

# **CITY of EL CAJON**

## **PURCHASING DIVISION**



## **REQUEST FOR QUOTATION**

### **FOR**

## **Heartland Fire Training Tower Repairs**

**RFQ NUMBER: 403206**

**DUE BEFORE: 5:00 PM on December 7, 2020**

TO BE USED IN CONJUNCTION WITH THE "2018 STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" (GREEN BOOK), "2018 SAN DIEGO COUNTY REGIONAL SUPPLEMENT TO THE STANDARD SPECIFICATIONS" & "2018 SAN DIEGO REGIONAL STANDARD DRAWINGS", ADOPTED BY CITY COUNCIL ACTION ON SEPTEMBER 10, 2019.

**Heartland Fire Training Tower Repairs**

**RFQ NO 403206  
ENGINEERING JOB NO. IFM3725**

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# CITY OF EL CAJON

## NOTICE INVITING QUOTE

**PUBLIC PROJECT:** Heartland Fire Training Tower Repairs  
Engineering Job No. IFM3725  
RFQ No. 403206

**QUOTES MUST BE RECEIVED BEFORE:** 5:00 p.m. on December 7, 2020

**PLACE OF RECEIPT OF QUOTES:** Electronic Submission via PlanetBids

NOTICE IS HEREBY GIVEN that the City of El Cajon, California will receive electronic quotes via PlanetBids before the time and date set forth above, for the above project. All quotes shall be made on the forms furnished by the City.

Reference is made to the specifications and detailed drawings for said work, on file in the Office of the City Purchasing Agent, in accordance with which said work shall be done. A copy of said specifications and the quote forms may be downloaded from the City's PlanetBids website (<https://www.planetbids.com/portal/portal.cfm?CompanyID=14593>). For assistance with downloading these documents, please contact the Purchasing Division at [purchasing@cityofelcajon.us](mailto:purchasing@cityofelcajon.us).

Bidders must register as a vendor on PlanetBids (<https://www.planetbids.com/portal/portal.cfm?CompanyID=14593>) in order to download specifications, plans, prospective bidders list, quote documentation, and to receive addenda and notifications when issued.

A pre-quotation conference will not be held for this project.

The plans and specifications show general information only. It shall be the bidder's responsibility to examine the project site(s) in order to determine the exact existing conditions, and the character and extent of the work to be performed. The bidder's omission, or failure to visit the project site(s) and acquaint itself with existing conditions shall in no way relieve the successful bidder from obligations with respect to the Contract. Submission of a bid shall be prima facie evidence of the bidder's compliance with this requirement.

The general prevailing wage rate of per diem wages, as determined by the Director of Industrial Relations, are available from the DIR website at [www.dir.ca.gov/OPRL/Pwd](http://www.dir.ca.gov/OPRL/Pwd). Any successful bidder who intends to use a craft or classification not shown on the general prevailing wage determinations may be required to pay the wage rate of the craft or classification most closely related to it as shown in the general determinations effective at the time of the call for bids.

This project is being paid for by the City of El Cajon entirely from local funds. No federal or state monies will contribute to the payment of consideration; therefore this project is a matter of local concern in accordance with section 400 of the El Cajon City Charter.

A Performance Bond and Labor and Material Bond, each in an amount equal to 100% of the contract price, shall be executed by the successful bidder within ten days after the Notice of Award of Contract has been mailed. Securities or bank or savings and loan certificates of deposit may be substituted for any moneys withheld to ensure performance of the contract, pursuant to Section

22300 of the California Public Contract Code.

Quotes shall be submitted electronically through the City's PlanetBids website at <https://www.planetbids.com/portal/portal.cfm?CompanyID=14593>.

The City reserves the right to reject any and all bids if it considers it necessary to do so for the public good, and it may reject the quote of any bidder who has been delinquent or unfaithful in any former contract with the City.

NOTE: No quote will be accepted from a Contractor who has not been licensed in accordance with the provisions of Division 3, Chapter 9, Section 7000 et. seq., of the Business and Professions Code.

A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in this chapter, unless currently registered and qualified to perform public work pursuant to Section 1725.5 of the Labor Code. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform the public work pursuant to Section 1725.5 of the Labor Code at the time the contract is awarded.

This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

/s/ Nahid Razi  
Purchasing Agent  
November 17, 2020

## **INFORMATION FOR BIDDERS**

**1. GENERAL INFORMATION** - The Purchasing Agent of the City of El Cajon, California, is requesting proposals for RFQ No. 403206 for supplying material and labor for Heartland Fire Training Tower Repairs. Request for Quotation (RFQ) documents may be examined and/or obtained on the City's PlanetBids website at <https://www.planetbids.com/portal/portal.cfm?CompanyID=14593>. All quote documents related to this solicitation will be posted by the City on the City's website as indicated above. In the event the quote document is obtained through any means other than the City's website, the City will not be responsible for the completeness, accuracy or timeliness of the Quote document. It is the bidder's responsibility to ensure that the most complete and current version of the quote document has been downloaded or otherwise obtained, including any addenda. Quotes shall be submitted electronically. A quote will not be accepted, nor any contract or subcontract entered into without proof of the contractor and, if applicable, subcontractor's current registration to perform public work pursuant to Section 1725.5 of the Labor Code.

**2. ELECTRONIC FORMAT RECEIPT AND OPENING OF QUOTES** - Quotes must be received in electronic format at the City of El Cajon's PlanetBids website and are due before the date and time shown on the cover of this solicitation. Once the Quote Due Date and Time has lapsed, bidders, proposers, the general public, and City staff are able to immediately see the results on line. A public opening will not be held. City staff may then begin reviewing the bid submissions for responsiveness, compliance and other issues.

2.1 Bidders must register as a vendor on PlanetBids (<https://www.planetbids.com/portal/portal.cfm?CompanyID=14593>) in order to download specifications, plans, prospective bidders list, quote documentation, and to receive addenda and notifications when issued. QUOTES MUST BE SUBMITTED BEFORE QUOTE DUE DATE AND TIME. Once the quote deadline is reached, no further submissions are accepted into the PlanetBids system.

**2.2. QUOTES MAY BE WITHDRAWN** by the Bidder only up to the quote due date and time.

2.2.1. Important Note: Submission of the electronic quote into the system may not be instantaneous. Due to the speed and capabilities of the user's internet service provider (ISP), bandwidth, computer hardware and other variables, it may take time for the bidder's submission to upload and be received by the City's PlanetBids system. It is the bidder's sole responsibility to ensure their quotes are received on time by the City's eBidding system. The City of El Cajon is not responsible for quotes that do not arrive by the required date and time.

## **3. ELECTRONIC QUOTE SUBMISSIONS CARRY FULL FORCE AND EFFECT**

3.1 The bidder, by submitting its electronic quote, acknowledges that doing so carries the same force and full legal effect as a paper submission with a longhand (wet) signature.

3.2 By submitting an electronic quote, the bidder certifies that the bidder has thoroughly examined and understands the entire Contract Documents (which consist of the plans and specifications, drawings, forms, affidavits and the solicitation documents), and that by submitting its electronic quote, the bidder acknowledges, agrees to and is bound by the entire Contract Documents, including any addenda issued thereto, and incorporated by reference in the Contract Documents.

3.3. The Bidder, by submitting its electronic quote, agrees to and certifies under penalty of perjury under the laws of the State of California, that the certification, forms and affidavits submitted as part of this quote are true and correct.

**4. EXAMINATION OF PLANS** - The bidder is required to examine carefully the site of the proposal, specifications, requirements, and contract forms for the work contemplated, and it will be assumed that the bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and quantities of work to be performed and materials to be furnished, and as to the requirements of the specifications. It is mutually agreed that submission of a proposal shall be considered prima facie evidence that the bidder has made such examination.

Should a bidder find discrepancies in, or omissions from the specifications, or should bidder be in doubt as to their true meaning, bidder may submit a written request for an interpretation thereof prior to 5:00 P.M. on November 30, 2020 via the PlanetBids "Q&A" tab. The person submitting the request shall be responsible for its prompt delivery. Any interpretation of, or change in the documents will be made only by an addendum issued to each person to whom specifications have been issued, and shall become part of any contract awarded. The City will not be responsible for any other explanation or interpretations

**5. PROPOSAL FORM** - All proposals must be made upon blank forms as provided in the specifications. All proposals must give the prices proposed both in writing and figures, and must be signed by the bidder, with his address. If the proposal is made by an individual, his name and post office address must be shown. If made by a firm or partnership, the name and post office address of each member of the firm or partnership must be shown. If made by a corporation, the proposal must show the name of the state under the laws of which the corporation was chartered, and the names, titles, and business addresses of the president, secretary, and treasurer. Quotations are to be verified before submission as they cannot be corrected or altered or signed after the deadline for submission of a quotation.

**6. ADDENDA** - Any addenda issued by the City during the time of bidding shall be covered in the quote and shall be made a part of the contract. It is the bidder's responsibility to ensure that the most complete and current version of the quote document has been obtained from PlanetBids, including any addenda. Quotes received without acknowledgment of applicable addenda may be rejected.

**7. REJECTION OF PROPOSALS** - Rejection of Proposals containing alterations, erasures, or irregularities. Proposals may be rejected if they show any alterations of form, additions not called for, conditional or alternative quotes, incomplete quotes, erasures or irregularities of any kind.

The right is reserved to reject any and all proposals.

**8. AWARD OF CONTRACT** - The award of the contract, if it be awarded, will be to the lowest responsive, responsible bidder whose proposal complies with all the requirements prescribed. The City, however, reserves the right to reject any or all quotes, or to waive any minor irregularities or informalities in the quote. Whenever additive or deductive items are included in a quote, the lowest quote shall be the lowest quote price on the base contract without consideration of the prices on the additive or deductive items. The award, if made, will be made within sixty (60) days after the opening of the proposals.

**9. EXECUTION OF CONTRACT** - The contract shall be signed by the successful bidder and returned, together with the contract bonds, within ten (10) days (Sundays and legal holidays

excluded), after the bidder has received notice that the contract has been awarded. No proposal shall be considered binding upon the City until the execution of the contract.

**10. CONTRACT BOND** - A Performance Bond and a Labor and Material Bond, each equal to 100% of the total quotation price shall be provided by the successful bidder, in accordance with Section 2 - 4 of the Standard Specifications for Public Works Construction. Forms (sample) of bond are attached herein. The Material and Labor Bond and the Faithful Performance Bond shall be maintained by the Contractor in full force and effect for a period of nine months and one year, respectively, following the completion date of the project. Securities or bank or savings and loan certificates of deposit may be substituted for any moneys withheld to ensure performance of the contract, pursuant to Section 22300 of the California Public Contracts Code.

**11. GUARANTEE** - The Contractor shall guarantee all parts of the work against defective materials or workmanship furnished by the Contractor for a period of one (1) year from the date of completion of the project.

**12. COMMENCEMENT AND COMPLETION** - Not less than ten (10) days after the execution of the contract, the Contractor will be notified in writing and within ten (10) days after the date of Notice to Proceed contractor shall commence work. The Contractor shall diligently prosecute the work to completion before the expiration of twenty working days from the date of the Notice to Proceed and such work shall be so completed to the satisfaction of the City of El Cajon Facilities Department. Work shall not be considered complete until proof of final inspection by the City of El Cajon Building Division is provided to the Facilities Department.

## **GENERAL CONDITIONS**

### **ARTICLE 1 - - DEFINITIONS**

Whenever used in these General Conditions or in other Contract Documents the following terms have the meanings indicated which are applicable to both the singular and plural thereof:

Agreement or Contract - The written agreement between the Owner and the Contractor covering the Work to be performed; other Contract Documents are attached to the Agreement and made a part thereof as provided therein.

Beneficial Use or Occupancy - Placing all or any portion of the Work in service for the purpose for which it is intended (or a related purpose) before reaching completion for all of the Work.

Change Order - A document, which is signed by the Contractor and the Owner and authorizes an addition to, deletion from, or revision of the Work, or an adjustment in the Contract Price or the Contract Time, issued on or after the Effective Date of the Agreement.

Completion - Completion of the Work shall be acceptance of the Work by the governing board of the Owner.

Contract Documents - Advertisement for Bids, Invitation to Bid, Information for Bidders, Special Conditions, Affirmative Action Program, the accepted Bid, Bid Bond, Work and/or Project Description, the Agreement, Performance and Payment Bonds, the General Conditions of the Contract, Supplemental General Conditions, Specifications, Drawings, Division 01, Details, and all addenda and Change Orders executed pursuant to the provisions of the Contract Documents.

Contract Time - The number of successive calendar days, or working days as stated in the Contract Documents for the completion of the Work.

Contractor - The person, firm, or corporation with whom the Owner has entered into the Agreement.

Day - A calendar day of 24 hours, measured from midnight to the next midnight. A working day is measured by the Standard Specifications for Public Works Construction, also referred to as the "Greenbook".

Effective Date of the Agreement - The date indicated in the Agreement on which it was executed.

General Requirements - Sections of Division 1 of the Technical Specifications.

Laws and Regulations - All local ordinances, and Laws and Regulations of the State of California, which are applicable to furnishings and performance of the Work.

Major Item - A single contract item constituting 10 percent or more of the original Contract Price.

Notice of Completion - The written notice by the Owner to the Contractor stating that the governing board of the Owner has accepted the Work.

Notice to Proceed - A written notice issued by the Owner to the Contractor authorizing the

Contractor to proceed with the work and establishing the Date of Commencement of the Contract Time.

Owner - The public body or authority, agency, corporation, association, firm, or person with whom the Contractor has entered into the Agreement and for whom the Work will be performed. ["Owner" means the City of El Cajon/ City of El Cajon as Successor Agency to the El Cajon Redevelopment Agency.]

Owner's Representative - The authorized representative of the Owner who is assigned by the Owner to the Work or Project.

Project - The total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner or by separate Contractors.

Shop Drawings - All drawings, diagrams, illustrations, schedules, and other data which are specifically prepared by or for the Contractor to illustrate some portion of the Work, and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams, and other information prepared by a supplier and submitted by the Contractor to illustrate materials or equipment for some portion of the Work.

Specifications - Those portions of the Contract Documents consisting of the General Requirements and the written technical descriptions of materials, equipment, construction systems, standards, and workmanship as applied to the Work and certain administrative details applicable thereto.

Subcontractor - An individual, firm, or corporation having a direct contract with the Contractor or with any other Subcontractor for the performance of a part of the Work at the site.

Substantial Completion - The Work (or a specified part thereof) has progressed to the point where it is sufficiently complete in accordance with the Contract Documents, so that the Work (or specified part) can be utilized for the purposes for which it is intended and where the Work can be accepted by the Owner's governing board. The terms "substantially complete" and "substantially completed," as applied to any Work, refer to Substantial Completion thereof.

Supplemental General Conditions - The part of the Contract Documents, which amends or supplements these General Conditions.

Technical Specifications - The Specifications as defined herein.

Work - The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. The Work is the result of performing services, furnishing labor and furnishing and incorporating materials and equipment into the construction, including receipt of required test results, completion of punch lists, all as required by the Contract Documents.

## **ARTICLE 2 - PRELIMINARY MATTERS**

### **Agreements, Bonds, and Insurance Certificates:**

2.1 When the Contractor delivers its signed Agreement to the Owner, then the Contractor shall deliver to the Owner the bonds specified in the Information for Bidders and

certificates and other evidence of insurance requested by the Owner which the Contractor is required to purchase and maintain in accordance with the provisions of Article 5.

Commencement of Contract Time; Notice to Proceed:

2.2 The Contract Time will commence to run on the day indicated in the Notice to Proceed.

**ARTICLE 3 - CONTRACT DOCUMENTS; INTENT**

Contract Documents:

3.1 The Contract Documents comprise the entire agreement between the Owner and the Contractor concerning the Work. The Contract Documents will be construed in accordance with the laws of the State of California.

3.2 It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any work, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result will be supplied whether or not specifically called for. In case of conflict or inconsistency, the Specifications shall take precedence over the Shop Drawings. Large scale and full size drawings shall be followed in preference to small-scale drawings. Figured dimensions shall be followed in preference to scaled measurement.

**ARTICLE 4 - AVAILABILITY OF LANDS; PHYSICAL CONDITIONS**

Availability of Lands:

4.1 The Owner shall furnish, as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and such other lands which are designated for the use of Contractor. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by the Owner unless otherwise provided in the Contract Documents. The Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment; provided that the Contractor shall not enter upon nor use any property not under the control of the Owner until a written temporary construction easement agreement has been executed by the Contractor and the property owner and a copy of said easement furnished to the Owner prior to said use; and, the Owner shall not be liable for any claims or damages resulting from Contractor's unauthorized trespass or use of any such properties.

Removal, Relocation, or Protection of Existing Utilities:

4.2 In accordance with the provisions of Section 4215 of the California Government Code, in any contract, to which a public agency as defined in Section 4401 of the California Government Code is a party, the public agency shall assume the responsibility, between the parties to the contract, for the timely removal, relocation, or protection of existing main or trunk line utility facilities located on the site of any construction project that is a subject of the contract, if such utilities are not identified by the public agency in the plans and specifications made a part of the invitation for bids. The Owner will compensate the Contractor for the costs of locating, repairing damage not due to the failure of the Contractor to exercise reasonable care, and removing or relocating such utility facilities not indicated in the plans and Specifications with reasonable accuracy, and for equipment on the Project necessarily idled during prosecution of

the Work.

4.3 The Contractor shall not be assessed liquidated damages for delay in completion of the Work when such delay was caused by the failure of the public agency or the owner of the utility to provide for removal or relocation of such utility facilities.

4.4 Nothing herein shall be deemed to require the public agency to indicate the presence of existing service laterals or appurtenances whenever the presence of such utilities on the site of the construction project can be inferred from the presence of other visible facilities, such as buildings, meter and junction boxes, on or adjacent to the site of the construction; provided, however, nothing herein shall relieve the public agency from identifying main or trunk lines in the plans and Specifications.

4.5 If the Contractor, while performing the Contract, discovers utility facilities not identified by the Owner in the plans or Specifications, it shall immediately notify the Owner agency and utility in writing.

4.6 The public utility, where they are the Owner, shall have the sole discretion to perform repairs or relocation work or permit the Contractor to do such repairs or relocation work at a reasonable price.

## **ARTICLE 5 - BONDS AND INSURANCE**

### Guaranty Bonds:

5.1 Upon the execution of this Contract, the Contractor shall furnish to the Owner the bonds specified in the Information for Bidders. Said bonds are to be in substantially the forms hereto attached and with sureties approved by the Owner. The premium upon all such bonds shall be paid by the Contractor. The Owner will approve any surety company, which, at the time of execution of this Contract, is listed in the latest published U.S. Treasury Department Circular 570, "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies," and further, is authorized to issue bonds in the State of California.

### Contractor's Liability and Insurance Requirements:

5.2 The Contractor shall, and the Contractor does, hereby assume all risks of damage to the Work and materials from fire, earthquake, storm, and/or other causes prior to the Completion and acceptance of the Contractor's Work, and shall, at the Contractor's own cost and expense, repair and/or replace any work or materials damaged or destroyed.

5.3 Liability Insurance. The Contractor shall furnish the Owner a policy or certificate of liability insurance naming the City of El Cajon, its elected and appointed officials, officers, employees, and volunteers ("City Insureds") as named insureds, or naming City Insureds in an original endorsement to the policy as additional insureds. Notwithstanding any inconsistent statement in the policy or any subsequent endorsement attached thereto, the City Insureds shall be the named insureds or named in an original endorsement as additional insureds covering all operations of the Contractor, whether liability is attributable to the Contractor or the City of El Cajon. The policy shall insure the City Insureds while acting within the scope of their duties, against all claims arising out of or in connection with the work. **SEE ATTACHED POLICY D-3 FOR COMPLETE INSURANCE REQUIREMENTS**

5.4 [Reserved for additional Insurance requirements]

5.5 [Reserved for additional Insurance requirements]

Workers' Compensation Insurance Requirements:

5.6 The Contractor shall also, before the commencement of the Work herein specified, take out, and during the life of this Contract, maintain in full force and effect, unlimited compensation insurance with an insurance carrier or carriers approved by the Owner, under an insurance policy or policies satisfactory to the Owner in form and amount covering the Contractor's full liability under the Workers' Compensation Insurance and Safety Act of the State of California, and any act or acts amendatory thereof or supplementary thereto, for compensation to any employee who may be injured during the course of the Work. The Contractor shall require all Subcontractors to take out and maintain similar policies of compensation insurance. A certified copy of each insurance policy carried shall be furnished to the Owner prior to the commencement of the Work.

Payment of Premiums and Notice of Revocation or Cancellation:

5.7 The premiums of all insurance policies shall be paid by the Contractor and each insurance policy in this Paragraph provided for shall expressly provide therein that it shall not be revoked nor cancelled by the insurer until thirty (30) days' written notice by certified mail, return receipt requested, of the intended revocation or cancellation thereof shall have first been given to the Owner by such insurer.

Owner May Insure for Contractor:

5.8 In case of the breach of any provision of this Article the Owner may, at the Owner's option, take out and maintain at the expense of the Contractor, such insurance in the name of the Contractor, or Subcontractor, as the Owner may deem proper and may deduct the cost of taking out and maintaining such insurance from any sums which may be found or become due to the Contractor under this Contract.

5.9 Prior to commencing any work under this Contract, the Contractor shall furnish to the Owner satisfactory evidence of compliance with all required insurance provisions. The Contractor shall furnish to the Owner, Certificates of Insurance naming Owner as an additional insured (except for workers' compensation insurance) and obligating the insurers to notify the Owner at least thirty (30) days prior to cancellation or reduction in coverage in any Insurance Policy or Policies obtained to satisfy the requirements of this Article.

## **ARTICLE 6 - THE CONTRACTOR'S RESPONSIBILITIES**

Inspection of the Site and Examination of Contract Documents:

6.1 Prior to commencing any work under this Contract, the Contractor is required to examine carefully the existing conditions of the Project site and compare to the Contract Documents. The Contractor shall immediately notify the Owner in writing of any error, inconsistency, omission or other discrepancy between the existing conditions of the site and the Contract Documents. Once the Contractor has commenced work, it will be deemed that the existing conditions have been accepted by the Contractor as correct and satisfactory for the Work specified herein.

Construction Schedule:

6.2 Prior to commencing any work under this Contract, the Contractor shall prepare and submit to the Owner and the Owner's Representative the Contractor's construction schedule for completion of the Work. The schedule shall not exceed time limits currently under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work. Where the Contractor is to furnish major items of equipment and/or materials, the schedule shall include the proposed dates of manufacture and shipment of said equipment and/or materials.

Supervision and Superintendence:

6.3 The Contractor shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. The Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction, but the Contractor shall not be responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence, or procedure of construction, which is indicated in and required by the Contract Documents. The Contractor shall be responsible to see that the finished work complies accurately with the Contract Documents.

Materials and Prosecution of the Work:

6.4 Unless otherwise specified in Division 01, General Requirements, of the Technical Specifications, the Contractor shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities and all other facilities, and incidentals necessary for furnishing performance, testing, startup, and completion of the Work.

6.5 The Contractor shall perform all work necessary to complete the Contract in a satisfactory manner. All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. Whenever the words "or equal" appear in the Specifications or Shop Drawings, it shall mean equal in the opinion of the Owner's Representative. Approval by the Owner's Representative of a substitute proposed by the Contractor for a specified method or material shall not relieve the Contractor of the responsibility for full compliance with the plans and Specifications and for the adequacy of the substituted method or material.

Concerning Subcontractors, Suppliers, and Others:

6.6 The Contractor shall be fully responsible to the Owner for all acts and omissions of the Subcontractors, suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with the Contractor just as the Contractor is responsible for its own acts and omissions. Nothing in the Contract Documents shall create any contractual relationship between the Owner and any such Subcontractor, supplier, or other person or organization, nor shall it create any obligation on the part of the Owner to pay or to see to the payment of any monies due any such Subcontractor, supplier, or other person or organization except as may otherwise be required by Laws and Regulations.

6.7 The Contractor shall afford other contractors reasonable opportunity for the

introduction and storage of materials and the execution of the Work and shall properly coordinate its work with that of said other contractors.

6.8 Throughout the Contractor's performance of the Work, including suspension of the Work, the Contractor shall at all times keep the site clean and free from all excess materials, tools, equipment, garbage, rubbish, and debris. In the removal of garbage, rubbish and debris, the Contractor shall comply with the requirements of the El Cajon Municipal Code with respect to trash collection by the Owner's contractor for the collection and disposal of same.

#### Patent Fees and Royalties:

6.9 The Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. The Contractor shall indemnify and hold harmless the Owner from and against all claims, damages, losses, and expenses (including attorneys' fees and court and arbitration costs) arising out of any infringement of patent right or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents, and shall defend all such claims in connection with any alleged infringement of such rights.

#### Permits and Licenses:

6.10 The Contractor shall secure a No Permit Fee building permit from the City of El Cajon. A City of El Cajon business license is required for this Contract, which shall be obtained and paid for by the Contractor. The Contractor shall have a current Class B General Building Contractor license issued by the Contractors State License Board of the State of California.

In addition to the above, the general contractor & sub-contractors must show proof that they are currently registered to perform the public work pursuant to Section 1725.5 of the Labor Code.

#### Laws and Regulations:

6.11 The Contractor shall give all notices and comply with all local ordinances, and Laws and Regulations of the State of California applicable to furnishings and performance of the Work. ***Contractor shall specifically comply with Chapter 13.10 of the El Cajon Municipal Code related to Stormwater Management and Discharge Control, and all other ordinances and resolutions related thereto adopted by the City of El Cajon.*** Except where otherwise expressly required by applicable local ordinance, or Laws and Regulations, the Owner shall not be responsible for monitoring the Contractor's compliance with any local ordinance, or Laws and Regulations.

