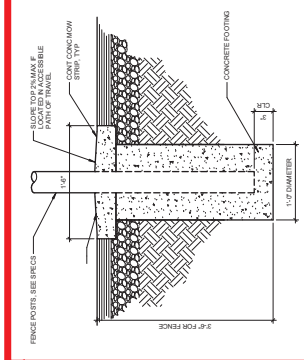
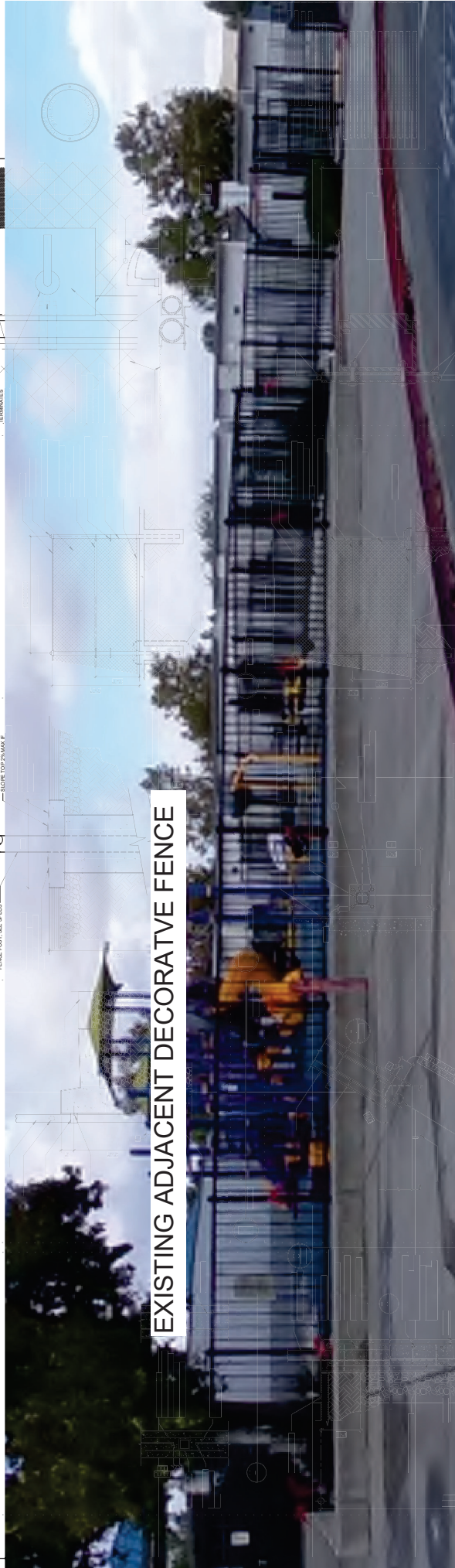
NOTE: FENCE TO OPEN GATE NOT TO EXCEED 18". SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PULLING OR TWISTING OF THE GATE.

FENCE FOOTING - UP TO 6'-0" HIGH

CHAIN LINK FENCE

CHAIN LINK DOUBLE SWING GATE

EXISTING ADJACENT DECORATIVE FENCE



FILE NO. 1-18
1001 E. CANTONWAY
REV. OF THE STATE ARCHITECT

LEO R. CROCE
ELEMENTARY PARKING
LOT FENCING PROJECT
PAGE 10 OF 11

FOR REFERENCE ONLY

SHEET
AS501

FENCE POST MOUNTING AT BUILDING

FENCE AT BUILDING

RETAINING WALL

CHAIN LINK SWING SINGLE GATE

CHAIN LINK SWING SINGLE GATE

CHAIN LINK SWING SINGLE GATE

CHAIN LINK SWING SINGLE GATE

CHAIN LINK SWING SINGLE GATE

CHAIN LINK SWING SINGLE GATE

SECTION 03 30 00

CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Cast-in-place concrete.
 - 1. Architectural concrete at exposed locations.
- B. Concrete admixtures.
- C. Curing and surface slab treatment.
- D. Grouting, bonding, and patching materials.
- E. Accessories:
 - 1. Underslab vapor retarder with pipe boots.
 - 2. Expansion joints.
- F. Precast concrete wheel stops.

1.2 RELATED SECTIONS

- A. Section 03 11 00 – Concrete Forming.
- B. Section 03 20 00 – Concrete Reinforcing.
- C. Section 05 50 00 – Metal Fabrications.
- D. Section 07 26 50 – Vapor Emission Control System.
- E. Section 07 92 00 – Joint Sealants.
- F. Section 09 65 00 – Resilient Flooring.
- G. Section 09 65 66 – Resilient Athletic Flooring.
- H. Section 09 68 13 – Tile Carpeting.
- I. Divisions 21-23 – Mechanical Sections, as applicable to the Project.
- J. Divisions 25-28 – Electrical Sections, as applicable to the Project.
- K. Section 31 20 00 – Earth Moving.
- L. Section 33 30 00 – Sanitary Sewer System.
- M. Section 33 41 00 – Storm Utility Drainage Piping.

1.3 REFERENCES

- A. The publications listed below form a part of this Section to the extent referenced. The publications are referred to in the text by the basic designation only. Refer to Division 01 for definitions, acronyms, and abbreviations.
- B. Standards, manuals, and codes refer to the latest edition of such standards, manuals, and codes in effect as of the date of issue of this Project Manual, unless indicated otherwise in CBC Chapter 35 and CFC Chapter 80.
- C. ACI publications 221R, 302.1R, 302.2R, 303R, 304R, 305R, 306R, and 309R contain recommended practices for concrete work. Submit any proposed deviations from these recommendations to Architect for review prior to commencing concrete work.
- D. Referenced Standards:
1. ACI 117 – Specification for Tolerances for Concrete Construction and Materials.
 2. ACI 221R – Guide for Use of Normal Weight and Heavyweight Aggregates in Concrete.
 3. ACI 301 – Specifications for Structural Concrete.
 4. ACI 302.1R – Guide for Concrete Floor and Slab Construction.
 5. ACI 302.2R – Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials.
 6. ACI 303R – Guide to Cast-In-Place Architectural Concrete Practice.
 7. ACI 303.1 – Standard Specification for Cast-in-Place Architectural Concrete.
 8. ACI 304R – Guide for Measuring, Mixing, Transporting, and Placing Concrete.
 9. ACI 305R – Guide to Hot Weather Concreting.
 10. ACI 305.1 – Specification for Hot Weather Concreting.
 11. ACI 306R – Guide to Cold Weather Concreting.
 12. ACI 306.1 – Standard Specification for Cold Weather Concreting.
 13. ACI 309R – Guide for Consolidation of Concrete.
 14. ACI 318 – Building Code Requirements for Structural Concrete.
 15. ACI SP-15 – Field Reference Manual: Specifications for Structural Concrete ACI 301-10 with Selected ACI and ASTM References.
 16. ASTM C31/C31M – Standard Practice for Making and Curing Concrete Test Specimens in the Field.
 17. ASTM C33 – Standard Specification for Concrete Aggregates.
 18. ASTM C39/C39M – Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
 19. ASTM C94/C94M – Standard Specification for Ready Mixed Concrete.
 20. ASTM C109 – Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50-mm] Cube Specimens).

21. ASTM C114 – Standard Test Methods for Chemical Analysis of Hydraulic Cement.
22. ASTM C143/C143M – Standard Test Method for Slump of Hydraulic Cement Concrete.
23. ASTM C150 – Standard Specification for Portland Cement.
24. ASTM C157/C157M – Standard Test Method for Length Change of Hardened Hydraulic-Cement, Mortar and Concrete.
25. ASTM C171 – Standard Specification for Sheet Materials for Curing Concrete.
26. ASTM C172 – Standard Practice for Sampling Freshly Mixed Concrete.
27. ASTM C309 – Standard Specification for Liquid Membrane Forming Compounds for Curing Concrete.
28. ASTM C348 – Standard Test Method for Flexural Strength of Hydraulic-Cement Mortars.
29. ASTM C494/C494M – Standard Specification for Chemical Admixtures for Concrete.
30. ASTM C595 – Standard Specification for Blended Hydraulic Cements.
31. ASTM C618 – Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete.
32. ASTM C881/C881M – Standard Specification for Epoxy Resin Base Bonding Systems for Concrete.
33. ASTM C920 – Standard Specification for Elastomeric Joint Sealants.
34. ASTM C928 – Standard Specification for Packaged, Dry, Rapid Hardening Cementitious Materials for Concrete Repairs.
35. ASTM C939 – Standard Test Method for Flow of Grout for Preplaced Aggregate Concrete (Flow Cone Method).
36. ASTM C989 – Standard Specification for Slag Cement for Use in Concrete and Mortars.
37. ASTM C1028 – Standard Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull Meter Method.
38. ASTM C1059 – Standard Specification for Latex Agents for Bonding Fresh to Hardened Concrete.
39. ASTM C1077 – Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation.
40. ASTM C1107 – Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink).
41. ASTM C1315 – Standard Specification for Liquid Membrane-Forming Compounds Having Special Properties for Curing and Sealing Concrete.
42. ASTM C1602/C1602M – Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete.

- 43. ASTM D882 – Standard Test Method for Tensile Properties of Thin Plastic Sheeting.
- 44. ASTM D1709 – Standard Test Methods for Impact Resistance of Plastic Film by the Free-Falling Dart Method.
- 45. ASTM D1751 – Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types).
- 46. ASTM D4397 – Standard Specification for Polyethylene Sheeting for Construction, Industrial, and Agricultural Applications.
- 47. ASTM E96/E96M – Standard Test Methods for Water Vapor Transmission of Materials.
- 48. ASTM E154 – Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover.
- 49. ASTM E329 – Standard Specification for Agencies Engaged in Construction Inspection and/or Testing.
- 50. ASTM E1155 – Standard Test Method for Determining F_F Floor Flatness and F_L Floor Levelness Numbers.
- 51. ASTM E1643 – Standard Practice for Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs.
- 52. ASTM E1745 – Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs.
- 53. ASTM F1249 – Standard Test Method for Water Vapor Transmission Rate Through Plastic Film and Sheeting Using a Modulated Infrared Sensor.
- 54. ISO/IEC/EN 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (formerly ISO/IEC Guide 25-1990 and ASTM E548).
- 55. NRMCA – Quality Control Checklist – Section 2.
- 56. NRMCA – Plant Certification Checklist – Section 3.

1.4 SUBMITTALS

- A. General: Submit in accordance with Division 01.
- B. Product Data: Submit manufacturer's descriptive literature and product specification for each product. Include manufacturer's written instructions and installation procedures.
- C. Drawings: Submit concrete pouring plan showing proposed locations of construction and control joints for review by Architect prior to concrete placement.
- D. Samples: Submit product samples when requested by Architect or testing laboratory.

E. Quality Assurance/Control Submittals:

1. Certificates:
 - a. Manufacturer's Certification of Compliance that materials (cementitious materials, aggregates, and admixtures) conform to specifications.
 - b. Manufacturer's certificate of compatibility stating that admixtures, slab curing materials, and surface treatments are compatible with subsequent floor finishes and adhesives.
2. Reference Documents: Maintain one copy of ACI SP-15 on site.
3. Concrete mixture proportions and characteristics for each class/type of concrete used.
4. Concrete mixture proportion data for each class/type of concrete used:
 - a. Calculation of required average compressive strength and supporting test records.
 - b. Documentation indicating proposed mixture proportions will produce an average compressive strength greater than the required average compressive strength, including field strength test records or trial mixtures.
 - c. Provide documentation in accordance with Concrete Mix Design Submittal Checklist located at the end of this Section.
5. Test Reports.
6. Batch Ticket: Furnish accepted batch tickets at the time of delivery for each concrete load. Indicate on each ticket equipment used for measuring and quantities, by weight, of cement, sand, each class of aggregate, admixtures, and amount of water in the aggregate, water added at the batching plant, and any water withheld at the batch plant. In addition, include mix number, total yield in cubic yards, date and time of day (dispatch time, plant departure time, site arrival time, unloading start and end time).
7. Concrete Placement Record: Keep a record on site including time and date of concrete placing for each portion of the structure for the duration of the project. Record additional information not included in batch ticket such as admixtures added at the job site. Make records available to Architect and DSA for review. Submit record to Architect at project completion.
8. Protection of Slabs and Foundations: Submit plans for protection of slabs and foundations, including the following, if applicable:
 - a. Cold Weather Concreting: Comply with submittal requirements of ACI 306.1.
 - b. Hot Weather Concreting: Comply with submittal requirements of ACI 305.1.

