



PROJECT MANUAL

Buildings Repairs and Related Work

Property at:

13600 Egret Boulevard
Clearwater, FL 33762

Prepared for:

Bordeaux Village Association, No. 2, Inc.
1401 Manatee Ave., Suite 300
Bradenton, FL 34205

Project No. UR2301-313

June 16, 2023

RIMKUS CONSULTING GROUP, INC.
dba DELTA ENGINEERING & INSPECTION
10405 TECHNOLOGY TERRACE
LAKEWOOD RANCH, FL 34211
FL EB#:8301

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Owner: Bordeaux Village Association, No. 2, Inc.

Issued By: Rimkus Consulting Group, Inc. FL E.B. #8301
dba Delta Engineering & Inspection
10405 Technology Terrace, Lakewood Ranch, FL 34211

Reviewed By: Bruce D. Miller, P.E. FL P.E. License #43721

Date: 6.16.23

THIS DESIGN IS BASED ON FBC 7TH EDITION (2020) CHAPTER 6 AND IS VALID FOR A PERIOD OF 1 YEAR AFTER THE DATE IT IS SIGNED OR UNTIL A NEWER VERSION OF THE BUILDING CODE, HAVING JURISDICTION, IS ADOPTED, WHICH EVER OCCURS FIRST.

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SECTION 002113

INSTRUCTIONS TO BIDDERS

1.01 PROJECT AND LOCATION: Buildings Repairs and Related Work
Bordeaux Village
13600 Egret Boulevard
Clearwater, FL 33762

1.02 PREPARATION AND SUBMITTAL OF BID

A. This document contains instructions to bidders for the project named above. This bidding document is not part of the Contract Documents, unless specifically referenced in the Owner/Contractor Agreement.

B. To obtain bidding documents contact:

Name: Samuel Adames, P.E.
Firm: c/o Delta Engineering & Inspection, A Rimkus Company
Address: 10405 Technology Terrace
City, State, and ZIP: Lakewood Ranch, FL 34211
Telephone: 941-727-2600

C. Fee for Documents: A fee of **\$200.00** will be charged by the Engineer if the bidding documents (and all copies) are not returned complete and in usable condition. Unauthorized copies may be considered a possible infringement upon the Engineer's copyright and may be punishable by law. Written consent by the Engineer will be requested per additional copy. Bids that are not accompanied with the documents will not be accepted.

D. Pre-Bid Conference: A pre-bid conference will be held at the project site on **TBD**. Attendance by a representative of each bidder is mandatory.

E. Interpretation and Addenda: During the bidding period, submit questions to the person(s) named below in writing. No oral interpretation will be made to any Bidder as to the meaning of the Contract Documents or any part thereof. Questions will be answered in writing and copies distributed to bidders of record.

Name: Bruce D. Miller, PE
Firm: c/o Delta Engineering & Inspection, A Rimkus Company
Address: 10405 Technology Terrace
City, State, and ZIP: Lakewood Ranch, FL 34211
Telephone: 941-727-2600

F. Site Visit: A site visit is required. Contact the person named above to arrange to visit the site.

G. Qualifications: Bids will only be accepted from Contractors requested to bid and who have current applicable licenses in the State of Florida, and have completely filled out the Owner's "Contractor Qualification Form". Contractor must have a minimum of five (5) years documented experience in painting of commercial and residential building(s) and provide evidence as a certified applicator of the materials used in bid.

H. Bid shall be valid as submitted for not less than ninety (90) calendar days from the date bids are due.

INSTRUCTIONS TO BIDDERS

- I. Bids may be withdrawn by written or telegraphic request dispatched by the bidder in time for delivery in the normal course of business prior to the time fixed for opening, provided that written confirmation of any telegraphic withdrawal over the signature of the bidder is placed in the mail and postmarked prior to the time set for the bid opening. Negligence on the part of the bidder in preparing his bid confers no right of withdrawal or modification of his bid after such bid has been opened.
- J. A Performance and Payment Bond is required. Each bidder shall submit evidence of bondability for the amount of the bid. A surety company licensed to do business at the location of the project must execute bonds. Bond form shall be AIA Document A312.
- K. Unless specifically authorized, telegraphic modification of bid will be considered only if such modification is received prior to the time set for opening and written confirmation of such modification over the signature of the bidder is placed in the mail and postmarked prior to the time for bid opening.

1.03 SUBMISSION OF BIDS

- A. Submission of Bids: Submit Bid Form before the time and date below. Late submissions will not be considered. Submit bids in sealed and labeled envelopes with the project name and bidder's name on the outside of the envelope. Mark the envelope: "Bid Enclosed - Do Not Open".

Submit Bid To:

Name: Bruce Miller, PE
Firm: c/o Delta Engineering & Inspection, A Rimkus Company
Address: 10405 Technology Terrace
City, State, and ZIP: Lakewood Ranch, FL 34211

Date and Time of Day: **TBD**

Submission of Bids to Include (2) Complete Copies of the Following:

1. Completed Bid Form
2. Contractor's Sample Warranties
3. A Performance and Payment Bond is required. Each bidder shall submit evidence of bondability for the amount of bid. A surety company licensed to do business at the location of the project must execute bonds. Bond form shall be AIA Document A312.
4. Must submit a copy of a valid contractor license and be registered with the City of Clearwater and Pinellas County.
5. Provide proof of a minimum of five (5) similar commercial projects involving similar work.
6. Provide a list of subcontractors (i.e., painting).
7. Provide a reference list (name, address, contact, and phone number) of three similar projects completed involving concrete repairs.
8. Have the ability to obtain mfg. certification as an installer or applicator of the products specified in the Project Manual.
9. Submit a current copy of the AIA Contractor Qualification Form.
10. Return complete bidding documents (and all copies). A **\$200.00** fee will be charged if the bidding documents are not returned complete and in usable condition.

1.04 OPENING OF BIDS

- A. Bids will be opened in private by the Engineer. Bidders may not be present. Bids may not be withdrawn for 90 calendar days after receipt of bids.
- B. The Owner reserves the right to reject or accept any or all bids or to enter into negotiations with any bidder. The Owner reserves the right to waive any alleged breach of technicality.
- C. The Owner reserves the right to modify the Contract Documents and rebid the project, if necessary, to meet Owner's budgetary requirements.

1.05 CONSTRUCTION START DATE

- A. Work will be scheduled to begin with a start date after **TBD** and is contingent upon Contract approval by the Owner.

1.06 CONSTRUCTION COMPLETION DATE

- A. Work to be completed on or before **TBD**.

END OF SECTION

SECTION 004100

BID FORM

Date Submitted: _____

To: Delta Engineering & Inspection Inc.
Attn: Bruce D. Miller, P.E.
10405 Technology Terrace
Bradenton, FL 34211

Contractor: _____

Address: _____

Telephone: _____

Fax: _____

E-Mail: _____

The undersigned, as bidder, hereby declares that the only person or persons interested in the proposal as Principal or Principals, is/are named herein, and that no other person than herein mentioned has any interest in this proposal or the Contract to be entered into; that this proposal is made without connection with any other person, company, or parties making a bid or proposal; and that it is in all respects fair and in good faith, without collusion or fraud.

The undersigned further declares that he has examined the site of the Work and informed himself fully in regard to all conditions pertaining to the places where the Work is to be done; that he has examined the drawings and specifications for Work and contractual documents relative thereto; that he has read all special provisions furnished prior to the opening of bids; and that he has satisfied himself relative to the Work to be performed.

The undersigned further agrees, if this proposal is accepted, to contract with the Project Owner in the form of the Contract provided, to furnish all necessary materials, equipment, machinery, tools, apparatus, means of transportation, and all permits and all labor necessary to complete the Work known particularly as:

Project Name: **Buildings Repairs and Related Work
Bordeaux Village**

Project Owner: **Bordeaux Village Association, No. 2, Inc.**
13600 Egret Boulevard
Clearwater, FL 33762

The undersigned further agrees and understands:

- A. Bids are to be submitted in compliance with Section 002113 - Instructions to Bidders. Fill in blanks. The Owner reserves the right to reject incomplete bid forms. **ALTERNATE FORMS WILL NOT BE ACCEPTED FOR THE PURPOSE OF COMPARATIVE BIDS.**

- B. This Bidding document is not part of the Contract Documents, unless specifically referenced in the Owner/Contractor Agreement.
- C. The bidder is familiar with all applicable Federal, State, and local laws and ordinances or regulations governing this project.
- D. Fixed Prices and Unit Prices shall include material, labor, equipment, shoring, scaffolding, cleanup, mobilization, permit fees, job startup, staging setup, deposits on equipment and general conditions which shall include but not limited to office overhead, supervision, portable sanitation, dumpster, etc. and any item not included elsewhere in the bid costs.
- E. Estimated Unit Prices are for bidding purposes only. Unit Price work will be billed based upon the actual quantities as verified by the Engineer.
- F. The property and buildings will be occupied and fully functional during the construction period and the Contractor shall proceed with the Work in a manner that does not interfere with daily operation of the facility.

PROJECT SUMMARY

- A. The Work to be performed under the terms and conditions of this contract includes: the furnishing of all materials, labor, services, permit fees, supervision, quality control, inspections, testing, scaffolding, portable sanitation, dumpsters, and equipment required or incidental to concrete repair at the entry stairs and balconies; removal of tile/surface finishes and water-proofing of balconies and stairs; removal and replacement of existing screen enclosures; stucco repair/replacement; and exterior painting of all buildings and carports.
- B. The facilities within the scope of work include:
 - 1. 2-story residential condominium building – Building G (2453 Kingfisher Ln)
 - 2. 2-story residential condominium building – Building H (2467 Kingfisher Ln)
 - 3. 2-story residential condominium building – Building I (2473 Kingfisher Ln)
 - 4. 2-story residential condominium building – Building J (2462 Kingfisher Ln)
 - 5. 2-story residential condominium building – Building K (13600 Egret Blvd)
 - 6. 2-story residential condominium building – Building L (2401 Gull Ct.)
 - 7. Fourteen (14) Carports
- C. The Contractor shall realize that the facility will be occupied and fully functional during the construction period. The Contractor shall proceed with the Work in a manner that does not interfere with daily operation of the facility. Any action by the Contractor, that may effect the operation of the facility, will be addressed to the Owner and Engineer. Notification from the Contractor shall be provided in writing, seven (7) days prior to proceeding with that portion of Work and must be approved by the Owner.

PERFORMANCE REQUIREMENTS

- A. All repairs shall be performed in strict accordance with these plans, specifications, Florida Building Code 7th Edition (2020) and local ordinances.
- B. Provide a complete waterproofing system that prevents the passage of water at the balconies and in strict accordance with Sealant, Waterproofing, and Restoration Institute (SWRI) standards and manufacturer's instructions.