#### Use of Premises:

6.12 The Contractor shall confine construction equipment, the storage of materials and equipment, and the operation of workers to the Work site and land and areas identified in and permitted by the Contract Documents and other land and areas permitted by Laws and Regulations, rights-of-way, permits, and easements and shall not unreasonably encumber the premises with construction equipment or any other materials or equipment. The Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any land or areas contiguous thereto, resulting from the performance of the Work.

Should any claim be made against the Owner by any such owner or occupant because of the performance of the Work, the Contractor shall promptly attempt to settle with such other party by agreement or otherwise resolve the claim by arbitration or at law. The Contractor shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold the Owner harmless from and against all claims, damages, losses, and expenses (including, but not limited to, fees of architects, engineers, attorneys, and other professionals and court and arbitration costs) arising directly, indirectly, or consequentially out of any action, legal, or equitable brought by any such other party against the Owner based on a claim arising out of the Contractor's performance of the Work.

#### Safety, Protection and Site Maintenance:

6.13 The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. The Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss of the following:

- (a) All employees on the Work and other persons and organizations who may be affected thereby;
- (b) All the Work and materials and equipment to be incorporated therein, whether in storage on or off the site; and
- (c) Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and underground facilities not designated for removal, relocation, or replacement in the course of construction.

#### Disconnect of Utilities and Mechanical Systems:

6.14 The Contractor shall conduct its work so as to minimize interference with normal Owner activities. If, during the performance of the Contract, it becomes necessary to temporarily disconnect or shut-down existing utilities or mechanical systems for any reason, the Contractor shall notify the Owner not less than three (3) business days prior to such temporary utility shut-downs. Such temporary disconnection or shutdown shall occur prior to or after regular business hours.

#### Plans and Specifications:

6.15 The Contractor shall keep at the Work site a copy of the Plans and Specifications, to which the Owner's Representatives shall have access at all times. The Plans, Specifications, and other Contract Documents are intended to be complementary and cooperative and to describe and provide for a complete project. Anything in the Specifications and not on the Plans, or on the Plans and not in the Specifications, shall be as though shown or mentioned in both. While it is believed that much of the information pertaining to conditions, which may affect the cost of the Work, will be shown on the Plans or indicated in the Specifications, the Owner does not warrant the completeness or accuracy of such information. The Contractor shall ascertain the existence of any conditions affecting the cost of the Work, which would have been disclosed by reasonable examination of the site. Existing improvements visible at the job site, for which no specific disposition is made on the Plans, but which could reasonably be assumed to interfere with the satisfactory completion of the improvements contemplated by the Plans, shall be removed and disposed of by the Contractor. The Contractor shall, upon discovering any error or

omission in the Plans or Specifications, immediately call it to the attention of the Owner's Representative.

Shop Drawings:

6.16 The Contractor shall submit to the Owner's Representative, with such promptness as to cause no delay in the work, two (2) copies of all shop or setting drawings and schedules required for the work of the various trades and templates and modes as required. The Contractor shall make any corrections required by the Owner's Representative, file with the Owner's Representative two corrected copies, and furnish such other copies as may be needed. Approval of such drawings and schedules, by the Owner's Representative, shall not relieve the Contractor from the responsibility for deviations from Drawings or Specifications unless the Contractor has, in writing, called to the Owner Representative's attention such deviation at the time of the submission, nor shall it relieve the Contractor from responsibility for errors, omissions or inconsistencies of any sort in shop drawings or schedules.

Indemnification:

6.17 To the fullest extent permitted by Laws and Regulations, the Contractor shall indemnify and hold harmless the Owner and its elected and appointed officials, consultants, agents, and employees (collectively, the "Indemnitees") from and against all claims, damages, losses and expenses, direct, indirect, or consequential (including but not limited to fees and charges of architects, engineers, attorneys, and other professionals and court and arbitration costs) (individually a "Claim," collectively, the "Claims") arising out of or resulting from performance of the Work, but not from the sole negligence or willful misconduct of the Owner; provided, that any such Claim (a) is attributable to bodily injury, sickness, disease, or death or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom, and (b) is caused in whole or in part by any negligent act or omission of the Contractor, any Subcontractor, or any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder or arises by or is imposed by Law and Regulations regardless of the negligence of any such party. Contractor shall further indemnify, defend and hold harmless the Indemnitees from and against any and all Claims arising out of the violation of Chapter 13.10 of the El Cajon Municipal Code related to Stormwater Management and Discharge Control, and all other ordinances and resolutions related thereto adopted by the City of El Cajon.

6.18 The Contractor shall reimburse the Owner for all costs and expenses, (including but not limited to fees and charges of architects, engineers, attorneys, and other professionals and court costs) incurred by said Owner, in enforcing the provisions of Paragraph 6.17.

Liquidated Damages:

6.19 Contractor agrees that in case the Work is not completed before or upon the expiration of the Contract Time, damage will be sustained by Owner, and that it is and will be impracticable to determine the actual damage which Owner will sustain in the event and by reason of such delay, and it is therefore agreed that Contractor shall pay to Owner the amount of \$500.00 dollars for each day of delay, which shall be the period between the expiration of the Contract time and the date of final acceptance by Owner, as liquidated damages and not as a penalty. It is further agreed that the amount stipulated for liquidated damages per day of delay is a reasonable estimate of the damages that would be sustained by Owner, and Contractor agrees to pay such liquidated damages as herein provided. In case the liquidated damages are not paid,

Contractor agrees that Owner may deduct the amount thereof from any money due or that may become due to Contractor by progress payments or otherwise under the Contract, or if said amount is not sufficient, recover the total amount.

## **ARTICLE 7 -- OTHER WORK**

### Separate Contracts:

7.1 The Owner reserves the right to let other contracts in connection with this Work and/or Project.

## **ARTICLE 8 -- THE OWNER'S RESPONSIBILITIES**

### Owner's Right to do Work:

8.1 Should the Contractor at any time during the progress of the Work without the fault of the Owner or the Owner's agents or employees, refuse or neglect to supply a sufficiency of materials or workers to complete the Contract within the time limit herein (or any lawful extension thereof) for a period of more than three (3) days after having been notified by Owner's Representative in writing to supply the same, the Owner shall have the option to furnish and provide said materials and/or workers required to finish said Work and the reasonable expenses thereof shall be charged against the Contractor by the Owner and deducted from any monies which might otherwise be or become payable to the Contractor.

## **ARTICLE 9 -- OWNER'S REPRESENTATIVE STATUS DURING CONSTRUCTION**

9.1 The Owner will designate a representative to act on its behalf in all matters relating to the Agreement.

9.2 The Owner shall have the right to stop the Work whenever such stoppage may, in the Owner's Representative's opinion, be necessary to insure proper execution of the Work.

9.3 The Owner's Representative shall, in the first instance, be the interpreter of the requirements of the Contract Documents and the judge of the performance thereunder by both the Owner and the Contractor.

### Claims:

9.4 The following is a summary of Public Contract Code section 9204 and shall be the procedures that Owner and Contractor shall follow for the handling of claims (as defined in section 9204 and below):

- (a) Notwithstanding the foregoing, and notwithstanding any other law, including Public Contract Code section 20104, any separate demand by Contractor, sent to Owner by registered mail or certified mail with return receipt requested, for any one or more of the following:

- 1. A time extension, including, but not limited to, for relief from damages or penalties for delay assessed by Owner under this Contract; or

2. Payment by Owner of money or damages arising from work done by, or on behalf of, Contractor (or, as provided in subsection (j), below, by Contractor on behalf of a subcontractor or a lower tier subcontractor) pursuant to this Contract, and where payment for which is not otherwise expressly provided herein or to which Contractor is not otherwise entitled ("Claim"), shall be processed as set forth in this Section 9.4.
  - (b) Upon the receipt of a Claim Owner shall conduct a reasonable review of the Claim and WITHIN a period not to exceed forty-five (45) days, shall provide Contractor with a written statement identifying what portion of the Claim is disputed and what portion of the Claim is undisputed. Upon the receipt of a Claim Owner, through the chief executive officer, and Contractor may, by mutual agreement, extend the time period provide in this subsection (b).
  - (c) As a condition precedent to the Claim, Contractor must include reasonable DOCUMENTATION to support its Claim.
  - (d) Owner's response to the Claim must be approved by its legislative body. If the legislative body will not meet within the initial forty-five (45) days or any extension mutually agreed upon between Owner's chief executive officer and Contractor as permitted by subsection (b), above, Owner shall have up to three (3) days following the next duly publicly noticed meeting of the legislative body after the forty-five (45) day period, or extension, expires to provide Contractor with a written statement identifying the disputed portion and the undisputed portion.
  - (e) Payment due on any undisputed portion of the Claim shall be processed and made within sixty (60) days following the issuance of the written statement required in subsection (d). If Owner fails to issue a written statement the provisions of subsection (h), below, shall apply.
  - (f) If Contractor disputes Owner's written response, or if Owner fails to respond to the Claim within the time prescribed by this Section 9.4, Contractor may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a written demand for meet and confer, sent by registered mail or certified mail, return receipt requested, Owner shall schedule a meet and confer conference in El Cajon, California, to be held within thirty (30) days.
  - (g) Within ten (10) business days following the conclusion of the meet and confer conference, if the Claim or any portion thereof remains in dispute, Owner shall provide Contractor with a written statement identifying the portion of the Claim that remains in dispute and the portion of the Claim that is undisputed.
1. Any payment due on an undisputed portion of the Claim following the meet and confer conference shall be processed and made within sixty (60) days after Owner has issued its written statement required by this subsection (g).

2. Any disputed portion of the Claim, as identified by Contractor in writing, shall be submitted to nonbinding mediation in San Diego County, with Owner and Contractor sharing the costs of mediation (i.e., the costs charged by the mediator) equally. Owner and Contractor shall mutually agree to a mediator within ten (10) business days after the disputed portion of the Claim has been identified by Owner as required by this subsection (g). If Owner and Contractor fail to agree upon a mediator, each party shall select a mediator, and those mediators shall select a qualified neutral third party to mediate the disputed portion of the Claim.
  - 1) In the event the mediation is conducted by a qualified neutral third party mediator, selected by the parties' mediators, each party shall bear the fees and costs charged by its selected mediator in connection with the selection of the neutral mediator. The costs of the neutral mediator shall be shared equally as set forth in subdivision (g)(2) of this Section 9.4.
  - 2) For the purposes of this Section 9.4, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board (if applicable), in which an independent third party or board assist Owner and Contractor in dispute resolution through negotiation or the issuance of an evaluation of the Claim. Any mediation utilized shall conform to the timeframes set forth in this Section 9.4.
  - 3) If mediation is unsuccessful, the portions of the Claim remaining in dispute shall be subject to such other procedures outside of this Section, applicable to the Claim.
  - 4) Unless Owner and Contractor otherwise agree in writing, the mediation conducted pursuant to this subsection (g) shall excuse any further obligation under California Public Contract Code section 20104.4 to mediate after litigation is commenced.
- (h) Should Owner fail to respond to a Claim within the time periods set forth herein or otherwise meet the time requirements of this Section 9.4, the Claim shall be deemed rejected in its entirety. A Claim that is deemed denied pursuant to this subsection (h) shall not constitute an adverse finding with regard to the merits of the Claim or the responsibility or qualifications of Contractor.
- (i) Any amounts not paid in a timely manner as required by this Section 9.4 shall bear interest at the rate of seven percent (7%) per annum.
- (j) Claims of any subcontractor or a lower tier subcontractor, against Owner, which cannot be brought directly against Owner due to lack of privity of contract, may be presented to Owner by Contractor on behalf of that claimant. A subcontractor, on his or her own behalf, or on behalf of a lower

tier subcontractor must request that Contractor present the Claim on behalf of the subcontractor. In requesting that Contractor present his or her Claim, the subcontractor must furnish Contractor with reasonable documentation to support the Claim. Within forty-five (45) days of receipt of this written request Contractor must notify the subcontractor, in writing, as to whether the Claim was presented to Owner and, if not presented, a statement of the reasons why it was not presented.

- (k) If a Claim is not resolved through negotiation or mediation, a Contractor or any subcontractor having presented the Claim through this procedure may thereafter seek such remedies as set forth in Article 14.

## **ARTICLE 10 -- CHANGES IN THE WORK**

10.1 The Owner reserves the right, without notice to sureties, to require alterations and additions to or omission from the Work called for by this Contract. All such work shall be executed under conditions of the original contract except that any claim for extension of time caused thereby shall be adjusted at the time of ordering the change. The Contractor shall not be entitled to extra time or any compensation for extra work unless orders therefor are given in writing and the amount of compensation for such extra work or the amount of extra time is specified in such written orders.

Value of any extra work, change, or deduction shall be determined at the discretion of Owner in one or more of the following ways:

- (a) By acceptable lump sum proposal submitted by Contractor.
- (b) By unit prices contained in Contractor's original bid and incorporated in the Contract Documents, or fixed by subsequent written agreement between the Owner and the Contractor.
- (c) By cost of material and labor, and percentage for overhead and profit, for additions and deductions to the Contract, as determined pursuant to the following calculation:

	Extra	Credit
1. Labor (attach itemized hours for each labor classification and the corresponding prevailing wage rate)		
2. Materials (attach itemized quantity and unit cost plus applicable sales tax)		
3. Equipment Rental (attached itemized list of rental equipment and total cost)		
4. Subtotal of lines 1, 2 and 3		
5. Subcontractor's Overhead and Profit  (Contractor is not entitled to		

Subcontractor overhead and profit for  
Work not completed by Subcontractor)  
(combined overhead and profit shall  
not exceed 15% of the amount on line 4)

6. Property Loss and Property Damage Insurance, Compensation Insurance, Social Security, and Unemployment Taxes (the total of all items combined shall not exceed 20% of the amount on line 4)
7. Subtotal of lines 4, 5 and 6
8. General Contractor's Overhead and Profit (combined overhead and profit shall not exceed 15% of the amount on line 7)
9. Subtotal of lines 7 and 8
10. Bond Premium  
(not to exceed 1% of the amount on line 9)
11. Total of lines 9 and 10

10.2 If the parties are unable to agree upon the compensation for extra work, then it shall be computed on the basis of actual cost of labor, materials, and equipment, plus a fixed fee of 20 percent. In the case of a reduction of cost, if the parties are unable to agree on the change in contract price, the Owner's Representative shall make determination of the reduction in price to be allowed for the change.

10.3 If the Contractor claims that any instruction, by drawings or otherwise, involves extra costs under this Contract, the Contractor shall give the Owner's Representative written notice thereof before proceeding to execute the Work and, in any event, within fourteen (14) calendar days of receiving such instructions. No such claims shall be entitled to consideration by the Owner unless so made. Any claims shall be presented in the manner set forth in Section 9.4 of this Contract.

10.4 If adverse weather conditions are the basis of a claim for an extension of time for performance of the Contract, or a claim for an adjustment of the Contract Price, such claim must be documented by data substantiating that weather conditions were abnormal for the period of time and could not have been reasonably anticipated, and that such weather conditions had an adverse effect on the scheduled construction. No extension of time, or adjustment in the contract price will be granted if the adverse weather conditions could have reasonably been anticipated by the Contractor. Any claims shall be presented in the manner set forth in Section 9.4 of this Contract.

10.5 Adjustments in the time required for performance of the Contract for work covered by a Change Order shall be made by one of the following:

- (a) Time extension or reduction agreed upon by the parties; or

- (b) If the parties are unable to agree on the time extension or time reduction, the Owner's Representative shall make a determination of the time extension or time reduction to be allowed for a change.

10.6 Failure to agree on an adjustment of the contract price or extension of time for performance of the Contract shall not excuse the Contractor from proceeding with the prosecution of the Work as changed.

## **ARTICLE 11 - CORRECTION OF WORK AFTER COMPLETION**

### One Year Correction Period:

11.1 If within one (1) year after the date of Completion or such longer period of time as may be prescribed by Laws or Regulations, or by the terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents, any portion of the Work is found to be defective, the Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions, either correct such defective Work, or, if it has been rejected by Owner, remove it from the site and replace it with non-defective Work. If the Contractor does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or the rejected Work removed and replaced and the costs (including but not limited to fees and charges of architects, engineers, attorneys and other professionals) shall be paid by the Contractor. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Contract Documents.

## **ARTICLE 12 - PAYMENTS TO THE CONTRACTOR AND COMPLETION**

### Payment:

12.1 The Owner shall make payments as follows: On or about the «Payment\_day» day of each calendar month, the Owner agrees to pay the Contractor an amount to be determined by taking 95 percent of the value, proportionate to the amount of the Contract, of labor and materials incorporated in the Work to be performed, which has been performed to date, and by deducting thereon the aggregate of all previous payments. The balance of the total Contract Price shall be paid within thirty (30) days after the date of completion of the Work to be done under this Contract.

12.1.1 The provisions of Section 20104.50 of the California Public Contract Code are hereby incorporated by reference. A copy of Section 20104.50 is hereby attached.

12.1.2 The Owner reserves the right to withhold payments on account of any of the following:

- (a) Defective work not remedied;
- (b) Failure of the Contractor to make payments properly to Subcontractors or for materials or labor;
- (c) A reasonable doubt that the Contract can be completed for the balance then unpaid; and

- (d) Failure to submit certified payrolls covering the period for which Contractor has submitted his or her billing; and
- (e) Default of the Contractor in the performance of the terms and/or conditions of the Contract, or in the performance of any such terms and/or conditions.

Substitution of Securities:

12.2 Retainage From Monthly Payments: Pursuant to Section 22300 of the California Public Contract Code, the Contractor may substitute securities for any money withheld by the Owner to insure performance under the Contract. At the request and expense of the Contractor, securities equivalent to the amount withheld shall be deposited with the Owner, or with a state or federally chartered bank in this state as the escrow agent, who shall then pay those monies to the Contractor. Upon satisfactory completion of the Contract, the securities shall be returned to the Contractor. Deposit of securities with an escrow agent shall be subject to a written agreement between the escrow agent and the Owner in accordance with the provisions of Section 22300. The Owner will not certify that the contract has been satisfactorily completed until at least thirty (30) days after filing by the Owner of a Notice of Completion. Securities eligible for investment under Section 22300 shall be limited to those listed in Section 16430 of the California Government Code and to bank or savings and loan certificates of deposit, interest bearing demand deposit accounts, standby letters of credit, or any other security mutually agreed to by the Contractor and the Owner.

Contractor's Warranty of Title:

12.3 The Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any application for payment, whether incorporated in the Project or not, will pass to the Owner no later than the time of payment, free and clear of all liens.

Stop Notices:

12.4 Any Subcontractor, supplier, worker, or anyone else having any claim against the Contractor for or on account of work done or material furnished for the performance of the Work provided for hereunder, may in accordance with the requirements of the applicable Laws and Regulations give notice of the claim and its amount to the Owner, who may, but shall not be obligated to, withhold any and all payments due or to become due thereafter to the Contractor until the claim is adjusted and paid. The provisions of this Paragraph 12.4 shall not lessen or diminish, but shall be in addition to, the right or duty of the Owner to withhold any payments under to provisions of the laws of the State of California respecting the withholding of sums due to the Contractor.

Beneficial Use or Occupancy by the Owner:

12.5 The Owner reserves the right, at its option and convenience, to occupy or otherwise make use of all or any part of the Project premises at any time prior to completion upon ten (10) days' written notice to the Contractor. Beneficial use or occupancy, or use shall be subject to the following conditions:

- (a) The Owner shall use its best efforts to prevent its occupancy from interfering with the conduct of the Contractor's remaining work.
- (b) The Contractor shall not be required to repair damage to premises if the

same was caused by the Owner's occupancy or use.

- (c) The one-year correction period for those portions of the premises occupied and equipment utilized by the Owner shall start as of the date of actual occupancy or use by the Owner.
- (d) Occupancy or use shall not constitute acceptance by the Owner either of the completed work or any portion thereof, nor will it relieve the Contractor from full responsibility for correcting defective work or materials found before completion and acceptance of all the Work or during the period specified in Paragraph 11.1, above.
- (e) Occupancy or use shall not be deemed to be the equivalent of filing a Notice of Completion, nor as a cessation of labor.
- (f) There shall be no added costs to the Owner due to pre-completion occupancy or use.
- (g) The Contractor and its surety shall execute a "No Change in Price Change Order" prepared pursuant to this Paragraph 12.5.
- (h) Effective 12:01 a.m. San Diego time at the project site on the date of beneficial occupancy stipulated in the Change Order, the Contractor shall be released from the obligations of maintaining fire and extended coverage insurance covering those portions of the premises occupied by the Owner pursuant to this Paragraph 12.5, but shall maintain all other insurance required by the Contract in full force and effect. The Owner shall obtain fire and extended coverage insurance or maintain equivalent self-insurance covering those portions of the premises occupied by it pursuant to this Paragraph 12.5.

## **ARTICLE 13 - SUSPENSION OF WORK AND TERMINATION**

### **Delays and Suspension of Work:**

13.1 The time during which the Contractor is delayed in the work by the act or negligence of the Owner, of the Owner's employees, the Owner's Representative, or by an act of God, which the Contractor could not have reasonably foreseen, or by stormy or inclement weather in which the controlling operation of the Work cannot proceed, or by strikes, boycotts, or like obstructive actions by employees or labor organizations which delay said controlling operation of the Work is not caused by, or the continuance of which is not due to, any act or conduct on the part of the Contractor, shall be added to the time for the completion of the Work called for by this Contract. Such extension of the time on account of such delays shall not be allowed unless applied for in writing by the Contractor within three (3) calendar days of the commencement of any such delay and the written approval of such extension of time is obtained by the Owner's Representative. Any request by the Contractor for an increase in the contract price because of any delay shall be the subject of a Change Order in accordance with the provisions of Article 10.

13.2 If, in the opinion of the Owner's Representative, the Contractor is not proceeding with the prosecution of the Work as scheduled, and such failure to proceed is due to the act, omission, or negligence of the Contractor, any Subcontractor and/or any supplier, or the employees of any or all of the above, then the Contractor shall, immediately upon the request of the Owner, and at no additional cost to the Owner, work such overtime, additional shifts, or

holidays, as may be required to correct said delays and to insure no further delays to the completion of the Work called for by this Contract.

The Owner's Right to Terminate:

13.3 If at any time there shall be filed by or against the Contractor in any court a petition in bankruptcy or insolvency or for reorganization or for the appointment of a receiver or trustee of all or a portion of the Contractor's property, and within thirty (30) days therefrom the Contractor fails to secure a discharge thereof; or if the Contractor (1) makes an assignment for the benefit of creditors or petitions for or enters into an agreement or arrangement with its creditors, (2) fails to prosecute the Work properly, or fails to complete the Work entirely on or before any date established for partial or final completion, (3) fails to make prompt payment to Subcontractors or for materials or labor or, (4) without limitations, fails to perform any provisions of this Contract, then the Owner (by giving seven (7) days prior written notice of any such default to the Contractor and without prejudice to any other remedy it may have) may terminate the Contract and take possession of all or some of the Contractor's materials, tools, equipment, and appliances and complete the Work by such means as the Owner deems fit. In such case, the Contractor shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Sum shall exceed (y) the expense of completing the Work including compensation for additional managerial and administrative services, plus (z) the Owner's losses and damages because of the Contractor's default, such excess shall be paid to the Contractor. If such expense, plus the Owner's losses and damages shall exceed such unpaid balance, the Contractor shall pay the difference to the Owner promptly on demand.

13.4 The Owner may terminate this Contract without cause by giving seven (7) days prior written notice to the Contractor, and in such event, the Owner will pay the Contractor for that portion of the Contract Price, less the aggregate of previous payments, allocable to the Work completed as of the date of termination. The Owner also will reimburse the Contractor for all costs necessarily incurred for organizing and carrying out the stoppage of the Work and paid directly by the Contractor, not including overhead, general expenses or profit. The Owner will not be responsible to reimburse the Contractor for any continuing contractual commitments to Subcontractors or material-suppliers or penalties or damages for canceling such contractual commitments inasmuch as the Contractor shall make all subcontracts and other commitments subject to this provision.

13.5 In the event of termination by the Owner, the Owner may require the Contractor promptly to assign to the Owner all or some subcontracts, construction, plant, materials, tools, equipment, appliances, rental agreements, and any other commitments which the Owner in its sole discretion, chooses to take by assignment, and in such event, the Contractor shall promptly execute and deliver to the Owner written assignments of the same.

## **ARTICLE 14 – DISPUTE RESOLUTION**

14.1 The parties hereby mutually agree that should any dispute arise out of or relate to this Contract, or its alleged breach thereof, said parties shall first attempt to settle such dispute or alleged breach by good faith negotiation. If, after good faith negotiation the parties are unable to resolve the dispute, the parties may, but are not obligated to submit the dispute to mediation under the Commercial Mediation Rules of the American Arbitration Association before resorting to arbitration, litigation, or other action.

14.2 Any consent to arbitration involving an additional person or persons shall not constitute consent of any dispute not described therein, with any person not named, or described

therein. Any agreement to arbitrate and any agreement to arbitrate with additional person or persons duly consented to by the parties to this Contract shall be specifically enforceable under the prevailing arbitration law.

14.3 If the parties voluntarily consent to arbitration, notice of the request for arbitration is to be filed in writing with the other party to this Contract and with the American Arbitration Association. No claim may be made until the period of time which begins with the date on which the Owner's Representative has issued a written decision and ends thirty (30) days after the date on which the written decision is received. In no event is the demand for arbitration to be made after the date when institution of legal or equitable proceedings based on such claim, dispute or other matter in question would be barred by the applicable statute of limitations. A request for arbitration shall contain a statement setting forth the nature of the controversy, reference or attach the Owner's Representative's decision in issue, identify this Contract by title, state the amount involved, if any, and the remedy sought. Two copies of the demand shall be filed with the regional office of the American Arbitration Association in the county in which the project is located, together with two copies of Articles 9 and 14 and the appropriate filing fee as provided in the American Arbitration Association Construction Industry Arbitration Rules.

