

PART 1 – GENERAL

1.01 WORK INCLUDED

A. Furnish all necessary materials, labor, and equipment required to:

1. Complete all work as outlined in the **Specifications and as shown in the bid documents.**
2. The Contractor is responsible for documenting (*by video recorder, or Camera*) prior condition of the balconies, walkways, parking lot, garage, roof, and common areas prior to the commencement of work. A copy is to be submitted to the Association and the engineer.
3. Repair all deteriorated concrete, slab, beams, columns, stucco, and parapet wall repairs at the roof of the building structure as per ICRI standards and the appropriate manufacturer's recommendations.
4. A copy of the condition report shall be forwarded to the Owner and the Engineer prior to the removal of any shutters, doors, windows, furniture, and other misc. equipment so as to avoid potential damage claims.
5. Remove and reinstall all building components marked by Engineer to conduct repairs to the deteriorated concrete.
6. Properly prepare concrete decks prior to the application of the roofing membrane system.

1.02 UNRELATED WORK

- A. Electrical conduit replacement or other electrical work on buried wiring in the concrete members.
- B. The work identified in Sections 1.02 (A) shall not be performed by this Contractor unless specifically set forth the contract or by approved change order.
- C. Repair of electrical devices and conduit encountered within the concrete structure or in masonry, wood or metal partition walls:



1. When encountered, notify Owner's representative and Engineer to contact the building's electrician to schedule and perform the electrical repair(s). Contractor will take every precaution to prevent damage to these items. If conduit or piping is damaged due to negligence of work force, Contractor will pay repair costs.
2. Following repair, wipe down and coat the metal parts with bond breaker material prior to cementitious repair.
3. Seal all non-weather-tight joints and faces with urethane sealant.

1.03 QUALITY ASSURANCE

- A. Manufacturer: Company specializing in type of material specified, with not less than (5) five years of documented experience.
- B. Contractor: The Contractor shall meet all the following requirements:
1. The Contractor shall be a "Pre-qualified Contractor" of the Manufacturer for the material used. The Contractor shall submit a letter from the Manufacturer stating such approval, including a letter of intent to warranty said project.
 2. The Contractor shall have a minimum of (3) three years of experience in performing repair work similar to that specified herein.
 3. The Contractor shall be a State-Certified General Contractor.
 4. The Contractor shall submit a list of (3) three projects in which repair work similar to that specified herein was successfully completed. The list shall contain the following information for each project: *Project name and location, owner of project, contact person and telephone number, brief description, and date of completion.*

1.04 SUBMITTALS

- A. The Contractor shall deliver the required submittals to the Owner. Submittals shall be made promptly and in such a sequence as to cause no delay in the work.

Owner: Hillcrest Condominium Building #15
4800 Hillcrest Lane,
Hollywood, FL-33021

Engineer: Farrukh Sayeed, P.E., CGC, MBA, MIS
1031 NW 31st Avenue,
Pompano Beach, FL-33069.



- B. The Contractor shall submit the following in duplicate:
1. Documentation that he/she meets the qualifications.
 2. A letter from the Manufacturer and a sample warranty.
 3. Certifications of Insurance.
 4. Hold Harmless Agreement.
 5. Schedule of work, including commencement and completion dates.

1.05 MATERIAL DELIVERY, HANDLING AND STORAGE

- A. Materials shall be delivered in the Manufacturer's undamaged, unopened containers. Each container shall be clearly marked with the following:
1. Product name.
 2. Manufacturer's name.
 3. Batch number
 4. Component designation ("A" or "B")
 5. Ratio of component mixtures.
- B. Provide equipment and personnel to handle the materials by methods, which prevent damage.
- C. Promptly inspect shipments to assure that materials comply with requirements, quantities are correct and materials are undamaged.
- D. The Contractor shall be responsible for all materials furnished by him/her, and he/she shall replace, at his/her own expense, all such material that is found to be defective in manufacturing or that has become damaged in handling.
- E. Store materials in accordance with the Manufacturer's instructions with seals and labels intact and legible. Maintain temperatures within the required ranges.
- F. Store materials only in locations designated by Owners.