- C. Provide sustainable concrete repairs in strict accordance with International Concrete Repair Institute (ICRI), the American Concrete Institute (ACI) and manufacturer's instructions.
- D. Provide a premium paint coating system free of peeling, blistering, flaking, delamination, loss of adhesion and cracking for the life of the warranty.
- E. Provide sustainable stucco repairs in strict accordance with American Society for Testing and Materials (ASTM), Portland Cement Association (PCA) and manufacturer's instructions.
- F. Screen enclosures with integrated guardrails and their connections including the connections between the supporting structure shall be designed to meet the minimum design requirements of the Florida Building Code 7th Edition (2020) – (FBC), the current edition of the ASCE 7 "Minimum design loads for buildings and other structures", and the current edition of the life Safety Code. Design documents are to be submitted to the Owner for final approval.

I. BASE BID: Fixed Price Work with Add and Deducts for Unit Price Work:

Fixed Price Work – Includes all related items in accordance with Section 011100 - Summary and all applicable sections of the Project Manual. The line items below are estimated quantities for bidding and are based on a limited building survey. Actual quantities may be different.

The description of work provided below is a summary only. Manufacturer's requirements, code requirements, requirements from Authorities Having Jurisdiction, and requirements included in the specifications or shown on the drawings shall also apply.

DESCRIPTION OF WORK – GENERAL:

The following work items are to be executed only as indicated by the Owner and/or Engineer and in accordance with the provisions of all applicable Sections and Drawings contained within the Project Manual.

The description of work provided below is a summary only. Manufacturer's requirements, Code requirements, requirements from Authorities Having Jurisdiction, and requirements included in the specifications or shown on the drawings shall also apply.

- A. Mobilization, Demobilization and General Conditions in accordance with Section 007200 of the project manual. A detailed breakdown of this amount will be required before signing of contract.
- B. The Contractor shall perform mock-ups of the required Work prior to proceeding with the said repairs. Mock-ups shall be reviewed and approved by the Engineer and Owner.
 - 1. Mock-ups shall be installed in the presence of the Owner, Engineer, and manufacturer's representative to assure installation procedures adhere to warranty requirements.
 - 2. Required mock-up locations:
 - a. Concrete Repairs: (demo and pour back) overhead, column, beam, slab and epoxy rebar installation
 - b. Balcony Waterproofing (stepped mockup displaying prep, base, and finish coats)
 - c. Stairwell waterproofing (stepped mockup displaying prep, base, and finish coats)
 - d. Screen Enclosure
 - e. Stucco repair/replacement

- f. Sealant joints
 - i. Stucco to stucco
 - ii. Stucco to window perimeters (metal-to-stucco)
 - iii. Balcony floor to wall
 - g. Painting systems (stepped mock-up) Prep / prime / finish
 - i. Stucco / masonry substrate
 - ii. Painting system on miscellaneous substrates
 3. Approved mock-up shall remain in place and establish the guidelines for acceptable installation of Work and acceptable appearance.
 - C. Prior to bidding the Contractor shall perform the following:
 1. Site Verification Survey: The survey shall be made to the exterior of the buildings and common areas within the areas of work to verify the existing conditions which may be affected by the construction, as well as discrepancies between the field conditions and the scope of work. If quantities are required, they shall be entered on the bid form, and discrepancies shall be brought to the attention of the Engineer prior to bid submittal.
 - D. Prior to the execution of the Contract, Contractor shall provide:
 1. Sample Warranties: sample warranties required by the contract documents and compliant with the requirements in the contract documents shall be submitted by the Contractor and approved by the Engineer prior to the execution of the Contract. Submit electronically in .pdf.
 2. Project Critical Path Schedule: by drop, staging, units, or major tasks. Submit electronically in .pdf.
 3. Staging/Drop Plan: numbered consecutively and corresponding to the Project Critical Path Schedule. Submit electronically in .pdf.
 4. A Breakdown of the Mobilization, Demobilization and General Conditions will be required prior to the execution of the contract.
 - E. Prior to construction the Contractor shall provide:
 1. Pre-condition Assessment: A pre-condition assessment of the property located within the areas of work shall be conducted to document the existing conditions and pre-existing damages which may exist. The assessment shall incorporate visual observations and video documentation prior to commencing construction. A copy shall be provided to the Engineer and the Owner, noting any pre-existing damage. Submit electronically.
 2. Submit the following:
 - a. Submit all required submittals listed in the specifications, including technical data sheets, samples, and manufacturer's installation instructions. Submit electronically in .pdf.
 - b. Submit an updated project schedule. Submit electronically in .pdf.
 - c. Submit a hurricane plan, detailing procedures for securing the facility, materials and the work in process, and procedures for demobilization and remobilization. Submit electronically in .pdf.
 - F. Coordinate any traffic interruptions caused by the performance of the work with the appropriate authority having jurisdiction.
 - G. Install and coordinate pedestrian and overhead protection with the Owner. Install protection, i.e., temporary walls, fencing and barriers to prevent public use and injury to the public in the areas of Work.
 - H. Install protection i.e., drop cloths, protection board, and plastic sheeting in the areas of work and adjacent to the areas of work to prevent damage to the property. Areas requiring protection include but are not limited to: floors, decks, pavements, landscaping,

windows, doors, and railings. Cover windows, doors, and railings with plastic. Install barriers to prevent debris from entering common areas.

- I. Staging, scaffolding and/or other methods will be required as needed to facilitate the Work. The Contractor shall independently contract and provide signed and sealed scaffolding or staging plan for the work. The staging shall remain in place for use by the Engineer and Inspectors to conduct progress inspections and punch out.
- J. The staging shall remain in place for use by the engineer and Inspectors to conduct progress observations which include:
 - 1. Concrete repair. Demo and pour back
 - 2. Stucco soundings and repairs
 - 3. Balcony/stairwell waterproofing installation: Prep / base / finish
 - 4. Sealant installation
 - 5. Painting systems for all substrates: Prep / prime / finish
 - 6. Screen enclosure installation
 - 7. Punch out by buildings
- K. Coordinate testing and compatibility evaluations for all materials including paint coatings, sealants, and caulks at each unique substrate per reference protocols, and include mock-up samples for approval with the manufacturers' representative and Engineer present.
- L. All materials to be reused and/or reinstalled shall be fully protected from damage, wrapped labeled, photographed, and stored on site in a container. There will be no storage permitted in the buildings.

BALCONIES - CONCRETE REPAIRS, SCREEN ENCLOSURE REPLACEMENT AND WATER-PROOFING:

- A. Remove and dispose of all existing screen enclosures at the balconies, including but not limited to all screen enclosure fasteners and embedded anchors in the concrete slab. Patch all penetrations in the slab using approved materials in accordance with these specifications including but not limited to section(s) 071801, 079200, details, and manufacturers' instructions.
- B. Remove all existing floor finishes, cants and sealants at edge of the balconies and prepare surface to receive new continuous waterproofing deck coating systems, in accordance with these specifications including but not limited to section(s) 071801 and 079200, details, and manufacturer's instructions.
- C. After the removal of the balcony floor finishes, the Contractor with the assistance of the Engineer shall perform a pre-construction damage survey. This survey shall incorporate visual observations and mechanical sounding (hammer top method) to identify areas of spalling concrete, unbounded topping, exposed reinforcement, and cracks greater than hairline (1/16"). Areas noted for repair shall be spray marked in the field and quantified for verification by the Engineer. (Include in General Conditions).
- D. Keep all sliding glass doors and tracks in place unless removal is required to facilitate repairs when concrete damage extends beyond balconies and into the floor slab. Contact Engineer prior to door removal for verification.
 - 1. If required, protective barriers to be installed upon the removal of sliding glass doors. If concrete damage and repairs extend into the unit, the protective barrier shall extend into the unit to cover the work area. Store the sliding glass door assemblies and reinstall with new sill tracks and in-kind fasteners in accordance with original sliding glass door manufacturer's instructions, after repairs to

balconies have been performed. Inject sealant in fastener holes before installing fasteners. Provide new sealant on perimeter tracks and frame.

- E. Provide surface repairs at the subject elevated balconies (up to 3-inches depth) in accordance with these specifications, including but not limited to section 031330, details, and manufacturer's instructions. Contact Engineer prior to demolition and pre-pour. The contract amount for the unit cost items will be based upon the actual quantity as accepted by the Engineer. The actual quantity may differ from estimated bid quantities on Bid Form.
- F. Provide full depth concrete slab edge repairs at the subject elevated balconies in accordance with these specifications, including but not limited to section 031330, details, and manufacturer's instructions. Re-stucco repair area and prep, prime, and paint to match existing. Contact Engineer prior to demolition and pre-pour. The contract amount for the unit cost items will be based upon the actual quantity as accepted by the Engineer. The actual quantity may differ from estimated bid quantities on Bid Form.
- G. Provide overhead partial depth concrete repairs (up to 3-inches depth) to the underside of the subject elevated balconies in accordance with these specifications including but not limited to section 031330, details, and manufacturer's instructions. Re-stucco repair area and pre, prime, and paint to match existing. Contact Engineer prior to demolition and pre-pour. The contract amount for the unit cost items will be based upon the actual quantity as accepted by the engineer. The actual quantity may differ from estimated bid quantities on Bid form.
- H. Install temporary barrier wall within the unit and provide concrete repairs at the reinforced concrete columns, beams, and walls in accordance these specifications including but not limited to section 031330, details, and manufacturer's instructions. Re-stucco repair area and pre, prime, and paint to match existing. Contact Engineer prior to demolition and pre-pour. The contract amount for the unit cost items will be based upon the actual quantity as accepted by the Engineer. The actual quantity may differ from estimated bid quantities on Bid Form.
- I. Epoxy-dowel and splice additional rebar as required in accordance with these specifications including but not limited to section 031330, details, and manufacturer's instructions. The contract amount for the unit cost items will be based upon the actual quantity as accepted by the Engineer. The actual quantity may differ from estimated bid quantities on Bid Form.
- J. Install new code compliant screen enclosures at balconies, in accordance with these specifications including but not limited to section 055816, details, and manufacturer's instructions.
 - 1. First Floor Balconies: Install screen enclosures integrate door
 - 2. Second Floor Balconies: Install screen enclosures with integrate guardrails
- K. Conduct flood tests at balcony slabs and install leveling material as required. Areas shall be flooded with water using a common garden hose. Apply leveling materials to areas which exhibit ponding water (bird baths) and promote positive drainage. Because there are limitations due to the existing conditions, it is not the intent of this specification to include the sloping of the entire deck surfaces rather to reduce areas of bird baths and other low spots in the existing construction. (*Based on a depth ranging from 0" to ½"*).
- L. Install new fluid-applied water-proofing system at elevated balconies from slab edge to sliding glass door track, remove and replace existing sealants, including the installation of new sealants where previously omitted, as indicated per these specifications, section

071801, and details for water-tight seal including all cants, floor-to-wall junctures, all corners, along sliding glass door track (do not obstruct sliding glass door track weep holes), all control joints, all exposed fasteners, and all transitions in accordance with these specifications, details, and manufacturer's instructions. **Color to be selected by Owner.**

- M. **Alternate: Appy Gemstone finish to balconies. Color and pattern to be selected by Owner.**

ENTRY STAIRS - CONCRETE REPAIRS AND WATER-PROOFING:

- A. Remove all existing floor finishes, cants and sealants at edge of the stairs and entryways and prepare surface to receive new continuous waterproofing traffic coating system.
- B. After the removal of the floor finishes, the Contractor with the assistance of the Engineer shall perform a pre-construction damage survey. This survey shall incorporate visual observations and mechanical sounding (hammer top method) to identify areas of spalling concrete, unbounded topping, exposed reinforcement, and cracks greater than hairline (1/16"). Areas note for repair shall be spray marked in the filed and quantified for verification by the Engineer. (Include in General Conditions).
- C. Provide concrete repairs, as required, at the stairs and entryways in accordance with these specifications, including but not limited to section 031330, details and manufacturer's instructions. Contact Engineer prior to demolition and pre-pour. The contract amount for the unit cost items will be based upon the actual quantity as accepted by the Engineer. The actual quantity may differ from estimated bid quantities on Bid Form.
- D. Conduct flood tests at stairs and entryways and install leveling materials as required. Areas shall be flooded with water using a common garden hose. Apply leveling materials to areas which exhibit ponding water (bird baths) and promote positive drainage. Because there are limitations due to the existing conditions, it is not the intent of this specification to include the sloping of the entire deck surfaces rather to reduce areas of bird baths and other low spots in the existing construction. *(Based on a depth ranging from 0" to 1/2")*.
- E. Install new fluid-applied water-proofing system on stairs and entryways, remove and replace existing sealants, including the installation of new sealants where previously omitted, as indicated per these specifications, section 071801, and details for water-tight seal including all cants, floor-to-wall junctures, all corners, all control joints, all exposed fasteners, and all transitions in accordance with these specifications, details, and manufacturer's instructions.
- F. **Alternate: Appy Gemstone finish to entryways and stairs. Color and pattern to be selected by Owner.**

STUCCO REPLACEMENT AT GABLE ENDS:

- A. Remove all exterior coverings (stucco and vapor barrier) at the gable ends of the buildings. The exterior coverings are to be disposed in a designated refuse container per Section 0150000. All nails, staples and fasteners are to be removed and discarded in a timely fashion.
- B. After the removal of the exterior coverings, Contractor with the assistance of the Engineer shall perform a condition assessment of the existing sheathing. This assessment shall

incorporate visual observations and probing of the sheathing to identify damaged areas. Areas noted for repair shall be spray marked in the field and quantified.

- C. The Contractor shall only remove exterior coverings that can be **weather-proofed "dried-in" at the end of each workday.**
- D. **If required, sheathing and wood framing repairs are to be performed on a T & M basis.**
- E. Install Tyvek weather resistive barrier, "Home Wrap", over sheathing in accordance with these specifications, details and manufacturer's instructions. Contractor shall contact Engineer to assess the work prior to the installation of the stucco accessories and self-furring expanded metal lath.
- F. Replace all stucco accessories in their existing position (terminations, control joints, corners, etc.) install peel n' stick tape behind accessories in accordance with these details, specifications, and manufacturer's instructions.
- G. Install self-furring expanded metal lath over specified weather barrier per ASTM C 1063. Contractor shall contact the Engineer to assess the Work prior to the installation of the stucco scratch coat.
- H. Install 7/8" thick stucco in (3) coats to all previously stucco'd walls. Match existing texture. Install per ASTM C 926, these specifications, details, and manufacturer's instructions.
- I. Replace sealants at all dissimilar materials and junctures and remove and replace existing joint sealants here previously omitted.

EXTERIOR PAINTING, SEALANT REPLACEMENT AND STUCCO REPAIR:

- A. Remove and reinstall gutters/downspouts, building signs and other attachments as required to perform the work. Seal fasteners and surface mounted components where applicable.
- B. Pressure wash, mildecide and prepare all exterior concrete masonry/stucco surfaces in accordance with manufacturer recommendations for surface preparation and remove any and all foreign matter that may affect the adhesion and performance of the direct applied systems. There are areas where there exist heavy deposits of mildew and algae. Unless otherwise noted power wash and with an inline injector apply a mildew solution composed of a five-gallon plastic container with 1 lb. of TSP, (if available), Tide or any other high-quality powder detergent with 1 gallon of pool chlorine mixed in 3 gallons of water. Allow solution to remain on surface for a minimum of 20-30 minutes prior to rinsing. Heavy build-ups shall require this mixed solution by volume in a chemically resistant pump-up sprayer with acid resistant hoses.
- C. Remove staining, mildew, efflorescence, and rust stains as per these specifications and coatings manufacturer's instructions. Special care is to be taken to remove all embedded iron deposits "rust mites" from stucco surfaces.
- D. At start of work for each "drop" or section of the building(s), the Contractor shall perform a pre-condition inspection of the exterior walls of the building(s). This inspection shall incorporate visual observations to identify fractured stucco or mechanical sounding (hammer tap method) to identify areas of unbonded stucco and cracks greater than hairline (1/16"). If areas of stucco unbonded or concrete distress are encountered, spray-mark or identify in the field for evaluation by the Engineer.

- E. If stucco is replaced, new stucco shall be tested for pH levels, recorded, and submitted to the Engineer prior to painting to ensure the new stucco is within the paint manufacturer's allowable limits. When applying over new stucco surfaces the following timelines shall be followed prior to applying coating system:
 - 1. Stucco repairs must be "fog" cured for minimum of 3 days before applying the specified, "hot" pH tolerant sealer/conditioner to all concrete masonry/stucco surfaces.
 - 2. Once the surface has been primed the surface must dry a minimum of 4 hours before applying Finish Coating.
- F. Repair all exterior wall breaches including cementitious finish cracks, delamination, and dis-bonding cementitious finish, voids, holes, penetrations, including but not limited to the removal of protruding accessories, rust stains, and blisters in accordance with these specifications, details, and manufactures' instructions. The smoothing of rough areas and sanding of the adjacent coatings is required providing a matching transition between the old and newly repaired and painted areas, (featheredged to blend into the adjacent cementitious finish).
- G. Provide wall crack repairs in accordance with these specifications, including but not limited to section(s) 031330, 079200, details, and manufacturer's instructions. Re-stucco repair area, if necessary, and prep prime, and paint to match existing. The contract amount for the unit cost items will be based upon the actual quantity as accepted by the engineer. The actual quantity may differ from estimated bid quantities on Bid form.
- H. Cut out existing loose, peeling/blistering coatings, and foreign materials, the smoothing of rough areas and sanding of the adjacent coatings is required providing a matching transition between the old and newly repaired and painted areas (featheredged to blend into the adjacent stucco). Apply paint coating in accordance with these specifications, details, and manufacturers' instructions.
- I. Remove all exterior building sealants, clean, prepare surfaces and install new hybrid sealants where removed or previously omitted using approved materials in accordance with these specifications, details, and manufacturers' instructions. (i.e., reglets, junctures, inside all corners, joints, reveals, wall penetrations, control joints, lights, shutters to building interfaces, balustrades and railing to wall interfaces, exposed fasteners, transitions, dissimilar materials interfaces, surface mount components).
- J. Remove and replace ALL window perimeter sealants with new hybrid sealants. Clean, prepare surfaces, solvent wipe metals clean, and prime (if necessary) to obtain proper adhesion and install new sealants and backer rod (if required) in accordance with these specifications, details, and manufacturers' instructions (i.e., metal-to-stucco).
- K. Detail and seal decorative trim, including but not limited to the filling of joints using approved sealants and elastomeric patching compounds in accordance with these specifications, details, and manufacturers' instructions.
- L. Seal all corner, butt joints and control joints using approved materials in accordance with these specifications, details, and manufacturers' instructions.
- M. Seal around scupper penetrations including but not limited to installing sealants using approved materials in accordance with these specifications, details, and manufacturers' instructions.
- N. Prepare, prime, and coat (paint) all pre-painted concrete, masonry and stucco exterior surfaces, decorative foam bands and ancillary components of the property using

approved materials in accordance with these specifications, details, and manufacturers' instructions.

- O. Prepare, prime, and coat ALL previously painted miscellaneous PVC, ferrous metal surfaces and non-ferrous metal surfaces including but not limited to: service/common doors, drip edges, gutters, downspouts, conduit, flashings, vents, junction boxes, etc. using approved materials in accordance with these specifications, details, and manufacturers' instructions.

Excluding: Surface-mounted lights.

- P. All windows, walkways, balconies, doors, etc. shall be completely cleaned upon completion of work.
- Q. The project will be "punched-out" by drop or elevation for surface preparation and finish coat stages with the Engineer and Owner's Representative present unless otherwise directed.

TESTING:

- A. After coatings and sealant have achieved sufficient cure, the Coatings Manufacturer's Representative shall contract or conduct adhesion tests at a minimum of (2) locations per building elevation or more, if required, prior to the Contractor proceeding with Work. Adhesion testing shall be either conducted in accordance with ASTM D3359-02 "Standard Test Method for Measuring Adhesion by Tape Test" or ASTM D4541-02 "Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers" whichever is recommended by the Manufacturer.
- B. After sealants have achieved sufficient cure pull testing of the sealants shall also be conducted in accordance with the attached "Standard Field Adhesion Test". The Engineer shall be present at all tests with reports delivered to both the Engineer and Contractor.
- C. Conduct flood test at balcony and entryway slabs and install leveling materials as required. Areas shall be flooded with water using a common garden hose. Apply leveling materials to areas which exhibit ponding water (bird Baths) and promote positive drainage. Because there are limitations due to the existing conditions, it is not intent of this specification to include the sloping of the entire deck surfaces rather to reduce areas of bird baths and other low spots in the existing construction. (Based on depth ranging from 0" to 1/2")

BID FORM

Work Item	Estimated Quantity	Unit Price	Total
1. General Conditions. Includes mobilization / demobilization, project management and overhead costs.	Lump Sum		
2. Remove existing concrete finish at balcony.	32 / EA		
3. Remove existing tile finish at balcony.	8 / EA		
4. Remove existing laminated finish at balcony.	1 / EA		
5. Remove existing carpet finish at balcony.	1 / EA		
6. Remove existing cementitious coating at stairs and entryways.	8 / EA		
7. Concrete surface repairs (approx. 3-inches depth) at balcony slabs and entryways.	400 SF		
8. Concrete full depth slab edge repairs at balcony slabs.	200 SF		
9. Concrete column, beam, and stair spall repair.	100 CF		
10. Concrete overhead slab repairs (approx. 3 -inches) at balcony slabs.	100 SF		
11. Concrete crack repair in slabs (rout and seal)	200 LF		
12. Install leveling material average ½" thick at balconies and entryways.	1000 SF		
13. Install water-proofing system at elevated balconies.	16 / EA		
14. Install floor finish at ground floor balconies.	26 / EA		
15. Install water-proofing system at stairs/entryways.	8 / EA		
16. Remove and replace all existing screen enclosures with guardrail at elevated balconies.	16 / EA		
17. Remove and replace all existing screen enclosures with door at ground balconies.	26 / EA		
18. Replacement of stucco at framed gable ends of buildings.	12 / EA		
19. Stucco Repair.	800 SF		
20. Exterior painting and sealant replacement.	Lump Sum		
Sub-bid Total:			\$
			%
Percentage for Performance and Payment Bond (to be added to bid):			\$
TOTAL:			\$

II. TERMS:

- A. Available Project Start Date: _____
- B. Time limit for completion of Total Project shall be _____ Calendar days.
 (Based on base bid work)
- C. Estimated Completion Date: _____
 (Based on available start date)

III. UNIT PRICES (Additional / Deduct Work): Includes all related items in accordance with Section 011100- Summary and all applicable sections of the Project Manual.