14.4 Voluntary arbitration shall be in accordance with the Construction Industry Arbitration Rules of the AAA in effect on the date on which the arbitration is demanded except that the following modifications to those Rules shall apply:

- (a) The arbitrator(s) shall be neutral and appointed by the AAA; and
- (b) A controversy involving less than \$50,000 shall be heard by a single arbitrator; a controversy involving \$50,000 or more shall be heard by three (3) arbitrators one of whom shall be an attorney.

14.5 The award rendered by the arbitrator(s) shall be final. The exclusive forum for the confirmation and enforcement, vacation or correction of an award shall be the Superior Court of the State of California, County of San Diego.

#### Performance of Contract During Arbitration:

14.6 Pending an award by the arbitrator(s), the Contractor shall proceed diligently with the performance of the Contract and in accordance with the Owner's Representative's decision unless the parties to this Contract otherwise agree in writing.

### **ARTICLE 15 - MISCELLANEOUS**

#### Assignment

15.1 Neither party to the Contract shall assign the Contract without the written consent of the other, nor shall the Contractor assign any monies due or to become due to the Contractor hereunder, without the previous written consent of the Owner. Any assignment of money shall be subject to all proper withholdings in favor of the Owner and to all deductions provided for in the Contract. All money withheld, whether assigned or not, shall be subject to being used by the Owner for completion of the Work should the Contractor be in default.

### **ARTICLE 16 - CALIFORNIA STATE REQUIREMENTS**

#### Nondiscriminatory Practices:

16.1 The City of El Cajon Affirmative Action Plan requires contractors who are awarded contracts for construction, alteration, maintenance or demolition, their Subcontractors and suppliers, to take affirmative action to improve employment of racial and ethnic minorities in the construction industry, in accordance with Executive Order 11246. To comply, each contractor awarded a construction contract by the City of El Cajon shall agree, and by signing and submitting, a proposal for this contract does certify, to comply with mandated regulations as set forth by Executive Order 11246.

16.1.1 The Contractor shall not willfully discriminate against any employee or applicant for employment, and all applicants for employment and current employees shall be treated equally without regard to their race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, or sexual orientation of such persons.

16.1.2 The Contractor shall advise unions and other organizations, which represent employees of the provisions of this Agreement and post in a conspicuous place to the unions an equal employment opportunity sign to be furnished by the Owner.

16.1.3 Violation by the Contractor of this Article or the State Fair Employment Practice Act shall be cause to terminate this Contract.

16.1.4 None of the provisions of the Contract shall be used to preclude the Owner from pursuing other remedies available under law for noncompliance with these provisions.

16.1.5 The provisions of this paragraph 16.1 apply to each and every Subcontractor hired by, or under contract with the Contractor.

#### Apprentices:

16.2 Attention is directed to Sections 1777.5, 1777.6 and 1777.7 of the California Labor Code and Title 8, California Administrative Code Section 200 et seq. To insure compliance and complete understanding of the law regarding apprentices, and specifically the required ration thereunder, the Contractor (and Subcontractors) should, where some question exists, contact the Division of Apprenticeship Standards prior to commencement of the work. Responsibility for compliance with this Paragraph 16.2 lies with the Contractor. The Owner's policy is to encourage the employment and training of apprentices on its construction contracts as may be permitted under local apprenticeship standards.

#### Prevailing Wage Rates:

16.3 As required by Sections 1770 and following, of the California Labor Code, the Contractor (and Subcontractors) shall pay no less than the prevailing wage per diem wages as determined by the Director of the California Department of Industrial Relations. Copies of such prevailing rate of per diem wages are on file at the office of the Owner, which copies shall be made available to any interested party on request. The Contractor shall post a copy of such determination at each job site.

16.4 The Contractor (and Subcontractors) shall, as a penalty to the Owner, forfeit not more than \$50.00 for each calendar day, or portion thereof, for each worker paid less than the prevailing rates as determined by the Director for such work or craft in which such worker is employed for any public work done under the contract by it or by any Subcontractor under it. The

amount of this penalty shall be determined by the Labor Commissioner.

Payroll Records; Retention; Inspection; Noncompliance Penalties; Rules and Regulations:

16.5 Each Contractor and Subcontractor shall keep an accurate payroll record, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by him or her in connection with the public work. Each payroll record shall contain or be verified by a written declaration that it is made under penalty of perjury, stating both of the following:

16.5.1 The information contained in the payroll record is true and correct.

16.5.2 The Contractor or Subcontractor has complied with the requirements of Sections 1771, 1811, and 1815 for any work performed by its employees on the public works project.

16.6 The payroll records enumerated under Paragraph 16.5 shall be certified and shall be available for inspection at all reasonable hours at the principal office of the Contractor on the following basis:

16.6.1 A certified copy of employee's payroll record shall be made available for inspection or furnished to the employee or his or her authorized representative on request.

16.6.2 A certified copy of all payroll records enumerated in Paragraph 16.5 shall be made available for inspection or furnished upon request to a representative of the Owner, the Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards of the Department of Industrial Relations.

16.6.3 A certified copy of all payroll records enumerated in Paragraph 16.5 shall be made available upon request by the public for inspection or copies thereof. However, a request by the public shall be made through either the body awarding the contract, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. If the requested payroll records have not been provided pursuant to Paragraph 16.6.2 the requesting party shall, prior to being provided the records, reimburse the costs of preparation by the Contractor, Subcontractors, and the entity through which the request was made. The public shall not be given access to the records at the principal office of the Contractor.

16.7 The certified payroll records shall be on forms provided by the Division of Labor Standards Enforcement or shall contain the same information as the forms provided by the division.

16.8 The Contractor or Subcontractor shall file a certified copy of the records, enumerated in Paragraph 16.5 with the entity that requested the records within 10 days after receipt of a written request.

16.9 Any copy of records made available for inspection as copies and furnished upon request to the public or any public agency by the awarding body, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement shall be marked or obliterated in such a manner as to prevent disclosure of an individual's name, address, and social security number. The name and address of the Contractor awarded the contract or performing the contract shall not be marked or obliterated.

16.10 The Contractor shall inform the body awarding the contract of the location of the records enumerated under Paragraph 16.5 including the street address, city and county, and shall, within five (5) working days, provide a notice of a change of location and address.

16.11 The Contractor or Subcontractor shall have 10 days in which to comply subsequent to receipt of a written notice requesting the records enumerated in paragraph 16.5. In the event that the Contractor or Subcontractor fails to comply within the 10-day period, he or she shall, as a penalty to the Owner, forfeit twenty-five dollars (\$25.00) for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due. The Contractor is not subject to a penalty assessment pursuant to this section due to the failure of a Subcontractor to comply with this section.

Workers' Compensation:

16.12 In accordance with the provision of Section 3700 of the California Labor Code, the Contractor and each Subcontractor shall secure the payment of workers' compensation benefits to its employees.

16.13 Prior to beginning work under the Contract, the Contractor shall sign and file with the Owner the following certification:

"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 work of this Contract."

16.14 Notwithstanding the foregoing provisions, before the Contract is executed on behalf of the Owner, a bidder to whom a contract has been awarded shall furnish satisfactory evidence that it has secured in the manner required and provided by law the payment of workers' compensation.

Working Hours:

16.15 The Contractor shall comply with all applicable provisions of Sections 1810 to 1815 inclusive, of the California Labor Code relating to working hours. The Contractor shall, as a penalty to the Owner, forfeit twenty-five dollars (\$25.00) for each worker employed in the execution of the Contract by the Contractor or by any Subcontractor for each calendar day during which such worker is required or permitted to work more than 8 hours in any one calendar day and 40 hours in any one calendar week, unless such worker receives compensation for all hours worked in excess of 8 hours at not less than 1-1/2 times the basic rate of pay.

Contractor Not Responsible for Damage Resulting From Certain Acts of God:

16.16 As provided in Section 7105 of California Public Contract Code, the Contractor shall not be responsible for the cost of repairing or restoring damage to the Work which damage is determined to have been proximately caused by an act of God, in excess of five percent (5%) of the contracted amount, provided that the Work damaged was built in accordance with accepted and applicable buildings standards and the plans and specifications of the Owner. The Contractor

shall obtain insurance to indemnify the Owner for any damages to the Work caused by an act of God if the insurance premium is a separate bid item in the bidding schedule for the Work. For purposes of this section, the term “acts of God” shall include only the following occurrences or conditions and effects: earthquakes in excess of a magnitude of 3.5 on the Richter Scale, and tidal waves.

Concrete Forms, Falsework, and Shoring:

16.17 The Contractor shall comply fully with the requirements of Section 1717 of the Construction Safety Orders, State of California, Department of Industrial Relations, regarding the design of concrete forms, false work, and shoring and the inspection of same prior to placement of concrete. Where the said Section 1717 requires the services of a civil engineer registered in the State of California to approve design calculations and working drawings of the false work or shoring system, or to inspect such system prior to purposes, and all costs therefore shall be included in the price named in the Contract for completion of the Work as set forth in the Contract Documents.

Protection of Workers in Trench Excavations:

16.18 As required by Section 6705 of the California Labor Code and in addition thereto, whenever work under the Contract involves the excavation of any trench or trenches 5 feet or more in depth, the Contractor shall submit for acceptance by the Owner or by a registered civil or structural engineer, employed by the Owner, to whom authority to accept has been delegated, in advance of excavation, a detailed plan showing the design of shoring, bracing, sloping, or other provisions to made for worker protection from the hazard of caving ground during the excavation, of such trench or trenches. If such plan varies from the shoring system standards established by the Construction Safety Orders of the Division of Industrial Safety, the plan shall be prepared by a registered civil or structural engineer employed by the Contractor, and all costs therefore shall be included in the price named in the Contract for completion of the Work as set forth in the Contract Documents. Nothing in this section shall be deemed to allow the use of a shoring, sloping, or other protective system less effective than that required by the Construction Safety Orders. Nothing in this Section shall be construed to impose tort liability on the Owner, the Architect, no any of their officers, agents, representatives, or employees.

Public Works Contracts; Assignment to Awarding Body:

16.19 In accordance with Section 7103.5 of the California Public Contract Code, the Contractor and Subcontractor shall conform to the following requirements: In entering into a public works contract, or a subcontract to supply goods, services or materials pursuant to a public works contract, the Contractor or Subcontractor offers and agrees to assign to the awarding body all rights, title and interest in and to all causes of action it 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 Professional Code], arising from purchases of goods, services or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the Contractor, without further acknowledgment by the parties.

Submission of Bids; Agreement to Assign:

16.20 In accordance with Section 4552 of the California Government Code, the bidder shall conform to the following requirements. In submitting a bid to a public purchasing body, the bidder offers and agrees that if the bid is accepted, it will assign to the purchasing body all rights,

title, and interest in and to all causes of action it 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, materials, or services by the bidder for sale to the purchasing body pursuant to the bid. Such assignment shall be made and become effective at the time the purchasing body tenders final payment to the bidder.

## **SPECIAL CONDITIONS**

**1. PRE-QUOTATION MEETING** - A pre-quotation meeting will not be held for this project.

Contractor Request for Information (RFI's) should be submitted in writing to the Purchasing Agent in accordance with Item 2 of the INFORMATION FOR BIDDERS. Changes, explanations, or instruction shall be by written addenda.

**2. INFORMATION ITEMS** - Performance Bond, Labor & Material Bond and Workers Compensation (Certification by Contractor) are part of this quotation as information items only and are to be completed and submitted by the successful bidder(s) after award.

**3. ALTERNATES** - The use of the name of a manufacturer, or any special brand or make, in describing any item in the quote documents does not restrict bidders to that manufacturer or specific article. An equal of the named product will be given due consideration. The contractor shall submit any alternate item for approval. All items on which quotes are submitted must in all cases be equal or better in quality and utility to those specified by the City. The approval of any alternate shall be made by the City. Notwithstanding the foregoing, the City may impose additional restrictions in the Specifications section of these documents. All information required to make an informed decision on an alternate item must be submitted as part of the quote.

**4. SPECIALTY ITEMS** - The contractor shall perform, with its own organization, Contract work amounting to at least 50 percent of the Contract Price except that any designated "Specialty Items" may be performed by subcontract and the amount of any such "Specialty Items" so performed may be deducted from the Contract Price before computing the amount to be required to be performed by the Contractor with its own organization. The following items have been designated as "Specialty Items" in accordance with the provisions of Section 2-3.2 of the Standard Specifications for Public Works Construction and Public Contract Code Sections 4100 through 4113:

**There are no specialty items for this project.**

**5. UNDERGROUND UTILITIES** – Section 4216 of the Government Code requires a Dig Alert Identification Number be issued before excavation will be permitted. Call for mark-outs and a Dig Alert I.D. number from Underground Service Alert, at 1-800-227-2600, at least two working days before excavating.

**6. STORMWATER MANAGEMENT AND DISCHARGE CONTROL**

**6A. JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM (JRMP)** - The JRMP is the City of El Cajon's approach to improving water quality in rivers, bays, lakes, and ocean through reducing discharges of pollutants to the Municipally Separate Storm Sewer System (MS4) storm drain system. To reduce pollutants in MS4 discharges to water bodies, the City implements or requires its residents, businesses, municipal facilities, and land owners to implement a variety of measures known as best management practices (BMPs). All municipal activities shall be conducted in accordance with the City's JRMP.

i. Demolition/Construction

Municipal projects involving demolition/construction activities shall implement a minimum level of BMPs to help prevent the discharge of pollutants including sediment, toxic chemicals or other

construction related materials to the City's MS4 storm drain system. The following is a list of minimum BMPs to be used for Demolition/Construction related municipal activities:

BMP1: Eliminate illicit non-storm water discharges	<p>Non-storm water (water other than rain) shall not be discharged to the City's MS4 storm drain. To eliminate illicit discharges, do not allow any solid or liquid material except uncontaminated storm water to enter City storm drains, curb gutters along City streets, or any other part of the City's MS4.</p> <p>CASQA:</p> <p><i>SC: 10 Storm Drain Inlet Protection</i></p> <p><i>SC:44 Drainage System Maintenance</i></p>
BMP 4: Eliminate the discharge of vehicle and equipment wash water	<p>Wastewater associated with washing activities shall not be allowed to enter the City's MS4 storm drains, curbs and gutters, or any other part of the City's MS4. All wash water must be contained, captured, and disposed of appropriately. Designated washing areas may consist of a container, a berm, or a liner to collect and contain liquids to prevent runoff.</p> <p>CASQA:</p> <p><i>SC: 10 Storm Drain Inlet Protection</i></p> <p><i>SC:21 Automotive Service Maintenance</i></p>
BMP 14: Protect unpaved areas, including landscaping, from erosion using vegetative or physical stabilization	<p>Exposed soils that are actively eroding or prone to erosion due to disturbance shall be protected from erosion. Significant accumulations of eroded soil shall be removed or contained to prevent sediment transport in runoff to the City's MS4 storm drain system.</p> <p>CASQA: <i>SC:41 Building &amp; Grounds Maintenance</i></p>
BMP 16: Implement good housekeeping to keep site free of trash and debris	<p>Outdoor areas shall be cleaned as needed to keep them free of accumulations of trash, sediment, litter, and other debris to help prevent transport to the City's MS4 storm drain system.</p> <p>CASQA: <i>SC:41 Building &amp; Grounds Maintenance</i></p>

<p>BMP 30: Temporarily protect storm drains from non-storm water discharges while conducting activities that have the potential to result in a discharge</p>	<p>If municipal activities conducted cannot be fully contained or minor failures in containment would potentially result in discharges of non-storm water to the MS4, temporary measures shall be used to protect the storm drain system. Any municipal activities and construction related materials that enter the MS4 storm drain system shall be removed promptly and disposed of appropriately (in accordance with other minimum BMPs). Keep storm drain inlets and under drains free of sediment, trash, and debris.</p> <p>CASQA:</p> <p>SC: 10 Storm Drain Inlet Protection</p> <p>SC:44 Drainage System Maintenance</p>
<p><i>City of El Cajon's Jurisdictional Runoff Management Plan, Minimum Best Management Practices for Industrial, Commercial, and Municipal Site/Sources, 2015.</i></p>	

Copies of the complete JRMP are available online at <http://www.cityofelcajon.us/i-want-to/view/documents-forms-library/-folder-137> or reviewed in person at City of El Cajon's City Hall (200 Civic Center Way). For any questions regarding the JRMP, or to make an appointment with the storm water management staff to discuss and/or review requirements, please call (619) 441-1653.

## 6B. STORMWATER MANAGEMENT AND DISCHARGE CONTROL

City of El Cajon's Municipal Code Chapter 13.10 (Stormwater Management and Discharge Control) identifies management practices to help protect health, safety and general welfare of citizens of El Cajon and improve water quality. Management practices will help reduce the adverse effects of polluted runoff discharges on waters of the state; to secure benefits from the use of storm water as a resource; and to ensure that the city is compliant with the Municipal Permit. The Municipal Code requires the control of non-stormwater discharge and reduction of pollutant discharge to the maximum extent practicable. Pollutant, as defined by the Municipal code means any agent that may cause or contribute to the degradation of water quality such that a condition of pollution or contamination is created or aggravated. To maintain compliance with the City of El Cajon's Municipal Code 13.10 and Municipal Stormwater Permit, non-stormwater pollutant discharges must be controlled to the maximum extent practicable.

Any proposed demolition/construction activities that includes the disturbance of surface area less than < **1 acre** requires the development of a Water Pollution Control Plan (WPCP).

Any proposed demolition/construction activities that includes the disturbance of surface area greater than > **1 acre** requires the development of a Storm Water Pollution Prevention Plan (SWPPP).

A template for the WPCP/SWPPP can be found at: <https://dot.ca.gov/programs/construction/storm-water-and-water-pollution-control>. The Contractor shall be responsible for the design of a WPCP/SWPPP and implement Best Management Practices (BMPs) to help eliminate pollutant discharges to the MS4 storm drain system. Use CASQA and/or Caltrans BMP factsheets. The WPCP/SWPPP must be submitted prior to any construction activities including soil disturbance, grading, clearing of vegetative material.

**The WPCP/SWPPP shall be submitted at least ten (10) working days prior to the start of construction and shall be approved in writing by the City Engineer prior to commencing work.**

The Contractor shall implement the WPCP/SWPPP and take remedial and preventive action immediately when pollutant discharge occurs and/or the City Engineer/Public Works Director directs. Full compensation for all work involved in Stormwater Management and Discharge Control, including the WPCP/SWPPP, furnishing, installation, maintenance and removal of all necessary BMP materials (including silt fences, gravel bags, and materials) and all necessary labor, tools and equipment, shall be considered as included in the contract prices paid for the various items of work and no additional payment will be made therefor.

## **7. PROJECT MANAGEMENT DOCUMENTATION & ADMINISTRATION**

- a. The City of El Cajon reserves the right to utilize an online cloud-based project management system. Virtual Project Manager (VPM) allows for paperless documentation and project administration. For more information, go to [www.virtual-pm.com](http://www.virtual-pm.com).
- b. Virtual Project Manager (VPM) allows for paperless documentation and project administration. All posted information is available to all personnel involved with the project at any time using the internet.
- c. The use of VPM by the Contractor is mandatory. Access to VPM will be provided at no cost to the contractor.
- d. In order to utilize VPM, the contractor needs a computer, internet access, a digital camera, and a scanner. For more information, go to [www.virtual-pm.com](http://www.virtual-pm.com). To Login, from the homepage, select LOGIN and enter the Username and Password that will be provided to you by the City's Representative.
- e. The contractor shall use the following features:
  - i. Daily Logs: Contractor's daily reports shall be entered electronically here.
  - ii. Change Order Manager: Contractor requests for change order shall be submitted electronically here.
  - iii. Transmittals: Schedules, Certified Payrolls (In addition, hard copies with wet signatures are required), etc. shall be electronically submitted here.
  - iv. Submittals: Submittals requiring approval shall be submitted electronically here.
  - v. RFIs: Requests for information (RFIs) shall be submitted electronically here.
  - vi. Payment Applications: Monthly Payment Applications shall be submitted by the specified date for review and approval by submitting current work items completed within the schedule of values. Contractor to submit back-up as required.

**8. LCP TRACKER SOFTWARE (CERTIFIED PAYROLLS)**

- a. LCP Tracker software allows for the submittal of weekly certified payrolls and related labor compliance documentation. LCP Tracker is available to the Contractor involved with the project via internet access.
- b. The use of LCP Tracker by the Contractor is mandatory for this project. Access to LCP Tracker will be provided at no cost to the Contractor.
- c. In order to utilize LCP Tracker, the Contractor will require a computer with internet access. A digital camera and a scanner may be useful as well. For additional information, go to [www.lcptracker.com](http://www.lcptracker.com). To login, go to [www.lcptracker.net](http://www.lcptracker.net) and from the homepage, select LOGIN and enter the Username and Password that will be provided to you by the City.

## **SPECIFICATIONS**

The Contractor shall furnish all labor, equipment, materials, tools, services, and incidentals required to perform the following scope as referenced in Exhibits A through H, as diagrammed in Attachment B - Training Tower Assessment, Appendix C:

Note: The use of the name of a manufacturer, or any special brand or make, in describing any item in the quote documents does not restrict bidders to that manufacturer or specific article. An equal of the named product will be given due consideration. Please see Special Conditions, Section 4. Alternates for alternate item consideration.

### **EXHIBIT A: CMU CRACK – NO FACE SHELL DELAMINATION**

Step 1: Mechanically chip out (do not crack chase with diamond blades) to a min of ½" wide x ½" deep.

Step 2: Fill cracks with SikaRepair 223.

#### **Examples**



**EXHIBIT B: CMU CRACK – FACE SHELL DELAMINATION**

- Step 1: Conduct a detailed survey and hammer sounding to identify unsound areas and their extent.
- Step 2: Mechanically remove all deteriorated unsound CMU, grout and concrete. Saw cut the perimeter of the demolition to define the extent of the repair and create a working edge. Rectangular geometries and  $\frac{1}{2}$ " deep sawcuts are preferred. The area within the repair should be prepared to achieve an ICRI concrete surface profile equivalent to or greater than CSP 6.
- Step 3: If steel is encountered, mechanically clean the exposed reinforcement and undercut a min of  $\frac{1}{2}$ ".
- Step 4: Fill voids with SikaRepair 222 for horizontal trowel applications; SikaRepair 223 for vertical or overhead applications; and Sikacrete 211 for larger form and pour applications.

**Examples**

### EXHIBIT C: CONCRETE CRACK – NO VISIBLE LIFT OR SEPARATION

Step 1: Measure maximum crack width.

- a. If crack width is less than 3/16 in. then no further action is required.
- b. If crack width is greater than 3/16 in. then proceed to Step 2.

Step 2: Conduct a detailed survey and hammer sounding to identify areas and extent of deficient concrete.

- a. If concrete is sound proceed to Step 3.
- b. If concrete is unsound proceed to Steps 4-8.

Step 3: Epoxy inject crack with Sikadur 35, Hi-Mod LV (see Appendix D). No further action is required.

Step 4: Mechanically remove all deteriorated unsound concrete/repair mortar. Extent of concrete removal shall extend beyond any corroded rebar to expose un-corroded bar. Remove concrete from behind and around the reinforcement by a minimum of ¾". Saw cut the perimeter of the demolition area to define the extent of the repair and create a working edge. Do not damage any existing rebar. Provide rectangular geometry and ¾" deep sawcuts where installation will not damage existing rebar. Prepare the area within the repair to achieve surface profiles as noted in the Sika specifications (see Appendix D)

Step 5: Mechanically clean exposed reinforcement to remove all corrosion (SSPC 3 minimum). Where section loss of reinforcement is greater than 20% of the original bar size consult with project engineer for direction.

Step 6: Coat prepared reinforcement with Sika Armatec 110 corrosion inhibiting primer (see Appendix D).

Step 7: Fill voids with SikaTop Plus repair mortars as directed in Appendix D for each application.

#### Examples



### EXHIBIT D: CONCRETE CRACK – VISIBLY LIFTING OR SEPARATING

Step 1: Although rebar may not be visible, these conditions likely occur due to corroding reinforcement. Begin by conducting a detailed survey and hammer sounding to identify area and extent of deficient concrete around crack.

Step 2: Mechanically remove all deteriorated unsound concrete/repair mortar. Extent of concrete removal shall extend beyond corroded rebar to expose un-corroded bar. Remove concrete from behind and around the reinforcement by a minimum of  $\frac{3}{4}$ ". Saw cut the perimeter of the demolition area to define the extent of the repair and create a working edge. Do not damage any existing rebar. Provide rectangular geometry and  $\frac{1}{2}$ " deep sawcuts where installation will not damage existing rebar. Prepare the area within the repair to achieve surface profiles as noted in the Sika specifications (see Appendix D)

Step 3: Mechanically clean exposed reinforcement to remove all corrosion (SSPC 3 minimum). Where section loss of reinforcement is greater than 20% of the original bar size consult with project engineer for direction.

Step 4: Coat prepared reinforcement with Sika Armatec 110 corrosion inhibiting primer (see Appendix D).

Step 8: Fill voids with SikaTop Plus repair mortars as directed in Appendix D for each application.

#### Examples



### EXHIBIT E: CONCRETE SPALL – NO REBAR EXPOSED

Step 1: Conduct a detailed survey and hammer sounding to identify deficient areas of concrete and their extent.

- a. If concrete is sound proceed to Steps 5-6.
- b. If concrete is unsound proceed to Steps 2-6.