F. Closeout Submittals:

1. Concrete placement record.
2. Show location of embedded utilities in record drawings.

1.5 QUALITY ASSURANCE

A. Qualifications:

1. Concrete Supplier: Firm specializing in products specified in this Section with a minimum five years documented experience; successfully supplying similar materials (design, content, and performance) as specified in this Section.

2. Concrete Batch Plant: Complies with requirements of ASTM C94 and is currently certified per NRMCA Plant Certification Checklist - Section 3 or other certification acceptable to Architect and DSA.
 3. Contractor's Design Laboratory: Under the direction of civil engineer licensed by the State of California; conforming to ASTM E329 and ASTM C1077.
 4. Independent Testing Laboratory: Conforming to ASTM E329, ASTM C1077, and ISO/IEC/EN 17025, acceptable to Architect and DSA.
- B. Structural Tests and Inspections: Refer to DSA Structural Tests and Inspection Sheet (Form DSA-103).
- C. Regulatory Requirements: Conform to requirements of 2016 California Building Code (CBC), Chapter 19A, "Concrete", Chapter 17A "Special Inspections and Tests", and as follows:
1. Materials:
 - a. Cementitious Materials: CBC Chapter 19A, Section 1903A "Specifications for Tests and Materials" and Section 1910A.1 "Cementitious Material".
 - b. Concrete Aggregates: CBC Chapter 19A, Section 1903A "Specifications for Tests and Materials".
 - c. Batch Plant Inspection: CBC Section 1705A, Paragraph 1705A.3.3 "Batch Plant Inspection".
 2. Quality:
 - a. Proportions of Concrete: CBC Chapter 19A, Section 1905A "Modifications to ACI 318", Paragraph 1905A.1 "General" and Paragraph 1905A.1.1.
 - b. Strength Tests of Concrete: CBC Chapter 19A, Section 1905A "Modifications to ACI 318" Paragraph 1905A.1.2.
 3. Inspection: CBC Chapter 17A, Section 1705A "Required Special Inspections and Tests" Article 1705A.3 "Concrete Construction", as applicable.
 - a. Batch Plant Weighmaster Inspection: CBC Section 1705A, Paragraph 1705A.3.3 "Batch Plant Inspection".
- D. Drying Shrinkage Test: Perform per ASTM C157/C157M modified as follows:
1. Prepare 4 inch x 4 inch x 11 inch prisms with an effective gage length of 10 inches fabricated, cured, dried, and measured per ASTM C157/C157M except that specimens shall be removed from molds at an age of 23 hours +/- 1 hour after trial batching, and shall be placed immediately in water at 73 degrees F +/- 3 degrees for at least thirty minutes, and shall be measured within thirty minutes thereafter to determine original length and then submerged in saturated lime water at 73 degrees F +/- 3 degrees.
 2. Measurement to determine expansion expressed as a percentage of original length shall be made at seven days. This length at seven days shall be the base length for drying shrinkage calculations. Specimens shall then be stored immediately in a humidity control room, maintained at 73 degrees F +/- three degrees F and fifty percent +/- four percent relative humidity for the remainder of the test.
 3. Measurements to determine shrinkage expressed as a percentage of base length shall be made and reported separately for 7, 14, and 21 days of drying after 7 days of moist curing.
- E. Quality Control: Comply with NRMCA Quality Control Checklist – Section 2.

F. Materials Quality Assurance: Obtain cement and aggregates from same source for the duration of the work unless specifically accepted by Architect.

G. Pre-Installation Meetings:

1. Conduct pre-installation (pre-pour) meeting in accordance with Division 01.
2. Convene pre-installation (pre-pour) meeting one week prior to commencing work of this Section attended by concrete supplier.
3. Meeting minutes shall be taken and distributed to meeting attendees within three days of meeting.
4. Coordinate work in this Section with work in related Sections.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Comply with requirements of Division 01.
- B. Deliver products in manufacturer's original containers, dry and undamaged, with seals and labels intact.
- C. Store cement and other cementitious materials in weathertight buildings, bins, or silos which exclude moisture and contaminants and keep building materials completely separated.
- D. Arrange and use aggregate stockpiles in a manner to avoid excessive segregation and to prevent contamination with other materials or with other sizes of aggregates. Do not store aggregates directly on ground unless a sacrificial layer is left undisturbed.
- E. Refer to manufacturers' product data sheets for recommended shelf life and storage conditions for admixtures.
- F. Clearly and accurately label materials after containers have been opened.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers:

1. BASF Corporation – Admixture Systems, Cleveland, OH; 800-228-3318, www.basf-admixtures.com.
2. BASF Corporation – Building Systems, Shakopee, MN; 800-433-9517, www.buildingsystems.basf.com
3. Curecrete Distribution Inc., Springville, UT; 800-998-5664, www.ashfordformula.com.
4. Grace Construction Products – W. R. Grace & Co., Cambridge, MA; 877-423-6491, www.na.graceconstruction.com.
5. Insulation Solutions, Inc., East Peoria, IL; 866-698-6562, www.insulationsolutions.com.
6. L. M. Scofield Company, Los Angeles, CA; 323-720-3000, www.scofield.com.
7. Pecora Corp., Harleysville, PA; 800-523-6688, www.pecora.com.
8. Raven Industries Inc, Sioux Falls, SD; 800-635-3456, www.ravenind.com.
9. Reef Industries, Inc., Houston, TX; 800-231-6074, www.reefindustries.com.
10. Sika Corp., Lyndhurst, NJ; 800-933-7452, www.sikaconstruction.com.

11. Stego Industries, LLC, San Clemente, CA; 877-464-7834, www.stegoindustries.com.
12. The Euclid Chemical Co., Cleveland, OH; 800-321-7628, www.euclidchemical.com.
13. Tremco, Beachwood, OH; 800-852-9068, www.tremcosealants.com.
14. US Mix Products Co., Denver, CO; 800-397-9903, www.usspec.com.
15. W. R. Meadows, Inc., Hampshire, IL; 800-342-5976, www.wrmeadows.com.

B. Substitutions: Manufacturers and products are listed in this Section to establish minimum requirements as to quality and performance. Comply with requirements of Division 01 for substitutions.

2.2 CONCRETE MATERIALS

A. Cementitious Materials:

1. Cement: ASTM C150, Type II, low alkali (equivalent alkalis (Na₂O + 0.658K₂O) no more than 0.6 percent per ASTM C114), gray.
2. Supplementary Cementitious Materials (SCM):
 - a. Fly Ash: ASTM C618, Class F or Class N. Class C is not permitted.
 - b. Slag Cement: ASTM C989, Grade 100 or Grade 120.

B. Aggregates: Aggregates used in concrete shall have a combined aggregate distribution similar to the aggregates used in the concrete represented by field test data or used in trial mixtures. Fine and coarse aggregates: ASTM C33. Low-shrinkage producing coarse aggregates per ACI 221R; and uniformly graded as follows:

| Sieve Number or Size in Inches | Percent Retained by Weight | | |
|--------------------------------|----------------------------|-------------|---------------|
| | 1-1/2 inch Max. | 1 inch Max. | 3/4 inch Max. |
| 2 inch | 0-5 | — | — |
| 1-1/2 inch | 0-8 | 0-5 | — |
| 1 inch | 8-18 | 0-8 | 0-5 |
| 3/4 inch | 8-18 | 8-18 | 0-8 |
| 1/2 inch | 8-18 | 8-18 | 8-18 |
| 3/8 inch | 8-18 | 8-18 | 8-18 |
| No. 4 | 8-18 | 8-18 | 8-18 |
| No. 8 | 8-18 | 8-18 | 8-18 |
| No. 16 | 8-18 | 8-18 | 8-18 |
| No. 30 | 8-18 | 8-18 | 8-18 |
| No. 50 | 0-18 | 0-18 | 0-18 |
| No. 100 | 0-8 | 0-8 | 0-8 |
| No. 200 | 0-8 | 0-8 | 0-8 |

1. Maximum Nominal Size of Coarse Aggregate: CBC Section 1903A “Specifications for Tests and Materials”, and as follows:
 - a. 1/5 the narrowest dimension between sides of forms,

- b. 1/3 depth of slab, or
 - c. 3/4 the minimum clear spacing between individual reinforcing bars or wires, bundles of bars.
2. Aggregate sources shall not contain any alkali-silica reactive material in accordance with ASTM C33, Appendix XI.

C. Water: Potable and complying with ASTM C1602/C1602M.

2.3 ADMIXTURES

A. General:

1. Manufacturer certified to contain no more than 0.05 percent water-soluble chloride ions by mass of cementitious material. Admixtures containing calcium chloride or thiocyanates not allowed.
2. Compatible with other admixtures and cementitious materials in the concrete mix.
3. Obtain Architect's and DSA's written acceptance prior to use of admixtures. Use admixtures according to manufacturer's written instructions.

B. Water Reducing:

1. Normal Range: ASTM C494/C494M, Type A.
 - a. Acceptable Products:
 - 1) MasterPozzolith Series by BASF Corporation – Admixture Systems.
 - 2) Eucon Series by The Euclid Chemical Co.
 - 3) WRDA 64 by Grace Construction Products.
 - 4) Plastocrete 161 by Sika Corp.
 - 5) Or accepted equal.
2. Mid Range Water-Reducing: ASTM C494/C494M, Type A or Type F.
 - a. Acceptable Products:
 - 1) MasterPolyheed Series BASF Corporation – Admixture Systems.
 - 2) Eucon Series by The Euclid Chemical Co.
 - 3) Duracem 55 by Grace Construction Products.
 - 4) Or accepted equal.
3. High Range Water-Reducing: ASTM C494/C494M, Type F or G.
 - a. Acceptable Products:
 - 1) MasterRheobuild 1000 or MasterGlenium Series by BASF Corporation – Admixture Systems.
 - 2) Eucon Series or Plastol Series by The Euclid Chemical Co.
 - 3) Duracem 100 by Grace Construction Products.
 - 4) Sikament 10 ESL by Sika Corp.
 - 5) Or accepted equal.

- C. Shrinkage Reducing: Reduces dry shrinkage up to 80 percent at 28 days, and up to 50 percent at one year and beyond as tested per ASTM C157/C157M.
 - 1. Acceptable Products:
 - a. MasterLife SRA 20 by BASF Corporation – Admixture Systems.
 - b. Eclipse Floor and Eclipse Plus by Grace Construction Products.
 - c. Eucon SRA Series or Conex by The Euclid Chemical Co.
 - d. Or accepted equal.
- D. Set Retarding: ASTM C494/C494M, Type B or Type D.
 - 1. Acceptable Products:
 - a. Pozzolith Series or MasterSet DELVO Series by BASF Corporation – Admixture Systems.
 - b. Eucon Retarder Series, Eucon DS, or Eucon Stasis by The Euclid Chemical Co.
 - c. Or accepted equal.
- E. Set Accelerating: ASTM C494/C494M, Type C or Type E.
 - 1. Acceptable Products:
 - a. MasterSet AC 534 or MasterSet FP 20 by BASF Corporation – Admixture Systems.
 - b. Accelguard Series by The Euclid Chemical Co.
 - c. Or accepted equal.
- F. Workability-Retaining: Shall retain concrete workability without affecting time of setting or early-age strength development. ASTM C494/C494M, Type S.
 - 1. Acceptable Products:
 - a. MasterSure Z 60 by BASF Corporation – Admixture Systems.
 - b. Plastol AMP Series by The Euclid Chemical Co.
 - c. Or accepted equal.