Unit Price Item	Unit of Measurement	Price	Days
1. Pin the debonded stucco utilizing Helifix DryFix ties at the exterior wall surfaces as approved by the Engineer.	EA		
2. De-mobilization and remobilization of rigging, scaffolding and all construction materials in case of a pending Hurricane Warning or Catastrophic Event.	EA		
3. Temporary Wall Barriers (at balcony)	LF		
4. Treat exposed rust spot.	EA		
5. Epoxy-dowel and splice additional rebar.	LF		

IV. ALTERNATES: Includes all related items in accordance with Section 011100- Summary and all applicable sections of the Project Manual.

Alternates	Estimated Quantity	Unit Price	Total
1. Apply Gemstone finish to balconies. Color and pattern to be selected by Owner.	42 / EA		
2. Apply Gemstone finish to entryways and stairwells. Color and pattern to be selected by Owner.	8 / EA		

V. SUBCONTRACTORS: This bid is predicated on the acceptance of the following principal subcontractors by the ENGINEER and OWNER. Bidders acknowledge responsibility for satisfactory performance by each Subcontractor.

	Name	Phone No.	Function	Trade
A.	_____	_____	_____	_____
B.	_____	_____	_____	_____
C.	_____	_____	_____	_____

Will your company be using temporary or day labor? _____ yes _____ no

	<u>Company Name</u>	<u>Phone No.</u>	<u>Function</u>
A.	_____	_____	_____
B.	_____	_____	_____
C.	_____	_____	_____

Provide list of temporary employees prior to job commencement. Provide necessary insurance requirements for these employees. **All temporary / day laborers shall be clearly identified in the field.**

VI. EXTRA WORK AND COST WORK WILL BE BILLED BY CHANGE ORDER AS AN ADDITIONAL COST TO THE TOTAL CONTRACT: The undersigned agrees that, should any change in the Work or extra work be ordered, where the prices set out above are not applicable, the following percentage shall be added to material costs to cover general conditions, overhead, and profit:

- A. MATERIALS: Allowance for CONTRACTOR mark up: _____%
- B. LABOR RATES: The labor cost basis for time and material work shall include any general conditions, overhead, and profit:
(Attach a separate flat-rate labor schedule if necessary)

Laborers	@	\$ _____	per man-hour
Mechanics	@	\$ _____	per man-hour
Superintendent (Foreman)	@	\$ _____	per man-hour
_____	@	\$ _____	per man-hour

VII. WARRANTIES: The CONTRACTOR will provide to the OWNER written labor and materials warranties for the following:

- A. Base Bid: For a period of **Three (3) years** from the date of project's final completion, for LABOR AND MATERIALS are warranted by the Contractor for all work covered under this contract against defects in material and workmanship. A sample of the CONTRACTOR'S warranty shall be included with the bid submittal.
- B. **In addition to the Contractors warranties, additional material manufacturer's warranties shall be issued:**
 1. Base Bid: For a period of **Five (5) years** from the date of project's substantial completion, for LABOR AND MATERIALS are warranted for the Concrete Repairs against defects in materials and shall be free of defects and delamination for the life of the warranty. A sample of the MANUFACTURER'S warranty shall be included with the bid submittal.
 2. Base Bid: For a period of **Ten (10) years** from the date of project's substantial completion, Work for LABOR AND MATERIALS are warranted for the paint against defects in materials and shall be free of excessive fading, peeling, blistering, flaking, delamination, loss of adhesion, and cracking for the life of the warranty. A sample of the MANUFACTURER'S warranty shall be included with the bid submittal.
 3. Base Bid: For a period of **Five (5) years** from the date of project's substantial completion, Work for LABOR AND MATERIALS are warranted for the Urethane Sealants against defects in materials and shall be free of excessive fading, peeling, blistering, flaking, delamination, loss of adhesion, and cracking for the life of the

warranty. A sample of the MANUFACTURER'S warranty shall be included with the bid submittal.

4. Base Bid: For a period of **Ten (10) years** from the date of project's substantial completion, Work for LABOR AND MATERIALS are warranted for the Hybrid Sealants against defects in materials and shall be free of excessive fading, peeling, blistering, flaking, delamination, loss of adhesion, and cracking for the life of the warranty. A sample of the MANUFACTURER'S warranty shall be included with the bid submittal.
5. Base Bid: For a period of **Five (5) years** from the date of project's substantial Completion, a special sole source water-proofing warranty shall be provided for MATERIALS and is warranted for the Waterproof Coatings and Sealants against water-penetration and shall be free of excessive fading, discoloration, peeling, blistering, flaking, delamination, loss of adhesion and cracking for the life of the warranty. A sample of the MANUFACTURER'S warranty shall be included with the bid submittal.
6. Base Bid: For a period of **Five (5) years** from the date of project's substantial Completion, a special sole source weather barrier warranty shall be provided for MATERIALS and is warranted against any defects for the life of the warranty. A sample of the MANUFACTURER'S warranty shall be included with the bid submittal.
7. Base Bid: For a period of **Ten (10) years** from the date of project's substantial completion, for LABOR AND MATERIALS are warranted for the Railing and Screen Enclosure against defects in materials, finishes and workmanship and shall be free of defects including peeling, blistering, corrosion, flaking, delamination and loss of adhesion for the life of the warranty. A sample of the SUPPLIERS warranty shall be included with the bid submittal.
8. Provide warranties as specified; warranties shall not limit length of time for remedy of damages the OWNER may have provided by law. The CONTRACTOR, MANUFACTURER, or INSTALLER is responsible for performance of said warranty and shall sign warranties.

VIII. SIGNATURE AND CERTIFICATION OF BIDDER:

The undersigned further proposes and agrees to commence Work under this contract within five (5) days from the date of receiving a signed and filed Notice of Commencement and/or Building Permit.

Respectfully Submitted,

Name of Contractor

Signature

Title

Date

Printed Name

General Contractor's License Number
CORPORATE SEAL

END OF SECTION

SECTION 006100

BONDS

- A. Provide Performance Bond and Payment Bond.
- B. Bond forms can be obtained from the American Institute of Architects, Washington, D.C., 202-626-7300, include:

AIA A312, Performance Bond and Payment Bond.

END OF SECTION

SECTION 007200

GENERAL CONDITIONS

1.0 INTENT AND INTERPRETATIONS:

- A. The INTENT of the Contract Documents is to include all items necessary for the proper execution and completion of the Work. The Contract Documents are complementary, and what is required by any one shall be as binding as if required by all. The Contractor shall be responsible for the construction and coordination of the parts and all systems shall be completely compatible and fully functional without additional cost to the Owner. Word abbreviations, which have well known technical or trade meanings, are used in the Contract Documents in accordance with such recognized meanings.
- B. Reference to standard specifications, manuals or codes or any technical society, organization or association, or to the code or any governmental authority, whether such reference is specific or by implication, shall mean the latest standard specification, manual or code in effect at the time indicated for reception of proposals, except as may be otherwise specially stated.
- C. "General Conditions" apply with equal force to Contractor's, Subcontractors', Sub-subcontractors' Work, material suppliers', extra Work and the like that may be specified herein or performed in or about building or site under this Contract.
- D. The layout of mechanical and electrical systems equipment and fixtures, piping, ductwork, conduit, specialty items and accessories indicated on the drawings is diagrammatic, and all variations in alignment, elevations, and detail required to avoid interference and satisfy architectural and structural limitations of the Work shall be carried out without effecting the architectural and structural integrity and limitations of the Work and shall be performed in such a sequence and manner as to avoid conflicts, provide clear access to all control points, including valves, strainers, control devices, specialty items of every nature related to such systems and equipment, obtain maximum headroom and provide adequate clearances as required for operation and maintenance. Immediately notify Engineer in writing and otherwise of any specific conditions which exist such that these requirements cannot be satisfied.
- E. **Construction Loads on Building Structures:** The structure is designed to support the loads of the finished building. No provision is included for unusual erection stresses or loads imposed by construction materials or equipment. If the Contractor desires to place loads in excess of the design load (shown on original as built drawings) on any part of the building structure, he shall submit drawings and stress calculations (prepared by and bearing the seal of a professional Engineer registered in the State of Florida) of the proposed method for supporting materials, scaffolding and/or other items of construction plant and equipment, for the Owner and the Engineer's review and acknowledgement. Interference with mechanical, electrical and other Work shall be considered in any proposed permanent design. The cost of engineering and all additional support loads shall be placed on the Contractor. No loading of any kind in excess of design loads shall be placed on any part of the building structure prior to submission of drawings and calculations.

2.0 EXECUTION / SCHEDULING / START OF WORK

- A. The award of contract, if awarded, will be to the most qualified, responsive and responsible Bidder whose qualifications are in the best interest of the Owner and whose proposal complies with all the job requirements. No award will be given until the Owner has concluded such investigation and qualification to establish responsiveness, responsibility, qualification, and financial ability of the Bidder to perform the Work as described within the cost objectives and time prescribed. In review of the Bids, the Owner may make provisions for alternates and unit prices, if requested by the bid forms. If the Contract is awarded, it is estimated that the OWNER or ENGINEER will give the Bidder written notification of the award within 30 days after opening the Bids.
- B. The Contractor will be furnished free of charge, three (3) copies of Contract Documents. Additional sets will be furnished at the cost of reproduction, postage and handling.
- Partial sets of documents will not be issued, nor will documents be issued to other than the General Contractor. **Unauthorized reproduction of Documents will be considered a violation of the Engineer's Copyright.**
- C. Prior to commencement of any Work, the Contractor will submit to the Owner and Engineer an estimated progress schedule indicating the starting and completion dates of the various stages of the work.
- D. Before the commencement of Work, a conference will be held to review the estimated schedule to establish procedures for handling submissions and for processing applications for Payment, and to establish an understanding of the scope of work. Present at the conference will be the following: Owner, Engineer, Contractor, and representatives of his Subcontractors and Material Suppliers.

3.0 CONTRACTOR / SUB CONTRACTS / WORK BY OTHERS / MATERIALS

- A. The Contractor may make no changes to the scope of Work without having first received written permission. Where detailed information is lacking, refer to Engineer, in writing and otherwise, for information before proceeding with work. If work is required in a manner to make it impossible to produce first class work, a written request from the Engineer with a written interpretation before proceeding with said work from the Owner or Engineer is required.
- B. The Contractor will not employ any Subcontractor not included in bid document as a substitute without first obtaining written approval and acknowledgement from the Owner.
- C. The Contractor will be fully responsible for all acts and omissions of his Subcontractors and of all persons, directly or indirectly, employed by him. As well as, all persons for whose acts make him liable to the same extent that he is responsible for the acts and omissions of the persons directly employed by him. No contractual relationship shall exist between any Subcontractor and the Owner or any obligation on the part of the Owner to pay or to see to the payment of any monies due any subcontractor, except as to the extent practicable, evidence of amount paid to the Contractor on account of specific work done in accordance with the schedule of values.
- D. The Contractor will specifically bind all Subcontractors to all of the applicable terms and conditions of the Contract Documents. Each and every subcontractor by undertaking to perform any of the Work will thereby automatically be deemed to be bound by such terms and conditions.