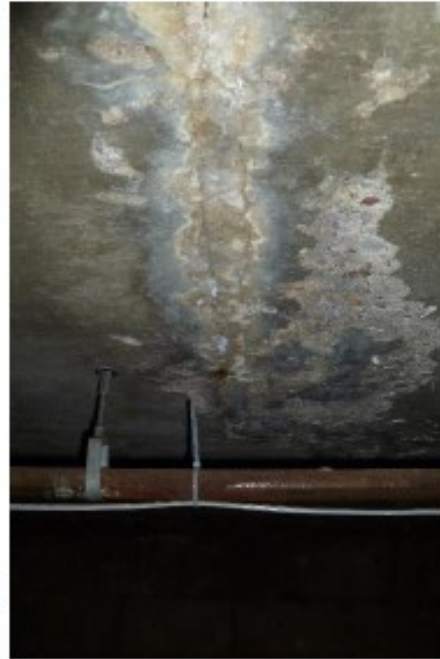
Step 2: Mechanically remove all deteriorated unsound concrete. Extent of concrete removal shall extend beyond corroded rebar to expose un-corroded bar. Remove concrete from behind and around the reinforcement by a minimum of  $\frac{1}{4}$ ". Saw cut the perimeter of the demolition area to define the extent of the repair and create a working edge. Do not damage any existing rebar. Provide rectangular geometry and  $\frac{1}{4}$ " deep sawcuts where installation will not damage existing rebar. Prepare the area within the repair to achieve surface profiles as noted in the Sika specifications (see Appendix D)

Step 3: Mechanically clean exposed reinforcement to remove all corrosion (SSPC 3 minimum). Where section loss of reinforcement is greater than 20% of the original bar size consult with project engineer for direction.

Step 4: Coat prepared reinforcement with Sika Armatec 110 corrosion inhibiting primer (see Appendix D).

Step 9: Fill voids with SikaTop Plus repair mortars as directed in Appendix D for each application.

#### Examples



## EXHIBIT F: CONCRETE SPALL – REBAR VISIBLY EXPOSED

Step 1: Conduct a detailed survey and hammer sounding to identify deficient areas of concrete and their extent.

Step 2: Mechanically remove all deteriorated unsound concrete. Extent of concrete removal shall extend beyond corroded rebar to expose un-corroded bar. Remove concrete from behind and around the reinforcement by a minimum of  $\frac{1}{4}$ ". Saw cut the perimeter of the demolition area to define the extent of the repair and create a working edge. Do not damage any existing rebar. Provide rectangular geometry and  $\frac{1}{8}$ " deep sawcuts where installation will not damage existing rebar. Prepare the area within the repair to achieve surface profiles as noted in the Sika specifications (see Appendix D)

Step 3: Mechanically clean exposed reinforcement to remove all corrosion (SSPC 3 minimum). Where section loss of reinforcement is greater than 20% of the original bar size consult with project engineer for direction.

Step 4: Coat prepared reinforcement with Sika Armatec 110 corrosion inhibiting primer (see Appendix D).

Step 5: Fill voids with SikaTop Plus repair mortars as directed in Appendix D for each application.

### Examples



**EXHIBIT G: CONCRETE DISCOLORATION OR RUST INDICATING POTENTIAL CORROSION**

Step 1: Closely investigate for potential concrete cracking or spalling. Miscellaneous items not structural in nature which are attached to the concrete (example wires, nails, ect.) which are potential locations for corrosion shall be removed.

- a. If no concrete deficiencies are observed, no further action is required.
- b. If concrete deficiencies are observed refer to Exhibits A-F for appropriate repair.

**Examples**

**EXHIBIT H: STEEL STAIR POST CORROSION**

- Step 1: Investigate base of stair post for lost section due to corrosion. Where post is loose or experiencing section loss greater than 10% of original section, proceed to step 2.
- Step 2: Sawcut post to remove corroded section. Excavate remaining post embedment into concrete to completely remove post base.
- Step 3: Chip out concrete to allow a minimum of 1" concrete patch to be applied behind new post
- Step 4: Provide new post to match existing removed with a minimum of 4" effective embedment into concrete stair. Provide splice with pipe sleeve overlapping existing post in place and new post base by a minimum of 2" each.
- Step 5: Provide minimum 3/16" fillet weld all around pipe sleeve to new post base and existing post above.
- Step 6: Repair concrete stair according to Exhibit F.
- Step 7: Paint post according to owner specifications.

**Examples**

**QUOTE**

In the matter of supplying labor and material for the Heartland Fire Training Tower Repairs project:

**To the Purchasing Agent of the City of El Cajon:**

Pursuant to and in compliance with the Notice Inviting Quotations, the bidder hereby proposes and agrees to perform the work, therein described, in accordance with the attached specifications, instructions, and conditions, in the time, form, and manner provided by law at the quote price herein.

Total proposal quote price for materials, equipment, tools, labor and incidentals necessary to complete the work, including necessary insurance cost and bond requirements:

**QUOTE**

<b><u>No.</u></b>	<b><u>Description</u></b>	<b><u>UOM</u></b>	<b><u>EST. QTY.</u></b>	<b><u>Item Price (In Figures)</u></b>	<b><u>Total (In Figures)</u></b>
1	Heartland Fire Training Tower Repairs	LS	1	<b>SUBMIT QUOTE PRICING ELECTRONICALLY</b>	

## CHECK LIST

### THE FOLLOWING DOCUMENTS MUST BE SUBMITTED TO COMPRISE A COMPLETE QUOTATION

- \_\_\_\_\_ Any Addendum to the quotation that is issued prior to the deadline for receipt of quotations (signed))
- \_\_\_\_\_ Noncollusion Declaration (signed)
- \_\_\_\_\_ Designation of Worker Classifications
- \_\_\_\_\_ Designation of Subcontractors (must include subcontractor(s) license number, DIR contractor registration number, and signed)
- \_\_\_\_\_ Bidders Statement Regarding Insurance Coverage (signed)
- \_\_\_\_\_ Experience Statement (signed)
- \_\_\_\_\_ Bidder's Organizational Information

### THE FOLLOWING DOCUMENTS ARE FOR INFORMATION ONLY, AND WILL ONLY BE COMPLETED BY THE AWARDED BIDDER

Sample of Performance Bond

Sample of Labor and Material Bond

Sample of Certification by Contractor

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#### FOR CITY USE ONLY

Federal Funding \_\_\_\_\_ YES \_\_\_\_\_ NO

**If Yes:** Check for Non-Debarred Status (website: <https://www.sam.gov>)  
Attach a copy of SAM print out.

Contractor's License meets requirements of Item 6.10 of the General Conditions \_\_\_\_ Yes \_\_\_\_ No

**NONCOLLUSION DECLARATION**  
**\*\*\*to be submitted by ALL BIDDERS\*\*\***

The undersigned declares:

I am the \_\_\_\_\_ of \_\_\_\_\_, the party  
(TITLE) (FIRM NAME)  
making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on \_\_\_\_\_[date], at \_\_\_\_\_[city], \_\_\_\_\_[state].

Name & Title: \_\_\_\_\_  
(PRINTED)

By (Signature): \_\_\_\_\_

**DESIGNATION OF WORKER CLASSIFICATIONS*****\*\*\*to be submitted by ALL BIDDERS\*\*\****

In compliance with the provisions of California Labor Code Section 1773.3, the City shall notify the Department of Labor Relations Division of Apprenticeship Standards of any contract awarded under section 1777.5.

Bidder shall provide the following information for California Labor Code Section 1777.5 contract work. **List name(s) of general contractor and sub-contractor next to all applicable classifications:**

**CLASSIFICATIONS**

<input type="checkbox"/> Asbestos	_____
<input type="checkbox"/> Boiler Maker	_____
<input type="checkbox"/> Bricklayers	_____
<input type="checkbox"/> Carpenters	_____
<input type="checkbox"/> Carpet/Linoleum	_____
<input type="checkbox"/> Cement Masons	_____
<input type="checkbox"/> Drywall Finisher	_____
<input type="checkbox"/> Drywall/Lathers	_____
<input type="checkbox"/> Electricians	_____
<input type="checkbox"/> Elevator Mechanic	_____
<input type="checkbox"/> Glaziers	_____
<input type="checkbox"/> Iron Workers	_____
<input type="checkbox"/> Laborers	_____
<input type="checkbox"/> Millwrights	_____
<input type="checkbox"/> Operating Eng	_____
<input type="checkbox"/> Painters	_____
<input type="checkbox"/> Pile Drivers	_____
<input type="checkbox"/> Pipe Trades	_____
<input type="checkbox"/> Plasterers	_____
<input type="checkbox"/> Roofers	_____
<input type="checkbox"/> Sheet Metal	_____

**DESIGNATION OF WORKER CLASSIFICATIONS (cont'd)**

- ☐ Sound/Comm \_\_\_\_\_
- ☐ Surveyors \_\_\_\_\_
- ☐ Teamster \_\_\_\_\_
- ☐ Tile Workers \_\_\_\_\_

Printed Name of General Contractor: \_\_\_\_\_

**DESIGNATION OF SUBCONTRACTORS*****\*\*\*to be submitted by ALL BIDDERS\*\*\****

In compliance with the Subletting and Subcontracting Fair Practices Act (chapter 4 (commencing at section 4100), part 1, division 2 of the Public Contract Code of the State of California) and any amendments thereof, each bidder shall set forth below: (a) The name, the location of the place of business, and the California contractor license number of each subcontractor who will perform work or labor or render service to the prime contractor in or about the construction of the work or improvement, or a subcontractor licensed by the State of California who, under subcontract to the prime contractor, specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the plans and specifications, in an amount in excess of one-half of 1 percent of the prime contractor's total bid or, in the case of the bids or offers for the construction of streets or highways, including bridges, in excess of one-half of 1 percent of the prime contractor's total bid or ten thousand dollars (\$10,000), whichever is greater and (b) The portion of the work that will be done by each subcontractor under this act. The prime contractor shall list only one subcontractor for each portion as is defined by the prime contractor in his or her bid.

If a prime contractor fails to specify a subcontractor or if a prime contractor specifies more than one subcontractor for the same portion of work to be performed under the contract in excess of one-half of one percent of the prime contractor's total bid, bidder shall be deemed to have agreed that bidder is fully qualified to perform that portion himself, and that bidder shall perform that portion himself.

No prime contractor whose bid is accepted shall (a) substitute any subcontractor, (b) permit any subcontract to be voluntarily assigned or transferred or allow it to be performed by anyone other than the original subcontractor listed in the original bid, or (c) sublet or subcontract any portion of the work in excess of one-half of one percent of the prime contractor's total bid as to which his original bid did not designate a subcontractor, except as authorized in the Subletting and Subcontracting Fair Practices Act. Subletting or subcontracting of any portion of the work in excess on one-half of one percent of the prime contractor's total bid as to which no subcontractor was designated in the original bid shall only be permitted in cases of public emergency or necessity, and then only after a finding reduced to writing as a public record of the authority awarding this contract setting forth the facts constituting the emergency or necessity.

A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in this chapter, unless currently registered and qualified to perform public work pursuant to Section 1725.5 of the Labor Code. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform the public work pursuant to Section 1725.5 of the Labor Code at the time the contract is awarded.

**DESIGNATION OF SUBCONTRACTORS (cont'd)**

<b>Name and Location of Business of Subcontractor</b>	<b>Subcontractor License Number &amp; DIR Registration Number</b>	<b>Bid Item No. Type of Work (All) or (Portion*)</b>	<b>Dollar Amount</b>	<b>Specialty**</b>	<b>Subcontractor Worker Classification*** (Specify per list below)</b>
	Lic# _____ Reg# _____				
	Lic# _____ Reg# _____				
	Lic# _____ Reg# _____				

\*If a portion of an item is subcontracted, documentation approved by the City Project Manager/Engineer is required prior to the award of contract. Such documentation shall include proof of the amount to be paid to, and the specific portions of the work to be done by, the subcontractor, as well as the prime contractor's certification of the specific portions of work to be done by its own forces.

\*\*Bidder must identify specialty trade if applicable. The description of the specialty trade must match that of the Specialty Items as listed in the Special Conditions.

\*\*\*Bidder must identify worker classification for each subcontractor. (i.e. Asbestos, Boilermaker, Bricklayers, Carpenters, Carpet/Linoleum, Cement Masons, Drywall Finisher, Drywall/Lathers, Electricians, Elevator Mechanic, Glaziers, Iron Workers, Laborers, Millwrights, Operating Engineer, Painters, Pile Drivers, Pipe Trades, Plasterers, Roofers, Sheet Metal, Sound/Comm., Surveyors, Teamster, Tile Workers, etc.)

\_\_\_\_\_  
Proper name of Bidder

By \_\_\_\_\_

**BIDDER'S STATEMENT**  
**REGARDING INSURANCE COVERAGE**  
***\*\*\*to be submitted by ALL BIDDERS\*\*\****

BIDDER HEREBY CERTIFIES that the Bidder has reviewed and understands the insurance coverage requirements specified in this Invitation to Quote. Should the Bidder be awarded the contract for the work, Bidder further certifies that the Bidder can meet the specified requirements for insurance, including insurance coverage of the subcontractors, and agrees to name the City of El Cajon as Additional Insured for the work specified.

\_\_\_\_\_  
Name of Bidder (Person, Firm, or Corporation)

\_\_\_\_\_  
Signature of Bidder's Authorized Representative

\_\_\_\_\_  
Name & Title of Authorized Representative

\_\_\_\_\_  
Date of Signing

**EXPERIENCE STATEMENT**  
**\*\*\*to be submitted by ALL BIDDERS\*\*\***

List at least three references for work of a similar nature performed within the last three years.

I hereby certify that I have performed the work listed below.

\_\_\_\_\_  
 Signature of Bidder

Description	Year	Amount	Customer and Telephone
		\$	( )
		\$	( )
		\$	( )
		\$	( )
		\$	( )

**BIDDER'S ORGANIZATIONAL INFORMATION****\*\*\*to be submitted by ALL BIDDERS\*\*\***

The bidder warrants that it, is duly licensed in the \_\_\_\_ classification in accordance with the Act providing for the registration of Contractors in the State of California, and said License is numbered \_\_\_\_\_. The undersigned bidder warrants that he, or it, is duly registered to perform public work pursuant to Section 1725.5 of the Labor Code, and said Registration is numbered \_\_\_\_\_.

The Quote is submitted in response to Notice Inviting Quotations, attached hereto, and pursuant to all of the proceedings of the City Council of the City of El Cajon heretofore had and taken to date. The names of all persons, firms and corporations interested in the foregoing bid as principals are as follows: (If an individual, so state. If a firm or co-partnership, state the firm name and give names of all individual co-partners comprising the firm. If a corporation, state the legal name of the corporation, also name the president, secretary, treasurer and manager thereof.)

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The undersigned are prepared to satisfy the Purchasing Agent of the City of El Cajon of their ability, financial or otherwise, to perform the proposed work and improvements in accordance with the specifications set forth.

**Firm Name:** \_\_\_\_\_

**Name & Title:** \_\_\_\_\_

**By (Signature):** \_\_\_\_\_

**Address:** \_\_\_\_\_  
\_\_\_\_\_

**Telephone:** \_\_\_\_\_

**E-Mail:** \_\_\_\_\_

**Taxpayer I.D. No.:** \_\_\_\_\_

**Type of Business entity:**

**Corp** ☐ **Partnership** ☐ **Individual/Sole Proprietor** ☐

**Joint Venture** ☐ **Other:** \_\_\_\_\_

**SAMPLE OF PERFORMANCE BOND****\*\*\*to be submitted by AWARDED BIDDER on projects of \$25,000 or more\*\*\***

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the CITY COUNCIL OF THE CITY OF EL CAJON has awarded to \_\_\_\_\_, hereinafter designated as "Principal", a contract for:  
together with appurtenance thereto: and

WHEREAS, said PRINCIPAL is required under the terms of said contract to furnish a bond for the faithful performance of said contract.

NOW, THEREFORE, we \_\_\_\_\_, as Principal, and \_\_\_\_\_, as Surety, are held firmly bound unto the CITY OF EL CAJON, CALIFORNIA, hereinafter called "Owner", in the penal sum of

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

THE CONDITION OF THIS OBLIGATION is such that if the above bounded 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 all the undertakings, terms, covenants, conditions and provisions in the said contract and any alteration thereof made as therein provided, all within the time and in the manner therein designated, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the City of El Cajon, its officers, agents and employees, as therein stipulated, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

As part of the obligation secured hereby and in addition to the face amount specified therefor, there shall be included costs and reasonable expenses and fees, including reasonable attorney's fees, incurred by the City in successfully enforcing such obligation, all to be taxed as costs and included in any judgment rendered.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or modification of the contract documents or of the work to be performed thereunder, shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or modification of the contract documents or of the work to be performed thereunder.

IN WITNESS WHEREOF, this instrument has been duly executed by the Principal and Surety

above names on \_\_\_\_\_, 20\_\_\_\_.

Principal: \_\_\_\_\_ Surety: \_\_\_\_\_

By \_\_\_\_\_ By \_\_\_\_\_

Note: To be submitted by successful bidder only.

**SAMPLE OF LABOR AND MATERIAL BOND****\*\*\*to be submitted by AWARDED BIDDER on projects of \$25,000 or more\*\*\***

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the City Council of the City of El Cajon has awarded to \_\_\_\_\_, hereinafter designated as "Principal", a contract for: together with appurtenances thereto; and

WHEREAS, said Principal is required under the terms of said contract to furnish a bond providing that if said Principal, or any of his or its subcontractors, shall fail to pay for any materials, provisions, provender, or other supplies used in, upon, or about the performance of the work contracted to be done, or for any work or labor done thereon of any kind, the Surety on this bond will pay the same to the extent hereinafter set forth.

NOW THEREFORE, we, \_\_\_\_\_, as Principal, and \_\_\_\_\_, as Surety, are held and firmly bound unto the CITY OF EL CAJON, CALIFORNIA, hereinafter called "Owner", in the penal sum of

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

THE CONDITION OF THIS OBLIGATION is such that if said Principal, his or its heirs, executors, administrators, successors or assigns, shall fail to pay for any 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 any person who supplies both work and materials therefor, or for amounts due under the Unemployment Insurance Act with respect to such work or labor, then said Surety will pay the same in an amount not exceeding the amount hereinabove set forth, and will also pay, in case suit is brought upon this bond, costs and reasonable expenses and fees, including reasonable attorney's fees, incurred by City in successfully enforcing such obligation, all to be taxed as costs and included in any judgment rendered.

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 effect.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or modification of the contract documents or of the work to be performed thereunder, shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or modification of the contract documents or of the work to be performed thereunder.

IN WITNESS WHEREOF, this instrument has been duly executed by the Principal and the Surety above named on \_\_\_\_\_, 20\_\_\_\_.

Principal: \_\_\_\_\_ Surety: \_\_\_\_\_

By \_\_\_\_\_

**SAMPLE OF CERTIFICATION BY CONTRACTOR**

***\*\*\*to be submitted by AWARDED BIDDER\*\*\****

I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workmen's 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 on this contract.

DATED:\_\_\_\_\_

\_\_\_\_\_  
Contractor

By:\_\_\_\_\_

Section 1861, Labor Code

The following excerpt from the State of California Public Contract Code shall be included in the terms of any contract subject to this article, as required by the article.

## **DIVISION 2. GENERAL PROVISIONS**

### **Part 2. Contracting by State Agencies**

#### **Chapter 2. State Procurement of Materials, Supplies, Equipment and Services**

#### **ARTICLE 1.7**

#### **MODIFICATIONS; PERFORMANCE; PAYMENT**

### **§ 20104.50. Timely progress payments; legislative intent; interest; payment requests**

(a) (1) It is the intent of the Legislature in enacting this section to require all local governments to pay their contractors on time so that these contractors can meet their own obligations. In requiring prompt payment by all local governments, the Legislature hereby finds and declares that the prompt payment of outstanding receipts is not merely a municipal affair, but is, instead, a matter of statewide concern.

(2) It is the intent of the Legislature in enacting this article to fully occupy the field of public policy relating to the prompt payment of local governments' outstanding receipts. The Legislature finds and declares that all government officials, including those in local government, must set a standard of prompt payment that any business in the private sector which may contract for services should look towards for guidance.

(b) Any local agency which fails to make any progress payment within 30 days after receipt of an undisputed and properly submitted payment request from a contractor on a construction contract shall pay interest to the contractor equivalent to the legal rate set forth in subdivision (a) of Section 685.010 of the Code of Civil Procedure.

(c) Upon receipt of a payment request, each local agency shall act in accordance with both of the following:

(1) Each payment request shall be reviewed by the local agency as soon as practicable after receipt for the purpose of determining that the payment request is a proper payment request.

(2) Any payment request determined not to be a proper payment request suitable for payment shall be returned to the contractor as soon as practicable, but not later than seven days, after receipt. A request returned pursuant to this paragraph shall be accompanied by a document setting forth in writing the reasons why the payment request is not proper.

(d) The number of days available to a local agency to make a payment without incurring interest pursuant to this article shall be reduced by the number of days by which a local agency exceeds the seven-day return requirement set forth in paragraph (2) of subdivision (c).

(e) For purposes of this article:

(1) A "local agency" includes, but is not limited to, a city, including a charter city, a county, and a city and county, and is any public entity subject to this part.

(2) A "progress payment" includes all payments due contractors, except that portion of the final payment designated by the contract as retention earnings.

(3) A payment request shall be considered properly executed if funds are available for payment of the payment request, and payment is not delayed due to an audit inquiry by the financial officer of the local agency.

(f) Each local agency shall require that this article, or a summary thereof, be set forth in the terms of any contract subject to this article.

**ATTACHMENT A**  
**CITY COUNCIL POLICY D-3**

<b>SUBJECT:</b> Insurance Requirements		<b>POLICY</b>
		D-3
<b>REFERENCE:</b>	Adopted 7/26/94 Amended 11/29/05 Amended 04/14/15	<b>EFFECTIVE</b>
		04/14/15
		<b>PAGE</b>
		1 of 8

**PURPOSE**

To provide a uniform City policy for liability insurance requirements and to establish procedures for its consistent application.

**BACKGROUND**

To help protect the City against liability, all individuals, contractors, agencies and organizations conducting business in association with, on behalf of, or in certain circumstances within the City of El Cajon are required to maintain adequate liability insurance coverage acceptable to the City.

Because of the differing levels of protection needed for various activities conducted within the City, the City has established policy limits and standards which directly relate to the type of activity being conducted.

**POLICY**

All individuals, contractors, agencies, and organizations conducting business either for the City of El Cajon (or the Successor Agency to the El Cajon Redevelopment Agency) or pursuant to an ordinance, resolution, agreement or policy requiring the maintenance of liability insurance shall provide proof of liability insurance in the following amounts and written on an occurrence basis (claims made coverage will be accepted only after verifying that occurrence coverage is not available):

1. A combined single limit policy with aggregate limits in the amount of \$2 million for all construction projects and for carnivals, subdivisions, and pollution coverage subject to section 5.c. under the heading "INSURANCE STANDARDS," with a maximum deductible or self-insurance retention ("SIR") of \$500,000; for policies not having a "combined single limit," minimum limits in amounts as follows:

Commercial General Liability (CGL): Insurance Services Office Form CG 00 01 covering CGL on an "occurrence" basis, including products and completed operations, property damage, bodily injury and personal & advertising injury with limits no less than \$1,000,000 per occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.

Unless staff determines that circumstances (i.e. high risk project, etc.) require the higher limit, the \$2,000,000 limit shall be decreased to \$1,000,000 with a maximum deductible or SIR of \$150,000, when:

**CITY OF EL CAJON  
CITY COUNCIL POLICY D-3**

<b>SUBJECT:</b> Insurance Requirements		<b>POLICY</b>
		D-3
<b>REFERENCE:</b> Adopted 7/26/94 Amended 11/29/05 Amended 04/14/15	<b>EFFECTIVE</b>	<b>PAGE</b>
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- a. The public improvements portion of a subdivision project is less than \$50,000; or
  - b. A construction project (in accordance with the Standard Specifications for Public Works Construction—and the Standard Special Provisions, the “Green Book”) is for less than \$50,000.
2. Except as otherwise provided in this policy, a combined single limit policy with aggregate limits in the amount of \$2 million for all others, including, but not limited to, athletic leagues, recreation groups, towing companies and public service agencies; for policies not having a “combined single limit,” minimum limits in amounts as follows:
- Commercial General Liability (CGL): Insurance Services Office Form CG 00 01 covering CGL on an “occurrence” basis, including products and completed operations, property damage, bodily injury and personal & advertising injury with limits no less than \$1,000,000 per occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.
3. A combined single limit policy with aggregate limits in the amount of \$250,000 for homeowners insurance or \$500,000 for commercial general liability insurance for small business owners, in either event only where the insurance is required for work in the public right-of-way. “Small business owners” are defined as commercial businesses, or a professional or administrative office uses, where the owners of the business work on-site as their primary calling or vocation, and having no more than two (2) employees not related by blood or marriage.
  4. Selected high-risk activities that would otherwise fall under the criteria for category 2 shall be evaluated by staff on a case-by-case basis to determine whether or not the above limits are sufficient. The imposition of liability limits exceeding \$2 million for such high-risk activities is appealable to the City Council.
  5. \$1,000,000 for taxicab companies.
  6. \$500,000 or actual value, whichever is greater, for “valuable papers” and “in transit” insurance where City records or personal property is being transported or stored outside of City property.

**CITY OF EL CAJON  
CITY COUNCIL POLICY D-3**

<b>SUBJECT:</b> Insurance Requirements			<b>POLICY</b>  D-3
<b>REFERENCE:</b> Adopted 7/26/94 Amended 11/29/05 Amended 04/14/15		<b>EFFECTIVE</b>  04/14/15	<b>PAGE</b>  3 of 8

7. Exceptions to the above limits may be made for non-profit, charitable, political, community and religious organizations.
8. The policy or policies of insurance may be for all operations or activities of the party purchasing the policy or policies provided, however, that the City or the Successor Agency may require a separate policy exclusively for operations of the purchaser where the City Manager, in his or her sole discretion, determines that a single policy would be inadequate to protect the City or Successor Agency in the event of multiple catastrophes.
9. Workers' compensation insurance shall meet the minimum limits required by law.