1.06 JOB CONDITIONS

- A. The Contractor shall visit the site and examine the condition of the surfaces, which are to be repaired. The Contractor shall follow the Manufacturer's recommendations with regard to the various moisture and temperature limitations of the materials.
- B. The Contractor shall arrange with the Owner to have all automobiles moved from the immediate work area and/or adequately protect such property from damage during the work.
- C. The Contractor shall arrange with the Owner to have all work areas closed off to prevent pedestrian traffic during the work.
- D. The Contractor shall arrange with the Owner for the times of day and days of the week during which the work can take place.



- E. The Contractor shall provide a dumpsite for the removal of all debris and for removal of it's contents.
- F. The Contractor shall provide portable toilets for use of his/her employees.
- G. The Contractor shall provide a full-time, on-site supervisor for the duration of the work.

1.07 GENERAL CONDITIONS

- A. The Contractor shall provide all required labor, materials, necessary equipment, supervision, insurance, and permits required to complete the work as herein specified.
- B. The Contractor shall obtain all necessary permits, at no additional cost to Owner, as required by the Municipality.
- C. The Contractor shall comply with all fire and safety regulations and shall supply workers with safety goggles, gloves, earplugs, and masks as required for protection during specific phases of the work.
- D. The Contractor shall utilize adequate numbers of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and methods needed for proper performance of the work.
- E. The Contractor shall protect and safeguard from harm all real and personal properties of the individual apartment owners and common elements of the Owner adjoining the work. Drop clothes or plastic wrapping or covers shall be utilized to protect adjoining surface as may be required.
- F. The Contractor shall arrange with the Owner for working space, space for storage of materials, parking for workers and access to the areas where the work for the Contractor is to be performed.
- G. The Contractor shall perform and install the work in strict accordance with these Specifications and the Manufacturer's recommendations and shall specifically request the Manufacturer's representative to review bi-weekly or as required, those portions of the work-in-progress, prior to, during, and after final installation, in order that the Warranties can be issued properly.
- H. The Owner shall make power and water available, without charge, for reasonable use of the Contractor.
- I. The Contractor, once having started the work, shall continuously, and expeditiously proceed to complete the work as quickly as possible. The Contractor shall submit a time schedule to the work indicating dates of commencement and completion prior to the execution of the contract.



- J. Should any unforeseen conditions be found during the work, immediately notify the Owner, Engineer, and a representative of the Manufacturer in order to determine remedial measures necessary to correct the problem area so that the work may continue and schedules are maintained within a reasonable time.
- K. At the end of each workday all equipment, staging, scaffold, shores, machinery, sealants, epoxy materials, cements, sand, reinforcing bars, etc. shall be secured and/or stored. All materials stored in containers shall be properly closed and sealed as necessary.
- L. The Contractor shall maintain the material storage/work area clean, removing from the site daily flammable cloths and discarded materials, which could support combustion and least weekly, remove empty drums, containers, bucket, boxes, and bags. The Contractor shall supply at least one, five-pound Co2, fire extinguisher for quick access.
- M. The Contractor is responsible for the proper design and construction of all formworks, shoring, and re-shoring.