- E. The Contractor will provide and pay for all materials, equipment, labor, transportation, machinery, tools, appliance, fuel, light, telephone, sanitary facilities and all peripherals and incidentals necessary for the execution, testing, initial operation and completion of Work.
- F. The Contractor's insurance will provide coverage for all equipment, tools and facilities placed on the Owner's property. The Owner assumes no liability for theft or vandalism of any materials, equipment, tools or facilities placed on the Owner's property.
- G. All equipment, tools, and facilities shall be in good working order and all materials used will be NEW. The Contractor is obligated to furnish evidence as to the type and quality of materials and equipment if requested by the Owner or Engineer.
- H. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable manufacture, fabricator, supplier or distributor, except as otherwise provided in the Contract Documents.
- I. Where several materials are specified by the name for one use, select for use any of those specified. Whenever item or class of materials is specified exclusively by trade name, manufactures name, or by catalog reference, use only such item. No substitutions for materials, article, or process required under Contract will be allowed unless the Owner grants specific written approval. Substitutions may not be necessarily granted.

4.0 PERMITS, FEES, NOTICES AND TAXES

- A. Charges by local municipalities for connections to water and sewer systems shall be paid by the Contractor. The Contractor shall pay any fees for damages to roads, other public property or to any public utilities.
- B. The Contractor shall secure and pay for all construction permits, certifications of inspections, licenses and certificates of occupancy that may be required by authorities having jurisdiction over Work.
- C. The Contractor shall expend every reasonable effort to obtain the necessary permits, licenses and certificates herein required, but shall not be responsible for an inability to obtain it due to governmental authority or body that prevents the commencement, continuation or completion of Work unless caused directly or indirectly by the Contractor.
- D. The Contractor will pay all sales, use, consumer and similar taxes required by law. The Contractor assumes and is liable for all State, Federal Payroll or Social Security Taxes, Unemployment and Workers Compensation Taxes and fees, and guarantees to hold the Owner harmless in every respect against the same.

5.0 SITE USE & SAFETY

- A. The Contractor shall be responsible for the receiving, unloading, handling and storage of any equipment or materials supplied or utilized by the Contractor hereunder. The Contractor shall store equipment and materials, as necessary to those areas permitted by law, ordinances, permits and those areas designated by the Owner and shall not unreasonably encumber the premises with equipment and materials.
- B. The Contractor will be responsible for the development, initiation, maintaining and supervising of all safety and precautionary programs and will provide the necessary protection to prevent damage, injury or loss to all employees, occupants, visitors,

subcontractors, materials, tools, equipment, and property at the site of the Owner, both common to the community and of the individual residents.

- C. The Contractor is to comply with all regulatory safety standards and codes, such as and not limited to OSHA. The Contractor will comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction over the safety of persons or property or to protect them from damage or injury or loss.
- D. The Contractor will be responsible for the erection of and maintenance of all equipment and safety barriers as required by the conditions and progress of the Work, necessary safeguards for safety and protection including posting danger signs and other warnings against hazards and compliance with safety regulations.
- E. The Contractor will be responsible and (without special instruction or authorization from the Engineer), is obligated to: 1) notify the Owner and each of the residents of any potential hazards which may exist at the job site and 2) is obligated to act, at his discretion, to prevent threatened damage, injury or loss.
- F. In the event the Contractor encounters what is thought to be asbestos containing material (ACM) or polychlorinated biphenyl (PCB) the Contractor shall immediately stop work and notify the Owner and Engineer of the present condition. The Work shall continue once the ACM and PCB are rendered harmless, by written notification of the Owner to the Contractor.
- G. In the event of an injury or accident at the site, the Contractor shall immediately notify the Owner and Engineer in writing of the individuals involved, circumstances surrounding the accident and severity of the injury.
- H. The Contractor shall be responsible for the means & methods of all materials handling and will not be permitted to use the Owner's elevator without prior approval. The cost to repair any damages to the elevator resulting from the Contractor's use shall be at the Contractor's expense and shall be deducted from the contract price.

6.0 SUPERINTENDENT

- A. The Contractor shall maintain at the project job site, a full-time superintendent satisfactory to the Owner and Engineer, who will devote **100% of his working hours to this project**. The superintendent will be the Contractor's representative at the site and shall have authority to act on behalf of the Contractor. All communication given to the superintendent shall be binding as if given to the Contractor. The superintendent shall also be the responsible member whose duty shall include accident prevention on the job site.
- B. **The Contractor will be solely responsible for the means, methods, techniques, sequences and procedures of construction. Before undertaking the Work, he will carefully review the Contract Documents, check and verify all figures and field measurements for inconsistencies. Perform required compatibility tests and he will report in writing any conflict, error or discrepancy, which he may discover to the Engineer.**
- C. The Contractor will provide competent, qualified and skilled labor in the respective field of Work. He will at all times maintain good discipline and ensure an environment that refrains from the public use of profanity and drugs.

- D. The Owner and Engineer will not be responsible for the acts or omissions of the Contractor, or any Subcontractors, or any of his or their agents, employees or any other persons performing any of the Work.

7.0 INDEMNIFICATION

- A. To the fullest extent permitted by law the Contractor shall indemnify, defend, and hold harmless the Owner (and its current and former agents, assigns, directors, devisees, employees, family members, guests, heirs, insurers, managers, managing-members, members, officers, partners, permittees, principals, representatives, shareholders, successors, successors-in-interest, sureties, tenants, and affiliated and/or related entities, and any other person or entity for which any of the foregoing are responsible (collectively the "Indemnified Parties") from and against any and all Liabilities (as defined in Paragraph 7(B) hereof), including, but not limited to and without limitation, Attorneys' Fees and Costs, arising out of or resulting from performance of the Work, provided that such Liabilities are attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property or real property (other than the Work itself), including loss of use therefrom, but only to the extent caused by the negligent acts or omissions of the Contractor, its subcontractors, its sub-subcontractors, its Vendors, anyone directly or indirectly employed by any of the foregoing, and/or anyone for whose acts they may be liable, regardless of whether or not such Liabilities are caused in part by an Indemnified Party. The obligations under this Paragraph 7(A) shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Paragraph 7.
- B. To the fullest extent permitted by law, the Contractor shall indemnify, defend, and hold harmless the Indemnified Parties from and against any and all actions, agreements, claims, duties, suits, controversies, covenants, demands, fees, fines, losses, costs, expenses, executions, obligations, liabilities, liens, deaths, judgments, penalties, personal injuries, property damage, promises, damages (including treble, punitive, direct, indirect, incidental, consequential damages, and special, loss of consortium, and whether economic or non-economic), recoveries, rights, variances, and deficiencies, including, but not limited to and without limitation, interest, penalties, and all other costs of defense (including, but not limited to, Attorneys' Fees and Costs), of any nature whatsoever, in law or in equity, now or in the future, foreseen or unforeseen, anticipated or unanticipated (collectively "Liabilities"), caused by, arising from, or relating to (whether as alleged and/or as adjudicated), any act, omission, or default of the Contractor, its subcontractors, its sub-subcontractors, its Vendors, anyone directly or indirectly employed by any of the foregoing, and/or anyone for whose acts they may be liable, and/or of the Indemnified Parties, which arises out of or relates to this Agreement or its performance. The Contractor's duties to defend, indemnify, and hold harmless the Indemnified Parties includes all Liabilities of any nature which arise out of or relate to the Contractor's performance of this Agreement, including, but not limited to and without limitation, those Liabilities arising out of or relating, in whole or in part, the Indemnified Parties' own fault and/or negligence arising out of or related to this Agreement. However, such indemnification and holding harmless duties for an Indemnified Party's own fault and/or negligence shall: (i) not include Liabilities to the extent they result from gross negligence, or willful, wanton, or intentional misconduct (or an equivalent mens rea as any of the foregoing) of the Indemnified Parties; (ii) not include Liabilities to the extent they result from statutory violation or punitive damages except and to the extent the statutory violation or punitive damages are caused by or result from the acts or omissions of the Contractor, its subcontractors, its sub-subcontractors, its Vendors, or agents of any tier or their respective employees; and (iii) be subject to a monetary limitation equal to the greater of Ten-Million and No/100 Dollars (\$10,000,000.00 USD), per occurrence, or the replacement cost of the building in the event of a total loss of the building, which sum the Parties acknowledge bear a reasonable commercial relationship to this Agreement, and

shall be deemed part of the project specifications (if any) and bid documents (if any). Should a Court of competent jurisdiction invalidate any aspect of this Paragraph 7(B) as contrary to §725.06, Fla. Stat., the Parties agree that the remainder of this 7(B) shall remain enforceable to the extent any Liabilities do not arise out of or relate to an Indemnified Party's own fault and/or negligence. The obligations under this Paragraph 7(B) shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a Party or person described in this Paragraph 7.

- C. To the fullest extent permitted by law, the Contractor shall indemnify, defend, and hold harmless the Indemnified Parties from and against any and all Liabilities (including, but not limited to and without limitation, Attorneys' Fees and Costs) arising out of, or in connection with any: (i) violation of or failure to comply with any law, statute, ordinance, rule, regulation, code, or requirement of a governmental authority that bears upon the performance of the Work by the Contractor, its subcontractors, its sub-subcontractors, its Vendors, or anyone directly or indirectly employed by any of the foregoing, and/or anyone for whose acts they may be liable; (ii) means, methods, procedures, techniques, or sequences of execution or performance of Contractor's Work; and/or (iii) failure to secure and pay for permits, fees, approvals, licenses, and inspections as required under the Contract Documents, or any violation of any permit or other approval of a governmental authority applicable to the Work, by the Contractor, its subcontractors, its sub-subcontractor, its Vendor, or anyone directly or indirectly employed by any of the foregoing, and/or anyone for whose acts they may be liable. The obligations under this Paragraph 7(C) shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Paragraph 7.
- D. The Contractor's separate indemnity, defense, and hold harmless obligations the separate subsections of this Paragraph 7, includes, but is not limited to and without limitation, indemnifying, defending, and holding harmless the Indemnified Parties from and against all Attorneys' Fees and Costs. The obligations under this Paragraph 7(D) shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Paragraph 13.
- E. The Contractor's separate indemnity, defense, and hold harmless obligations the separate subsections of this Paragraph 7 are intended to be cumulative. Any inclusion of specific language within any subsection of this Paragraph 7 shall not be construed to exclude or limit another subsection from independently requiring the Contractor to indemnify, defend, and/or hold harmless the Indemnified Parties from any against such Liabilities.
- F. In claims against any person or entity indemnified under this Paragraph 7 by an employee of the Contractor, its subcontractors, its sub-subcontractors, its Vendor, or anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligations under this Paragraph 7 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor, its subcontractors, its sub-subcontractors, its Vendor under workers' compensation acts, disability benefit acts or other employee benefit acts.
- G. If a claim is brought or an action is filed which is subject to any of Contractor's indemnity, defense, and hold harmless obligations under this Paragraph 7, Contractor agrees that the Indemnified Parties may employ attorneys of the Indemnified Parties' own selection to appear and defend the claim or action on behalf of the Indemnified Parties at the sole cost and expense of Contractor. The Indemnified Parties shall have the sole authority for the direction of the defense, and shall be the sole judge of the acceptability of any

compromise or settlement of any claims or actions against the Indemnified Parties, and may accept or reject any offers of compromise or settlement in their sole, unrestricted, and unfettered discretion, without regard to reasonableness, at the sole cost and expense of Contractor.