2.4 CURING MATERIALS AND SLAB TREATMENT

- A. General:
 - 1. Comply with regulations of the California Air Resources Board and the local Air Pollution Control/Air Quality Management District.
 - a. VOC Limit: 350 g/L.
 - 2. Verify compatibility with subsequent adhesives and coatings before application; furnish Manufacturer's certificate of compatibility. Coordinate with related Sections.
- B. Curing and Sealing Compound: Select as appropriate for compatibility of subsequent adhesives and coatings.
 - 1. Acrylic emulsion blend; meets or exceed ASTM C309, Type 1, Class B.
 - a. Acceptable Products:
 - 1) MasterKure CC 160WB by BASF Corporation – Building Systems.
 - 2) Diamond Clear VOX by The Euclid Chemical Co.
 - 3) Vocomp 20 by W. R. Meadows, Inc.

- 4) US SPEC Hydrasheen 15% by US Mix Products Co.
 - 5) Or accepted equal.
 2. Water-emulsion, white, wax-based; meets or exceed ASTM C309, Type 2, Class A.
 - a. Acceptable Products:
 - 1) Kurez VOX White Pigmented by The Euclid Chemical Co.
 - 2) US SPEC Maxcure Wax White by US Mix Products Co.
 - 3) Or accepted equal.
 3. Water-emulsion, dissipating resin based; meets or exceed ASTM C309, Type 1, Class B.
 - a. Acceptable Products:
 - 1) Ashford Formula by Curecrete Distribution Inc.
 - 2) Kurez DR VOX by The Euclid Chemical Co.
 - 3) US SPEC Maxcure Resin Clear by US Mix Products Co.
 - 4) Or accepted equal.
 4. Water based, acrylic emulsion; meets ASTM C1315, Type 1, Class A or Class B.
 - a. Acceptable Products:
 - 1) MasterKure CC 1315 by BASF Corporation – Building Systems.
 - 2) Super Aqua-Cure VOX by The Euclid Chemical Co.
 - 3) US SPEC Roca Seal by US Mix Products Co.
 - 4) Or accepted equal.
- C. Waterproof Sheet Materials for Curing: ASTM C171 and as follows:
 1. Curing paper consisting of two sheets of kraft paper adhered together with a bituminous material with embedded cords or strands of fiber running in both directions not more than 1-1/4 inches apart.
 - a. Tensile strength in machine direction: Thirty foot-pounds per inch of width minimum.
 - b. Tensile strength in cross direction: Fifteen foot-pounds per inch of width minimum.
 2. Polyethylene Film: ASTM D4397; minimum six mil thickness.
 3. White burlap-polyethylene sheeting: Consisting of burlap weighing not less than nine ounces per square yard extrusion coated on one side with at least four mil white opaque polyethylene sheet.
- D. Evaporation Retarder: Water-based polymer concentrate, readily dilutable in water.
 1. Acceptable Products:
 - a. MasterKure ER50 by BASF Corporation – Admixture Systems.
 - b. Eucobar by The Euclid Chemical Co.
 - c. US SPEC Monofilm ER by US Mix Products Co.
 - d. Or accepted equal.

- E. Surface Retarder: Water soluble liquid, formulated to retard wet surface of mortar in concrete.
1. Acceptable Products:
 - a. MBT EAC-S Regular or Deep by BASF Corporation – Admixture Systems.
 - b. Sure Etch Series by The Euclid Chemical Co.
 - c. Rugasol-S by Sika Corp.
 - d. Or accepted equal.
- F. Penetrating Sealer: Chemically reactive, waterborne solution of inorganic silicate or silicate materials; odorless, colorless; penetrates, densifies, and hardens concrete surfaces.
1. Acceptable Products:
 - a. Cementone Clear Concrete Sealer by L. M. Scofield Company.
 - b. MasterKure HD 200 WB by BASF Corporation – Building Systems.
 - c. Eucosil by The Euclid Chemical Co.
 - d. Aqua-Trete SG by Evonik.
 - e. US SPEC Industraseal by US Mix Products Co.
 - f. Or accepted equal.
- G. Vapor Emission Control System: Refer to Section 07 26 50.

2.5 GROUTING, BONDING, AND PATCHING MATERIALS

A. Grout:

1. Non-shrink Grout: ASTM C1107, non-metallic aggregate grout; 7000 psi minimum 28-day compressive strength at fluid water ratio per ASTM C939.
 - a. Acceptable Products:
 - 1) MasterFlow 928 by BASF Corporation – Building Systems.
 - 2) NS Grout, Hi-Flow Grout, or Euco Pre-Cast Grout by The Euclid Chemical Co.
 - 3) US SPEC MP Grout by US Mix Products Co.
 - 4) Or accepted equal.
2. Non-shrink Drypack Grout: Non-shrink, natural aggregates, 7000 psi minimum 28-day compressive strength.
 - a. Acceptable Products:
 - 1) MasterFlow 100 by BASF Corporation – Building Systems.
 - 2) Dry Pack Grout by The Euclid Chemical Co.
 - 3) Sealtight Pac-it by W.R. Meadows, Inc.
 - 4) US SPEC GP Grout by US Mix Products Co.
 - 5) Or accepted equal.

B. Bonding Materials:

1. Bonding Agent/Admixture:

a. Interior or exterior applications: Acrylic or SBR, latex cement bonding agent/admixture; non-re-emulsifiable; meets or exceeds ASTM C1059, Type II.

1) Acceptable Products:

- a) Akkro-7T, Flex-Con, or SBR Latex by The Euclid Chemical Co.
- b) US SPEC Acrylcoat by US Mix Products Co.
- c) Sealtight Acry-Lok by W. R. Meadows, Inc.
- d) Or accepted equal.

b. Interior applications or exterior applications not subject to constant water immersions: Ethyl-vinyl acetate (EVA) copolymer liquid bonding agent and admixture; re-emulsifies once and will not re-wet; meets or exceeds ASTM C1059.

1) Acceptable Products:

- a) Tammsweld by The Euclid Chemical Co.
- b) US SPEC Multicoat by US Mix Products Co.
- c) Or accepted equal.

2. Structural Bonding Epoxy Adhesive: Two component, 100 percent solids, 100 percent reactive; meets or exceeds ASTM C881/C881M, Type II, Grade 2, Class B or C as appropriate.

a. Acceptable Products:

- 1) MasterEmaco ADH 1090RS, MasterEmaco ADH 1420, or MasterEmaco ADH 327RS by BASF Corporation – Building Systems.
- 2) Dural 452 MV by The Euclid Chemical Co.
- 3) Sealtight Rezi-Weld 1000 by W. R. Meadows, Inc.
- 4) Or accepted equal.

C. Self-Leveling Underlayment: Portland cement based, self-leveling 1 inch thick to featheredge. Fast setting – minimum compressive strength 2200 psi after one day; minimum 4000 psi compressive strength at 28 days per ASTM C109.

1. Acceptable Products:

- a. K-15 Self-Leveling Underlayment Concrete by ARDEX Engineered Cements.
- b. MasterTop 110 SL by BASF Corporation – Building Systems.
- c. Flo-Top or EucoFloor SL 160 by The Euclid Chemical Co.
- d. US SPEC Self-Leveling Underlayment by US Mix Products Co.
- e. Or accepted equal.

D. Repair Mortar: Exceeds ASTM C928, R1 and R2; rapid setting – minimum 1300 psi at three hours; 5500 psi at seven days per ASTM C109.

1. Acceptable Products:

- a. MasterEmaco T 415/430 or MasterEmaco T 1060/1061 Repair Mortars by BASF Corporation – Building Systems.
- b. Euco-Speed, Versaspeed, or Speedcrete 2028 by The Euclid Chemical Co.

- c. US SPEC Transpatch by US Mix Products Co.
 - d. Or accepted equal.
- E. Repair Mortar (for patching over steel): Liquid polymer modified, containing an integral corrosion inhibitor, exceeds C928, R2; rapid setting – minimum compressive strength 1500 psi at one day; 3500 psi at seven days; 5000 psi at 28 days per ASTM C109.
- 1. Acceptable Products:
 - a. MasterEmaco N 350CI with Acrylic Additive or MasterEmaco T 310CI by BASF Corporation – Building Systems.
 - b. Concrete-Top Supreme by The Euclid Chemical Co.
 - c. US SPEC H2 by US Mix Products Co.
 - d. Sikatop 122 Plus by Sika Corp.
 - e. Or accepted equal.
- F. Epoxy Joint Filler: Two component, 100 percent solids, semi-rigid epoxy; hardness: minimum 75 Shore A per ASTM D2240.
- 1. Acceptable Products:
 - a. MasterSeal CR 190 by BASF Corporation – Building Systems.
 - b. Euco 700 by The Euclid Chemical Co.
 - c. Sikadur 51 NS by Sika Corp.
 - d. Or accepted equal.

2.6 ACCESSORIES

- A. Underslab Vapor Retarder, Plastic: Performance shall exceed ASTM E1745, Class A requirements, as modified below. Material properties shall match one of the acceptable products listed below.
- 1. Properties:
 - a. Thickness: Minimum 15 mils (ACI 302.2R, as applicable).
 - b. Water Vapor Permeance (as tested before and after ASTM E1745 mandatory conditioning): Maximum 0.01 Perms (based on Test Method ASTM E1745).
 - c. Tensile Strength: Minimum 60 lbf/in (ASTM D882).
 - d. Puncture Resistance: Minimum 3000 g (ASTM D1709, Method B).
 - 2. Acceptable Products:
 - a. Viper Vaporcheck II 15 Mil by Insulation Solutions, Inc.
 - b. VaporBlock VB15 by Raven Industries.
 - c. Griffolyn® 15 Mil Green by Reef Industries, Inc.
 - d. 15 Mil Vapor Barrier by Stego Industries, LLC.
 - e. Perminator 15 Mil by W.R. Meadows, Inc.
 - f. Substitutions: Under provisions of Division 01.

B. Vapor Retarder Accessories:

1. Seam Tape: Water vapor transmission rate 0.03 perms or lower, per ASTM E96. Provide seam tape as standard with vapor retarder manufacturer.
2. Vapor Proofing Mastic: Water vapor transmission rate 0.03 perms or lower per ASTM E96 as standard with vapor retarder manufacturer.
3. Boots for Pipe Penetrations: Provide prefabricated pipe boots as standard with vapor retarder manufacturer.
4. Bedding Layer: Fine graded material such as crusher fines or manufactured sand.

C. Cone Hole Plugs: Precast high strength cement compound plugs matching size and shape of form tie cone and matching color of poured-in-place concrete as provided by same manufacturer of form ties. Refer to Section 03 11 00.

D. Capillary Barrier: Clean crushed rock; 3/4 inch nominal maximum size with no material passing a No. 4 sieve.

E. Expansion Joints:

1. Joint-Filler Strips: ASTM D1751; bituminous type; preformed, resilient, flexible, and non-extruding.
 - a. Acceptable Product:
 - 1) Sealtight Fiber Expansion Joint by W.R. Meadows, Inc.
 - 2) Or accepted equal.
2. Self-Leveling Polyurethane Sealant: ASTM C920; Type M; Grade P; Class 25; use T and M.
 - a. Acceptable Products:
 - 1) THC 900/901 by Tremco Inc.,
 - 2) Urexpan NR-200 by Pecora Corp.,
 - 3) MasterSeal SL2 by BASF Building Systems,
 - 4) Or accepted equal.

F. Anchors, Anchor Bolts, Nuts, and Washers: Refer to Section 05 12 00.

2.7 PRECAST CONCRETE WHEEL STOPS

- A. Provide precast concrete wheel stops, size and shape as indicated on Drawings.
- B. Concrete: Precast, air entrained concrete with a minimum compressive strength of 2,500 psi. Provide chamfered corners and drainage slots on underside and holes for anchoring to substrate.
- C. Dowels: Galvanized steel, 3/4-inch diameter, 10-inch minimum length. Provide where indicated, or as required by design condition.

2.8 CONCRETE MIX

A. General:

1. Proportion concrete design mixes per ACI 301 Section 3.9, ACI 318 Chapter 26, and CBC Section 1904A "Durability Requirements".