PART 2 – PRODUCTS

2.01 MATERIALS

- A. Polymer modified Portland cement mortar for patching 3/4" depth horizontal surfaces:
LA Repair Mortar manufactured by BASF or equivalent.
- B. Polymer modified Portland cement mortar for patching vertical and overhead surfaces:
Gel Patch by BASF or equivalent.
- C. Repair concrete for repairing large, greater than 3/4" to full depth, horizontal slab surfaces:
LA40 Repair Mortar manufactured by BASF or equivalent.
- D. Grout for aluminum railing posts: LA Repair Mortar manufactured by BASF or equivalent.
- E. Anti-corrosion protective coating for reinforcing bars: EMACO P24 manufactured by BASF or equivalent.
- F. Bonding agent for bonding new plastic concrete to existing hardened concrete: EMACO P24 manufactured by BASF or equivalent.
- G. Epoxy adhesive for grouting replacement reinforcing bars: Acrylic7 manufactured by ITW Red Head or ICC and Florida Code Compliant for Cracked Concrete.
- H. Epoxy adhesive for pressure-injected crack repair: CONCRETSIVE LPL manufactured by BASF or equivalent.
- I. Epoxy adhesive for crack repair: CONCRETSIVE PASTE LPL manufactured by BASF or equivalent.
- J. Reinforcing bars: Deformed bars, ASTM A615, grade 60.
- K. Repair stucco: Standard stucco mix with 1 shovel of Portland Cement per bag mixed and Sonneborn Acryl 60 or equivalent bonding agent added.
- L. Waterproof Membrane:
 - 1. For use at Planters – Sikalastic 320
 - 2. For use at Parking Garage, Top Deck – Sikalastic 710/715/735 AL Traffic System
- M. Sealant for door, windows and caulking exterior joints: NP-1 manufactured by BASF or equivalent.
- N. Elastomeric Sealants
 - 1. Non traffic joints: Sonolastic NP-1 or Sonolastic NP-2 manufactured by BASF or equivalent.
 - 2. Horizontal joints: Sonolastic SL-1 or Sonolastic SL-2 manufactured by BASF or equivalent.



O. Backer-Rod

1. Horizontal floor joints: Sonofoam closed-cell backer-rod or Sonoflex by BASF or equivalent.
2. Vertical joints: Sonofoam soft backer-rod by BASF or equivalent.

P. Primers: #770, #772, and #733 by BASF or equivalent.

2.02 OPTIONAL READY-MIX DESIGN

A. Contractor will submit mix designs Alternate ready mixes to be used.

1. Minimum Compressive Strength = 6000 psi at 28 days.
2. Water/Cement ratio will not exceed 0.40 by weight, including admixtures introduced at the jobsite.
3. Minimum coarse aggregate size shall be #89 for pump mixes.
4. Portland Cement to be Type II, ANSI/ASTM C150.
5. Water Reducing Admixture (Super-plasticizer) to be Type A, ANSI/ASTM C494, and not contain more than 1% chloride ions.
6. Discharge of concrete shall be completed within 1-1/2 hours, or before 300 drum revolutions after the introduction of the mixing water to the cement or introduction of the cement to the aggregate.

B. Quality Assurance - Comply with the following:

1. "Guide for Surface Preparation for the Repair of Deteriorated Concrete Resulting from Reinforcing Steel Corrosion" (*Guideline No. 03730*), published by the International Concrete Repair Institute, 1323 Shepard Drive, Suite D, Sterling, Virginia 20164-4428 – Copyright 1995
2. Apply all repair materials in accordance with the manufacturer's recommendations for storage, preparation, mixing, placement, and curing.

2.03 ACCEPTABLE MANUFACTURERS

A. It is the intent of these Specifications to obtain a warranty from the material manufacturer. Therefore, the Contractor shall use products from a single manufacturer to the greatest extent possible and shall obtain prior, written authorization from the primary material manufacturer for use of any secondary materials.

B. Materials manufactured by Sonneborn Corporation have been specified and set the standard for the concrete repair products to be used.



2.04 EQUIPMENT

- A. All polymer-modified Portland cement mortar, repair concrete, repair stucco and coating mixing equipment shall be of a type, capacity, and mechanical condition suitable for doing the work and acceptable to the material manufacturer.
- B. The equipment used to inject the epoxy shall be acceptable to the epoxy manufacturer and shall conform to all of the following:
 - 1. Capacity to automatically proportion the epoxy materials within the ratio mix tolerances set by the epoxy Manufacturer.
 - 2. Capacity to automatically mix the epoxy materials completely in line. Batch mixing will not be permitted.
 - 3. Capacity to inject the epoxy adhesive under controlled variable pressures.