- H. The Contractor's separate indemnity, defense, and hold harmless obligations the separate subsections of this Paragraph 7 shall survive the completion of the Work and any termination of this Agreement, and shall remain in full force and effect for any Liabilities whatsoever arising out of or related to this Agreement or its performance.

8.0 ADMINISTRATION OF THE CONTRACT

- A. The Engineer will review the Work done and material used by the Contractor and carry out the duties that are stated in the engagement contract and in the Contract Documents or delegated to him by the Owner.
- B. The Engineer will review all requests for specifications, alternates and substitutions and recommend appropriate response to Owner for its prior approval.
- C. The Engineer will notify the Contractor concerning any identified violation of, or failure to comply with any part of the Contract Documents and Specifications by the Contractor and recommend recriminatory action to owner for the prior approval.
- D. The Engineer along with the Owner and/or Owner's attorney shall decide all questions concerning the interpretations of the Contract Documents to the quality, amount and value of any Work done and materials furnished under or by reason of this Contract, and his estimate and decision shall be final and conclusive.
- E. The Engineer or Owner will not be responsible for the Contractor's means, methods, techniques, and procedures used in construction and will not be held liable for the Contractor's inadequate or unsatisfactory performance of Work delays which are beyond his control.
- F. Any information NOT furnished by the Owner or the Engineer, his staff or inspectors does not relieve the Contractor of his responsibilities to complete the work as prescribed.

9.0 STOPPAGE / SUSPENSION OF WORK / TERMINATION

- A. The Contractor's rights to perform Work, correct deficiencies and occupy the contract site shall be at the sole option of the Owner.
- B. The Owner may, at any time and without cause, suspend Work or any portion thereof for a period of not more than ninety (90) days by notice in writing to the Contractor. The Contractor may be allowed a reasonable increase in the Contract Price and/or an extension of the Contract Time directly attributable to any suspension without cause if he makes a claim thereof.
- C. If the Work is defective, or the Contractor fails to supply sufficient skilled workmen or suitable materials or equipment, or if the Contractor fails to make prompt payments to the Subcontractors or suppliers for labor materials, or equipment, the Owner or the Engineer may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been resolved.
- D. If the Contractor is adjudged as bankrupt or insolvent or if he makes a general assignment for the benefit of his creditors, or if a trustee or receiver is appointed for the Contractor or for any of his property, or if he files a petition to take advantage of any

debtors' act or to reorganize under the bankruptcy or similar laws, or if he repeatedly fails to supply skilled workmen or repeatedly fails to make prompt payments to the Subcontractors or if he disregards law, ordinances, rules, regulations or orders of any public body having jurisdiction, or if he disregards the authority of the owner or if he violates any provisions of the Contract Documents, the Owner may without prejudice to any other right or remedy and after giving the Contractor and his SURETY seven days written notice, terminate the services of the Contractor and take possession of the Project and all materials, equipment, tools, construction equipment thereon owned by the Contractor, and finish the Work by whatever method he may deem expedient. The Contractor shall not be entitled to further payment. If the balance to complete the work exceeds the unpaid balance, the Contractor will pay the difference to the Owner.

- E. If the Work is suspended for a period of more than ninety (90) days by the Owner, through no fault of the Contractor, or under an order of the court or other public authority, or the Owner fails to act on any Application of Payment within thirty days (30) days after it is submitted, or the Owner fails to pay the Contractor any sum approved or awarded by the arbitrators within thirty (30) days of its approval and presentation, then the Contractor may upon seven (7) days written notice to the Owner, terminate the Agreement and recover from the Owner payment for all Work executed. In addition, if the Owner has failed to act on an application of payment or the Owner has failed to make payment as aforesaid, the Contractor may upon seven (7) days written notice to the Owner stop Work until he has been paid all amounts due.

10.0 CHANGE ORDERS

- A. The Owner or Engineer may at anytime order additions, deletions or revisions in the Work. These changes will be authorized via written Change Orders. Upon receipt of a written Change Order signed by the Owner, the Contractor will proceed with the Work. All such changes shall be executed in accordance with the provisions of the Contract Documents.
- B. The Owner and the Engineer may authorize minor changes or alterations in the Work that may not involve extra cost and are not inconsistent with the overall intent of the Contract documents. This may be accomplished by a Field Change Request or by an engineer's executed answer to a Request for Information (RFI) or Engineer's Supplemental Instruction (ESI). If the Contractor believes these changes will increase the Contract Price, he shall request a written Change Order.
- C. If the Contractor should neglect to perform Work in accordance with the Contract Documents, including any requirements of the progress schedule, The Owner, after three (3) days written notice to the Contractor may, without prejudice to any other remedy he may have, make good such deficiencies and the cost thereof (including compensation for additional professional services) to be charged against the Contractor in which case a Change Order shall be issued incorporating the necessary changes in the Contract Documents including an appropriate reduction in the Contract Price. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor will pay the difference to the Owner.
- D. All Work will be of good quality and free from faults or defects. Work not in accordance with the requirements of the Contract Documents or defects revealed through failed inspection or tests shall be considered defective. Prompt notice of all defects shall be given to the Contractor. Prompt notice is defined as 4 business days from date of inspection. All defective Work whether or not in place may be rejected.

11.0 DELAYS DUE TO WEATHER:

- A. The Contractor shall submit written notification for weather related delays to the Owner. Written notification shall be submitted no later than 24 hrs after the requested delay. The notification shall include:
- 1) Project name and location
 - 2) Name of Owner
 - 3) Project number
 - 4) Contractor's name and address
 - 5) Date of submittal
 - 6) Day(s) / requested (1/4 day, 1/2 day, 3/4 day, full day)
 - 7) Did work continue that day?
 - 8) What time did work stop that day?

12.0 CHANGE IN CONTRACT PRICE:

- A. The Contract Price is the total compensation payable to the Contractor for performing the Work based on the bid form, unit prices, cost plus and estimated quantities. There shall be no changes in the Contract Price unless approved in advance and in writing by the Owner or Engineer with prior approval of Owner.
- B. The Owner and Contractor shall agree upon all quantities and methods for computations of payments prior to submittal for payments.
- C. Provisions for establishing the Contractor's overhead and profit for extra work are set forth within the Bid Form Document.
- D. The Contractor shall submit receipts or other evidence showing his costs and his right to the payment for extra work if so required by the Owner or the Engineer.
- E. Labor costs shall include supervision, estimations, layout, tradesman and laborer's wages, including all applicable taxes, insurance premiums and assessments.

13.0 CONTRACT TIME

- A. It is hereby understood and mutually agreed, by and between Owner and Contractor, that the Contract Time as indicated on the Agreement Form constitutes a reasonable time period in which to complete the Work in compliance with the Contract Documents. Execution of the Contract shall constitute acknowledgement and agreement to the above.
- B. The Contractor will be required to have the project completed by the agreed upon date as mutually agreed upon and set forth within the Contract Agreement and have the actual site work, including punch list items and site clean up, totally completed within 14 calendar days thereafter fixed date. Failure to do so will result in liquidated damages in the amount of **\$500.00 per day** for each day between the fixed date and the total completion date; such payment shall not be construed as Penalty but as Liquidated damages for breach of contract.
- C. The Contractor shall furnish sufficient forces and equipment and shall work such hours, including overtime operations, as necessary to execute the Work in accordance with the approved progress schedule. If the Contractor falls behind the progress schedule, he shall take steps as necessary to see that the work progresses properly in order to complete it on time.
- D. Failure of the Contractor to comply with the prescribed requirements under Article 8.0 shall be grounds for determination that the Contractor is not pursuing the Work with

diligence as will insure the completion within the time specified and such failure constitutes a violation of the Agreement.

- E. Under such determination, the Owner may terminate the Contractor's right to proceed with the work.
- F. The Owner's exercise of the right to terminate shall not release the Contractor from his obligation to pay said damages in the amounts set out in the Agreement. The Owner may deduct from the funds owed to the Contractor amount equal to such damages.

14.0 PAYMENTS AND COMPLETION

A. The Contractor shall submit the following with each payment request:

- 1. Application for Payment (AIA Document G702, G703).
- 2. **Schedule of values of the Work, including quantities and unit prices, aggregating the Contract Price for all items on the Bid Form.** This schedule shall subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction.
 - a. Project name and location
 - b. Name of owner
 - c. Project number
 - d. Contractor's name and address
 - e. Date of submittal
- 3. **Product Delivery Bill of Laden:** Indicating materials purchased and delivered.
- 4. **Summary List:** A list of completed units and other completed areas of work.
- 5. **Sketch Plan:** (If applicable) A sketched plan indicating actual quantities and areas of completed repair.
- 6. **Project Schedule. With the Application for Payment, the Contractor shall submit an updated Project Schedule UNO**
- 7. **Contractor's Affidavit, Releases of Liens and Partial Liens**

B. The Contractor will submit to the Owner for review on the 25th day of the month **three (3) copies of the Application for Payment** filled out and signed by the Contractor covering the Work completed during the period from the start of the project to the 25th day of the month for the first Application for Payment, or completed during the period from the previous Application for Payment to the 25th day of the month for all subsequent Applications for Payment supported by such data as the Owner may reasonably require. Quantities used in the Application for Payment shall be previously approved by the Owner.

C. The Contractor warrants and guarantees that title to all Work, materials and equipment covered by an Application for Payment, whether incorporated in the Project or not, will have passed to the Owner PRIOR TO THE MAKING OF THE application for Payment, free and clear of all liens, claims, security interests and encumbrances (hereafter in these General Conditions referred to as "Liens"); and no Work, materials or equipment covered by an Application for Payment will have been acquired by the Contractor or by any other person performing the Work at the site or furnishing materials and equipment for the

Project, subject to an agreement under which an interest therein or encumbrance thereon is retained by the seller or otherwise imposed by the Contractor or such other person.