**INSURANCE STANDARDS**

1. ADMITTED CARRIER / BEST'S RATING A, CLASS VII
  - a. Insurers must be "admitted" carriers pursuant to the provisions of the California Insurance Code and in accordance with all requirements of the State Insurance Commission and must be listed in the:

"OFFICIAL PUBLICATION  
DEPARTMENT OF INSURANCE  
STATE OF CALIFORNIA

45 Fremont Street  
San Francisco, California 94105

INSURANCE ORGANIZATIONS AUTHORIZED BY THE INSURANCE  
COMMISSION TO TRANSACT BUSINESS OF INSURANCE

IN THE STATE OF CALIFORNIA DURING

[the most recent year for which  
the publication is available]."

or

"California Department of Insurance Company Profile."

**CITY OF EL CAJON  
CITY COUNCIL POLICY D-3**

<b>SUBJECT:</b> Insurance Requirements	<b>POLICY</b>  D-3	
<b>REFERENCE:</b> Adopted 7/26/94 Amended 11/29/05 Amended 04/14/15	<b>EFFECTIVE</b>  04/14/15	<b>PAGE</b>  4 of 8

- b. Insurers must have a Best's rating of A, Class VII or higher (this rating includes those insurers with a minimum policyholder's surplus of \$50 to \$100 million). Exceptions to the Best's rating may be considered when an insurance carrier meets all other standards and can satisfy surplus amounts equivalent to a A, Class VII rating. An exception to the rating requirement may be made for the California State Compensation Insurance Fund if not rated.

2. NON-ADMITTED CARRIER / BEST'S RATING A, Class XII

Exceptions to the "admitted" requirement may be considered when a non-admitted insurance carrier meets all other standards herein and:

- a. is either (i) listed in:

California Department of Insurance List of  
Approved Surplus Line Insurers

LISTING OF FILINGS

or (ii) is currently a party to co-operation agreements with foreign insurance regulatory authorities acceptable to the City Manager or City Attorney (for example, for insurers located in the United Kingdom, agreements must be with both the Prudential Regulatory Authority ("PRA") and the Financial Conduct Authority ("FCA"), or such successor authority or authorities of PRA and FCA;

- b. either the carrier or its parent company has a Best's rating of A, Class VII (this rating include those insurers with a minimum policyholder's surplus of \$50 to \$100 million ;
- c. has ten years or more experience in the business of insurance; and
- d. if applicable, the reinsurance carrier has a qualified rating.

3. GENERAL – INSURANCE CERTIFICATES / ADDITIONAL INSURED

All insurers (including those insuring against pollution or discharges of hazardous materials) must provide certificates of insurance and endorsements evidencing coverage prior to the start of any contract. All certificates or endorsements must include:

**CITY OF EL CAJON  
CITY COUNCIL POLICY D-3**

<b>SUBJECT:</b> Insurance Requirements	<b>POLICY</b>  D-3	
<b>REFERENCE:</b> Adopted 7/26/94 Amended 11/29/05 Amended 04/14/15	<b>EFFECTIVE</b>  04/14/15	<b>PAGE</b>  5 of 8

- Name of insurance company issuing each policy.  
All insurers must provide an original endorsement naming the City of El Cajon (and/or the Successor Agency to the El Cajon Redevelopment Agency), and its (their) elected and appointed officials, officers, employees and volunteers (for purposes of this Policy, individually and collectively, the “City Insureds”) as additional insureds. This inclusion as additional insureds shall not be required of Workers’ Compensation or professional liability policies of insurance, and may be waived for “valuable papers” coverage with the approval of the City Attorney.
- All insurers must provide an original endorsement stating that the insurance coverage shall be primary insurance as respects the City of El Cajon (and/or the Successor Agency to the El Cajon Redevelopment Agency), and its (their) elected and appointed officials, officers, employees and volunteers (for purposes of this Policy, individually and collectively, the “City Insureds. Any insurance or self- insurance maintained by the Entity, its officers, officials, employees, or volunteers shall be excess of the Contractor’s insurance and shall not contribute with it.
- Waiver of Subrogation endorsement is required on Workers’ Compensation Coverage.
- Address of named insured.
- Description of coverage, including any special coverage required by the contract.
- Policy numbers.
- Policy periods (If claims made basis, must include retroactive date and length of time allowed as extended reporting period).
- Coverage type (occurrence form vs. claims made).
- Authorized signature and date of issuance. An original signature is required: a digital signature is acceptable so long as it complies with the requirements of Government Code §16.5.
- Unless approved by the City Manager or designee, no certificate shall be accepted that qualifies the obligation of the carrier to provide 30 days written notice of cancellation of the policy. With the approval of the City Attorney the obligation to provide notice of cancellation may be reduced to ten (10) days, but only for termination due to the non-payment of any premium.

**CITY OF EL CAJON  
CITY COUNCIL POLICY D-3**

<b>SUBJECT:</b> Insurance Requirements			<b>POLICY</b>  D-3
<b>REFERENCE:</b> Adopted 7/26/94 Amended 11/29/05 Amended 04/14/15		<b>EFFECTIVE</b>  04/14/15	<b>PAGE</b>  6 of 8

**4. PUBLIC WORKS PROJECTS**

In addition to the standards set forth above, insurance policies for public works projects must also meet the following insurance requirements set out in the most recent edition of the Green Book adopted by the City Council:

- a. All insurance certificates shall bear an endorsement or shall have attached a rider whereby it is provided that, in the event of expiration or proposed cancellation of such policy for any reason whatsoever, the City shall be notified by certified mail, return receipt requested, giving a sufficient time before the date thereof to comply with any applicable law or statute, but in no event less than thirty (30) days before expiration or cancellation is effective, the provisions of section 3 herein notwithstanding; and
- b. Compliance with Labor Code §§3700 and 3800 relating to Worker's Compensation.
- c. Requirements of the Green Book shall prevail.

**5. PUBLIC RIGHT-OF-WAY**

An applicant for permit(s) to do work within the public right-of-way may establish satisfactory proof of liability insurance in the following manner:

**a. CONTRACTORS**

Contractors must furnish the City with a certificate of liability insurance, which meets the requirements set forth above and any other City requirements contained in this policy.

**b. HOMEOWNERS / PROPERTY OWNERS**

Homeowners/Property owners requesting a permit to do work within City rights-of-way or easements immediately adjacent to their respective owned or occupied property, solely for the owner's personal benefit, shall be required to furnish the City with a copy of their homeowner's/property owner's liability insurance policy, which meets the requirements set forth above, with the minimum limits described in category 3 under the heading "**POLICY**," above. The policy must be effective during the entire period of the proposed work, plus two (2) calendar years, and must provide coverage for claims arising from the work performed, or improvements

**CITY OF EL CAJON  
CITY COUNCIL POLICY D-3**

<b>SUBJECT:</b> Insurance Requirements		<b>POLICY</b>
		D-3
<b>REFERENCE:</b> Adopted 7/26/94 Amended 11/29/05 Amended 04/14/15	<b>EFFECTIVE</b>	<b>PAGE</b>
	04/14/15	7 of 8

owned, by the homeowner in the right-of-way or easement. If the encroachment is ongoing, annual proof of insurance shall be required. The requirement to name the City as an additional insured, and the requirement for a policy for two (2) additional calendar years, may each be waived by the City Council or the City Manager (or her designee) in cases of extreme hardship, in their discretion.

**c. POLLUTION EXCLUSION**

Applications for the installation of monitoring wells for the evaluation of groundwater pollution or for the discharge of formerly polluted groundwater into the City sewer system must be accompanied by a certificate of liability insurance provided by the property owner. Such liability insurance may not contain a pollution exclusion clause and must explicitly indemnify the City against all hazards which may result from either of these activities, including a worsening of pollution, either within the subsurface adjacent to the original pollution or within the City sewer system.

If the property owner is unable to provide insurance which addresses both general liability and pollution liability, the environmental company or other appropriately qualified entity contracting with the property owner for either monitoring well installation or groundwater pollution remediation, may furnish pollution liability insurance on behalf of the property owner.

Any insurance approved under this subsection c. shall be an occurrence policy, and shall otherwise comply with the provisions of this Policy.

**d. PUBLIC UTILITIES**

This policy as it relates to work in the public rights-of-way shall not be applicable to Cable TV, Helix Water District, Padre Dam Municipal Water District, SBC, San Diego Gas & Electric, or any other public utility.

**e. TRANSPORTATION / OVERSIZE LOADS – PERMITS – See Chapter 10.24 of the El Cajon Municipal Code.**

**CITY OF EL CAJON  
CITY COUNCIL POLICY D-3**

<b>SUBJECT:</b> Insurance Requirements		<b>POLICY</b>
		D-3
<b>REFERENCE:</b>	Adopted 7/26/94 Amended 11/29/05 Amended 04/14/15	<b>EFFECTIVE</b>
		04/14/15
		<b>PAGE</b>
		8 of 8

**TIME LIMITS / CANCELLATION PROVISIONS**

All liability insurance required pursuant to this policy shall provide coverage for a sufficient time period to protect the City from liability. The insurer is required to provide a minimum of thirty (30) days-notice of cancellation of any policy. With the approval of the City Attorney (except as provided in section 4, herein) this obligation may be reduced to not less than ten (10) days written notice, but only for termination due to the non-payment of any premium. In no event shall a policy be accepted which terminates prior to the completion of the activity to be covered.

In certain circumstances, it may be impracticable to obtain continuing insurance coverage due to the duration of the activity or the cost of premature renewal. Under such circumstances, an exception to the coverage period may be made so long as the policy is renewed or replaced with an acceptable insurance carrier and there is no lapse in coverage. Maintenance of proper insurance coverage is a material term of any contract with the City and failure to maintain or renew coverage or to provide evidence of renewal may be treated as a material breach of contract.

**ALTERNATIVE RISK MANAGEMENT PRACTICES; SELF-INSURANCE; RISK-POOLING**

Alternative risk management practices, such as self-insurance, risk pooling, risk retention groups, and other such programs, will be accepted in lieu of commercial insurance policies provided that the coverage meets the requirements of this Policy. Any such alternative risk management practices must meet the financial strength and surplus requirements reflected by the Best's Ratings required of commercial insurance under this Policy.

## Attachment B

### Heartland Fire Training Facility Training Tower Assessment

Heartland Fire Training Facility  
1301 North Marshall Ave  
El Cajon, CA 92020

Prepared for:  
Steve Butcher  
Heartland Fire Training Authority  
1301 N Marshall Ave  
El Cajon, CA 92020



Prepared by:  
COFFMAN ENGINEERS  
1301 Third Avenue, Suite 300  
San Diego, CA 92101  
619/232-4673

September 26, 2018  
Coffman Project #180567

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### Appendices:

A – General Photographs

B – Concrete Deficiency Exhibits and Suggested Repairs

C – Training Tower Damage Assessment Plans

D – Repair Product Data Sheets

## **SECTION 1: SCOPE OF WORK**

The scope of work included reviewing structural documents, conducting a site visit to observe the existing conditions of the concrete superstructure, and providing a written report identifying observed defects and recommendations for repairs. The focus of the assessment was to visually examine the extent of structural defects, provide recommended repairs for minor defects, and evaluate the building condition for further usage.

## **SECTION 2: ASSESSMENT**

On Tuesday, September 11, 2018, Casey Whitsett and Sean Westphal of Coffman Engineers met with Steve Butcher to conduct a condition assessment of the Heartland Fire Training Facility's Training Tower. The building exterior was visually observed around the perimeter from the ground level while slabs, stairs, and walls were observed from the interior perspective at corresponding levels.

Prior to the assessment, as-built drawings were provided for Coffman's review. The drawings were prepared by Arthur D. Decker, Architect dated December 1973.

## **SECTION 3: BUILDING DESCRIPTION**

The Heartland Training Tower is a five-story building, covering 2,320 gross square feet. The building is open to the weather as windows on each level and stairwell do not contain a glass barrier. The tower is used as a stair and small confines training facility for firefighters which involves dragging a live firehose from the bottom story to the top, resulting in the repeated accumulation and evaporation of standing water throughout the building.

Original structural drawings indicate that the walls consist of 8-inch fully grouted concrete masonry units (CMU) with #4 reinforcing bars spaced vertically at 24 inches on center, and two #4 bars spaced horizontally at 48 inches on center. The foundation is a 1'-6" thick concrete mat slab, and the elevated slabs for each floor are 4½ inch thick one-way concrete slabs. The stairs are cast-in-place concrete with (8)-#6 longitudinal reinforcing bars, #3 @ 9" on center transverse reinforcing bars, a minimum concrete thickness of 4½ inches, and a concrete cover dimension of ¾ inch.

A wood-framed staircase and mezzanine were observed during the investigation between the first and second floors of the Training Tower. This construction was not associated with the original structural documents and was not reviewed for structural integrity, as the scope was limited to the defects of the concrete superstructure.

## **SECTION 4: OBSERVATIONS, FINDINGS, & DISCUSSION**

The building was generally found to be in serviceable structural condition. The defects identified are comprised of cracked and spalled concrete at the floors, stairs, and CMU walls, as well as corroded base connections for the continuous metal handrail. These deficiencies are not immediately hazardous to building integrity; however, the recommendations discussed in Section 5 and repair procedures noted in Appendix B are advised to mitigate the development of hazards. For long term use of the building, the defects should be repaired as exposure of cracked CMU blocks and concrete surfaces to weather can cause more significant deterioration over time.

In general, it appears that many of the concrete slab and stair deficiencies are the result of rebar corrosion, most likely caused by water dripping and ponding from the fire hose as crews train up and down the tower. Briefly, once chloride intrusion has initiated a corrosive cycle, the rebar will swell and scale, causing the concrete to crack and spall. Therefore, in addressing these types of existing deficiencies, it will be imperative to not only patch the existing cracks and spalled concrete, but also thoroughly expose and clean the corroding rebar to address the root cause of the deficiencies.

Minor, previous repairs were identified at the underside of the concrete stairs in the lower portion of the building. Some of the repairs remain in good condition, while others have cracked through the patch or adjacent to the repaired crack, indicating that the underlying corrosion may have continued after the installation of the patch. We recommend that all existing patches and repairs be tested for soundness and re-repaired as appropriate.

The defects were identified through visual inspection and sounding of the CMU blocks and concrete elements. Material testing was not included in the scope of this investigation.

The location of specific deficiencies observed during Coffman's survey are mapped in Appendix C for reference. Please note that the sizes shown are sized through visual estimation of the concrete deficiencies and do not represent the actual final repair sizes. Furthermore, additional defects may be discovered once a contractor has gained complete and detailed access to the building. Such additional defects shall be repaired in congruence with similar conditions.

## SECTION 5: RECOMMENDATIONS

The repair procedures noted in Appendix B are presented as a general guide for addressing observed concrete deficiencies. The specific surface preparation and patch installation procedures shall conform to the Sika specifications and guidelines provided in Appendix D. Additionally, repair preparation shall conform to the following documents:

- **American Concrete Institute – Repair Application Procedures (ACI RAP)**  
**Bulletin 6:** Field Guide to Concrete Repair Application Procedures, "Vertical and Overhead Spall Repair by Hand Application"
- **American Concrete Institute – Repair Application Procedures (ACI RAP)**  
**Bulletin 7:** Field Guide to Concrete Repair Application Procedures, "Spall Repair of Horizontal Concrete Surfaces"

It should also be noted that cracks on the building have been observed which exceed the ACI recommended maximum crack width of 0.016 inches for a building exposed to dry air (**ACI 224R-01**, "Control of Cracking in Concrete Structures", Table 4.1). All concrete can be expected to crack; however, cracks with excessive width are most prone to be locations of future corrosion.

The recommended approach provided in Appendix B for addressing cracks around which the concrete is still sound is to require epoxy injection for cracks which exceed 3/16 inches (0.1875 in). This width limit should mitigate the cost associated with providing repairs for each crack as small as 0.016 inches in accordance with ACI 224R-01, while still affording a reasonable amount of corrosion protection for the near future. Please note that this approach will mitigate future corrosion but not provide complete protection.

## SECTION 6: CONCLUSIONS

The Heartland Fire Training Tower was observed to be in a serviceable structural condition and has generally been maintained adequately except for the observations noted in Section 4, for which recommendations are provided in Section 5 and Appendix B. The Client should contact our office should they have further concerns or inquiries.

## SECTION 7: LIMITATIONS

Our evaluation is based upon visual assessment of the site conditions and the review of construction documents made available by the Client. No furniture nor props were moved. Conclusions and recommendations have been derived in accordance with current standards of practice of the structural engineering profession. No warrantee is either expressed or implied.

Our observations have been limited to what can be examined by the naked eye. While access was available to a significant portion of the building, our review is still limited to what can be observed from the ground or floor levels without the use of a ladder or similar equipment. Coffman Engineers has performed no concrete testing. As such, the determination of the exact extent and quantity of required repairs based on the following recommendations will bear on the contractor's field verification. If deficiencies are encountered that significantly deviate from the exhibits presented in Appendix B and mapped in Appendix C of this report, they shall be reported to Coffman Engineers for review.

The exhibits shown in Appendix B are representative samples only. The pictures provided do not represent the quantity of or distribution of concrete deficiencies. Nor does the absence of a picture imply our assurance that the specific concrete deficiency type may not be found once a contractor has gained complete and detailed access to the building. Please reference Appendix C for a map of the noted deficiencies.

## SECTION 8: CERTIFICATION STATEMENT

I hereby certify that Coffman Engineers has observed the property as noted in this report, including all components listed and others deemed necessary; that Coffman Engineers and its representatives have no present nor contemplated future interest in the subject property or in the ownership entities of the subject properties; that Coffman Engineers' compensation is not contingent upon the content or conclusions of the engineering report to which this certification is attached; and that Coffman Engineers has disclosed all known material or significant defects, problems, conditions and situations concerning the subject improvements.

Signed: \_\_\_\_\_



Date: 9/26/2018

Casey Whitsett, S.E.  
Principal-in-charge

Prepared By: \_\_\_\_\_



Sean Westphal  
Engineer

# **APPENDIX A**

## General Photographs



Photo 1: West Elevation



Photo 2: South Elevation



Photo 3: East Elevation



Photo 4: North Elevation



Photo 5: Typical Stair



Photo 6: Underside of First Floor Mezzanine



Photo 7: Typical Window Opening

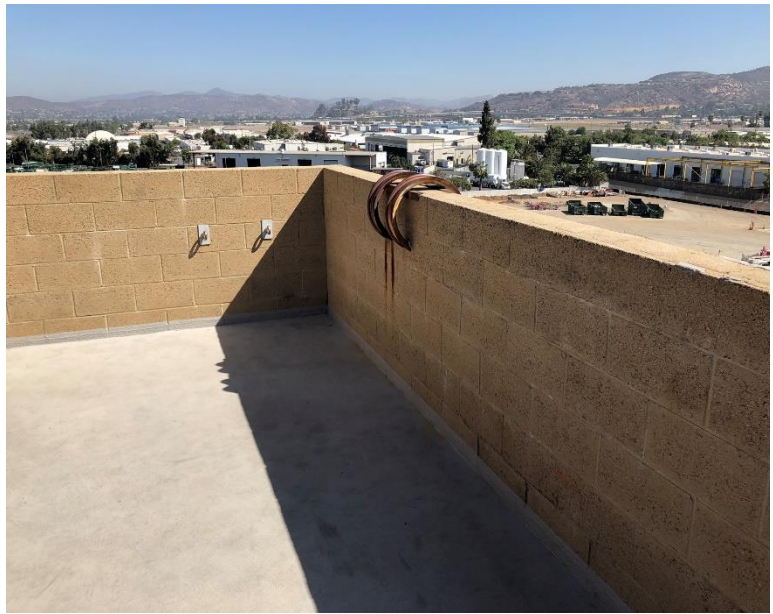


Photo 7: Roof

## **APPENDIX B**

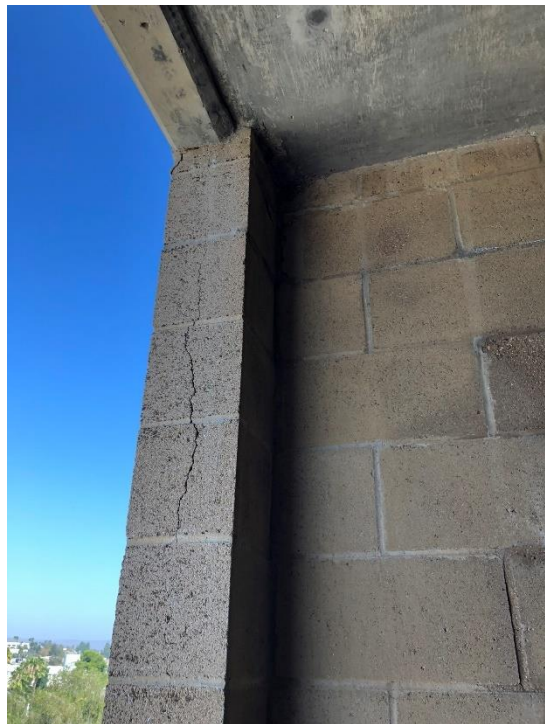
### **Concrete Deficiency Exhibits and Suggested Repairs**

## EXHIBIT A: CMU CRACK – NO FACE SHELL DELAMINATION

Step 1: Mechanically chip out (do not crack chase with diamond blades) to a min of ½" wide x ½" deep.

Step 2: Fill cracks with SikaRepair 223.

### Examples



## EXHIBIT B: CMU CRACK – FACE SHELL DELAMINATION

Step 1: Conduct a detailed survey and hammer sounding to identify unsound areas and their extent.

Step 2: Mechanically remove all deteriorated unsound CMU, grout and concrete. Saw cut the perimeter of the demolition to define the extent of the repair and create a working edge. Rectangular geometries and ½" deep sawcuts are preferred. The area within the repair should be prepared to achieve an ICRI concrete surface profile equivalent to or greater than CSP 6.

Step 3: If steel is encountered, mechanically clean the exposed reinforcement and undercut a min of 1/2".

Step 4: Fill voids with SikaRepair 222 for horizontal trowel applications; SikaRepair 223 for vertical or overhead applications; and Sikacrete 211 for larger form and pour applications.

### Examples



## EXHIBIT C: CONCRETE CRACK – NO VISIBLE LIFT OR SEPARATION

Step 1: Measure maximum crack width.

- a. If crack width is less than 3/16 in. then no further action is required.
- b. If crack width is greater than 3/16 in. then proceed to Step 2.

Step 2: Conduct a detailed survey and hammer sounding to identify areas and extent of deficient concrete.

- a. If concrete is sound proceed to Step 3.
- b. If concrete is unsound proceed to Steps 4-8.

Step 3: Epoxy inject crack with Sikadur 35, Hi-Mod LV (see Appendix D). No further action is required.

Step 4: Mechanically remove all deteriorated unsound concrete/repair mortar. Extent of concrete removal shall extend beyond any corroded rebar to expose un-corroded bar. Remove concrete from behind and around the reinforcement by a minimum of ¾". Saw cut the perimeter of the demolition area to define the extent of the repair and create a working edge. Do not damage any existing rebar. Provide rectangular geometry and ½" deep sawcuts where installation will not damage existing rebar. Prepare the area within the repair to achieve surface profiles as noted in the Sika specifications (see Appendix D)

Step 5: Mechanically clean exposed reinforcement to remove all corrosion (SSPC 3 minimum). Where section loss of reinforcement is greater than 20% of the original bar size consult with project engineer for direction.

Step 6: Coat prepared reinforcement with Sika Armatec 110 corrosion inhibiting primer (see Appendix D).

Step 7: Fill voids with SikaTop Plus repair mortars as directed in Appendix D for each application.

### Examples



## EXHIBIT D: CONCRETE CRACK – VISIBLY LIFTING OR SEPARATING

Step 1: Although rebar may not be visible, these conditions likely occur due to corroding reinforcement. Begin by conducting a detailed survey and hammer sounding to identify area and extent of deficient concrete around crack.

Step 2: Mechanically remove all deteriorated unsound concrete/repair mortar. Extent of concrete removal shall extend beyond corroded rebar to expose un-corroded bar. Remove concrete from behind and around the reinforcement by a minimum of  $\frac{3}{4}$ ". Saw cut the perimeter of the demolition area to define the extent of the repair and create a working edge. Do not damage any existing rebar. Provide rectangular geometry and  $\frac{1}{2}$ " deep sawcuts where installation will not damage existing rebar. Prepare the area within the repair to achieve surface profiles as noted in the Sika specifications (see Appendix D)

Step 3: Mechanically clean exposed reinforcement to remove all corrosion (SSPC 3 minimum). Where section loss of reinforcement is greater than 20% of the original bar size consult with project engineer for direction.

Step 4: Coat prepared reinforcement with Sika Armatec 110 corrosion inhibiting primer (see Appendix D).

Step 8: Fill voids with SikaTop Plus repair mortars as directed in Appendix D for each application.

### Examples



## EXHIBIT E: CONCRETE SPALL – NO REBAR EXPOSED

Step 1: Conduct a detailed survey and hammer sounding to identify deficient areas of concrete and their extent.

- a. If concrete is sound proceed to Steps 5-6.
- b. If concrete is unsound proceed to Steps 2-6.

Step 2: Mechanically remove all deteriorated unsound concrete. Extent of concrete removal shall extend beyond corroded rebar to expose un-corroded bar. Remove concrete from behind and around the reinforcement by a minimum of  $\frac{3}{4}$ ". Saw cut the perimeter of the demolition area to define the extent of the repair and create a working edge. Do not damage any existing rebar. Provide rectangular geometry and  $\frac{1}{2}$ " deep sawcuts where installation will not damage existing rebar. Prepare the area within the repair to achieve surface profiles as noted in the Sika specifications (see Appendix D)

Step 3: Mechanically clean exposed reinforcement to remove all corrosion (SSPC 3 minimum). Where section loss of reinforcement is greater than 20% of the original bar size consult with project engineer for direction.

Step 4: Coat prepared reinforcement with Sika Armatec 110 corrosion inhibiting primer (see Appendix D).