PART 3 - EXECUTION

3.01 INSPECTION

- A. The Contractor and Engineer shall inspect and sound the areas involved to determine the extent of work involved.
- B. An approximation of the magnitude of the repair quantities has been provided to assist the contractor in bidding the work. However, these repair quantities should not be relied upon as accurately reflecting the work to be performed and the actual quantities could be considerably more or less than projected. Actual quantities will be field measured by contractor and verified by Engineer.

3.02 PREPARATION

- A. The preparation required for the repairs shall be performed in accordance with the specifications herein described and in accordance with the Manufacturer's recommendations, approved codes, and the following standards:
 - 1. ACI 301 – Specifications for Structural Concrete Buildings; American Concrete Institute; latest code.
 - 2. ACI 318 – Building Code Requirements for Reinforced Concrete; American Concrete Institute; latest code.
 - 3. ACI 347R – Guide to Formwork for Concrete; American Concrete Institute; latest code.
 - 4. ASTM A 185-90a – Standard Specification for Steel Welded Wire Fabric, Plain, for Concrete Reinforcement; latest code.
 - 5. ASTM A 615-90 – Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement; latest code.
 - 6. ASTM A 416-886 – Standard Specification for Steel Strand, Uncoated Seven-Wire Stress-Relieved for Prestressed Concrete; latest code.
 - 7. ASTM C 31 – Standard Practice for Making and Curing Concrete Test Specimens in the Field; latest code.
 - 8. ASTM C 33 – Standard Specification for Concrete Aggregates; latest code.
 - 9. ASTM C 39 – Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; latest code.
 - 10. ASTM C 172 – Standard Practice for Sampling Freshly Mixed Concrete; latest code.
 - 11. ASTM C 309 – Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete; latest code.
 - 12. ASTM C 881 – Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete; latest code.
- B. Document the condition of each area where repairs will be conducted, including such items as railings, screens, doors, etc. A copy of this condition report shall be forwarded to the owner prior to the repairs so as to avoid potential damage claims.
- C. The glass at the doors and windows of the repair areas shall be protected from damage during demolition and surface preparation with plywood sheets.



- D. Apply tape over all openings at the doors and windows at the repair areas. The tape shall be applied at the perimeter frame and at the meeting stiles.
- E. Remove coatings or any other finishes from the top surface of the concrete slabs to make repairs.
- F. Remove and reinstall hurricane shutters and slider door tracks where required to facilitate structural repairs. All removed assemblies are considered fully operational unless documented by Contractor and forwarded to Owner prior to removal. If prior damage or problems exist, the Contractor can give a price to repair before re-installation or install with previous conditions.
- G. Prepare existing concrete slabs as per manufacturer's recommendations prior to water-proofing decks.
- H. Place shoring to support balconies above all columns where greater than 15% of gross concrete cross-sectional area will be removed. (*Repair material shall reach at least 3/4 design strength prior to removing shoring.*) Shore posts shall be rated with an 8-10-kip minimum load capacity each. All posts shall have adjustable collar to allow fine tightening to fit each location.

3.03 MORTAR PATCHING / CONCRETE REPAIR

- A. Areas of deteriorated and unsound concrete, as determined during the inspection, shall be removed as follows:
 - 1. The unsound concrete in these areas shall be removed by chipping hammers (*Max. – 30 lbs hammer*) or other mechanical equipment as approved by the Engineer.
 - 2. Removal of concrete shall extend 2" - 4" beyond the outer boundary mark of unsound concrete.
 - 3. Where possible, the areas removed shall be rectangular shaped.
 - 4. The edges of the patch area shall be perpendicular or slightly undercut between 1/4" and 1/2" deep. This shall be accomplished by saw cutting or by using chipping hammers. Feather edges will **NOT** be permitted.
 - 5. Concrete shall be removed completely around exposed corroded reinforcing steel such that a 3/4" clearance from the existing concrete is obtained.
 - 6. Removal of concrete around and beneath reinforcing steel shall be performed by using chipping hammers.
 - 7. During the removal process, care shall be exercised to avoid cracking and otherwise damaging the surrounding sound concrete.