- D. The Owner will, within **ten days after receipt** of each Application for Payment, either indicate in writing an approval of payment, or return the Application to the Contractor indicating in writing the reason for refusing to approve payment (such as errors or incomplete Pay Applications). In the latter case, the Contractor will make the necessary corrections and resubmit the Application. The Owner will, within ten days of receipt of the approved Application for Payment, pay the Contractor the amount approved by the Owner. Should the original or resubmitted Application cause a delay in payment, there will be no penalty towards the Owner.
- E. If the Contractor fails to provide the required construction schedules, submittals and samples, or fails to provide for tests and inspections, the Owner may withhold approval of pay applications until the deficiencies have been corrected.
- F. Payment application times: The twenty-fifth of each month with a **ten percent (10%) retainage** applying to all approved payments, being held until Project Close out.
- G. **Contractor shall submit simultaneously, with his Progress Payment Request, a Contractor's Affidavit for Partial Progress Payment and Partial Releases of Lien.**

15.0 APPROVAL OF PAYMENTS

- A. Approval by the Owner of any payment requested in an Application for Payment, will be based upon on-site observations of the Work in progress, as well as a review of the Application for Payment and the determination that the work has progressed to the point indicated and that the quality of Work is externally visible generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning project upon completion, to the results of any subsequent tests called for in the Contract Documents and any qualifications stated in the approval). Approval of payment by the Owner shall not be deemed to have been based on exhaustive on-site inspections to review the quality or the quantity of Work, or that he has reviewed the means, methods and techniques, sequences, and procedures of construction or that he has made any examination to ascertain how or for what purpose the Contractor has used the monies paid or to be paid to him on account of the Contract Price.
- B. Payments due to Contractor may be withheld by the Owner on account of defective work not remedied, claims filed, reasonable evidence indicating probability of filing claims, failure of Contractor to make payment properly to Subcontractor or for material or labor on the reasonable belief of the Owner that the work to be preformed under this Contract which remain unfinished cannot be completed for the balance then unpaid as determined by the Engineer and Owner.

16.0 FINAL PAYMENT

- A. Upon written notice from the Contractor to the Owner that the Project is complete, the Owner and Engineer will make a final inspection with the Contractor and will notify the Contractor in writing of any particulars in which this inspection reveals that the Work is defective. The Contractor shall immediately make such corrections as are necessary to remedy such defects. At the Owner's request, the Engineer may be asked to perform an additional final inspection to verify all deficiencies have been remedied.
- B. After the Contractor has completed any such corrections to the satisfaction of the Owner and Engineer and delivered all maintenance and operating instructions, schedules, guarantees, warranties, certificates of inspection and other documents, all as required by

the Contract Documents, he may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by such supporting data as the Owner and Engineer may require, together with complete and legally effective releases or waivers (satisfactory to the Owner and Engineer) of all Liens arising out of the Contract Documents and the labor and services, material and equipment for which a Lien could be filed, and that all payrolls, materials and equipment bills, and other indebtedness connected with the Work for which the Owner or his property might in any way be responsible, have been paid or otherwise satisfied; and consent of the surety, if any, to final payment. If any Subcontractor or supplier fails to furnish a release or receipt in full, the Contractor may furnish a bond satisfactory to the Owner to indemnify him against any Lien.

- C. **The Contractor shall submit simultaneously with the Final Application for Payment a Contractor Final Affidavit and Release of Lien, as well as Final Release of Lien for all Subcontractors, laborers, material men and suppliers; including Contractor's and Manufacturer's Warranties, and Manufacturer's Certification of finished work.**
- D. **Contractor, manufacturers, and any product applicators shall be jointly and severely liable for any warranty or to serviceability or defects of works or products.**

17.0 WAIVERS OF CLAIMS AND CONTINUING OBLIGATIONS

- A. The Contractor's obligation to perform the Work and complete the Project in accordance with the Contract Documents shall be absolute. Neither approval of any progress or final payment by the Engineer, nor any payment by the Owner to the Contractor under the Contract Documents, nor any use or occupancy of the Project or any part thereof by the Owner nor any faulty or defective work by the Owner shall constitute an acceptance of work not in accordance with the Contract Documents.
- B. The making applications for and acceptance of final payment shall constitute:
 - 1. A waiver of all claims by the Owner against the Contractor other than those arising from unsettled Liens, from faulty or defective work (whether patent or latent) discovered after final payments; failure to comply with the requirements of the Contract Documents; and/or failure to comply with the terms of any special guarantees specified in the Contract Documents, and
 - 2. A waiver of all claims by the Contractor against the Owner other than those previously made in writing and still unsettled.

18.0 INSURANCE AND BONDS

A. CONTRACTOR'S LIABILITY INSURANCE

- 1. Required Insurance
 - a. Worker's Compensation:

Each Accident	\$100,000
Disease – Employee	\$100,000
Disease Policy Limit	\$500,000
 - b. Bodily Injury, Personal Injury Liability and Property Damage Liability

Each Occurrence:	\$1,000,000
General Aggregate (umbrella):	\$2,000,000
Products – Comp/OP AGG	\$2,000,000

GENERAL CONDITIONS

Comprehensive General Public Liability including Contractors Protective Liability, Product Completed Operations – Coverage, shall include Premises and/or Operations, Independent Contractors, Products and/or Completed Operations, Independent Contractors, Products Coverage, and Contractual Liability Endorsement.

- c. Comprehensive Automobile (owned, leased, non-owned and hired) for Bodily Injury Liability and Property Damage Liability.

Each Claimant:	\$500,000
Each Occurrence:	\$500,000
General Aggregate (umbrella):	\$1,000,000

- B. Before the commencement of Work the Contractor will submit to the Owner certificates of insurance. These certificates shall contain a provision that the coverage afforded under the policies will not be cancelled or non-renewed until at least thirty (30) days prior written notice has been given to the Owner, certified mail, return receipt requested.
- C. The insurance required in Article 18.0 shall be extended and maintained in the amounts specified for the duration of all Guarantee-Warranty requirements of the Contract Documents, in the event that the Contractor, his Subcontractors and or his Sub-subcontractors is required to remedy workmanship defects in materials or to execute and satisfy any Guarantee-Warranty requirements after the date of completion of the Contract, with respect to the Contractor's completed operations coverage, such coverage shall be maintained at least until the expiration of four (4) years after the date of final payment.
- D. Contractor, manufacturer, and any product applicator shall be jointly and severely liable for any warranties or to serviceability or defects.

19.0 PERFORMANCE BOND AND PAYMENT BOND

- A. If Required: Prior to the execution of the Contract, the Contractor shall furnish bonds covering the faithful performance of the Contract and the payment of all obligations arising therefrom in a form acceptable to the Owner for the full amount of the Contract. Bonds shall be kept current in the full amount of the Contract.

END OF SECTION

SECTION 011100

SUMMARY

PART 1 - GENERAL

- 1.1 PROJECT IDENTIFICATION Buildings Repairs and Related Work
Bordeaux Village
- 1.2 PROJECT OWNER Bordeaux Village Association, No. 2, Inc.
13600 Egret Boulevard
Clearwater, FL 33762
- 1.3 PROJECT SPECIFIER Bruce Miller, PE
10405 Technology Terrace
Lakewood Ranch, FL 34211
Tel: 941-727-2600
- 1.4 RELATED DOCUMENTS
- A. Project Manual, Repair Drawings, Manufacturer's Specifications, and the Original Construction Drawings apply to this Section.
- 1.5 PROJECT SUMMARY
- A. The Work to be performed under the terms and conditions of this contract includes: the furnishing of all materials, labor, services, permit fees, supervision, quality control, inspections, testing, scaffolding, portable sanitation, dumpsters, and equipment required or incidental to concrete repair at the entry stairs and balconies; removal of tile/surface finishes and water-proofing of balconies and stairs; removal and replacement of existing screen enclosures; stucco repair/replacement; and exterior painting of all buildings and carports.
- B. The facilities within the scope of work include:
1. 2-story residential condominium building – Building G (2453 Kingfisher Ln)
 2. 2-story residential condominium building – Building H (2467 Kingfisher Ln)
 3. 2-story residential condominium building – Building I (2473 Kingfisher Ln)
 4. 2-story residential condominium building – Building J (2462 Kingfisher Ln)
 5. 2-story residential condominium building – Building K (13600 Egret Blvd)
 6. 2-story residential condominium building – Building L (2401 Gull Ct.)
 7. Fourteen (14) Carports
- C. The Contractor shall realize that the facilities will be occupied and fully functional during the construction period. The Contractor shall proceed with the Work in a manner that does not interfere with daily operation of the facilities. Any action by the Contractor, that may affect the operation of the facilities, will be addressed to the Owner and Engineer. Notification from the Contractor shall be provided in writing, seven (7) days prior to proceeding with that portion of Work and must be approved by the Owner.
- 1.6 PERFORMANCE REQUIREMENTS
- A. All repairs shall be performed in strict accordance with these plans, specifications, Florida Building Code 7th Edition (2020) and local ordinances.

- B. Provide a complete waterproofing system that prevents the passage of water at the balcony slabs and stairwells in strict accordance with Sealant, Waterproofing, and Restoration (SWRI) standards and manufacturer's instructions.
- C. Provide sustainable concrete repairs in strict accordance with International Concrete Repair Institute (ICRI), the American Concrete Institute (ACI) and manufacturer's instructions.
- D. Provide a premium paint coating system free of peeling, blistering, flaking, delamination, loss of adhesion and cracking for the life of the warranty.
- E. Provide sustainable stucco repairs in strict accordance with American Society for Testing and Materials (ASTM), Portland Cement Association (PCA) and manufacturer's instructions.
- F. Screen enclosures with integrated guardrails and their connections including the connections between the supporting structure shall be designed to meet the minimum design requirements of the Florida Building Code 7th Edition (2020) – (FBC), the current edition of the ASCE 7 “Minimum design loads for buildings and other structures”, and the current edition of the life Safety Code. Design documents are to be submitted to the Owner for final approval.

2.0 DESCRIPTION OF WORK – GENERAL:

The following work items are to be executed only as indicated by the Owner and/or Engineer and in accordance with the provisions of all applicable Sections and Drawings contained within the Project Manual.

The description of work provided below is a summary only. Manufacturer's requirements, Code requirements, requirements from Authorities Having Jurisdiction, and requirements included in the specifications or shown on the drawings shall also apply.