Step 9: Fill voids with SikaTop Plus repair mortars as directed in Appendix D for each application.

### Examples



## EXHIBIT F: CONCRETE SPALL – REBAR VISIBLY EXPOSED

- Step 1: Conduct a detailed survey and hammer sounding to identify deficient areas of concrete and their extent.
- Step 2: Mechanically remove all deteriorated unsound concrete. Extent of concrete removal shall extend beyond corroded rebar to expose un-corroded bar. Remove concrete from behind and around the reinforcement by a minimum of  $\frac{3}{4}$ ". Saw cut the perimeter of the demolition area to define the extent of the repair and create a working edge. Do not damage any existing rebar. Provide rectangular geometry and  $\frac{1}{2}$ " deep sawcuts where installation will not damage existing rebar. Prepare the area within the repair to achieve surface profiles as noted in the Sika specifications (see Appendix D)
- Step 3: Mechanically clean exposed reinforcement to remove all corrosion (SSPC 3 minimum). Where section loss of reinforcement is greater than 20% of the original bar size consult with project engineer for direction.
- Step 4: Coat prepared reinforcement with Sika Armatex 110 corrosion inhibiting primer (see Appendix D).
- Step 5: Fill voids with SikaTop Plus repair mortars as directed in Appendix D for each application.

### Examples



## EXHIBIT G: CONCRETE DISCOLORATION OR RUST INDICATING POTENTIAL CORROSION

Step 1: Closely investigate for potential concrete cracking or spalling. Miscellaneous items not structural in nature which are attached to the concrete (example wires, nails, ect.) which are potential locations for corrosion shall be removed.

- a. If no concrete deficiencies are observed, no further action is required.
- b. If concrete deficiencies are observed refer to Exhibits A-F for appropriate repair.

### Examples



## EXHIBIT H: STEEL STAIR POST CORROSION

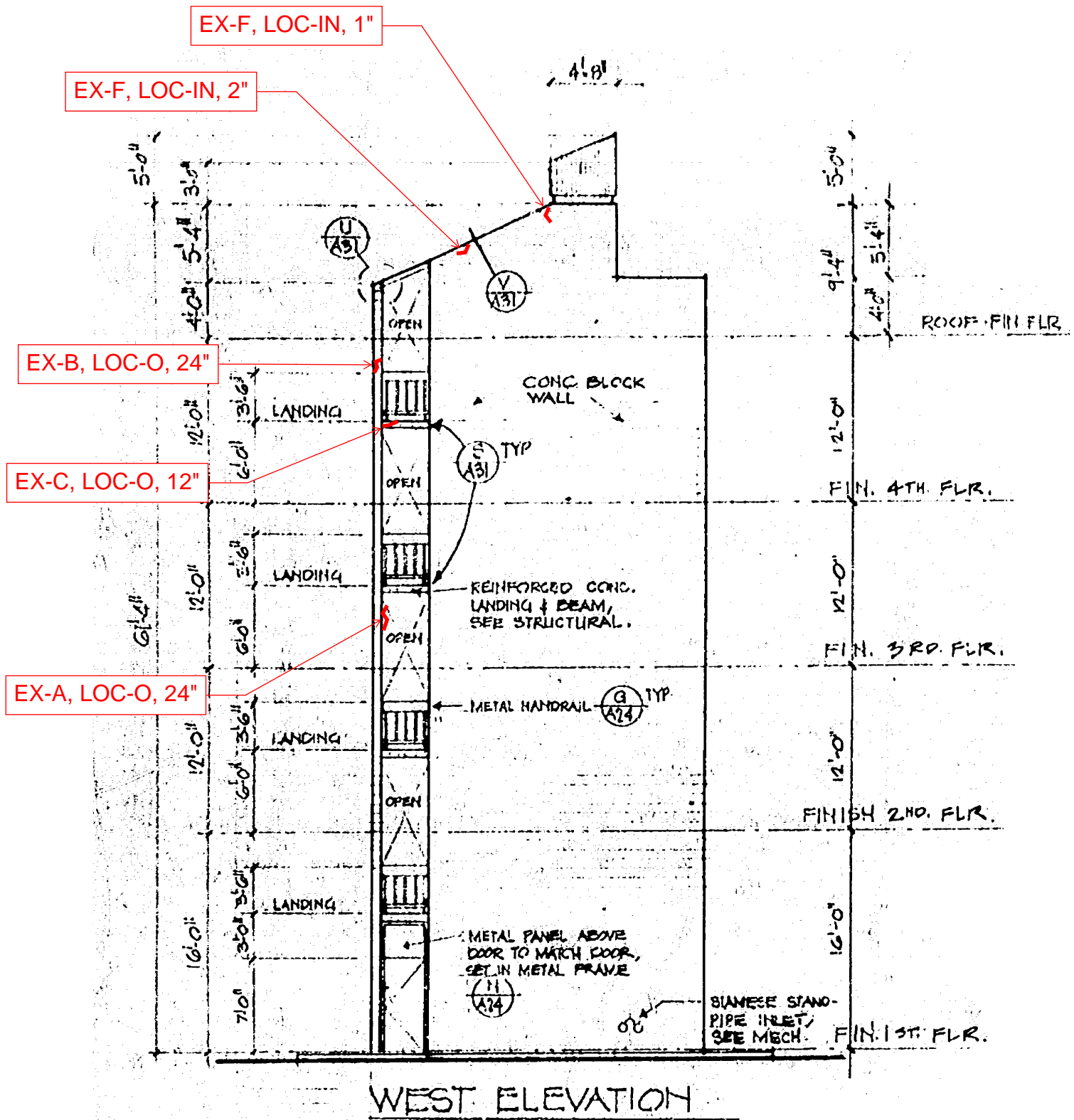
- Step 1: Investigate base of stair post for lost section due to corrosion. Where post is loose or experiencing section loss greater than 10% of original section, proceed to step 2.
- Step 2: Sawcut post to remove corroded section. Excavate remaining post embedment into concrete to completely remove post base.
- Step 3: Chip out concrete to allow a minimum of 1" concrete patch to be applied behind new post
- Step 4: Provide new post to match existing removed with a minimum of 4" effective embedment into concrete stair. Provide splice with pipe sleeve overlapping existing post in place and new post base by a minimum of 2" each.
- Step 5: Provide minimum 3/16" fillet weld all around pipe sleeve to new post base and existing post above.
- Step 6: Repair concrete stair according to Exhibit F.
- Step 7: Paint post according to owner specifications.

### Examples

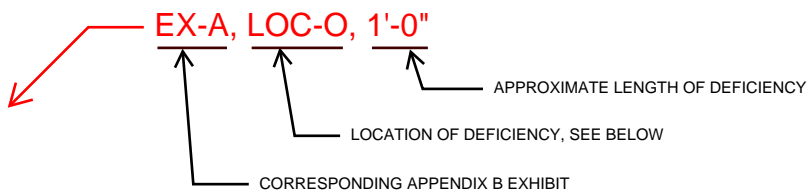


## **APPENDIX C**

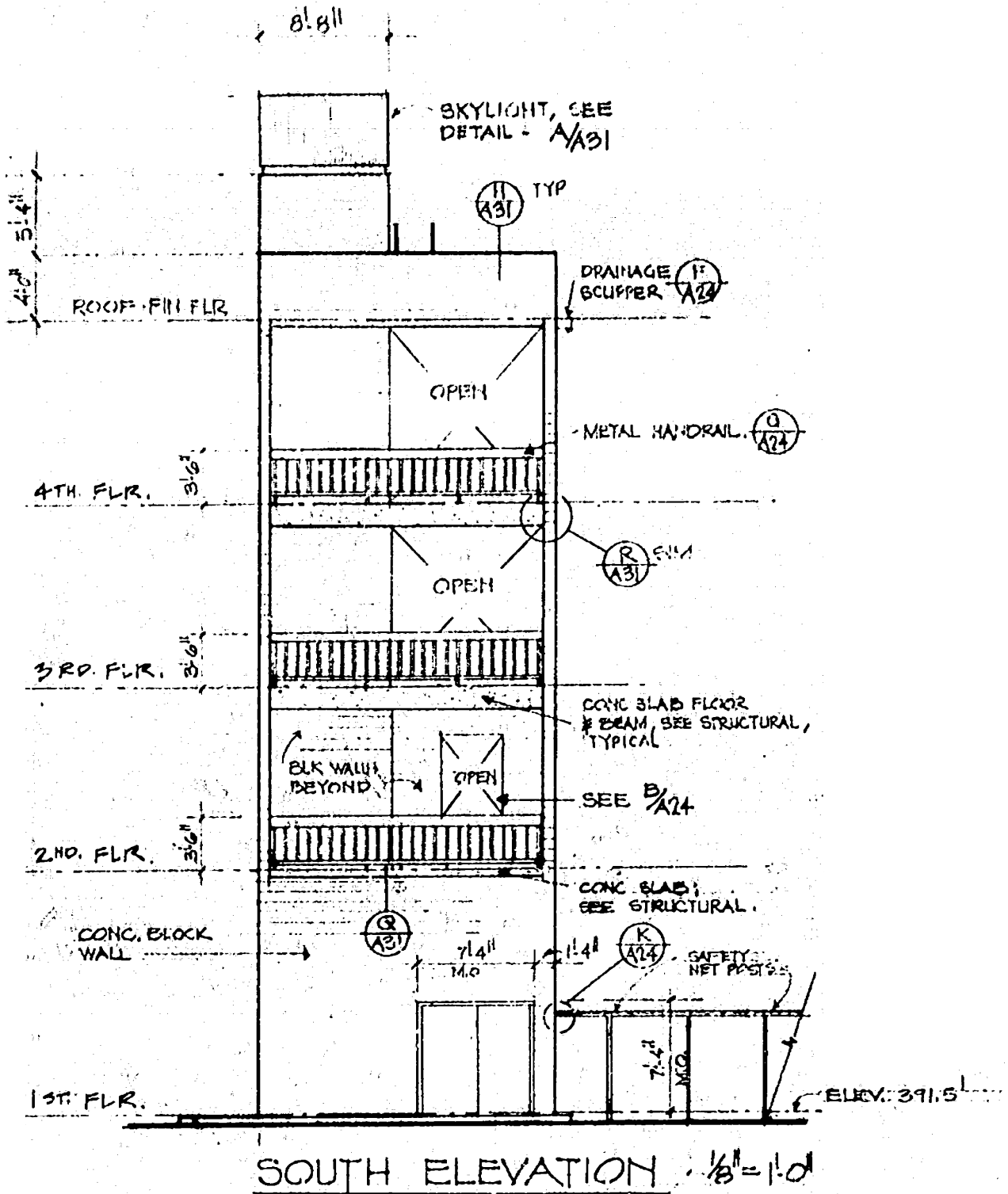
### Training Tower Damage Assessment Plans



# KEY



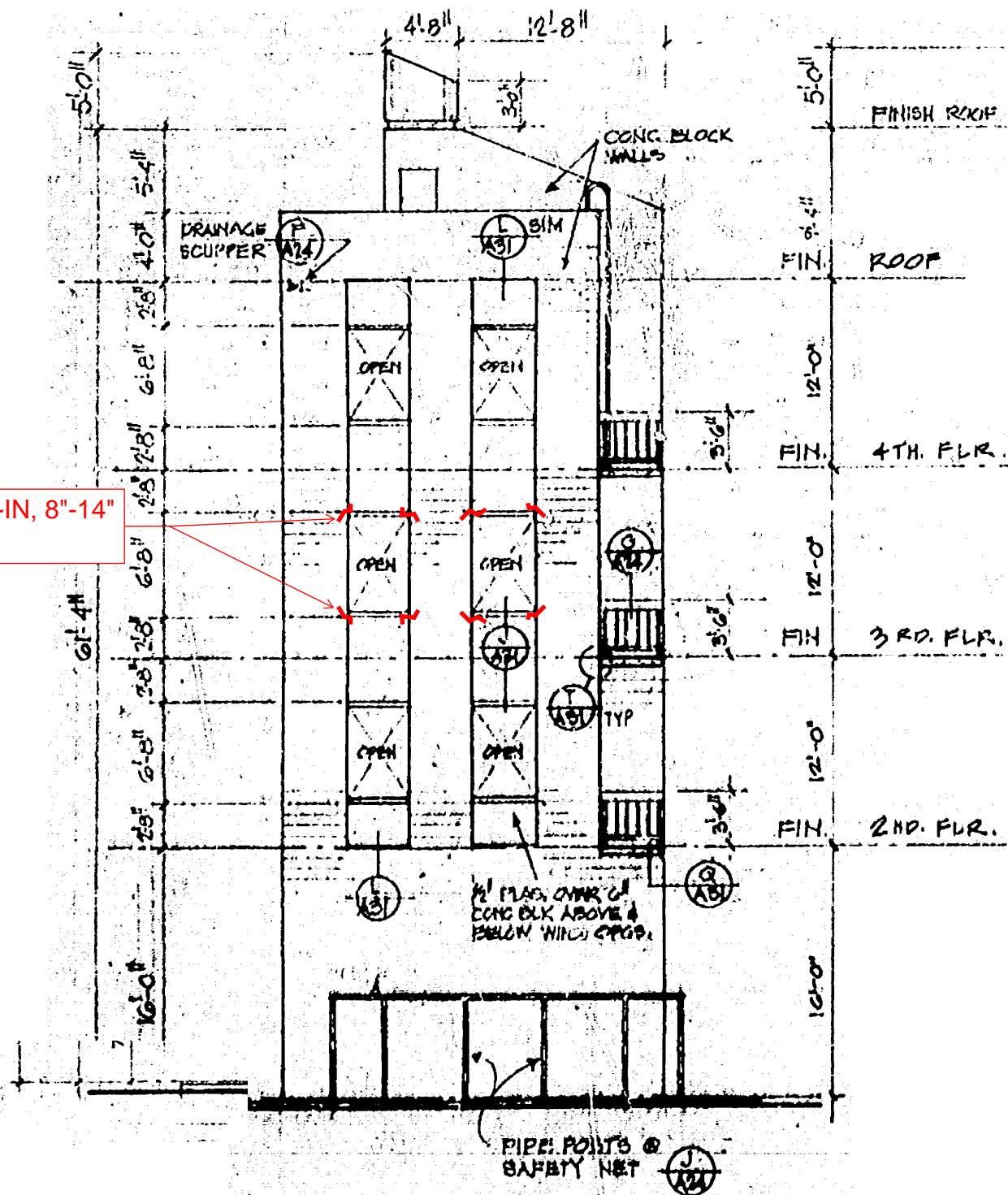
"O" = OUTSIDE, "IN" = INSIDE,  
 "T" = TOP, "B" = BOTTOM, "E" = EDGE/SIDE



\*NO VISIBLE/NOTABLE DEFICIENCIES ON THIS ELEVATION

NOTES  
FOR CALLOUT KEY, SEE  
APPENDIX C, PAGE 1

EX-B, LOC-IN, 8"-14"  
TYP.

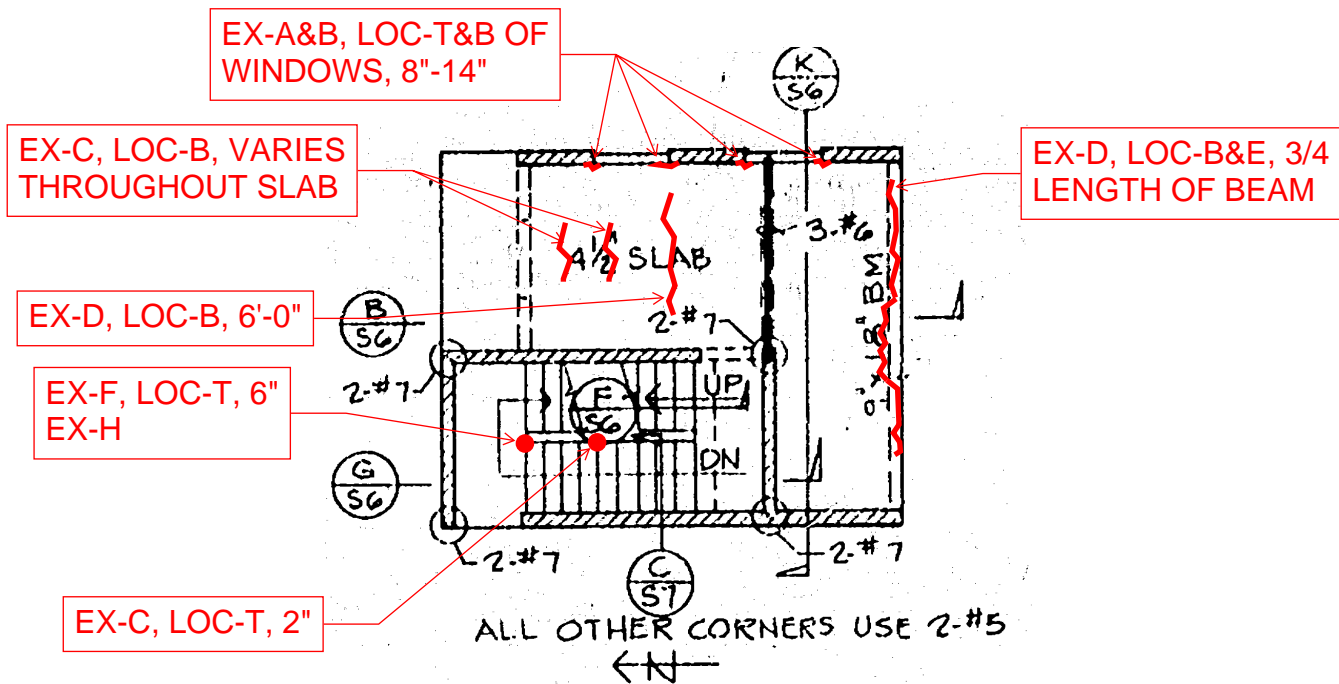


EAST ELEVATION 1/8" = 1'-0"

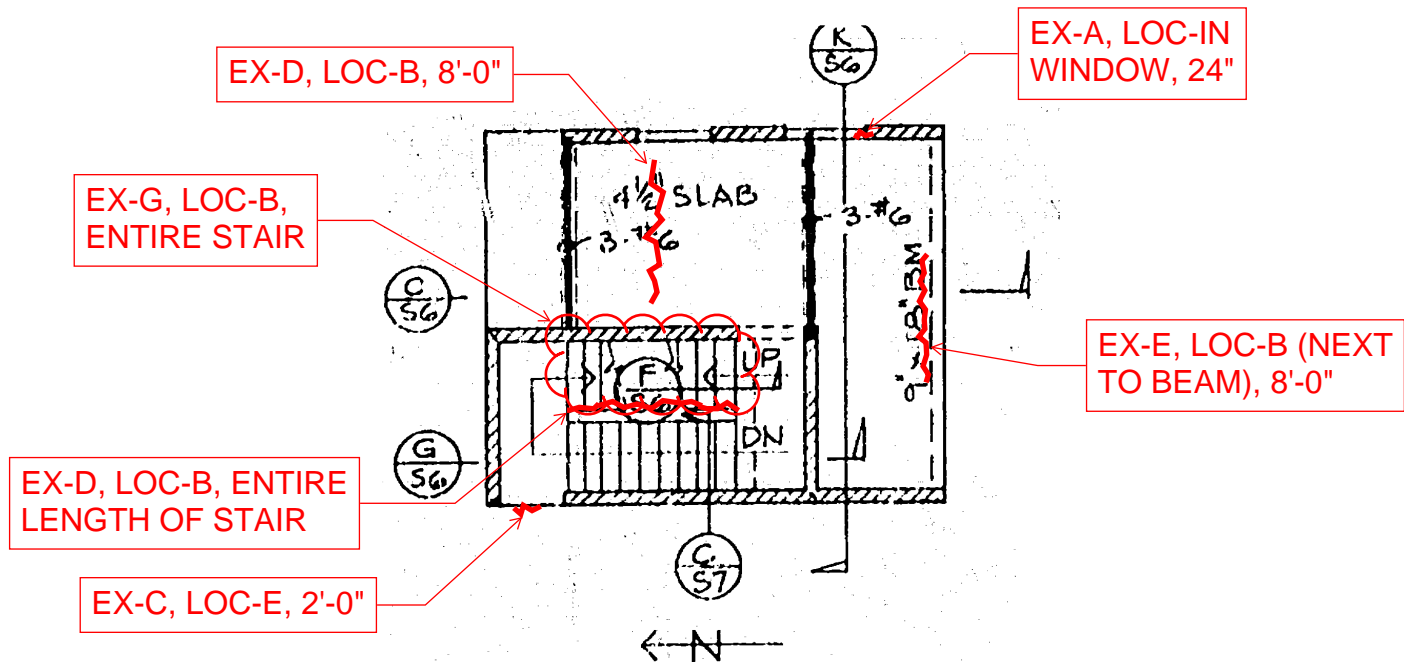
NOTES  
FOR CALLOUT KEY, SEE  
APPENDIX C, PAGE 1





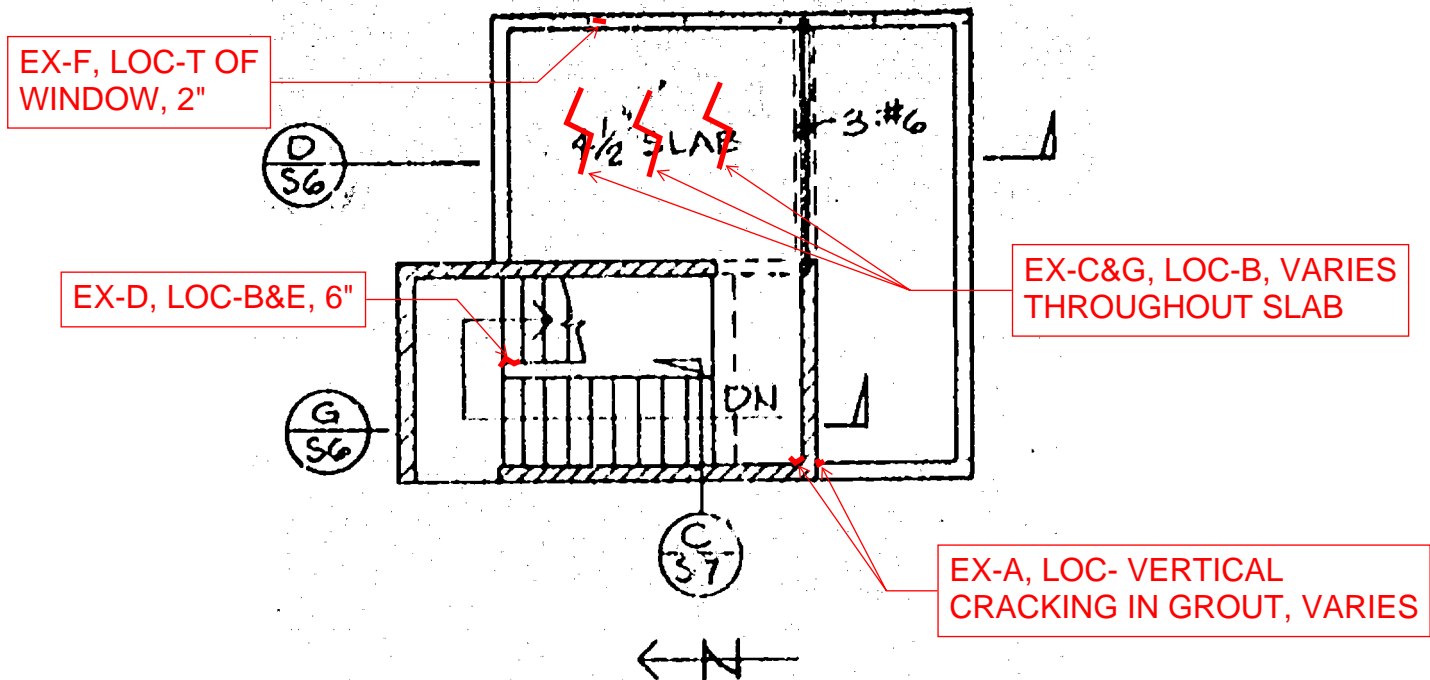


3RD FLR FRAMING PLAN

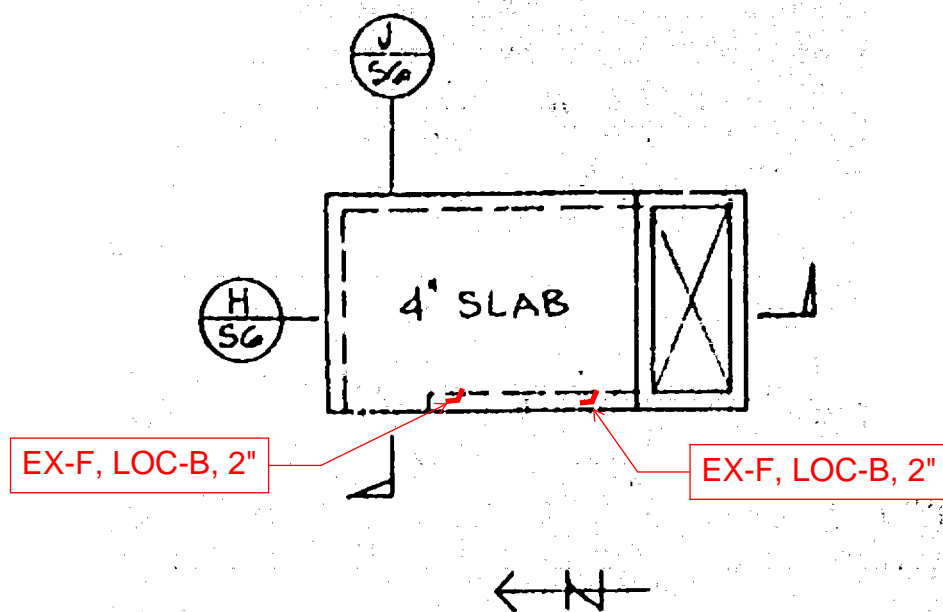


4TH FLR FRAMING PLAN

NOTES  
FOR CALLOUT KEY, SEE  
APPENDIX C, PAGE 1



ROOF FRAMING PLAN



STAIR ROOF FRAMING PLAN

NOTES  
FOR CALLOUT KEY, SEE  
APPENDIX C, PAGE 1

## **APPENDIX D**

### Repair Product Data Sheets

# PRODUCT DATA SHEET

## Sika® Armatec®-110 EpoCem

### BONDING PRIMER AND REINFORCEMENT CORROSION PROTECTION

#### PRODUCT DESCRIPTION

Sika® Armatec®-110 EpoCem is a cementitious epoxy resin compensated 3-component, solvent-free, coating material with corrosion inhibitor, used as bonding primer and reinforcement corrosion protection.