2. Proportion concrete design mixes per ACI, prepared and tested by an independent testing laboratory acceptable to Architect and DSA prior to design mix approval. For each mix design, prepare and perform tests as follows:
 - a. Drying shrinkage test per modified ASTM C157/C157M as specified in this Section; provide at least three test specimens. Drying shrinkage test not required for below grade concrete.
 - b. Compression test; provide at least six test specimens.
3. Proportioning without field experience or trial mixtures may be permitted with written approval from Architect and DSA, where concrete manufacturer can establish the uniformity of its production for concrete of similar type and strength based on recent test data in accordance with ACI 318, Chapter 26, Article 26.4.4 "Documentation of Concrete Mixture Characteristics".
4. Proportion concrete design mix to attain compressive strength as specified below and as needed, with early strength to meet Contractor's work program.

B. Mix Designs: Refer to Structural Drawings.

1. Maximum Water Content: 300 pounds per cubic yard.
2. Maximum Drying Shrinkage: 0.048 percent as tested per modified ASTM C157/C157M as specified in this Section after 7 days moist curing plus 21 days drying. This requirement does not apply to below grade concrete.

C. Admixtures:

1. Use specified admixtures as acceptable to Architect and DSA. Verify compatibility of concrete admixtures when using multiple admixtures.

2.9 CONCRETE MIXING

- A. Concrete shall be mixed per ACI 304R.

2.10 SOURCE QUALITY CONTROL

- A. Owner shall employ a testing laboratory accepted by Architect and DSA to perform the following:
1. Review mix designs and certificates of compliance for materials Contractor proposes to use.
 2. Provide continuous batch plant inspections per CBC Chapter 17A, Paragraph 1705A.3.3 "Batch Plant Inspection".

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine and verify the following prior to concrete placement.
1. Forms are erected, adequately braced, sealed, lubricated (if required), and bulkhead provided where placing is to stop.
 2. Thoroughly water soak wood forms other than plywood at least twelve hours before concrete placement.
 3. Steel reinforcement are accurately positioned, securely tied and braced. Verify concrete cover requirements.

4. Coordination with related work is completed.
 5. Anchors and embedded items are in position, securely held and braced.
 6. Construction joints and previously placed concrete are prepared as specified.
 7. Compliance with cold-weather or hot-weather requirements.
 8. Compliance with cleaning and preparation requirements.
- B. Report unacceptable conditions to Architect. Begin installation only when unacceptable conditions have been corrected.
- C. Concrete formwork, reinforcement, inserts, and embedded items are subject to Architect's acceptance. Notify Architect at least 48 hours prior to concrete placement.

3.2 PREPARATION

- A. Capillary barrier below interior slabs shall be compacted using one pass of a smooth drum or vibratory roller. Compaction shall be verified by Geotechnical Engineer.
- B. Underslab Vapor Retarder: Install in accordance with manufacturer's written instructions, ASTM E1643, and as specified in this Section.
1. Lay underslab vapor retarder at interior on-ground concrete work.
 2. Apply underslab vapor retarder directly on underlying subgrade, base course, or capillary water barrier, unless it consists of crushed material or large granular materials which could puncture the underslab vapor retarder. In this case, choke the surface with a bedding layer of approximately 1/2 inch fine-graded material rolled or compacted over the fill before placing the underslab vapor retarder.
 3. Unroll vapor retarder with longest dimension parallel with direction of concrete placement.
 4. Lay vapor retarder using the greatest widths and lengths practicable to eliminate joints wherever possible. Lap over footings and seal to foundation walls.
 5. Overlap joints 6 inches and seal with compatible seal tape per manufacturer's written recommendations.
 6. Seal all penetrations per manufacturer's written instructions using mastic and seal tape. No penetration of underslab vapor retarder is permitted except for reinforcing steel and permanent utilities.
 7. Replace torn, punctured, and damaged underslab vapor retarder material prior to placing concrete.
 8. Minor repairs may be made by patches of underslab vapor retarder overlapping edges 6 inches and sealing all four sides with tape.
 9. Control concrete placement so as to prevent damage to underslab vapor retarder. Screed pins and similar implements that will puncture underslab vapor retarder are not permissible.
- C. Cleaning: Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt and other debris before placing concrete.
- D. Refer to Section 03 11 00 for formwork preparation.
- E. Refer to Section 03 20 00 for reinforcing steel preparation.

3.3 PLACING CONCRETE

- A. Place concrete in accordance with ACI 301 and as specified in this Section.
 - 1. Place and finish Architectural Concrete in the locations indicated on Drawings in accordance with ACI 303.1 and 303R.
- B. Add no water during delivery and at the project site unless specifically accepted by Architect. If water is withheld at batch plant, indicate in delivery ticket the design water for accepted mix, moisture content of aggregates, and free water added at batch plant. If total water added at plant is less than design water to attain slump of accepted mix design, water may be added to concrete at job site, not to exceed the design water content, subject to the limitations specified in ASTM C94/C94M. If additional slump is required, use water reducing admixture.
- C. Discharge mixed concrete within 1-1/2 hours or before mixer has revolved 300 revolutions, whichever comes first, after the introduction of mixing water to the cement and aggregates. Reduce this time to 45 minutes when the concrete temperature exceeds 85 degrees F, unless appropriate measures as specified in ACI 305.1 are taken to maintain slump and temperature of concrete. Slump and concrete temperature can be maintained within limits longer with the use of retarding admixtures or hydration-control admixtures or ice.
- D. Place concrete within fifteen minutes after it has been discharged from the mixer. Handle concrete from mixer to forms in a continuous manner.
- E. Deposit concrete as close as possible to its final position in the forms, with no vertical drop greater than five feet except where suitable equipment is provided to prevent segregation and where specifically authorized.
- F. Deposit concrete continuously or in layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If concrete cannot be placed continuously, provide construction joints as specified. Deposit concrete to avoid segregation.
- G. Deposit concrete in forms in horizontal layers no deeper than 24 inches and in a manner to avoid inclined construction joints. Place each layer while preceding layer is still plastic to avoid cold joints.
- H. Pumping concrete, when specifically accepted, may be conveyed by positive displacement pump such as piston or squeeze pressure type; pneumatic placing equipment is not permitted. Use rigid steel pipe or heavy-duty flexible hose with an inside diameter at least three times the nominal maximum-size coarse aggregate, but not less than 4 inches. Aluminum pipe is not allowed.
- I. Provide adequate scaffolding, ramps and walkways in a manner so that personnel and equipment are not supported by in-place reinforcement.
- J. Consolidation: Consolidate placed concrete with mechanical vibrating equipment per ACI 309R.
 - 1. Consolidate each layer of concrete immediately after placing using internal vibrators, except for slabs 4 inches thick or less.
 - 2. Insert and withdraw vibrators vertically at uniformly spaced location no farther than the visible effectiveness of the vibrator. Hold vibrator stationary and slowly withdraw vertically while operating.

3. Do not use vibrators to transport concrete inside forms.
 4. Place vibrator to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers that have begun to lose plasticity. Limit vibration duration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mix to segregate.
- K. Concrete Floors and Slabs: Deposit and consolidate concrete for floors and slabs in a continuous operation within limits of construction joints until placement of a panel or section is complete.
1. Consolidate concrete during placement so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
 2. Maintain reinforcement in position on chairs during concrete placement.
 3. Screed slab surfaces with a straightedge and strike off to correct elevations.
 4. Slope exterior surfaces for drainage as directed, unless otherwise shown.
- L. Hot Weather Concreting: Place concrete according to ACI 305.1 and as follows:
1. Cool components before mixing to maintain concrete temperature below 85 degrees F at time of placement. Chilled mixing water or chopped ice may be used to control temperature. Calculate and include water equivalent of ice in designed water cement ratio.
 2. Cover steel reinforcement with water-soaked burlap so steel temperature will not exceed ambient air temperature immediately before embedding in concrete.
 3. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.
 4. Protect concrete from surface drying; moisture loss from concrete in plastic state shall be maintained below 0.1 pounds per square foot per hour. Methods may include, but are not limited to: evaporation retardant, sun shades, wind breaks, and fog misting.
- M. Cold Weather Concreting: Place concrete according to ACI 306.1 and as follows:
1. Protect concrete work from physical damage or reduced strength as a result of frost, freezing, or low temperatures.
 2. When ambient temperature is expected to fall below 40 degrees F, uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 degrees F and not more than 75 degrees F.
 3. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade.
 4. Do not incorporate calcium chloride, salt or other materials containing antifreeze agents into the concrete mix.
 5. Upon Architect's written acceptance and subject to prior approval of mix design, accelerating admixtures, containing no calcium chloride, as specified in this Section may be used.
- N. Do not allow concrete overpour from formwork where underground products and systems need to be installed at or adjacent to the concrete work. If overpour occurs, remove as necessary to accommodate the installation of such items.

3.4 JOINTS

- A. General: Construct joints true to line with faces perpendicular to surface plane of concrete, unless otherwise indicated on Drawings.
- B. Construction Joints: Locate and install joints as indicated on Drawings or as accepted by Architect, and in a manner that strength and appearance of concrete are not impaired.
 - 1. Comply with ACI 318, Chapter 26, Articles 26.5.6.1 and 26.5.6.2.
 - 2. Place joints perpendicular to main reinforcement. Continue reinforcement across construction joints unless otherwise indicated.
 - 3. Expose concrete aggregates, a minimum of 1/4 inch depth, creating a rough surface using a surface retardant. Within 24 hours after placing concrete, remove retarded surface mortar using either high pressure water jetting or stiff brushing or a combination of both to expose coarse aggregate. A rough surface of exposed aggregate may also be produced by sandblasting followed by high pressure water jetting.
 - 4. Where new concrete joins existing concrete (concrete more than sixty days old), clean and roughen existing concrete to expose coarse aggregate. Coat with epoxy bonding compound prior to placing new concrete.
 - 5. Horizontal joints: Apply a 1 inch wood grade strip, level and straight, 1/2 inch below the placement lift elevation for a neat joint.
- C. Slab-on-Ground Control Joints: Tool or saw-cut weakened plane joints at a depth of at least 1/4 slab thickness where shown on Drawings. Where not indicated in Drawings, provide at distances (in feet) every two times to three times of slab thickness (in inches).
 - 1. Tooled Joint: Form control joints after initial floating by grooving and finishing each joint edge to a 1/8-inch radius. Repeat grooving after applying surface finish.
 - 2. Sawed Joint: Saw cut 1/8-inch width as soon as the concrete has hardened sufficiently to prevent raveling (dislodging of the aggregates) of the edges of the saw cut and completed before shrinkage stresses become sufficient to produce cracking.
 - 3. Fill control joints with epoxy joint filler in accordance with manufacturer's written instructions.
- D. Slab-on-Ground Expansion Joints and Isolation Joints: Provide expansion joints and isolation joints where shown on Drawings, where slab abuts vertical surfaces such as curbs, gutters, and sidewalks.
 - 1. Extend joint-filler strips full width and extend to full depth of joint, terminating not less than 1/2 inch and not more than 1 inch from finish surface. Apply a removable capping flush to slab finish.
 - 2. Install strips in lengths as long as practicable. Where more than one length is required, lace or clip sections together.
 - 3. Remove capping when concrete has cured and apply joint sealant.
- E. Dowel Joints: Install dowel sleeves and dowels or dowel bar and support assemblies at joints where shown on Drawings.

3.5 FORMED SURFACES FINISHING

- A. Leave texture imparted on formed concrete surface, unless otherwise specified, except that defective surfaces shall be repaired. Repair defective concrete as specified in this Section.

- B. Maintain uniform color of the concrete, unless painting of surfaces is required, by using only one mixture without changes in material or proportions for any structure or portion of structure exposed to public view.
- C. Repair and patch tie holes. Apply cone hole plugs matching color of cured concrete; and unless otherwise indicated, flush to concrete surface, as provided by form tie manufacturer using waterproof adhesive.