- B. Following the removal of deteriorated and unsound concrete and prior to cleaning the patch area, the Contractor shall remove all loose concrete from the work area and leave said area broom clean.
- C. The patch area shall be thoroughly cleaned by sandblasting to accomplish the following:
 - 1. Removal of all remaining loose and unsound concrete and all dirt, debris and other contaminants, which may impair adhesion of the repair, mortar.
 - 2. Removal of all loose rust, scale, and unsound concrete from exposed reinforcing steel.
- D. Apply a bonding agent to the existing hardened concrete surfaces against which the new mortar/concrete is to be placed.
 - 1. pre-wet surfaces to saturated surface dry condition.
 - 2. Apply bonding agent with a stiff bristle brush or "hopper type" spray equipment.
- E. The top surfaces of the balcony surfaces shall be prepared in accordance with the waterproof deck coating system Manufacturer's recommendations.
- F. Contractor is responsible for ensuring compatibility of cementitious materials and waterproof deck coating products to be used.

3.04 REINFORCING STEEL

- A. Reinforcing steel which has lost more than 20% of its original diameter at any given point along its length shall be repaired as required by the Engineer and/or as follows:
 - 1. Supplement the existing deteriorated reinforcing steel with new steel of equivalent size. Shall be ASTM A615 Grade 60 deformed bars, free from oil, scale, and rust, placed in accordance with the American Concrete Institute Standard Specifications and details.
 - 2. Remove deteriorated reinforcing steel and replace it with new steel of equivalent size.
- B. All supplemental reinforcing steel shall be placed following the cleaning of the patch area and shall be securely tied to prevent displacement during the placement of the mortar/concrete.
- C. Reinforcing steel removed during the removal of concrete members shall be replaced on a one-for-one basis.
- D. Where new bars are spliced to existing bars, the lap splice shall be minimum of 30 bar diam.
- E. Where bars are required to be grouted, minimum eight (8) inch deep holes shall be drilled into the sound concrete to grout the bars. New bars shall be grouted with epoxy adhesive.
- F. Coupled Splices: Shall be achieved using a steel sleeve and wedge pin assembled in accordance with the manufacturer's recommendations to produce a positive connection up to 125% of specified yield. Acceptable product shall be the Quick-Wedge mechanical lap splice system manufactured by Erico, Inc.



- G. Chemical Anchors: Shall be an ICC and FBC Approved System for Cracked Concrete such as Acrylic 7 manufactured by ITW Red Head or equivalent.
- H. Epoxy Injection: Shall be pumped using low pressure equipment to inject Prime Rez 1100 High Mod LV into port devices set into routed cracks cap sealed with Prime Gel 2000 High Mod as Manufactured by Prime Resins, Inc.
- I. Coat all exposed reinforcing bars with a brush or spray applied anti-corrosion protective coating.

3.05 INSTALLATION OF REPAIR MORTAR

- A. Patch concrete slab, wall, or column, restoring to original shape, with a polymer-modified cement mortar. Utilize forms as necessary to provide true vertical and horizontal surfaces. Forms shall be used at the vertical edges of all slabs, walls, and columns unless directed otherwise by the Engineer.
- B. Polymer-modified repair mortars shall be mixed according to the manufacturer's instructions using a low-speed drill and mixing paddle in an acceptable sized container. For extended mixes, the coarse aggregate shall be added last, once a lump free homogenous mixture has been achieved.
- C. At the time of application, the substrate should be saturated surface dry with no standing water. Mortar must be scrubbed into substrate filling all pores and voids. While the scrub coat is still plastic, force material against edge of repair, working toward center. After filling, consolidate, then screed. Allow mortar to set to desired stiffness. Then finish with trowel for surface matching existing.
- D. Repair materials must have a (7) seven-day cure time before membrane coating. Verify that curing methods used for concrete are compatible with coating system.