#### USES

- Suitable in concrete repair as corrosion protection for reinforcement
- Suitable as a bonding primer on mortar, steel, and on placing fresh, plastic concrete to existing hardened concrete
- Protection to reinforcing steel in areas of thin concrete cover

#### CHARACTERISTICS / ADVANTAGES

- Contains EpoCem® technology - improved bonding agent
- Extended open times for repair mortars
- Excellent adhesion to concrete and steel
- Contains corrosion inhibitor
- Good resistance to water and chloride penetration
- High shear strength
- Long pot life
- Can be brushed on or applied using spray gun
- Can be used exterior on-grade
- Excellent bonding bridge for cement or epoxy based repair mortars
- High strength, unaffected by moisture when cured
- Non-flammable, solvent free

#### PRODUCT INFORMATION

Chemical Base	Portland cement, epoxy resin, selected aggregates and additives.				
Packaging	Unit	A	B	C	ABC
	3.5 gal (13.2 L)	47.6 oz (1.4 L)	122.1 oz (3.6 L)	46.82 lb (21.3 kg)	A + B in carton, C in bag
	1.65 gal (6.2 L)	22.7 oz (0.67 L)	57.6 oz (1.7 L)	5.5 lb (2.5 kg) (4 bags)	Factory-proportioned units in a pail
Appearance / Color	Component A		White liquid		
	Component B		Colorless liquid		
	Component C		Gray powder		
Shelf Life	12 months from date of production if stored properly in original, unopened and undamaged sealed packaging				

**Storage Conditions**

Store dry at 40–95 °F (4–35 °C)  
 Protect Component A and B from freezing. If frozen, discard.  
 Protect Component C from moisture. If damp, discard.

**TECHNICAL INFORMATION**

<b>Compressive Strength</b>	3 days	4,500 psi (31.0 MPa)	(ASTM C-109)
	7 days	6,500 psi (44.8 MPa)	73 °F (23 °C)
	28 days	8,500 psi (58.6 MPa)	50 % R.H.
<b>Flexural Strength</b>	28 days	1,250 psi (8.6 MPa)	(ASTM C-348)
			73 °F (23 °C) 50 % R.H.
<b>Splitting Tensile Strength</b>	28 days	600 psi (4.1 MPa)	(ASTM C-496) 73 °F (23 °C) 50 % R.H.
<b>Tensile Adhesion Strength</b>	<b>Bond of steel reinforcement on concrete</b>		
	Sika® Armatec® 110	625 psi (4.3 MPa)	(ASTM C-1583)
	EpoCem coated		73 °F (23 °C)
	Epoxy coated	508 psi (3.5 MPa)	50 % R.H.
<b>Slant Shear Strength</b>	Plain reinforcement	573 psi (4.0 MPa)	
	<b>Bonding agent properties</b> (14 d. moist cure, plastic to hardened concrete)		
	Wet on wet	2,800 psi (19.3 MPa)	(ASTM C-882)
	24 hr. open time	2,600 psi (17.9 MPa)	73 °F (23 °C) 50 % R.H.
<b>Permeability to Water Vapor</b>	Control	7.32 x 10 <sup>-10</sup> ft/sec	
	145 psi (10 bar)	8.92 x 10 <sup>-15</sup> ft/sec	
<b>Diffusion Resistance to Water Vapor</b>	μ H <sub>2</sub> O ~100		
<b>Permeability to CO<sub>2</sub></b>	μ CO <sub>2</sub> ~14,000		
<b>Corrosion Test</b>	<b>Time-to-Corrosion Study</b>		
	▪ Sika® Armatec®-110 EpoCem more than tripled the time to corrosion		
	▪ Reduced corrosion rate by over 40 %		

**APPLICATION INFORMATION**

Fresh Mortar Density	A+B+C ~125 lb/ft <sup>3</sup> (~2.0 kg/l)		
Coverage	Bonding agent	80 ft <sup>2</sup> /gal (7.4 m <sup>2</sup> /l)	
	Corrosion Protection	40 ft <sup>2</sup> /gal (3.7 m <sup>2</sup> /l)	
(Coverage figures do not include allowance for surface profile and porosity or material waste)			
Layer Thickness		Min. thickness of 1 coat	Coat
	Bonding agent	20 mils	1
	Corrosion Protection	20 mils	2
Product Temperature	65°-75°F (18°-24°C)		
Ambient Air Temperature	40–95 °F (5–35 °C)		
Substrate Temperature	40–95 °F (5–35 °C)		
Pot Life	~ 90 minutes		

## Waiting / Recoat Times

Sika repair mortars and non-fast setting concrete can be applied on Sika® Armatec®-110 EpoCem within a maximum time of:

Temperature	Maximum Waiting Time
80°- 95 °F (26°- 35 °C)	6 hours
65°-79 °F (18°- 26 °C)	12 hours
50°- 64° F (10°- 17° C)	16 hours
40°- 49° F (4°- 9° C)	wet-on-wet

## APPLICATION INSTRUCTIONS

### SURFACE PREPARATION

#### Concrete

- Free from dust, loose material, surface contamination and materials which reduce bond or prevent suction or wetting by repair materials.
- Delaminated, weak, damaged and deteriorated concrete and where necessary sound concrete shall be removed by suitable means.
- Substrate must be Saturated Surface Dry (SSD) with no standing water.

#### Steel reinforcement

- Rust, scale, mortar, concrete, dust and other loose and deleterious material which reduces bond or contributes to corrosion shall be removed by blast cleaning or other means of mechanical abrasion and reinforcement.
- Should be fully exposed and have all corrosion removed.

### MIXING

- Sika® Armatec®-110 EpoCem can be mixed with a low speed (< 250 rpm) electric drill mixer.
- Shake components A and B thoroughly before opening.
- Pour liquid components A and B into a suitable mixing vessel and mix for 30 seconds.
- While still mixing components A and B slowly add powder component C.
- Mix the three components together for a minimum 3 minutes until blend is uniform and free of lumps, minimizing addition of air.
- Mix only the quantity that you can be applied within the pot life
- DO NOT ADD WATER

### APPLICATION

#### As reinforcement corrosion protection

- Apply by stiff-bristle brush or spray at 80 ft² /gal.
- Take special care to properly coat the underside of the totally exposed steel.
- Allow coating to dry 2-3 hours at 73 °F, then apply a second coat at the same coverage.
- Allow to dry again before the repair mortar or concrete is applied.
- Pour or place repair within 7 days

#### As a bonding primer

- Apply using a stiff-bristle brush or broom. To achieve good bond, Sika® Armatec®-110 EpoCem must be applied well into the substrate, filling all pores and ensure complete coverage of all surface irregularities (minimum layer thickness 1/64" (0.5 mm).
- Spray apply with Goldblatt Pattern Pistol or equal equipment.
- Apply the freshly mixed patching mortar or concrete wet on wet, or up to the maximum recommended open time, onto the bonding slurry.

### CURING TREATMENT

Sika® Armatec®-110 EpoCem must be protected against contamination and rain until application of the repair mortar.

### CLEANING OF TOOLS

Clean all tools and application equipment with water immediately after use. Hardened material can only be mechanically removed.

## LIMITATIONS

- Avoid application in direct sun and/or strong wind and/or rain.
- Do not add water.
- Not a vapor barrier.
- Apply only to sound, prepared substrates.
- Not recommended for use with expansive grouts and SikaQuicks
- Use of semi-dry mortars onto Sika® Armatec®-110 EpoCem must be applied "wet on wet"
- When used in overhead applications with hand placed patching mortars, use "wet on wet" for maximum mortar built thickness.
- Substrate profile as specified by the overlay or repair material is still required.
- As with all cement based materials, avoid contact with aluminum to prevent adverse chemical reaction and possible product failure. Insulate potential areas of contact by coating aluminum bars, rails, posts etc. with an appropriate epoxy such as Sikadur® Hi-Mod 32.

## BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

## LOCAL RESTRICTIONS

See Legal Disclaimer.

## ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

### DIRECTIVE 2004/42/CE - LIMITATION OF EMISSIONS OF VOC

A+B+C combined 50 g/l

## LEGAL DISCLAIMER

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SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs. **NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.** Sale of SIKA products are subject to the Terms and Conditions of Sale which are available at <https://usa.sika.com/en/group/SikaCorp/termsandconditions.html> or by calling 201-933-8300.

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Product Data Sheet  
Sika® Armatex®-110 EpoCem  
August 2018, Version 01.01  
020302020050000003

SikaArmatex-110EpoCem-en-US-(08-2018)-1-1.pdf

**BUILDING TRUST**



## PRODUCT DATA SHEET

# SikaTop®-111 Plus

TWO-COMPONENT, POLYMER-MODIFIED, CEMENTITIOUS, SCREED MORTAR PLUS SIKA FERROGARD® 901 PENETRATING CORROSION INHIBITOR

## PRODUCT DESCRIPTION

SikaTop®-111 Plus is a two-component, polymer-modified, portland cement-based, fast-setting, screed mortar. It is a high performance repair mortar for horizontal, vertical and overhead surfaces in form and pour applications. It offers the additional benefit of Sika FerroGard® 901, a penetrating corrosion inhibitor included in its formulation.

## USES

- On grade, above and below grade on concrete and mortar substrates
- On horizontal, vertical and overhead surfaces
- As a structural repair material for parking structures, industrial plants, walkways, bridges, tunnels, dams, floors, etc.
- Approved for repairs over cathodic protection systems
- Free-flowing repair mortar for hard-to-reach areas
- Filler for voids and cavities

## CHARACTERISTICS / ADVANTAGES

- Extremely low shrinkage proven by four industry standard test methods
- High compressive and flexural strengths
- Increased freeze/thaw durability and resistance to deicing salts
- Increased density - improved carbon dioxide resistance (carbonation) without adversely affecting water vapor transmission (not a vapor barrier)
- Enhanced with Sika FerroGard® 901, a penetrating corrosion inhibitor - reduces corrosion even in the adjacent concrete

## APPROVALS / STANDARDS

- Compatible with coefficient of thermal expansion of concrete - Passes ASTM C-884
- USDA certifiable for incidental food contact
- ANSI/NSF Standard 61 potable water compliant

## PRODUCT INFORMATION

Packaging	SikaTop®-111 Plus: 61.5 lb. (27.9 kg) bag SikaTop® A Component: 1 gal. (3.8 L) plastic jug, 4/carton
Appearance / Color	Gray powder
Shelf Life	12 months from date of production if stored properly in original, unopened and undamaged sealed packaging
Storage Conditions	Store dry at 40–95 °F (4–35 °C) Protect from moisture. If damp, discard material

## TECHNICAL INFORMATION

<b>Compressive Strength</b>	1 day	2,500 psi (17.2 MPa)	(ASTM C-109)
	7 days	5,500 psi (37.9 MPa)	73 °F (23 °C)
	28 days	6,500 psi (44.8 MPa)	50 % R.H.
<b>Modulus of Elasticity in Compression</b>	3.0 x 10 <sup>6</sup> psi		(ASTM C-469)
<b>Flexural Strength</b>	28 days	1,400 psi (9.7 MPa)	(ASTM C-293) 73 °F (23 °C) 50 % R.H.
<b>Splitting Tensile Strength</b>	28 days	600 psi (4.1 MPa)	(ASTM C-496) 73 °F (23 °C) 50 % R.H.
<b>Tensile Adhesion Strength</b>	28 days	> 500 psi (3.4 MPa) substrate failure	(ASTM C-1583)
<b>Shrinkage</b>	28 days	< 0.05 %	(ASTM C-157 Modified per ASTM C-928)
<b>Ring Test</b>	Days	>70 days	(ASTM C-1581)
	Average Max Strain	-16 µstrain	73 °F (23 °C)
	Average Stress Strain	1.46 psi/day	50 % R.H.
	Potential for Cracking	Low	
<b>Baenziger Block</b>	90 days	No cracking	73 °F (23 °C) 50 % R.H.
<b>Freeze thaw resistance</b>	300 cycles	98 %	(ASTM C-666)
<b>Chloride Ion Diffusion Resistance</b>	< 500 Coulombs		(ASTM C-1202)

## APPLICATION INFORMATION

Mixing Ratio	7/8 - 1 gal of Component A		
Coverage	Neat	0.5 ft <sup>3</sup> / unit (0.01 m <sup>3</sup> )	
	Extended with 42 lb (19 kg) of 3/8" (9.5 mm) gravel	0.75 ft <sup>3</sup> /unit (0.02 m <sup>3</sup> /unit)	
	(Coverage figures do not include allowance for surface profile and porosity or material waste)		
Layer Thickness		Min.	Max. in one lift
	Neat	1/2" (12 mm)	1" (25 mm)
	Extended	1" (25 mm)	6" (150 mm)
Product Temperature	65–75 °F (18–24 °C)		
Ambient Air Temperature	> 45 °F (7 °C)		
Substrate Temperature	> 45 °F (7 °C)		
Set Time	40–70 minutes		(ASTM C-266)
Final Set Time	> 90 minutes		(ASTM C-266)
Application Time	~ 30 minutes As the temperature will affect the pot life, application temperature: ▪ Above 73 °F (23 °C) will reduce the pot life and slump ▪ Below 73 °F (23 °C) will extend the pot life and slump		
Finishing Time	50–120 minutes		

# APPLICATION INSTRUCTIONS

## SURFACE PREPARATION

### Surface preparation

- Surface must be clean and sound. Remove all deteriorated concrete, dirt, oil, grease, and other bond-inhibiting materials from the area to be repaired.
- Be sure repair area is not less than 1/2" (12 mm) deep.
- Preparation work should be done by high pressure water blast, scabbler, or other appropriate mechanical means. Obtain an exposed aggregate surface with a minimum surface profile of  $\pm 1/16$ "-1/8" (1.6-3.2 mm) (CSP-5-6) on clean, sound concrete.
- To ensure optimum repair results, the effectiveness of decontamination and preparation should be assessed by a pull-off test.
- Saw cutting of edges is preferred and a dovetail is recommended.
- Substrate should be Saturated Surface Dry (SSD) with clean water prior to application. No standing water should remain during application.

### Priming

- Reinforcing steel: Should be thoroughly prepared by mechanical cleaning to remove all traces of rust. Where corrosion has occurred, the steel should be high-pressure washed with clean water after mechanical cleaning. For priming of reinforcing steel use Sika® Armatec® 110 EpoCem (consult PDS).
- Concrete Substrate: Prime the prepared substrate with a brush or sprayed applied coat of Sika® Armatec® 110 EpoCem (consult PDS). Alternately, a scrub coat of SikaTop®-111 Plus can be applied prior to placement of the mortar. The repair mortar has to be applied into the wet scrub coat before it dries.

## MIXING

- Pour approximately 7/8 of Component A into the mixing container.
- Add Component B (powder) while mixing continuously.
- Mix mechanically with a low speed drill (400–600 rpm) and mixing paddle or mortar mixer.
- Add remaining Component A (liquid) to mix if a more loose consistency is desired.
- Mix to a uniform consistency, maximum 3 minutes. Thorough mixing and proper proportioning of the two components is necessary.

### Extension with aggregates:

- Pour all of Component A into mixing container.
- Add all of Component B while mixing, then introduce 3/8" (9.5 mm) coarse aggregate at desired quantity.
- Mix to uniform consistency, maximum 3 minutes.
- The aggregate must be non-reactive (reference ASTM C-1260, C-227 and C-289), clean, well graded, SSD, have low absorption and high density, and comply with ASTM C-33 size number 8 per Table 2.

- Variances in aggregate may result in different strengths.
- The addition rate is 42 lb. (19 kg) of aggregate per bag. It is approximately 3.0-3.5 gal. (11.3-13.2 L) by loose volume of aggregate.
- Water may be varied to achieve the desired consistency. Do not over water.

## APPLICATION

### Horizontal

- Mortar or concrete must be scrubbed into the substrate, filling all pores and voids.
- After filling repair, screed the material.
- Allow mortar or concrete to set to desired stiffness, then finish with wood or sponge float for a smooth surface, orbroom or burlap-drag for a rough finish.

### Form and pour or pump

- Pre-wet surface to SSD.
- Vibrate form while pouring or pumping.
- Pump with a variable pressure pump.
- Continue pumping until a 3 to 5 psi increase in normal line pressure is evident then STOP pumping.
- Form should not deflect.
- Vent to be capped when steady flow is evident, and forms stripped when appropriate.

## CURING TREATMENT

- As per ACI recommendations for Portland cement concrete, curing is required.
- Moist cure with wet burlap and polyethylene, a fine mist of water or a water based\* compatible curing compound.
- Curing compounds adversely affect the adhesion of following lifts of mortar, leveling mortar or protective coatings.
- Moist curing should commence immediately after finishing. Protect freshly applied mortar from direct sunlight, wind, rain and frost.

\* Pretesting of curing compound is recommended.

## LIMITATIONS

- Do not use solvent-based curing compound
- As with all cement based materials, avoid contact with aluminum to prevent adverse chemical reaction and possible product failure. Insulate potential areas of contact by coating aluminum bars, rails, posts etc. with an appropriate epoxy such as Sikadur® 32, Hi-Mod.

## BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

## LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

## ECOLOGY, HEALTH AND SAFETY

Keep container tightly closed. Keep out of reach of children. Not for internal consumption. For industrial use only. For professional use only. For further information and advice regarding transportation, handling, storage and disposal of chemical products, users should refer to the actual Safety Data Sheets containing physical, ecological, toxicological and other safety related data. Read the current actual Safety Data Sheet before using the product. In case of emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

### DIRECTIVE 2004/42/CE - LIMITATION OF EMISSIONS OF VOC

0 g/l

(EPA method 24)

## LEGAL DISCLAIMER

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SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs. **NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.** Sale of SIKA products are subject to the Terms and Conditions of Sale which are available at <https://usa.sika.com/en/group/SikaCorp/termsandconditions.html> or by calling 201-933-8300.

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Product Data Sheet  
SikaTop®-111 Plus  
July 2018, Version 01.03  
020302040070000025

SikaTop-111Plus-en-US-(07-2018)-1-3.pdf

**BUILDING TRUST**



# SikaTop® 122 PLUS

Two-component, polymer-modified, cementitious, trowel-grade mortar plus Sika FerroGard® 901 penetrating corrosion inhibitor

<b>Description</b>	SikaTop® 122 PLUS is a two-component, polymer-modified, portland cement based, fast-setting, trowel-grade mortar. It is a high performance repair mortar for horizontal and vertical surfaces and offers the additional benefit of Sika FerroGard® 901, a penetrating corrosion inhibitor.
<b>Where to Use</b>	<ul style="list-style-type: none"> <li>■ On grade, above and below grade on concrete and mortar.</li> <li>■ On horizontal surfaces.</li> <li>■ As a structural repair material for parking structures, industrial plants, walkways, bridges, tunnels, dams, ramps, floods, etc.</li> <li>■ To level concrete surfaces.</li> <li>■ As an overlay system for topping/resurfacing concrete.</li> </ul>
<b>Advantages</b>	<ul style="list-style-type: none"> <li>■ Extremely low shrinkage <b>proven by four industry standard test methods.</b></li> <li>■ High compressive and flexural strengths.</li> <li>■ High abrasion resistance.</li> <li>■ Increased freeze/thaw durability and resistance to deicing salts.</li> <li>■ Compatible with coefficient of thermal expansion of concrete - Passes ASTM C-884.</li> <li>■ Increased density - improved carbon dioxide resistance (carbonation) without adversely affecting water vapor transmission (not a vapor barrier).</li> <li>■ Sika FerroGard® 901, a penetrating corrosion inhibitor - reduces corrosion even in the adjacent concrete.</li> <li>■ USDA certifiable for the food industry.</li> <li>■ ANSI/NSF Standard 61 potable water compliant.</li> </ul>
<b>Coverage</b>	0.51 cu. ft./ unit mortar; 0.75 cu. ft./unit concrete; (mixed mortar + 42 lbs. 3/8 pea gravel)
<b>Packaging</b>	<b>Component 'A'</b> - 1-gal. plastic jug; 4/carton. <b>Component 'B'</b> - 61.5-lb. multi-wall bag.

## Typical Data (Material and curing conditions @ 73°F (23°C) and 50% R.H.)

RESULTS MAY DIFFER BASED UPON STATISTICAL VARIATIONS DEPENDING UPON MIXING METHODS AND EQUIPMENT, TEMPERATURE, APPLICATION METHODS, TEST METHODS, ACTUAL SITE CONDITIONS AND CURING CONDITIONS.

<b>Shelf Life</b>	One year in original, unopened packaging.
<b>Storage Conditions</b>	Store dry at 40°-95°F. Condition material to 65°-75°F before using. Protect Component 'A' from freezing. If frozen, discard.
<b>Color</b>	Concrete gray when mixed.
<b>Mixing Ratio</b>	Plant-proportioned kit, mix entire unit.
<b>Application Time</b>	Approximately 30 minutes.
<b>Finishing Time</b>	50-120 minutes

**Note:** All times start after adding Component 'B' to Component 'A' and are highly affected by temperature, relative humidity, substrate temperature, wind, sun and other job site conditions.

<b>Density (wet mix)</b>	<b>ASTM C 138</b>	136 lbs./ft³ (2.18 kg./l)
<b>Flexural Strength</b>	<b>ASTM C 293</b>	28 days 1,500 psi
<b>Split Tensile</b>	<b>ASTM C 496</b>	28 days 500 psi
<b>Bond Strength</b>	<b>ASTM C 882 (modified)</b>	28 days 2,000 psi
<b>Compressive Strength</b>	<b>ASTM C 109</b>	1 day 2,500 psi 7 days 5,300 psi 28 days 7,000 psi
<b>Shrinkage</b>	<b>ASTM C 157 (mod. ICRI 320.3R)</b>	
<b>Specimen Size 1"x1"x11-1/4"</b>		28 days <0.05%
<b>Specimen Size 3"x3"x11-1/4"</b>		28 days <0.021%
<b>Ring Test (days)</b>	<b>ASTM C 1581</b>	>70 days
<b>Ring Test - Average Max Strain</b>	<b>ASTM C 1581</b>	-9 µstrain
<b>Ring Test - Average Stress Strain</b>	<b>ASTM C 1581</b>	0.49 psi/day
<b>Ring Test - Potential for Cracking Baenzinger Block</b>	<b>ASTM C 1581</b>	Low
<b>Freeze/Thaw Durability (300 cycles)</b>	<b>ASTM C 666</b>	98%
<b>CI Permeability</b>	<b>ASTM C 1202</b>	<500 Coulombs.
<b>Direct Bond Strength</b>	<b>ASTM C 1583</b>	7 days 400 psi 28 days >300 psi
<b>Modulus of Elasticity</b>	<b>ASTM C 531</b>	3.00x10 <sup>6</sup> psi
<b>Initial Set Time (min)</b>	<b>ASTM C 266</b>	40-70

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## How to Use

Substrates	Concrete, mortar, and masonry products.		
Surface Preparation	<p>Remove all deteriorated concrete, dirt, oil, grease and all bond inhibiting materials from surface. Be sure repair area is not less than 1/8 inch in depth. Preparation work should be done by high pressure water blast, scabber, or other appropriate mechanical means to obtain an exposed aggregate surface with a minimum surface profile of ±1/16 inch (CSP-5); ±1/8 inch (CSP-6). Saturate surface with clean water. Substrate should be saturated surface dry (SSD) with no standing water during application.</p> <p><b>Reinforcing Steel:</b> Steel reinforcement should be thoroughly prepared by mechanical cleaning to remove all traces of rust. Where corrosion has occurred due to the presence of chlorides, the steel should be high-pressure washed with clean water after mechanical cleaning. For priming of reinforcing steel use Sika® Armatex® 110 EpoCem (Consult Product Data Sheet).</p> <p><b>Priming Concrete Substrate:</b> Prime the prepared substrate with a brush or sprayed applied coat of Sika® Armatex® 110 EpoCem (consult Product Data Sheet). Alternately, a scrub coat of SikaTop® 122 PLUS can be applied prior to placement of the mortar. The repair mortar has to be applied into the wet scrub coat before it dries.</p>		
Mixing	<p>Pour approximately 7/8 of Component 'A' into the mixing container. Add Component 'B' (powder) while mixing continuously. Mix mechanically with a low-speed drill (400- 600 rpm) and mixing paddle or mortar mixer. Add remaining Component 'A' (liquid) to mix if a more loose consistency is desired. Mix to a uniform consistency, maximum 3 minutes. Thorough mixing and proper proportioning of the two components is necessary.</p> <p><b>For SikaTop® 122 PLUS concrete:</b> Pour all of Component 'A' into mixing container. Add all of Component 'B' while mixing, then introduce 3/8 inch coarse aggregate at desired quantity. Mix to uniform consistency, maximum 3 minutes. Addition rate is 42 lbs. per bag (approx. 3.0 to 3.5 gal. by loose volume). The aggregate must be non-reactive (reference ASTM C 1260, C 227 and C 289), clean, well-graded, saturated surface dry, have low absorption and high density, and comply with ASTM C 33 size number 8 per Table 2. Note: Variances in the quality of the aggregate will affect the physical properties of SikaTop® 122 PLUS. The yield is increased to 0.75 cu. ft./unit with the addition of the aggregate (42 lbs.). Do not use limestone aggregate.</p>		
Application	<p>SikaTop® 122 PLUS must be scrubbed into the substrate, filling all pores and voids. Force material against edge of repair, working toward center. After filling repair, consolidate, then screed. Allow mortar or concrete to set to desired stiffness, then finish with wood or sponge float for a smooth surface, or broom or burlap-drag for a rough finish.</p>		
Tooling & Finishing	<p>As per ACI recommendations for portland cement concrete, curing is required. Moist cure with wet burlap and polyethylene, a fine mist of water or a water based* compatible curing compound (ASTM C 309 compliant). Curing compounds adversely affect the adhesion of following layers of mortar, leveling mortar or protective coatings. Moist curing should commence immediately after finishing. Protect newly applied material from direct sunlight, wind, rain and frost.</p> <p>*Pretesting of curing compound is recommended.</p>		
Limitations	<b>Application thickness:</b>	<b>Min.</b>	<b>Max. in one lift</b>
	Neat	1/8 inch (3 mm)	1 inch (25 mm)
	Extended	1 inch (25 mm)	4 inches (100 mm)
	<ul style="list-style-type: none"><li>■ Minimum ambient and surface temperatures 45°F (7°C) and rising at time of application.</li><li>■ Addition of coarse aggregates may result in variations of the physical properties of the mortar.</li><li>■ Do not use solvent-based curing compound.</li><li>■ Size, shape and depth of repair must be carefully considered and consistent with practices recommended by ACI or ICRI. For additional information, contact Technical Service.</li><li>■ For additional information on substrate preparation, refer to ICRI Guideline No.310.2R Coatings, Polymer Overlays, and Concrete Repair.</li><li>■ If aggressive means of substrate preparation is employed, substrate strength should be tested in accordance with ACI 503 Appendix A prior to the repair application.</li><li>■ As with all cement based materials, avoid contact with aluminum to prevent adverse chemical reaction and possible product failure. Insulate potential areas of contact by coating aluminum bars, rails, posts etc. with an appropriate epoxy such as Sikadur® 32, Hi-Mod.</li></ul>		

**PRIOR TO EACH USE OF ANY SIKA PRODUCT, THE USER MUST ALWAYS READ AND FOLLOW THE WARNINGS AND INSTRUCTIONS ON THE PRODUCT'S MOST CURRENT PRODUCT DATA SHEET, PRODUCT LABEL AND SAFETY DATA SHEET WHICH ARE AVAILABLE ONLINE AT [HTTP://USA.SIKA.COM/](http://usa.sika.com/) OR BY CALLING SIKA'S TECHNICAL SERVICE DEPARTMENT AT 800.933.7452 NOTHING CONTAINED IN ANY SIKA MATERIALS RELIEVES THE USER OF THE OBLIGATION TO READ AND FOLLOW THE WARNINGS AND INSTRUCTIONS FOR EACH SIKA PRODUCT AS SET FORTH IN THE CURRENT PRODUCT DATA SHEET, PRODUCT LABEL AND SAFETY DATA SHEET PRIOR TO PRODUCT USE.**

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**Sika®**

# PRODUCT DATA SHEET

## SikaTop-123 Plus

TWO-COMPONENT, POLYMER-MODIFIED, CEMENTITIOUS, NON-SAG MORTAR PLUS SIKAFERROGARD® 901 PENETRATING CORROSION INHIBITOR

### PRODUCT DESCRIPTION

SikaTop-123 Plus is a two-component, polymer-modified, Portland cement-based, fast-setting, non-sag mortar. It is a high performance repair mortar for vertical and overhead surfaces and offers the additional benefit of Sika FerroGard® 901, a penetrating corrosion inhibitor included in its formulation.