3.6 CONCRETE FLOORS AND SLABS FINISHING

- A. Comply with ACI 302.2R and as specified in this Section. Comply with flatness and levelness tolerance requirements of this Section.
- B. Float Finish:
 - 1. Immediately following placing and consolidating concrete, begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, free of humps or hollows, before excess moisture or bleedwater appears on the surface.
 - 2. When concrete has sufficiently stiffened begin floating to a true and even plane free of ridges. Perform floating using power-driven equipment or hand floats if area is small or inaccessible to power-driven floats.
 - 3. If bleedwater is present prior to finishing, carefully drag-off or remove by absorption with porous materials such as burlap. Dusting of surfaces with dry cement or other materials or the addition of any water during finishing is not permitted.
 - 4. Check slab surfaces with a ten-foot straightedge at regular intervals while concrete is still plastic, to detect high or low areas.
 - 5. Restraighten, cut down high spots, and fill low spots. Repeat float passes and restraighten until surface is left with a uniform, smooth, granular texture.
 - 6. Take extreme care during finishing operations to prevent over finishing or to prevent working water into the surface; this can cause crazing (surface shrinkage cracks which appear after hardening) of the surface. Slabs with surfaces exhibiting significant crazing as determined by Architect shall be removed and replaced.
- C. Trowel Finish:
 - 1. After floating is complete and after surface moisture has disappeared, apply trowel finish using a power-driven trowel or hand trowel if area is small or inaccessible to power-driven trowel.
 - 2. Steel trowel to a smooth, even, dense finish, free of blemishes including trowel marks.
 - 3. Apply final steel troweling by hand.
- D. Broom Finish:
 - 1. After floating, lightly trowel surface and then carefully score by pulling a broom across the surface. Use appropriate type of broom to achieve texture specified.
 - 2. Broom as indicated or as directed by Architect. Where not specifically indicated, broom transverse to traffic or at right angles to the slope of the slab.
 - 3. Adding water to facilitate brooming is not permitted.
 - 4. Exterior ramps, walks, and slabs: Apply a slip-resistant finish as follows:
 - a. Where slope is six percent or greater: Heavy broom finish with at least 0.8 coefficient of friction per ASTM C1028.

- b. Where slope is less than six percent: Medium broom finish with a minimum 0.6 coefficient of friction per ASTM C1028.
- E. Floor and Slab Flatness and Levelness Tolerance: Determine flatness and levelness of floor slabs using the F-Number System in accordance with ASTM E1155 using the inch-pound system of units. Calculate F-Numbers as follows:
1. Definitions:
 - a. Face Flatness Number (F_F): The maximum slab curvature allowed over 24 inches computed on the basis of successive 12 inch elevation differentials.
 - b. Face Levelness Number (F_L): The relative conformity of the slab surface to a horizontal plane as measured over a ten foot distance.
 2. Sampling Requirements: As described in ACI 117.
 3. Calculations:

$$F_F = \frac{4.57}{\text{Maximum difference in elevation (in decimals of inches) between successive 12 inch elevation differences.}}$$

$$F_L = \frac{12.5}{\text{Maximum difference in elevation (in decimals of inches) between two points 10 feet apart.}}$$

4. Tolerances, unless noted otherwise:
 - a. Trowel finish surfaces on ground: F_F 25; F_L 20 (overall tolerance values).
 - b. Float finish surfaces on ground: F_F 20; F_L 17 (overall tolerance values).
 - c. Minimum local tolerance (1/2 bay or as designated by Architect): 2/3 of specified tolerance values.
 5. Refer to Section 09 65 66 for floor flatness and levelness requirements for resilient athletic flooring.
 6. Refer to Article 3.9 of this Section for remedial work required for out-of-tolerance concrete.
- F. Site Concrete Flatness Tolerance: 1/4 inch in 10 feet, non-cumulative; unless more restrictive tolerance is indicated or specified. This tolerance does not allow slopes to exceed the specified maximum slopes.
1. Surface cross slopes shall not exceed one unit vertical in fifty units horizontal (two percent).

3.7 CURING AND PROTECTION

- A. Protect freshly placed concrete from premature drying, rapid temperature change, mechanical injury, and injury from flowing water for a curing period not less than seven days. Comply with ACI 306.1 for cold-weather protection and ACI 305R for hot-weather protection during curing.

B. Curing Methods:

1. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.
 - a. If curing compound is applied using a hand held, pump-up sprayer, it shall be back-rolled using a short nap roller.
2. Moist Curing: Keep surfaces in a moist condition for not less than seven days using water saturated absorptive cover (burlap-polyethylene sheeting) kept wet continuously. Cover concrete completely in widest practicable width, with sides and ends lapped at least 12 inches, and sealed with waterproof tape or adhesive. Immediately repair and maintain rips and tears and keep traffic away from surface during curing period.
3. Ponding or Immersion: Continuously immerse concrete throughout the curing period in water not more than twenty degrees below the temperature of the concrete.

C. Concrete in Forms: Keep forms and exposed concrete surfaces covered and continuously moist. Provide soaker hoses at top of walls or other accepted means of keeping concrete and forms wet while forms remain in place. If forms are removed before end of curing period, continue curing by methods described in this Section.

D. Floors and Slabs:

1. Evaporation Retarder: Apply evaporation retarder to floors and slabs if hot, dry, or windy conditions cause moisture loss of 0.1 pounds per square foot per hour before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.
2. Cure by application of curing and sealing compound or by moist curing. Use appropriate curing method compatible with subsequent floor adhesives and coatings. Moist cure concrete surfaces to receive penetrating liquid floor treatments.
3. Begin curing as soon as free water has disappeared from the concrete surface after placing and final finishing.

E. Protection:

1. Protect concrete surfaces from damage by tools, equipment, materials, and construction activity.
2. Traffic, shoring, or loading will not be permitted on concrete surface until it has sufficiently hardened to prevent injury to finish and strength.
3. Protect all flat work and other surfaces as required with full board of plywood coverings as necessary.

3.8 REMOVAL OF FORMS

A. Formwork for sides of curbs, walls, and similar parts of the Work that does not support weight of concrete may be removed after cumulatively curing at not less than 50 degrees F for 48 hours after placing concrete provided concrete is hard enough not to be damaged by form-removal operations and provided curing and protection operations are maintained.

3.9 CONCRETE REPAIRS

- A. General: Comply with ACI 301, Article 1.7 as follows:
1. Completed concrete work shall conform to applicable requirements of this Section and Contract Documents.
 2. Concrete work that fails to meet one or more requirements of the Contract Documents but subsequently is repaired to bring the concrete into compliance will be acceptable.
 3. Concrete work that fails to meet one or more requirements of the Contract Documents and cannot be brought into compliance with the Contract Documents is subject to rejection.
 4. Repair rejected concrete work by removing and replacing or by additional construction to strengthen or otherwise satisfy project requirements as directed by Architect. To bring rejected Work into compliance, use repair methods that meet applicable requirements for function, durability, dimensional tolerances, and appearance as determined by Architect.
 5. Submit proposed repair methods, materials, and modifications needed to repair concrete work to meet the requirements of the Contract Documents.
 6. Contractor shall be responsible to bring concrete work into compliance with requirements of Contract Documents.
- B. Defective Concrete: Repair and patch defective concrete work and concrete not conforming to required lines, details, and elevations. Use materials and methods specified in this Section as accepted by Architect. Serious defects, defects affecting structural strength, or unsatisfactory patching may be cause for complete removal and replacement of concrete.
- C. Repairing Formed Surfaces: Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on the surface stains and other discolorations that cannot be removed by cleaning.
1. Immediately after form removal, cut out honeycomb, rock pockets, and voids more than 1/2 inch in any direction in solid concrete. Make edges of cuts perpendicular to concrete surface. Clean, dampen with water, and brush-coat holes and voids with bonding agent. Fill and compact with drypack grout before bonding agent has dried. Fill form-tie voids with patching mortar or cone hole plugs secured in place with bonding agent.
 2. Repair defects on surfaces exposed to view by blending white Portland cement and standard Portland cement so that, when dry, repair mortar will match surrounding color. Patch a test area at inconspicuous location to verify mixture and color match before proceeding with patching. Compact mortar in place and strike off slightly higher than surrounding surface.
 3. Repair defects on concealed, formed surfaces that affect concrete's durability and structural performance as determined by Architect and DSA.
- D. Repairing Unformed Surfaces: Test unformed surfaces, such as floors and slabs, for finish and verify tolerances specified for each surface. Correct low and high areas. Test surfaces sloped to drain for trueness of slope and smoothness.
1. Repair defective finished surfaces including spalls, popouts, honeycombs, rock pockets, crazing and cracks in excess of 0.01 inch wide or that penetrate to reinforcement or completely through unreinforced section regardless of width, and other objectionable conditions.
 2. After concrete has cured fourteen days, correct high spots by grinding.

3. Correct localized low areas during or immediately after completing surface finishing operations by cutting out low areas and replacing with patching mortar. Finish areas to blend into adjacent concrete.
 4. Correct other low areas scheduled to receive floor coverings with a repair underlayment. Prepare, mix, and apply mortar underlayment and primer according to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface. Feather edges to match adjacent floor elevations.
 5. Repair defective areas, except random cracks and single holes 1 inch or less in diameter, by cutting out and replacing with fresh concrete. Remove defective areas with clean, square cuts and expose steel reinforcement with at least 3/4 inch clearance all around. Dampen concrete surface in contact with patching concrete and apply bonding agent. Mix patching concrete of same materials and mix as original concrete. Place, compact, and finish to blend with adjacent finished concrete.
 6. Repair random cracks and single holes 1 inch or less in diameter with drypack grout. Groove top of cracks and cut out holes to sound concrete and clean off dust, dirt, and loose particles. Dampen cleaned concrete surfaces and apply bonding agent. Place drypack grout before bonding agent has dried. Compact and finish grouted areas to match adjacent concrete.
- E. Moist cure patches and repairs for at least 72 hours.
- F. Perform concrete structural repairs subject to Architect's and DSA's acceptance.

3.10 FIELD QUALITY CONTROL

- A. General: Comply with requirements of Division 01.
- B. Testing Service: Owner will select and pay for independent testing agency.
- C. Strength Test Specimen Cylinders: Conduct sampling, curing, and testing per ASTM C172, ASTM C31/C31M, and ASTM C39/C39M. Contractor shall provide moulds required for strength test cylinders.
 1. Frequency: Samples for strength tests of each class of concrete placed each day shall be taken not less than once a day, nor less than once for each 50 cubic yards of concrete, nor less than once for each 2000 square feet of surface area for slabs or walls. Additional samples for seven-day compressive strength tests shall be taken for each class of concrete at the beginning of the concrete work or whenever the mix or aggregate is changed.
 2. A strength test shall be the average of the strengths of at least two 6 inch by 12 inch cylinders or at least three 4 inch by 8 inch cylinders made from the same sample of concrete and tested at the test age designated for the determination of concrete compressive strength.
 3. Cylinder Label and Records: Mark and date each test cylinder. Maintain records of test specimen cylinders and send copies to Contractor, Architect, DSA, Project Inspector, and Owner. Record the following information:
 - a. Cylinder identification mark.
 - b. Date made.
 - c. Concrete supplier.
 - d. Slump/slump flow.

- e. Specified concrete design strength.
 - f. Pour location and type of structural member.
 - g. Compressive strength test date and age.
 - h. Admixtures added to concrete mix.
 - i. Air content.
4. Compressive Strength Tests: Test laboratory cured specimens at the following ages and report compressive strengths as follows:
- a. 7 days at the start of use of each class of concrete or change in mix or aggregates.
 - b. 7 days where early compressive strength is required.
 - c. 28 days.
 - d. 56 days.
 - e. Hold specimens for one strength test in reserve.
5. Test Reports: Furnish copies of test reports directly from testing agency to Contractor, Architect, DSA, Project Inspector, and Owner.
- D. Slump Test: ASTM C143/C143M. Conduct slump testing when test cylinders are made and additionally for every 150 cubic yards of concrete. Perform additional tests when concrete consistency appears to change. Slump not meeting slump indicated in accepted mix design (\pm one inch) will be rejected. Contractor shall provide slump cones.
- E. In the event the cylinders tested do not meet the required concrete design strength, conduct core tests and additional tests or inspections as may be required by Architect to ascertain strength of placed concrete. Costs for additional tests and inspections shall be borne by Contractor.

END OF SECTION

Concrete Mixture Design Submittal Checklist

- Specify Use:** All mix designs must clearly note the concrete type or use. (i.e. footings, slab on grade, site concrete)
- Mix Design:** Provide concrete mixture designs with proportions and characteristics including all admixtures.
- Gradation:** Provide combined aggregate gradation by weight for all course and fine aggregates.
- Weight:** Provide dry unit weight of mix. Normal weight concrete shall be limited to 145 PCF.
- Material Certificates:** Provide supplier's certification that materials conform to specifications. This includes aggregates, admixtures, and cementitious materials such as cement and fly ash.
- Product Data:** Provide product literature for each product and admixture used. Include manufacturer's specification, written instructions, and installation procedures.
- Required SCM:** Mix design must contain the percentage of supplementary cementitious materials noted in mix design table of the specifications.