3.06 INSTALLATION OF REPAIR CONCRETE

- A. Forms shall be used at the vertical edge of all slabs, walls and columns unless directed otherwise by the Engineer.
- B. Install horizontal forms flush with underside of existing slab. Install vertical forms flush with outboard edge of existing slab, wall, and column or as required to provide a minimum of 1-1/2 inches of concrete cover for existing reinforcing bars. Forms shall be adequately constructed and supported to prevent sagging, bulging etc.
- C. Forms shall be thoroughly cleaned to remove all debris and foreign matter prior to concrete pour.
- D. Upon arrival at the jobsite, the ready-mix delivery ticket shall be checked for initial batch time. If accepted, the Contractor shall then introduce the corrosion-inhibiting admixture to the drum and allow dispersing. (Note: The introduction of DCI by W.R. Grace shall be by mixing plant)



- E. Pumping equipment and hoses shall be cleaned and inspected prior to dumping concrete into hopper.
- F. The repair concrete shall be poured or pumped into the forms and shall be rodded or vibrated as required to completely fill repair area.
- G. The repair concrete shall be struck off flush with the top of the existing slab and shall be trowel finished to receive the decorative/protective finish.
- H. Remove the forms after the repair concrete has gained adequate strength.

3.07 CONCRETE TESTING

Test containers shall contain project identification name and number, date of pour, name of testing service, compressive breaking strength, and type of break for (1) 3-day, (1) 7-day, and (2) 28-day and one extra tests.

3.08 FINISHING AND CURING

- A. Moist cure polymer-modified repair overlays with wet burlap in accordance with the manufacturer's recommendations for material or moisture cure a minimum of (7) seven days for transit mix placement. If a dissipating curing compound is used, then the residue shall be ground off to remove any bond inhibiting films.
- B. Repairs of load bearing members (*i.e., cantilevered slabs*) which require temporary shoring must reach original design strength of 3/4 of the repair material 28-day strength prior to removing formwork and shores.
- C. Stucco will be applied to match existing texture at beams, walls, columns, ceilings, and slab edges after the repair work is completed.

3.09 RAILING REPAIRS

- A. Repair all deteriorated railings (*caps, balusters, and posts*) as marked by the Engineer and shown in the handrail drawings.
- B. Engineered drawings shall be submitted by the contractor for the railing components and approved by this office prior to fabrication of any components.



3.10 REMOVAL AND INSTALLATION OF SLIDING GLASS DOOR /STORM SHUTTERS ASSEMBLIES

- A. Prior to removal of sliding glass doors/shutters document the condition of each assembly to be removed. A copy of the condition report shall be forwarded to Owner prior to the removal, so as to avoid potential damage claims.
- B. Remove sliding glass doors/shutters, as directed by Engineer, to properly repair concrete slabs.
- C. Drill out old fasteners and repair all holes with epoxy gel. Remove each sliding glass door/shutter assembly to a designated safe location, where each assembly will be wrapped, tagged, and stored until reinstallation.
- D. If glass doors are removed, install dust wall to full height to protect the unit from weather, concrete dust, sandblasting, debris, etc.