### USES

- On grade, above and below grade on concrete and mortar.
- On vertical and overhead surfaces.
- As a structural repair material for parking structures, industrial plants, walkways, bridges, tunnels, dams and ramps.
- Approved for repairs over cathodic protection systems

### CHARACTERISTICS / ADVANTAGES

- Extremely low shrinkage proven by four industry standard test methods.
- High compressive and flexural strengths.
- Increased freeze/thaw durability and resistance to de-icing salts.
- Increased density - improved carbon dioxide resistance (carbonation) without adversely affecting water vapor transmission (not a vapor barrier).
- Enhanced with Sika FerroGard® 901, a penetrating corrosion inhibitor - reduces corrosion even in the adjacent concrete.
- Compatible with coefficient of thermal expansion of concrete - Passes ASTM C 884.

### APPROVALS / STANDARDS

- USDA certifiable for incidental food contact
- ANSI/NSF Standard 61 potable water approved compliant.
- Tested per ICRI Guideline NO. 320.3R for inorganic repair material data sheet protocol

### PRODUCT INFORMATION

Packaging	Component A	1 gal (3.68 L) jug - 4/carton
	Component B	44 lb. (20 kg) bag
Appearance / Color	Gray powder	
Shelf Life	12 months from date of production if stored properly in original, unopened and undamaged sealed packaging	
Storage Conditions	Store dry at 40–95 °F (4–35 °C). Protect Component 'B' from moisture. If damp, discard material Protect Component 'A' from freezing. If frozen, discard.	

## TECHNICAL INFORMATION

<b>Compressive Strength</b>	1 day	3,000 psi (20.7 MPa)	(ASTM C-109)
	7 days	4,000 psi (27.6 MPa)	73 °F (23 °C)
	28 days	6,000 psi (41.4 MPa)	50 % R.H.
<b>Modulus of Elasticity in Compression</b>	2.94 x 10 <sup>6</sup> psi		(ASTM C-469)
<b>Flexural Strength</b>	28 days	1,500 psi (10.3 MPa)	(ASTM C-293) 73 °F (23 °C) 50 % R.H.
<b>Splitting Tensile Strength</b>	28 days	900 psi (6.2 MPa)	(ASTM C-496) 73 °F (23 °C) 50 % R.H.
<b>Tensile Adhesion Strength</b>	28 days	2,000 psi (13.8 MPa)	(ASTM C-882 modified)
* Mortar scrubbed into substrate at 73 °F (23 °C) and 50 % R.H.			
<b>Pull-Out Resistance</b>	28 days	500 psi (3.4 MPa) Substrate failure	(ASTM C-1583)
<b>Shrinkage</b>	28 days	1x1x11-1/4" specimen	0.05 % (ASTM C-157, mod. ICRI 320.3R)
	28 days	3x3x11-1/4" specimen	0.038 %
<b>Ring Test</b>	>70 days		(ASTM C-1581)
	Average Max Strain		- 36 µstrain
	Average Stress Strain		4.92 psi/day
	Potential for Cracking		Low
<b>Baenziger Block</b>	90 days	No cracking	
<b>Freeze thaw resistance</b>	300 cycles	98 %	(ASTM C-666)
<b>Chloride Ion Diffusion Resistance</b>	28 days	< 500 C	(ASTM C-1202 AASHTO T-277)

## APPLICATION INFORMATION

<b>Fresh Mortar Density</b>	132 lb/ft <sup>3</sup> (2.2 kg/l)		(ASTM C-138)
<b>Coverage</b>	0.39 ft <sup>3</sup> (0.01 m <sup>3</sup> ) per bag (Coverage figures do not include allowance for surface profile and porosity or material waste)		
<b>Layer Thickness</b>	<b>Min.</b>	<b>Max.</b>	
	1/8 " (3 mm)	1.5" (38 mm)	
<b>Product Temperature</b>	65–75 °F (18–24 °C)		
<b>Ambient Air Temperature</b>	> 45 °F (7 °C)		
<b>Substrate Temperature</b>	> 45 °F (7 °C)		
<b>Set Time</b>	15 - 40 min.		(ASTM C-266)
<b>Final Set Time</b>	< 60 min.		(ASTM C-266)

## Application Time

~ 15 minutes

As the temperature will affect the pot life, application temperature:  
Above 73 °F (23 °C) will reduce the pot life and workability  
Below 73 °F (23 °C) will extend the pot life and workability

## Finishing Time

20–60 minutes

Note: All times start after adding Component 'B' to Component 'A' and are highly affected by temperature, relative humidity, substrate temperature, wind, sun and other job site conditions.

# APPLICATION INSTRUCTIONS

## SURFACE PREPARATION

### Surface preparation

- Surface must be clean and sound. Remove all deteriorated concrete, dirt, oil, grease, and other bond-inhibiting materials from the area to be repaired.
- Be sure repair area is not less than 1/8" (3 mm) in depth.
- Preparation work should be done by high pressure water blast, scabbler or other appropriate mechanical means to obtain an exposed aggregate surface profile of  $\pm 1/16"$  (1.6 mm) (CSP-5).
- To ensure optimum repair results, the effectiveness of decontamination and preparation should be assessed by a pull-off test.
- Saw cutting of edges is preferred and a dovetail is recommended.
- Substrate should be Saturated Surface Dry (SSD) with clean water prior to application. No standing water should remain during application.

### Priming

- **Reinforcing steel:** Steel reinforcement should be thoroughly prepared by mechanical cleaning to remove all traces of rust. Where corrosion has occurred due to the presence of chlorides, the steel should be high pressure washed with clean water after mechanical cleaning. For priming of reinforcing steel use Sika® Armatec® 110 EpoCem (consult PDS).
- **Concrete Substrate:** Prime the prepared substrate with a brush or sprayed applied coat of Sika® Armatec® 110 EpoCem (consult PDS). Alternately, a scrub coat of SikaTop-123 Plus can be applied prior to placement of the mortar. The repair mortar has to be applied into the wet scrub coat before it dries.

## MIXING

- Pour Component 'A' into mixing container.
- Add Component 'B' while mixing continuously.
- Mix mechanically with a low-speed drill (400–600 rpm) and mixing paddle or mortar mixer.
- Mix to a uniform consistency, maximum 3 minutes.
- Manual mixing can be tolerated only for less than a full unit. Thorough mixing and proper proportioning of the two components is necessary.

## APPLICATION

- SikaTop-123 Plus must be scrubbed into the substrate, filling all pores and voids.
- Force material against edge of repair, working toward center.
- After filling repair, consolidate, then screed.
- Material may be applied in multiple lifts.

### Multiple lifts

- Where multiple lifts are required score top surface of each lift to produce a roughened surface for next lift.
- Allow preceding lift to reach initial set, 30 minutes minimum, before applying fresh material.
- Substrate should be Saturated Surface Dry (SSD) with clean water prior to application. No standing water should remain during application.
- Scrub fresh mortar into preceding lift.
- Allow mortar or concrete to set to desired stiffness, then finish with wood or sponge float for a smooth surface.

## CURING TREATMENT

- As per ACI recommendations for Portland cement concrete, curing is required.
- Moist cure with wet burlap and polyethylene, a fine mist of water or a water based\* compatible curing compound (ASTM C-309).
- Curing compounds adversely affect the adhesion of following lifts of mortar, leveling mortar or protective coatings.
- Moist curing should commence immediately after finishing.
- Protect freshly applied mortar from direct sunlight, wind, rain and frost.

\* Pretesting of curing compound is recommended.

## LIMITATIONS

- Do not use solvent-based curing compound.
- Size, shape and depth of repair must be carefully considered and consistent with practices recommended by ACI or ICRI.
- For additional information on substrate preparation, refer to ICRI Guideline No. 310.2R.
- If aggressive means of substrate preparation is employed, substrate strength should be tested in accordance with ACI 503 Appendix A prior to the repair application.
- As with all cement based materials, avoid contact with aluminum to prevent adverse chemical reaction and possible product failure. Insulate potential areas of contact by coating aluminum bars, rails, posts etc. with

an appropriate epoxy such as Sikadur® 32, Hi-Mod.

## BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

## LOCAL RESTRICTIONS

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## DIRECTIVE 2004/42/CE - LIMITATION OF EMISSIONS OF VOC

0 g/l

(EPA method 24)

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Product Data Sheet  
SikaTop-123 Plus  
July 2018, Version 01.02  
020302040070000022

SikaTop-123Plus-en-US-(07-2018)-1-2.pdf

**BUILDING TRUST**



# PRODUCT DATA SHEET

## Sikacrete<sup>®</sup>-211

ONE-COMPONENT, CEMENTITIOUS, PUMPABLE AND POURABLE CONCRETE MIX

### PRODUCT DESCRIPTION

Sikacrete<sup>®</sup>-211 is a one-component, portland-cement concrete containing factory blended coarse aggregate.

### USES

- Full depth repairs
- On grade, above, and below grade on concrete
- On horizontal, vertical and overhead surfaces
- As a structural repair material for parking facilities, industrial plants, walkways, bridges, tunnels, dams and balconies
- Filler for voids and cavities

### CHARACTERISTICS / ADVANTAGES

- Pre-packaged coarse aggregate: Eliminates need to extend material in the field; Eliminates the risk of reactive aggregate
- High bond strength
- Compatible with coefficient of thermal expansion of concrete
- Increased resistance to deicing salts
- Simple-to-use labor-saving system
- Easily mixed
- Good freeze/thaw resistance
- Easily applied to clean, sound substrate
- Not flammable

### PRODUCT INFORMATION

Packaging	80 lb. (36.3 kg) bag
Appearance / Color	Gray powder
Shelf Life	12 months from date of production if stored properly in original, unopened and undamaged sealed packaging
Storage Conditions	Store dry at 40–95 °F (4–35 °C). Protect from moisture. If damp, discard material

### TECHNICAL INFORMATION

Compressive Strength	1 day	2,000 psi (13.8 MPa)	(ASTM C-39) 73 °F (23 °C) 50 % R.H.
	7 days	4,500 psi (31.0 MPa)	
	28 days	5,000 psi (34.5 MPa)	
Flexural Strength	28 days	700 psi (4.8 MPa)	(ASTM C-293) 73 °F (23 °C) 50 % R.H.

<b>Splitting Tensile Strength</b>	28 days	750 psi (5.2 MPa)	(ASTM C-496) 73 °F (23 °C) 50 % R.H.
<b>Tensile Adhesion Strength</b>	28 days	1,500 psi (10.3 MPa)*	(ASTM C-882 modified)
* Mortar scrubbed into substrate at 73 °F (23 °C) and 50 % R.H.			
<b>Shrinkage</b>	28 days	< 0.05 %	(ASTM C-157) 73 °F (23 °C) 50 % R.H.
<b>Chloride Ion Diffusion Resistance</b>	28 days	< 1,500 Coloumbs	(ASTM C-1202, AASHTO T-277)

## APPLICATION INFORMATION

<b>Mixing Ratio</b>	4/5 up to 1 gal. (3 - 3.8 L)		
<b>Coverage</b>	0.65 ft <sup>3</sup> (0.02 m <sup>3</sup> ) per bag (Coverage figures do not include allowance for surface profile and porosity or material waste)		
<b>Layer Thickness</b>	<b>Min.</b> 1" (25 mm)	<b>Max.</b> 8" (203 mm)	
<b>Consistency</b>	Initial Slump Slump at 30 minutes	5"-7" > 4"	(ASTM C-143)
<b>Product Temperature</b>	65–75 °F (18–24 °C)		
<b>Ambient Air Temperature</b>	45–86 °F (7–30 °C)		
<b>Substrate Temperature</b>	45–86 °F (7–30 °C)		

## APPLICATION INSTRUCTIONS

### SUBSTRATE QUALITY / PRE-TREATMENT

#### Surface preparation

- Substrate: Concrete, mortar, and masonry products.
- Surface must be clean and sound. Remove all deteriorated concrete, dirt, oil, grease, and other bond-inhibiting materials from the area to be repaired.
- Be sure repair area is not less than 1" (25 mm) deep.
- Preparation work should be done by high pressure water blast, scabbler, or other appropriate mechanical means. Obtain an exposed aggregate surface with a minimum surface profile of  $\pm 1/8"$  (3 mm) (CSP-7) on clean, sound concrete.
- To ensure optimum repair results, the effectiveness of decontamination and preparation should be assessed by a pull-off test.
- Saw cutting of edges is preferred and a dovetail is recommended.
- Substrate should be Saturated Surface Dry (SSD) with clean water prior to application. No standing water should remain during application.

#### Priming

- **Reinforcing steel:** Should be thoroughly prepared by mechanical cleaning to remove all traces of rust. Where corrosion has occurred, the steel should be high-pressure washed with clean water after mechanical cleaning. For priming of reinforcing steel use Sika® Armatec® 110 EpoCem (consult PDS).
- **Concrete Substrate:** Prime the prepared substrate with a brush or sprayed applied coat of Sika® Armatec® 110 EpoCem (consult PDS). Alternately, a scrub coat of Sikacrete®-211 can be applied prior to placement of the mortar. The repair mortar has to be applied into the wet scrub coat before it dries.

#### MIXING

- Place 4/5 gal. (3.8 L) water in mixing container.
- Add Sikacrete®-211 while continuing to mix.
- Add additional 1/5 gal. (0.8L) if needed. Mix to a uniform consistency, maximum 3 minutes. Mechanically mix with a low-speed drill (400–600 rpm) and paddle or in appropriate size mortar mixer or concrete mixer.

#### APPLICATION

##### Form and pour or pump applications:

- Pre-wet surface to SSD.
- Ensure good intimate contact with the substrate is achieved. To accomplish this, material should be

scrubbed into the substrate or other suitable means should be employed such as vibration of the material or pumping under pressure.

- Vibrate form while pouring or pumping.
- Pump with a variable pressure pump.
- Continue pumping until a 3 to 5 psi increase in normal line pressure is evident then STOP pumping.
- Form should not deflect.
- Vent to be capped when steady flow is evident, and forms stripped when appropriate.

#### **Tooling and Finishing:**

As per ACI recommendations for Portland cement concrete, curing is required. Moist cure with wet burlap and polyethylene, a fine mist of water or a water based\* compatible curing compound. Curing compounds adversely affect the adhesion of following layers of mortar, leveling mortar or protective coatings. Moist curing should commence immediately after finishing. Protect newly applied material from direct sunlight, wind, rain and frost.

\*Pretesting of curing compound is recommended.

### **LIMITATIONS**

- Using SikaLatex®, SikaLatex® R or similar products will result in loss of slump and slump retention. Mock-up for suitability are strongly recommended.
- Not a vapor barrier

### **BASIS OF PRODUCT DATA**

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

### **LOCAL RESTRICTIONS**

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#### **DIRECTIVE 2004/42/CE - LIMITATION OF EMISSIONS OF VOC**

0 g/L

(EPA Method 24)

### **LEGAL NOTES**

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Product Data Sheet  
Sikacrete®-211  
May 2018, Version 01.01  
020302020010000015

Sikacrete-211-en-US-(05-2018)-1-1.pdf

## Sikadur® 35, Hi-Mod LV LPL

High-modulus, low-viscosity, high-strength,  
extended pot life, epoxy adhesive

<b>Description</b>	Sikadur® 35, Hi-Mod LV LPL is a 2-component, 100% solids, moisture-tolerant, low-viscosity, high-strength, multi-purpose epoxy resin adhesive. It conforms to the current ASTM C-881, Types I, II, and IV, Grade-1, Class-C** and AASHTO M-235 specifications. **except for bond strength
<b>Where to Use</b>	<ul style="list-style-type: none"> <li>■ Low pressure and high pressure injection of cracks in structural concrete, masonry, wood, etc.</li> <li>■ Gravity-feed of cracks in horizontal concrete and masonry.</li> <li>■ Epoxy resin binder for epoxy mortar patching and grouting.</li> <li>■ Seal interior slabs and exterior above-grade slabs from water, chlorides and mild chemical attack; also improves wearability.</li> <li>■ Epoxy resin binder for epoxy mortar repair for structural pile members.</li> </ul>
<b>Advantages</b>	<ul style="list-style-type: none"> <li>■ Extended pot life.</li> <li>■ Low viscosity and excellent penetrating ability.</li> <li>■ Slow reaction rate and low exotherm.</li> <li>■ Convenient, easy mix ratio; A:B = 2:1 by volume.</li> <li>■ Unique, high-strength, structural adhesive for "can't dry" surfaces.</li> <li>■ Deep, penetrating and tenacious bonding of cracks in structural concrete.</li> <li>■ Excellent chemical resistance.</li> </ul>
<b>Coverage</b>	1 gal. yields 231 cu. in. of adhesive and grout. 1 gal. of adhesive, when mixed with 5 gal. by loose volume of oven-dried aggregate, yields approximately 808.5 cu. in. of epoxy mortar. Typical coverage is 150-175 ft. <sup>2</sup> /gal. (3.7-4.3 m <sup>2</sup> /L) for surface sealing. Coverage varies with porosity and surface profile of substrate. Higher porosity concrete will reduce coverage.
<b>Packaging</b>	3 gal. units. 165 gal. units.

### Typical Data (Material and curing conditions @ 73°F (23°C) and 50% R.H.)

RESULTS MAY DIFFER BASED UPON STATISTICAL VARIATIONS DEPENDING UPON MIXING METHODS AND EQUIPMENT, TEMPERATURE, APPLICATION METHODS, TEST METHODS, ACTUAL SITE CONDITIONS AND CURING CONDITIONS.

<b>Shelf Life</b>	2 years in original, unopened containers		
<b>Storage Conditions</b>	Store dry at 40°-95°F (4°-35°C). Condition material to 65°-75°F (18°-24°C) before using.		
<b>Color</b>	Clear, amber.		
<b>Mixing Ratio</b>	Component 'A' : Component 'B' = 2:1 by volume		
<b>Viscosity (Mixed)</b>	Approximately 250 cps.		
<b>Pot Life</b>	Approximately 90 minutes (250 grams). Approximately 40 minutes (250 grams) @ 100°F (38°C)		
<b>Tensile Properties (ASTM D-638)</b>	<b>60°F (15°F)</b>	<b>73°F (23°F)</b>	
<b>7 day</b>	Tensile Strength	7,200 psi (49.6 MPa)	7,500 psi (51.8 MPa)
	Elongation at Break	4.0 %	4.8%
<b>Heat Deflection Temperature (ASTM D-648) 7 day</b> (Fiber Stress Loading = 264 psi) 120°F (49°C)			
<b>Bond Strength (ASTM C-882): Hardened concrete to hardened concrete</b>			
<b>2 day (moist cure)</b>	Bond Strength 1,100 psi (7.6 MPa)		
<b>14 day (moist cure)</b>	Bond Strength 1,300 psi (9.0 MPa)		
<b>Water Absorption (ASTM D-570) 24 hrs.</b> (24 hr. immersion) 0.35%			
<b>Compressive Properties (ASTM D-695):</b>			
<b>Compressive Strength</b>	<b>73°F (23°C)</b>	<b>90°F (32°C)</b>	
<b>1 day</b>	1,450 psi (10.0 MPa)	7,100 psi (49.0 MPa)	
<b>3 day</b>	9,600 psi (66.2 MPa)	10,000 psi (69.0 MPa)	
<b>7 day</b>	11,800 psi (81.3 MPa)	11,100 psi (76.6 MPa)	
<b>28 day</b>	13,000 psi (89.6 MPa)	11,300 psi (78.0 MPa)	
<b>Compressive Modulus 7 day</b> 270 psi (1.863 MPa)			



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## How to Use

### Surface Preparation

Surface must be clean and sound. It may be dry or damp, but free of standing water. Remove dust, laitance, grease, curing compounds, impregnations, waxes and any other contaminants.

**Preparation Work:** Concrete - Should be cleaned and prepared thoroughly to achieve a laitance and contaminant free, open textured surface by blast cleaning or equivalent mechanical means.

**Steel** - Should be cleaned and prepared thoroughly by blast cleaning or other equivalent mechanical means.

### Mixing

Proportion 1 part Component 'B' to 2 parts Component 'A' by volume into a clean pail. Mix thoroughly for 3 minutes with a low-speed (400 - 600 rpm) drill using Sika Paddle until uniformly blended. Mix only that quantity that can be used within its pot life.

**To prepare an epoxy mortar** slowly add 4-5 parts by loose volume of an oven-dried aggregate to 1 part of the mixed Sikadur® 35, Hi-Mod LV LPL and mix until uniform in consistency.

### Application

**To gravity feed cracks** - Blow vee-notched surface of crack clean with oil-free compressed air. Pour neat Sikadur® 35, Hi-Mod LV LPL, into vee-notched crack. Continue placement until completely filled. Seal underside of slab prior to filling if cracks reflect through.

**To seal slabs** - Spread neat Sikadur® 35, Hi-Mod LV LPL over slab. Allow penetration. Remove excess to prevent surface film. Seal interior slabs and above-grade exterior slabs only.

**For an epoxy mortar** - Prime prepared surface with neat Sikadur® 35, Hi-Mod LV, LPL. Place prepared epoxy mortar before primer becomes tack-free. Place the epoxy mortar using trowels. Compact and level with vibrating screed or trowels. Finish with finishing trowel. Epoxy mortar is for interior use only.

**To pressure inject cracks** - Suitable for low or high pressure injection. Use automated injection equipment or manual method. Set appropriate injection ports based on system used. Seal ports and crack with Sikadur® 31, Hi-Mod Gel or Sikadur® 33. When the epoxy adhesive seal has cured, inject Sikadur® 35, Hi Mod LV LPL with steady pressure. Consult Technical Service for additional information.

### Limitations

- Minimum application temperature 40°F (4°C).
- Do not thin with solvents.
- Use oven-dried aggregate only.
- Maximum epoxy mortar thickness is 1.5 in. (38 mm) per lift.
- Epoxy mortar is for interior use only.
- Do not seal exterior slabs on grade.
- Minimum age of concrete must be 21-28 days, depending upon curing and drying conditions, for mortar applications. and to seal slabs.
- Porous substrates must be tested for moisture-vapor transmission prior to mortar or sealing slabs.
- Not for injection of cracks under hydrostatic pressure.
- Do not inject cracks greater than 1/4 in. (6 mm) Consult Technical Service.
- Not an aesthetic product. Color may alter due to variations in lighting and/or UV exposure.

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