- Admixtures:** Where multiple admixtures are used, provide a letter from all manufacturers indicating there are no compatibility problems or adverse effects resulting from combination of products.
- Shrinkage:** Provide shrinkage test per modified ASTM C157/C157M at 21 days. Shrinkage test must be for the same mix specified or a similar mix with the same water cement ratio and aggregate source. (Exception: shrinkage testing is not required for below grade concrete)
- Testing / Proportion Method:** Concrete must be proportioned per the requirements of ACI 318-11, Section 5. Indicated method used and provide complete test data and documentation for the chosen proportion method.

SECTION 32 31 19
DECORATIVE METAL FENCES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Ornamental Picket Fencing and Accessories.

1.2 RELATED SECTIONS

- A. Section 03 30 00 – Cast-In-Place Concrete.
- B. Section 32 31 19.13 – Sliding Decorative Metal Gates.
- C. Section 32 31 19.16 – Swinging Decorative Metal Gates.

1.3 REFERENCES

- A. The publications listed below form a part of this Section to the extent referenced. The publications are referred to in the text by the basic designation only. Refer to Division 01 for definitions, acronyms, and abbreviations.
- B. Standards, manuals, and codes refer to the latest edition of such standards, manuals, and codes in effect as of the date of issue of this Project Manual, unless indicated otherwise in CBC Chapter 35 and CFC Chapter 80.
- C. Referenced Standards:
 - 1. ASTM A653/A653M – Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - 2. ASTM B117 – Standard Practice for Operating Salt Spray (fog) Testing Apparatus.
 - 3. ASTM B695 – Standard Specification for Coatings of Zinc Mechanically Deposited on Iron and Steel.

1.4 SUBMITTALS

- A. Submit under provisions of Division 01.
- B. Shop Drawings: Layout of fences and gates with dimensions, details and finishes of components, accessories and post foundations.
- C. Product Data: Manufacturer's catalog cuts indicating material compliance and specified options.
- D. Samples: Color selections for finishes. If requested, samples of materials (e.g., caps and accessories).

1.5 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Sufficient experience manufacturing similar products.
- B. Erector's Qualifications: Sufficient experience installing similar products.

1.6 PROTECTION

- A. Damage to Adjoining Property and Existing Surfaces: Contractor shall assume all responsibility for damage to building surfaces and materials and shall restore them to their original condition should damage occur.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store and handle materials so as to avoid damage under provisions of Division 01.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. Ameristar. Product: Ornamental Picket Fence: Aegis II, Classic Style three rail.
- B. Master Halco - Monumental Iron Works.
- C. Substitutions: Under provisions of Division 01.

2.2 ORNAMENTAL PICKET FENCE

- A. Materials for fence framework (i.e., pickets, rails and posts) shall be manufactured from coil steel having a minimum yield strength of 50,000 psi. All steel shall be galvanized to meet the requirements of ASTM A653/A653M with a minimum zinc coating weight of 0.90 ounces per square foot (coating designation G-90), hot dip process.
- B. Pickets: Material for fence pickets shall be 1 inch square x 14 gauge tubing.
- C. Rails: The cross-sectional shape of the rails shall conform to the manufacturer's standard design, with outside cross section dimensions of 1.75 inches square and a minimum thickness of 14 gauge. Picket holes in rail shall be spaced 4.98 inches on center.
- D. Posts: Posts at fence shall be 3 inches square tube x 12 gauge.
- E. Preassemble panels with rods or rivets supplied by manufacturer.
- F. Finish: Galvanized framework shall be subject to six stage pretreatment/wash (with zinc phosphate) followed by an electrostatic spray application of a two coat powder system. The base coat shall be a thermosetting epoxy powder coating (gray in color) with a minimum thickness of 2 mils to 4 mils. Top coat shall be a TGIC polyester powder coat finish with a minimum thickness of 2 mils to 4 mils. The color shall be black. Coated galvanized framework shall have a salt spray resistance of 3500 hours using ASTM B117 without loss of adhesion. Paint system used shall not contain lead.

2.3 ACCESSORIES

- A. Rail Attachment Brackets: Pressed steel or cast malleable iron.
- B. Ornamental Picket Fence Accessories: Provide indicated items required to complete fence system. Galvanize each ferrous metal item in accordance with ASTM B695 and finished to match framing.
- C. Post Caps: Formed steel, cast or malleable iron or aluminum alloy, weathertight closure cap. Provide one standard post cap for each post.

D. Picket Tops: Provide standard steel top.

2.4 SETTING MATERIALS

A. Concrete: Minimum 28 day compressive strength of 3,000 pounds per square inch for setting fence posts. Refer to Section 03 30 00.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify areas to receive fencing are completed to final grades and elevations.

B. Ensure property lines and legal boundaries of work are clearly established.

3.2 ORNAMENTAL PICKET FENCE INSTALLATION

A. Install fence in accordance with manufacturer's instructions.

B. Space posts uniformly at 8 feet on center maximum, unless otherwise noted.

C. Concrete Footings: Drill holes in firm, undisturbed or compacted soil. Holes shall have diameter four times greater than outside dimension of posts and depths approximately 6 inches deeper than post bottom. Excavate deeper as required for adequate support in soft and loose soils and for posts with heavy lateral loads. Set post bottom below surface when in firm, undisturbed soil. Place concrete around posts in a continuous pour. Trowel finish around post and slope to direct water away from posts. Refer to Drawings for footing size.

D. Check each post for vertical and top alignment and maintain in position during placement and finishing operations.

E. Align fence panel posts. Panels shall be attached to posts using mechanically fastened panel brackets supplied by the manufacturer.

3.3 ACCESSORIES

A. Install post caps and other accessories to complete fence.

3.4 CLEANING

A. Cleaning and Finishing: Upon completion of the work, clean all exposed surfaces, removing any discoloration or foreign matter.

B. Touch up all abraded or scraped areas with touch-up paint to match fence color. Touch-up shall not be obvious.

C. Protect all installed work against damage from other construction work.

D. Clean Up: Upon completion of the work of this Section, remove all surplus materials, rubbish and debris from the fence installation area.

END OF SECTION

SECTION 32 31 19.13

SLIDING DECORATIVE METAL GATES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Gates, framework, and accessories.

1.2 RELATED SECTIONS

- A. Section 03 30 00 – Cast-In-Place Concrete.
- B. Section 32 31 19 – Decorative Metal Fences.
- C. Section 32 31 19.16 – Swinging Decorative Metal Gates.

1.3 REFERENCES

- A. The publications listed below form a part of this Section to the extent referenced. The publications are referred to in the text by the basic designation only. Refer to Division 01 for definitions, acronyms, and abbreviations.
- B. Standards, manuals, and codes refer to the latest edition of such standards, manuals, and codes in effect as of the date of issue of this Project Manual, unless indicated otherwise in CBC Chapter 35 and CFC Chapter 80.
- C. Referenced Standards:
 - 1. ASTM A513 – Standard Specification for Electric-Resistance-Welded Carbon and Alloy Steel Mechanical Tubing.
 - 2. ASTM A653/A653M – Standard Specification for Steel Sheet, Zinc Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot-Dip Process.
 - 3. ASTM B117 – Standard Practice for Operating Salt Spray (fog) Testing Apparatus.

1.4 SUBMITTALS

- A. Submit under provisions of Division 01.
- B. Shop Drawings: Shop drawings shall show gate elevation, dimensions, all component parts, and all fabrication details.
- C. Product Data: Manufacturer's catalog cuts indicating material compliance and specified options.
- D. Samples: Color selections for finishes. If requested, samples of materials (e.g., caps and accessories).

1.5 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Sufficient experience manufacturing similar products.
- B. Erector Qualifications: Sufficient experience installing similar products.

1.6 PROTECTION

- A. Damage to Adjoining Property and Existing Surfaces: Contractor shall assume all responsibility for damage to building surfaces and materials and shall restore them to their original condition should damage occur.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store and handle materials so as to avoid damage under provisions of Division 01.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. Ameristar. Product: Ornamental Picket Sliding Gates: Passport II, Classic Style three rail with roll gate hardware kit #PGKOD. Gates, accessories, and finish shall match decorative metal fencing.
- B. Master Halco - Monumental Iron Works.
- C. Substitution under the provision of Division 01.

2.2 MATERIALS

- A. Materials for gate framework (i.e., pickets, rails and posts) shall be manufactured from coil steel having a minimum yield strength of 45,000 psi. All steel shall be galvanized to meet the requirements of ASTM A653 with a minimum zinc coating weight of 0.90 ounces per square foot (coating designation G-90), hot dip process. Gate sizes as indicated on Drawings.
- B. Pickets: Material for gate pickets shall be 1 inch square x 14 gauge tubing.
- C. Rails: The cross-sectional shape of the rails shall conform to the manufacturer's standard design, with outside cross section dimensions of 2 inches square x 11 gauge at top rails, uprights, and diagonal braces, and 2 inches x 4 inches x 11 gauge at bottom rail. Picket holes in rail shall be spaced 4-3/4 inches on center.
- D. Gate Posts: Posts at gates shall be 4 inch square x 11 gauge, ASTM A513 hot-rolled structural quality steel, 50,000 pounds per square inch tensile strength, with ASTM A653 hot-dipped galvanized G90 coating. Provide top cap at each post.
- E. Track: Galvanized steel angles sized to accommodate trucks.
- F. Trucks: Two swivel type zinc die cast trucks having four sealed lubricant ball bearing wheels, 4 inches in diameter by 1 inch in width, with two side rolling wheels to insure alignment of truck in track shall be provided for each gate leaf. Trucks shall be held to post brackets by 7/8 inch diameter ball bolts with 1/2 inch shank. Truck assembly shall be designed to take the same reaction load as the track.
- G. Guide Roller Assembly: Provide for each supporting post 4 inch rubber guide rollers. Each assembly shall consist of rubber wheels 4 inches in diameter with oil impregnated bearings and shall be attached to post so that the bottom horizontal member will roll between the wheels which can be adjusted to maintain plumb gate frames and proper alignment.

- H. Accessories: All gate hangers, latches, brackets, guide assemblies and stops shall be malleable iron or steel, galvanized after fabrication.
- I. Finish: Galvanized framework shall be subject to six-stage pretreatment/wash (with zinc phosphate) followed by an electrostatic spray application of a two-coat powder system. The base coat is a thermosetting epoxy powder coating (gray in color) with a minimum thickness of 2 mils to 4 mils. Topcoat shall be a TGIC polyester powder coat finish with a minimum thickness of 2 mils to 4 mils. The color shall be black. Coated galvanized framework shall have a salt spray resistance of 3500 hours using Test Method B117 without loss of adhesion. Paint system used shall not contain lead.

2.3 FABRICATION

- A. Sliding gates shall be constructed as specified in this Section and as indicated on Drawings.
- B. Use materials of size and thickness indicated or, if not indicated, as required to produce strength and durability in finished product for use intended. Work to dimensions shown or accepted on shop drawings, using proven details of fabrication and support. Use type of materials shown or specified for various components of work.
- C. Form exposed work true to line and level with accurate angles and surfaces and straight sharp edges. Ease exposed edges to a radius of approximately 1/32 inch unless otherwise indicated.
- D. Weld corners and seams continuously, complying with AWS recommendations. At exposed connections, grind exposed welds smooth and flush to match and blend with adjoining surfaces.
- E. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners.
- F. Fabricate to design, dimensions and details indicated. Provide members formed of galvanized steel tube of sizes indicated.
- G. Interconnect members by butt-welding or welding with internal connectors, at fabricator's option. Provide closures, flanges, miscellaneous fittings and anchors for interconnections of tube and attachment of members to other work.
- H. Fabricate and furnish gates complete with all hardware.