3.11 RESTORE STUCCO FINISH

- A. Thickness: Two coats for total thickness of 1/2 inch minimum.
- B. General Application of Cement Plaster/Stucco:
 - 1. Pre-wet wall prior to each coat of stucco.
 - 2. Apply bonding agent to concrete areas prior to first coat. Allow pre-wet areas to “damp dry” prior to application of bonding agent.
 - 3. Apply scratch (*or first*) coat with sufficient material and pressure to form good, full keys or good bond, as the case may be. Allow this coat to set firm before applying next coat.
 - 4. Apply cement plaster/stucco coats continuously in one general direction, not allowing mortar to dry at edges.
- C. Technique:
 - 1. Follow directions for general application as noted above and apply the first scratch coat.
 - 2. Apply finish coat after scratch coat has dried. Apply this coat so surfaces are straight, true, smooth, even, plumb, and flush with all grounds. Provide corners, angles, and intersections straight, sharp, and true.
- D. Finish: To match existing adjacent surfaces.
- E. Beginning curing of stucco not more than 8 hours after finish coat is applied, fog stucco until water runs down face of wall. Each morning and each afternoon, again fog the stucco for not less than (2) two days.
- F. Thoroughly clean and repair work of other trades of plaster, droppings, stains, etc.



3.12 INSTALLATION OF DECK WATER PLANTER SYSTEM

- A. A preconstruction meeting shall be held with the Owner, Engineer, Contractor and Manufacturer in attendance to discuss the deck preparation and coating installation.
- B. Sample area shall be provided for deck surface preparation and pedestrian deck coating application. Sample shall be of adequate size to objectively determine the level of quality, color and texture of the deck coating.
- C. All concrete surfaces to be waterproofed shall be prepared by a method approved by the Engineer and Manufacturer. The concrete surface shall be free of all laitance, loose mortar, oil curing compounds, previously applied coatings, and all other contaminants.
- D. The deck preparation method shall not damage the surface of the concrete slab.
- E. Following cleaning of the deck surface, all damaged areas of the concrete deck surface shall be "flash patched" in accordance with the Manufacturer's recommendations.
- F. Repair all cracks in the deck surface and install a one inch can't bead of urethane sealant at the junction of all horizontal and vertical surfaces in accordance with the Manufacturer's recommendations.
- G. Apply the Sika Sealoflex (See Specifications) waterproof deck coating system in accordance with the Manufacturer's recommendations.

3.13 CLEAN-UP

- A. The Contractor shall clean surface areas of excess epoxy and cementitious materials and shall remove the injection ports by grinding or other appropriate methods. No epoxy materials or injection ports shall extend beyond the plane of the surfaces of the existing concrete.
- B. Remove all excess coatings, sealants, etc. from all areas not intended for same.
- C. Remove excess materials and debris from jobsite. Leave work and storage areas in as clean a condition as when Contractor first arrived at jobsite.
- D. Contractor shall replace all sod and plants damaged during the progress of the work.
- E. Contractor shall replace or repair any portions of the buildings or grounds damaged by work.
- F. A punch list shall be conducted on each repaired stack by Engineer and/or Owner before the Contractor removes staging. The Contractor is responsible for the completion of all listed items.

Note: Engineer's punch list does not absolve Contractor from responsibilities to other unlisted damage claims.



PART 4 WARRANTY

4.01 WARRANTY

- A. Manufacturer and Contractor shall jointly and severally agree to warranty the repair work against failure due to materials or workmanship for the period of the warranty. Contractor shall provide a letter from the Manufacturer prior to commencement of the work indicating their willingness to provide such a warranty. Contractor shall provide sample of warranty prior to commencement of work.
- B. Separate warranties shall be provided for the concrete repair work and the waterproofing coating systems.
- C. Notwithstanding anything set forth in the Manufacturer's Warranties to the contrary, those items specifically covered by the Manufacturer's Warranties shall in no way be deemed to limit Contractor's warranty herein and are in addition to and not in lieu of the Contractor's warranty. This is not in lieu of but is in addition to any other warranties expressed or implied, which may be provided by law.
- D. The period of the warranty shall be five (5) years from the Date of Completion.

Respectfully submitted:
S&D Engineering and Construction, Inc.

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P.E. # 64701
Aug 23rd,2023