2.4 SETTING MATERIALS

- A. Concrete: Minimum 28 day compressive strength of 3,000 pounds per square inch for setting gate posts. Refer to Section 03 30 00.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify areas to receive gates are completed to final grades and elevations.

3.2 INSTALLATION

- A. Install gates in accordance with manufacturer's instructions.

- B. Workmanship: All work shall be installed level and plumb and securely anchored to the fence structure.
- C. Gate: Install gate plumb, level and secure for a full opening without interference. Gate shall operate freely and without bind.
 - 1. Adjust fencing prior to anchoring to insure matching alignment at abutting joints.
 - 2. Cutting, Fitting and Placement: Perform cutting, drilling and fitting required for installation of gates. Set work accurately in location, alignment and elevation, plumb, level, true and free of rack, measured from established lines and levels. Install in concrete foundations as indicated.
 - 3. Fit exposed connections accurately together to form tight hairline joints. Weld connections which are not to be left as exposed joints, but cannot be shop welded because of shipping size limitations. Grind exposed joints smooth and touch-up galvanizing and shop prime coats.
 - 4. Field Welding: Comply with AWS Code for procedures of manual shielded metal-arc welding appearance and quality of welds made.
- D. Coordinate installation of gates with installation of fencing.

3.3 ADJUST AND CLEAN

- A. Adjusting: Adjust gate as required for smooth, unhindered operation.
- B. Cleaning and Finishing: Upon completion of the work, clean all exposed surfaces, removing any discoloration or foreign matter.
- C. Touch up all abraded or scraped areas with touch-up paint to match gate color. Touch-up shall not be obvious.
- D. Protect all installed work against damage from other construction work.
- E. Clean Up: Upon completion of the work of this Section, remove all surplus materials, rubbish and debris from the gate installation area.

END OF SECTION

SECTION 32 31 19.16

SWINGING DECORATIVE METAL GATES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Gates, framework, and accessories.

1.2 RELATED SECTIONS

- A. Section 03 30 00 – Cast-In-Place Concrete.
- B. Section 08 71 00 – Door Hardware: Gate hardware.
- C. Section 32 31 19 – Decorative Metal Fences.
- D. Section 32 31 19.13 – Sliding Decorative Metal Gates.

1.3 REFERENCES

- A. The publications listed below form a part of this Section to the extent referenced. The publications are referred to in the text by the basic designation only. Refer to Division 01 for definitions, acronyms, and abbreviations.
- B. Standards, manuals, and codes refer to the latest edition of such standards, manuals, and codes in effect as of the date of issue of this Project Manual, unless indicated otherwise in CBC Chapter 35 and CFC Chapter 80.
- C. Referenced Standards:
 - 1. ASTM A513 – Standard Specification for Electric-Resistance-Welded Carbon and Alloy Steel Mechanical Tubing.
 - 2. ASTM A653/A653M – Standard Specification for Steel Sheet, Zinc Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot-Dip Process.
 - 3. ASTM B117 – Standard Practice for Operating Salt Spray (fog) Testing Apparatus.

1.4 SUBMITTALS

- A. Submit under provisions of Division 01.
- B. Shop Drawings: Shop drawings shall show gate elevation, dimensions, all component parts, and all fabrication details.
- C. Product Data: Manufacturer's catalog cuts indicating material compliance and specified options.
- D. Samples: Color selections for finishes. If requested, samples of materials (e.g., caps and accessories).

1.5 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Sufficient experience manufacturing similar products.

B. Erector Qualifications: Sufficient experience installing similar products.

1.6 REGULATORY REQUIREMENTS

- A. All gates shall meet all applicable requirements for doors per CBC Chapter 11B, Sections 11B-206.5 and 11B-404.1.
- B. Hand-activated opening hardware, handles, pulls, latches, locks and other operating devices for 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 per CBC Sections 11B-309.4 and 11B-404.2.7.
- C. The lever of lever actuated latches or locks for an accessible gate shall be curved with a return to within 1/2 inch of the face of gate per California Referenced Standards code, Title 24, Part 12, Section 12-10-202, Item (F).
- D. The bottom 10 inches of an accessible gate shall have a smooth, uninterrupted surface on each side. Bottom of the gates shall be within 3 inches of finish surface of the path of travel. Maximum effort to operate a gate shall not exceed 5 pounds per CBC Sections 11B-404.2.9.

1.7 PROTECTION

- A. Damage to Adjoining Property and Existing Surfaces: Contractor shall assume all responsibility for damage to building surfaces and materials and shall restore them to their original condition should damage occur.

1.8 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store and handle materials so as to avoid damage under provisions of Division 01.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. Ameristar. Product: Ornamental Picket Swinging Gates: Aegis II, Classic Style three rail. Gates, accessories, and finish shall match decorative metal fencing.
- B. Master Halco - Monumental Iron Works.
- C. Substitutions: Under provisions of Division 01.

2.2 MATERIALS

- A. Materials for gate framework (i.e., pickets, rails and posts) shall be manufactured from coil steel having a minimum yield strength of 50,000 pounds per square inch. All steel shall be galvanized to meet the requirements of ASTM A653 with a minimum zinc coating weight of 0.90 ounces per square foot (coating designation G-90), hot dip process. Gate sizes as indicated on Drawings.
- B. Pickets: Material for gate pickets shall be 1 inch square x 14 gauge tubing.
- C. Rails: The cross-sectional shape of the rails shall conform to the manufacturer's standard design, with outside cross section dimensions of 1.75 inches square and a minimum thickness of 14 gauge. Picket holes in rail shall be spaced 4.98 inches on center.

- D. Gate Posts: Posts at gates shall be 4 inch square x 12 gauge, ASTM A513 hot-rolled structural quality steel, 50,000 psi tensile strength, with ASTM A653 hot-dipped galvanized G90 coating. Provide top cap at each post.
- E. Bracing: Provide diagonal adjustable length truss rods on gates to prevent sag.
- F. Gate Hardware: Refer to Section 08 71 00.
- G. Finish: Galvanized framework shall be subject to six-stage pretreatment/wash (with zinc phosphate) followed by an electrostatic spray application of a two-coat powder system. The base coat is a thermosetting epoxy powder coating (gray in color) with a minimum thickness of 2 mils to 4 mils. Topcoat shall be a TGIC polyester powder coat finish with a minimum thickness of 2 mils to 4 mils. The color shall be black. Coated galvanized framework shall have a salt spray resistance of 3500 hours using Test Method B117 without loss of adhesion. Paint system used shall not contain lead.

2.3 FABRICATION

- A. Swinging gates shall be constructed as specified in this Section and as indicated on Drawings.
- B. Use materials of size and thickness indicated or, if not indicated, as required to produce strength and durability in finished product for use intended. Work to dimensions shown or accepted on shop drawings, using proven details of fabrication and support. Use type of materials shown or specified for various components of work.
- C. Form exposed work true to line and level with accurate angles and surfaces and straight sharp edges. Ease exposed edges to a radius of approximately 1/32 inch unless otherwise indicated.
- D. Weld corners and seams continuously, complying with AWS recommendations. At exposed connections, grind exposed welds smooth and flush to match and blend with adjoining surfaces.
- E. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners.
- F. Fabricate to design, dimensions and details indicated. Provide members formed of galvanized steel tube sizes indicated.
- G. Interconnect members by butt-welding or welding with internal connectors, at fabricator's option. Provide closures, flanges, miscellaneous fittings and anchors for interconnections of tube and attachment of members to other work.
- H. Fabricate and furnish gates complete with all hardware as indicated.
- I. Bracing: Provide diagonal adjustable length truss rods on gates to prevent sag.

2.4 SETTING MATERIALS

- A. Concrete: Minimum 28 day compressive strength of 3,000 pounds per square inch for setting gate posts. Refer to Section 03 30 00.

PART 3 EXECUTION

3.4 EXAMINATION

- A. Verify areas to receive gates are completed to final grades and elevations.

3.1 INSTALLATION

- A. Install gates in accordance with manufacturer's instructions.
- B. Workmanship: All work shall be installed level and plumb and securely anchored to the wall structure.
- C. Gate: Install gate plumb, level and secure for a full opening without interference. Gate shall operate freely and without bind.
 - 1. Adjust fencing prior to anchoring to insure matching alignment at abutting joints.
 - 2. Cutting, Fitting and Placement: Perform cutting, drilling and fitting required for installation of fencing assemblies. Set work accurately in location, alignment and elevation, plumb, level, true and free of rack, measured from established lines and levels. Install in concrete foundations as indicated.
 - 3. Fit exposed connections accurately together to form tight hairline joints. Weld connections which are not to be left as exposed joints, but cannot be shop welded because of shipping size limitations. Grind exposed joints smooth and touch-up galvanizing and shop prime coats.
 - 4. Field Welding: Comply with AWS Code for procedures of manual shielded metal-arc welding appearance and quality of welds made.
- D. Coordinate installation of gates with installation of fencing.

3.2 ADJUST AND CLEAN

- A. Adjusting: Adjust gate as required for smooth, unhindered operation.
- B. Cleaning and Finishing: Upon completion of the work, clean all exposed surfaces, removing any discoloration or foreign matter.
- C. Touch up all abraded or scraped areas with touch-up paint to match gate color. Touch-up shall not be obvious.
- D. Protect all installed work against damage from other construction work.
- E. Clean Up: Upon completion of the work of this Section, remove all surplus materials, rubbish and debris from the gate installation area.

END OF SECTION

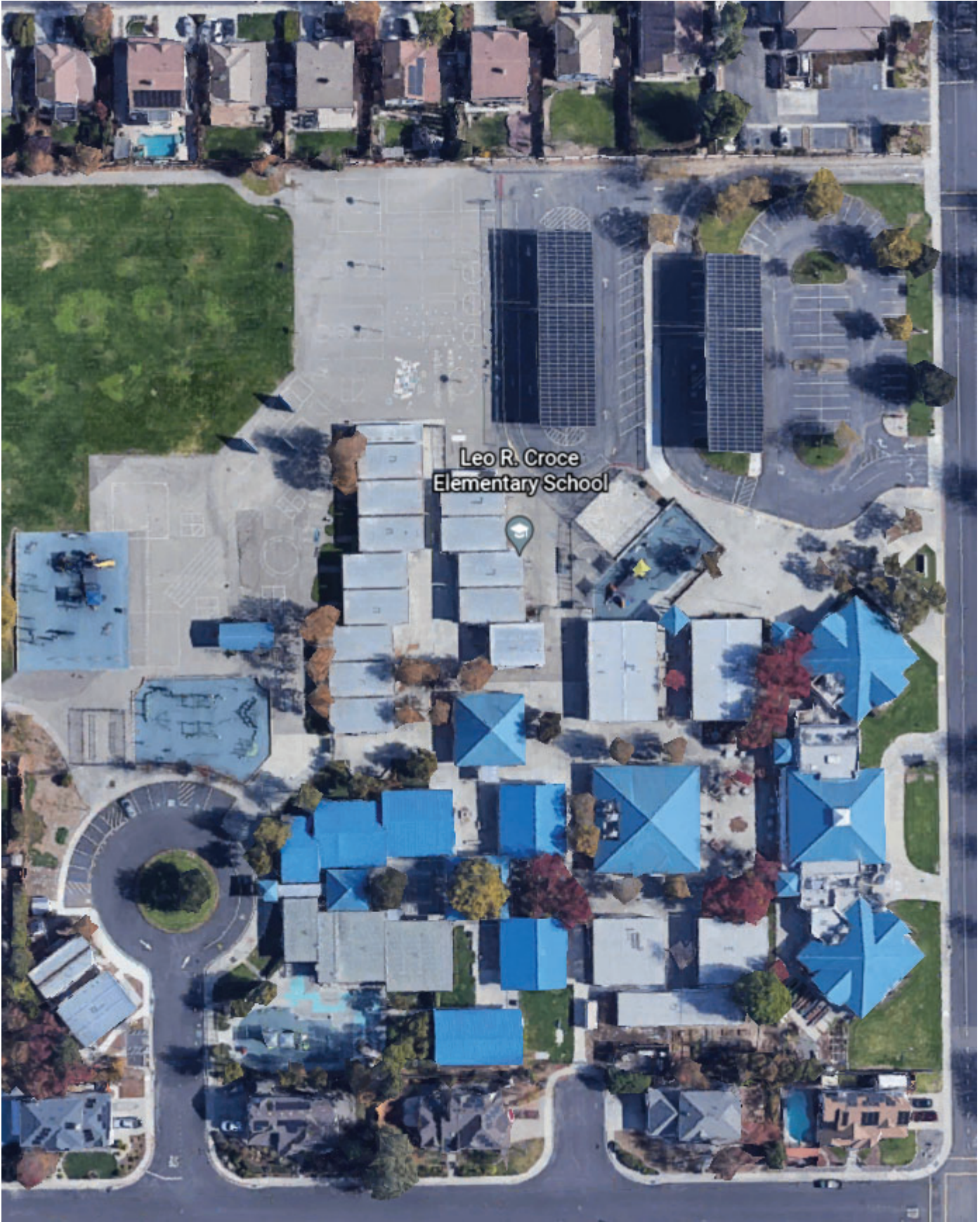
- Contractor to provide underground utility location survey prior to any construction activities taking place.
- Installation, removal, and maintenance of temporary construction fencing around the entire construction area.
- Installation of 6' decorative fence to be complete prior to demolition of chain link fence.
- New gate hardware to be installed at new decorative fence. Match existing hardware at pedestrian gates.
- Patch and paint existing decorative fence where gates were cut off.
- Chain link fence footings to remain. Fence posts to be cut flush and then filled and patched back.
- Decorative fence footings to be removed.
- Signage on all fencing will be removed and relocated to new locations unless otherwise noted.
- Signage on posts will be removed and relocated to new locations unless otherwise noted. See site plans for locations.
- Patch back of concrete and/or asphalt as needed.
- Fencing post around the gas meter enclosure will be dug by hand.
- Provide Knox box and mount at decorative fence.

General Requirements to be included in pricing for the project:

- 1) Provide all required management, engineering, submittals, shop drawings, supervision, material, labor, equipment, hoisting and unloading, coordination and all related work necessary for the completion of the entire scope in accordance with Contract Documents and all applicable codes and authorities.
- 2) All safety requirements per the local and state jurisdictions must be maintained at all times.
- 3) Bid is to fully include all the following contract items within the complete bid number:
 - a) Insurance
 - b) Prevailing Wage
 - c) Worker's Compensation
 - d) Criminal Background Investigation Certification
 - e) Asbestos & Other Hazardous Material Certification
 - f) Lead Product(s) Certification
 - g) Performance Bond
 - h) Payment Bond
- 4) Provide all dumpsters and debris bins required for complete project. Off haul and disposal is to be per all local requirements.
- 5) Daily clean up per the CM's requirements.
- 6) Provide Temporary Toilets for duration of project.
- 7) Work hours are to be 7am- 3:30pm Monday through Friday unless agreed upon otherwise by the Construction Manager and Owner.

Attachments

- Attachment 1 – Exhibit A – Scope of Work & Specifications (49 Pages)
- Attachment 2 – Exhibit B – Project Schedule (1 page)
- Attachment 3 – Sample Contract (20 pages)
- Attachment 4 – Bid Form (6 pages)



Addendum No. 01 – Leo R. Croce Elementary Parking Lot Fencing Project

February 11, 2022

To all bidders for furnishing all labor and material necessary and required for completing:

Livermore Valley Joint Unified School District
Leo R. Croce Elementary School
Parking Lot Fencing Project
685 East Jack London Blvd
Livermore, CA 94551

This addendum forms a part of the Contract Documents and modified the original Bidding Documents dated January 31, 2022. Acknowledge all addenda in the space provided on the Bid Form. Failure to do so may subject Bidder to disqualification.

CLARIFICATIONS

Response to Bid Questions:

1. **Question from Bidder:** Detail 9/AS501 shows a concrete mow strip above the new post footings. A mowstrip is not necessary or beneficial in asphalt where the new fence will be installed. Is the mow strip still required? If so, what depth will the mow strip need to be?
 - a. **Response:** A mowstrip is not required. Concrete footing to be flush with adjacent asphalt/grade.
2. **Question from Bidder:** Detail 8/AS502 shows a standard strike latch on the new single swing gates. Are any of these gates considered ADA path of travel? If so, this gate latch will not be sufficient to meet code. Please advise on style of latch for these gates.
 - a. **Response:** The new gates identified are not part of the ADA path of travel. Install strike latch as shown on detail 8/AS502.
3. **Question from Bidder:** Enlarged site plan sheet calls for the new decorative fence to match the existing which is a welded 2-rail iron fence style. Spec section 32 31 19 calls for an Ameristar Aegis II bracketed 3-rail iron fence style. What is the preferred style of fencing to be installed?
 - a. **Response:** Install fence specified per specification 32 31 19. Color to match existing.
4. **Question from Bidder:** Do you have instructions to bidders? Which will say what forms need to be submitted? Or confirm the attachment called SAMPLE BID FORM are the only ones you need to bid on the project.
 - a. **Response:** Refer to bid form for all forms needed to submit.

Addendum No. 01 – Leo R. Croce Elementary Parking Lot Fencing Project

5. **Question from Bidder:** When the footings of the existing decorative fence are removed, what are the backfill requirements?
 - a. **Response:** Contractor to backfill with a concrete slurry mix and provide 3" AC over the top to blend in with the adjacent asphalt.

EXHIBIT B (PROJECT SCHEDULE)

- **PROJECT SCHEDULE DATED 01-28-2022 (1 PAGE)**

EXHIBIT B

ESTIMATED PROJECT SCHEDULE

PROJECT: LEO R. CROCE ELEMENTARY PARKING LOT FENCING PROJECT

LOCATION: 5650 SCENIC AVE, LIVERMORE, CA 94551

Release Notice to Bid – January 31, 2022

Mandatory Job Walk – February 9, 2022 at 2:00pm

Addenda as Needed – February 11, 2022 at 3:00pm

Bids Forms Due – February 15, 2022 at 3:00pm

Board Approval – March 1, 2022

Notice to Proceed – March 2, 2022

Submittals Due – March 16, 2022

Construction Schedule

Potholing & Underground Utilities Survey: 4/4/2022 – 4/8/2022

On-Site Construction: 6/15/2022 – 7/15/2022

PERFORMANCE BOND

PERFORMANCE BOND (100% of Contract Price)

(Note: Contractors must use this form, NOT a surety company form.)

KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the governing board ("Board") of the **Livermore Valley Joint Unified School District** ("District") and **Westside Landscape & Concrete Inc.**, ("Principal") have entered into a contract for the furnishing of all materials and labor, services and transportation, necessary, convenient, and proper to perform the following project:

LEO R. CROCE ELEMENTARY PARKING LOT FENCING (Project Name)
("Project" or "Contract")

which Contract dated MARCH 2, 2022, and all of the Contract Documents attached to or forming a part of the Contract, are hereby referred to and made a part hereof, and

WHEREAS, said Principal is required under the terms of the Contract to furnish a bond for the faithful performance of the Contract;

NOW, THEREFORE, the Principal and Granite Re, Inc. dba Granite Surety Insurance Company ("Surety") are held and firmly bound unto the Board of the District in the penal sum of:

One hundred eleven nine hundred sixty-two and 00/100 DOLLARS

(\$111,962.00), lawful money of the United States, for the payment of which sum well and truly to be made we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally, firmly by these presents, to:

- Perform all the work required to complete the Project; and
- Pay to the District all damages the District incurs as a result of the Principal's failure to perform all the Work required to complete the Project.

The condition of the obligation is such that, if the above bounden Principal, his or its heirs, executors, administrators, successors, or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions, and agreements in the Contract and any alteration thereof made as therein provided, on his or its part to be kept and performed at the time and in the intent and meaning, including all contractual guarantees and warranties of materials and workmanship, and shall indemnify and save harmless the District, its trustees, officers and agents, as therein stipulated, then this obligation shall become null and void, otherwise it shall be and remain in full force and virtue.

As a condition precedent to the satisfactory completion of the Contract, the above obligation shall hold good for a period equal to the warranty and/or guarantee period of the Contract, during which time Surety's obligation shall continue if Contractor shall fail to make full, complete, and satisfactory repair, replace, and totally protect the District from loss or damage resulting from or caused by defective materials or faulty workmanship. The obligations of Surety hereunder shall continue so long as any obligation of Contractor remains. Nothing herein shall limit the District's rights or the Contractor's or Surety's obligations under the Contract, law or equity, including, but not limited to, California Code of Civil Procedure section 337.15.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Contract or to the Work to be performed thereunder shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the Contract Documents or to the Work.

Any claims under this bond may be addressed to the Surety at the following address. This cannot be the Contractor's broker for this bond, but must be an employee of the Surety or the Surety's legal counsel:

Attention: _____

Telephone No.: (____) ____-_____

Fax No.: (____) ____-_____

E-mail Address: _____

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Principal and Surety above named, on the ____ day of _____, 2022.

Principal

Surety

Westside Landscape & Concrete, Inc.
(Name of Principal)

Granite Re, Inc. dba Granite Surety Company
(Name of Surety)

(Signature of Person with Authority)

(Signature of Person with Authority)

(Print Name)

(Print Name)

(Name of California Agent of Surety)

(Address of California Agent of Surety)

(Telephone Number of California Agent of Surety)

Contractor must attach a Notarial Acknowledgment for all Surety's signatures and a Power of Attorney and Certificate of Authority for Surety. The California Department of Insurance must authorize the Surety to be an admitted surety insurer.

PAYMENT BOND

PAYMENT BOND -- Contractor's Labor & Material Bond (100% of Contract Price)

(Note: Contractors must use this form, NOT a surety company form.)

KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the governing board ("Board") of the **Livermore Valley Joint Unified School District** ("District") and **Westside Landscape & Concrete Inc.**, ("Principal") have entered into a contract for the furnishing of all materials and labor, services and transportation, necessary, convenient, and proper to

LEO R. CROCE ELEMENTARY PARKING LOT FENCING (Project Name)
("Project" or "Contract")

which Contract dated MARCH 2, 2022, and all of the Contract Documents attached to or forming a part of the Contract, are hereby referred to and made a part hereof, and

WHEREAS, pursuant to law and the Contract, the Principal is required, before entering upon the performance of the work, to file a good and sufficient bond with the body by which the Contract is awarded in an amount equal to 100 percent (100%) of the Contract price, to secure the claims to which reference is made in the Civil Code of California, including section 9100, and the Labor Code of California, including section 1741.

NOW, THEREFORE, the Principal and Granite Re. Inc. dba Granite Surety Insurance Company ("Surety") are held and firmly bound unto the Board of the District in the penal sum of:

One hundred eleven thousand nine hundred sixty-two and 00/100 DOLLARS

(\$ 111,962.00), lawful money of the United States, being a sum not less than the total amount payable by the terms of Contract, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, or assigns, jointly and severally, by these presents.

The condition of this obligation is that if the Principal or any of his or its subcontractors, of the heirs, executors, administrators, successors, or assigns of any, all, or either of them shall fail to pay for any labor, materials, provisions, provender, or other supplies, used in, upon, for or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to such work or labor, that the Surety will pay the same in an amount not exceeding the amount herein above set forth, and also in case suit is brought upon this bond, will pay a reasonable attorney's fee to be awarded and fixed by the Court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies, and corporations entitled to file claims under sections 9000 through 9566 of the Civil Code, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should the condition of this bond be fully performed, then this obligation shall become null and void; otherwise, it shall be and remain in full force and affect.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Contract or to the Work to be performed thereunder shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the Contract Documents or to the Work.

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Principal and Surety above named, on the ____ day of _____, 2022.

Principal

Westside Landscape & Concrete Inc.
(Name of Principal)

(Signature of Person with Authority)

(Print Name)

Surety

Granite Re, Inc. dba Granite Surety Insurance Company
(Name of Surety)

(Signature of Person with Authority)

(Print Name)

(Name of California Agent of Surety)

(Address of California Agent of Surety)

(Telephone Number of California Agent of Surety)

Contractor must attach a Notarial Acknowledgment for all Surety's signatures and a Power of Attorney and Certificate of Authority for Surety. The California Department of Insurance must authorize the Surety to be an admitted surety insurer.