- A. Mobilization, Demobilization and General Conditions in accordance with Section 007200 of the project manual. A detailed breakdown of this amount will be required before signing of contract.
- B. The Contractor shall perform mock-ups of the required Work prior to proceeding with the said repairs. Mock-ups shall be reviewed and approved by the Engineer and Owner.
 - 1. Mock-ups shall be installed in the presence of the Owner, Engineer, and manufacturer's representative to assure installation procedures adhere to warranty requirements.
 - 2. Required mock-up locations:
 - a. Concrete Repairs: (demo and pour back) overhead, column, beam, slab and epoxy rebar installation
 - b. Balcony Waterproofing (stepped mockup displaying prep, base, and finish coats)
 - c. Stairwell waterproofing (stepped mockup displaying prep, base, and finish coats)
 - d. Screen Enclosure
 - e. Stucco repair/replacement
 - f. Sealant joints
 - a. Stucco to stucco
 - b. Stucco to window perimeters (metal-to-stucco)
 - c. Balcony floor to wall
 - g. Painting systems (stepped mock-up) Prep / prime / finish
 - a. Stucco / masonry substrate

- 3.
 - b. Painting system on miscellaneous substrates
- 3. Approved mock-up shall remain in place and establish the guidelines for acceptable installation of Work and acceptable appearance.
- C. Prior to bidding the Contractor shall perform the following:
 - 1. Site Verification Survey: The survey shall be made to the exterior of the buildings and common areas within the areas of work to verify the existing conditions which may be affected by the construction, as well as discrepancies between the field conditions and the scope of work. If quantities are required, they shall be entered on the bid form, and discrepancies shall be brought to the attention of the Engineer prior to bid submittal.
- D. Prior to the execution of the Contract, Contractor shall provide:
 - 1. Sample Warranties: sample warranties required by the contract documents and compliant with the requirements in the contract documents shall be submitted by the Contractor and approved by the Engineer prior to the execution of the Contract. Submit electronically in .pdf.
 - 2. Project Critical Path Schedule: by drop, staging, units, or major tasks. Submit electronically in .pdf.
 - 3. Staging/Drop Plan: numbered consecutively and corresponding to the Project Critical Path Schedule. Submit electronically in .pdf.
 - 4. A Breakdown of the Mobilization, Demobilization and General Conditions will be required prior to the execution of the contract.
- E. Prior to construction the Contractor shall provide:
 - 1. Pre-condition Assessment: A pre-condition assessment of the property located within the areas of work shall be conducted to document the existing conditions and pre-existing damages which may exist. The assessment shall incorporate visual observations and video documentation prior to commencing construction. A cope shall be provided to the Engineer and the Owner, noting any pre-existing damage. Submit electronically.
 - 2. Submit the following:
 - a. Submit all required submittals listed in the specifications, including technical data sheets, samples, and manufacturer's installation instructions. Submit electronically in .pdf.
 - b. Submit an updated project schedule. Submit electronically in .pdf.
 - c. Submit a hurricane plan, detailing procedures for securing the facility, materials and the work in process, and procedures for demobilization and remobilization. Submit electronically in .pdf.
- F. Coordinate any traffic interruptions caused by the performance of the work with the appropriate authority having jurisdiction.
- G. Install and coordinate pedestrian and overhead protection with the Owner. Install protection, i.e., temporary walls, fencing and barriers to prevent public use and injury to the public in the areas of Work.
- H. Install protection i.e., drop cloths, protection board, and plastic sheeting in the areas of work and adjacent to the areas of work to prevent damage to the properly. Areas requiring protection include but are not limited to: floors, decks, pavements, landscaping, windows, doors, and railings. Cover windows, doors, and railings with plastic. Install barriers to prevent debris from entering common areas.
- I. Staging, scaffolding and/or other methods will be required as needed to facilitate the Work. The Contractor shall independently contract and provide signed and sealed

scaffolding or staging for the work. The staging shall remain in place for use by the Engineer and Inspectors to conduct progress inspections and punch out.

- J. The staging shall remain in place for use by the Engineer and inspectors to conduct progress observations which include:
 - 1. Concrete repair. Demo and pour back
 - 2. Stucco soundings and repairs
 - 3. Balcony/stairwell waterproofing installation: Prep / base / finish
 - 4. Sealant installation
 - 5. Painting systems for all substrates: Prep / prime / finish
 - 6. Screen enclosure installation
 - 7. Punch out by buildings
- K. Coordinate testing and compatibility evaluation for all materials including paint coatings, sealants, and caulks at each unique substrate per referenced protocols, and include mock-up samples for approval with the manufacturers' representative and Engineer present.
- L. All materials to be reused and/or reinstalled shall be fully protected from damage, wrapped, labeled, photographed, and stored on site in a container. There will be no storage permitted in the buildings.

BALCONIES - CONCRETE REPAIRS, SCREEN ENCLOSURE REPLACEMENT AND WATER-PROOFING:

- A. Remove and dispose of all existing screen enclosures at the balconies, including but not limited to all screen enclosure fasteners and embedded anchors in the concrete slab. Patch all penetrations in the slab using approved materials in accordance with these specifications including but not limited to section(s) 071801, 079200, details, and manufacturers' instructions.
- B. Remove all existing floor finishes, cants and sealants at edge of the balconies and prepare surface to receive new continuous waterproofing deck coating systems, in accordance with these specifications including but not limited to section(s) 071801 and 079200, details, and manufacturer's instructions.
- C. After the removal of the balcony floor finishes, the Contractor with the assistance of the Engineer shall perform a pre-construction damage survey. This survey shall incorporate visual observations and mechanical sounding (hammer top method) to identify areas of spalling concrete, unbounded topping, exposed reinforcement, and cracks greater than hairline (1/16"). Areas noted for repair shall be spray marked in the field and quantified for verification by the Engineer. (Include in General Conditions).
- D. Keep all sliding glass doors and tracks in place unless removal is required to facilitate repairs when concrete damage extends beyond balconies and into the floor slab. Contact Engineer prior to door removal for verification.
 - 1. If required, protective barriers to be installed upon the removal of sliding glass doors. If concrete damage and repairs extend into the unit, the protective barrier shall extend into the unit to cover the work area. Store the sliding glass door assemblies and reinstall with new sill tracks and in-kind fasteners in accordance with original sliding glass door manufacturer's instructions, after repairs to balconies have been performed. Inject sealant in fastener holes before installing fasteners. Provide new sealant on perimeter tracks and frame.

- E. Provide surface repairs at the subject elevated balconies (up to 3-inches depth) in accordance with these specifications, including but not limited to section 031330, details, and manufacturer's instructions. Contact Engineer prior to demolition and pre-pour. The contract amount for the unit cost items will be based upon the actual quantity as accepted by the Engineer. The actual quantity may differ from estimated bid quantities on Bid Form.
- F. Provide full depth concrete slab edge repairs at the subject elevated balconies in accordance with these specifications, including but not limited to section 031330, details, and manufacturer's instructions. Re-stucco repair area and prep, prime, and paint to match existing. Contact Engineer prior to demolition and pre-pour. The contract amount for the unit cost items will be based upon the actual quantity as accepted by the Engineer. The actual quantity may differ from estimated bid quantities on Bid Form.
- G. Provide overhead partial depth concrete repairs (up to 3-inches depth) to the underside of the subject elevated balconies in accordance with these specifications including but not limited to section 031330, details, and manufacturer's instructions. Re-stucco repair area and pre, prime, and paint to match existing. Contact Engineer prior to demolition and pre-pour. The contract amount for the unit cost items will be based upon the actual quantity as accepted by the engineer. The actual quantity may differ from estimated bid quantities on Bid form.
- H. Install temporary barrier wall within the unit and provide concrete repairs at the reinforced concrete columns, beams, and walls in accordance these specifications including but not limited to section 031330, details, and manufacturer's instructions. Re-stucco repair area and pre, prime, and paint to match existing. Contact Engineer prior to demolition and pre-pour. The contract amount for the unit cost items will be based upon the actual quantity as accepted by the Engineer. The actual quantity may differ from estimated bid quantities on Bid Form.
- I. Epoxy-dowel and splice additional rebar as required in accordance with these specifications including but not limited to section 031330, details, and manufacturer's instructions. The contract amount for the unit cost items will be based upon the actual quantity as accepted by the Engineer. The actual quantity may differ from estimated bid quantities on Bid Form.
- J. Install new code compliant screen enclosures at balconies, in accordance with these specifications including but not limited to section 055816, details, and manufacturer's instructions.
 - 1. First Floor Balconies: Install screen enclosures integrate door
 - 2. Second Floor Balconies: Install screen enclosures with integrate guardrails
- K. Conduct flood tests at balcony slabs and install leveling material as required. Areas shall be flooded with water using a common garden hose. Apply leveling materials to areas which exhibit ponding water (bird baths) and promote positive drainage. Because there are limitations due to the existing conditions, it is not the intent of this specification to include the sloping of the entire deck surfaces rather to reduce areas of bird baths and other low spots in the existing construction. *(Based on a depth ranging from 0" to 1/2").*
- L. Install new fluid-applied water-proofing system at elevated balconies from slab edge to sliding glass door track, remove and replace existing sealants, including the installation of new sealants where previously omitted, as indicated per these specifications, section 071801, and details for water-tight seal including all cants, floor-to-wall junctures, all corners, along sliding glass door track (do not obstruct sliding glass door track weep holes), all control joints, all exposed fasteners, and all transitions in accordance with

these specifications, details, and manufacturer's instructions. **Color to be selected by Owner.**

- M. **Alternate: Appy Gemstone finish to balconies. Color and pattern to be selected by Owner.**

ENTRY STAIRS – CONCRETE REPAIRS AND WATER-PROOFING:

- A. Remove all existing floor finishes, cants and sealants at edge of the stairs and entryways and prepare surface to receive new continuous waterproofing traffic coating system.
- B. After the removal of the floor finishes, the Contractor with the assistance of the Engineer shall perform a pre-construction damage survey. This survey shall incorporate visual observations and mechanical sounding (hammer top method) to identify areas of spalling concrete, unbounded topping, exposed reinforcement, and cracks greater than hairline (1/16"). Areas note for repair shall be spray marked in the field and quantified for verification by the Engineer. (Include in General Conditions).
- C. Provide concrete repairs, as required, at the stairwells and entryways in accordance with these specifications, including but not limited to section 031330, details and manufacturer's instructions. Contact Engineer prior to demolition and pre-pour. The contract amount for the unit cost items will be based upon the actual quantity as accepted by the Engineer. The actual quantity may differ from estimated bid quantities on Bid Form.
- D. Conduct flood tests at stairs and entryways and install leveling materials as required. Areas shall be flooded with water using a common garden hose. Apply leveling materials to areas which exhibit ponding water (bird baths) and promote positive drainage. Because there are limitations due to the existing conditions, it is not the intent of this specification to include the sloping of the entire deck surfaces rather to reduce areas of bird baths and other low spots in the existing construction. *(Based on a depth ranging from 0" to ½").*
- E. Install new fluid-applied water-proofing system on stairs and entryways, remove and replace existing sealants, including the installation of new sealants where previously omitted, as indicated per these specifications, section 071801, and details for water-tight seal including all cants, floor-to-wall junctures, all corners, all control joints, all exposed fasteners, and all transitions in accordance with these specifications, details, and manufacturer's instructions.
- F. **Alternate: Appy Gemstone finish to entryways and stairwells. Color and pattern to be selected by Owner.**

STUCCO REPLACEMENT AT GABLE ENDS:

- A. Remove all exterior coverings (stucco and vapor barrier) at the gable ends of the buildings. The exterior coverings are to be disposed in a designated refuse container per Section 0150000. All nails, staples and fasteners are to be removed and discarded in a timely fashion.
- B. After the removal of the exterior coverings, Contractor with the assistance of the Engineer shall perform a condition assessment of the existing sheathing. This assessment shall incorporate visual observations and probing of the sheathing to identify damaged areas. Areas noted for repair shall be spray marked in the field and quantified.

- C. The Contractor shall only remove exterior coverings that can be **weather-proofed "dried-in" at the end of each workday.**
- D. **If required, sheathing and wood framing repairs are to be performed on a T & M basis.**
- E. Install Tyvek weather resistive barrier, "Home Wrap", over sheathing in accordance with these specifications, details and manufacturer's instructions. Contractor shall contact Engineer to assess the work prior to the installation of the stucco accessories and self-furring expanded metal lath.
- F. Replace all stucco accessories in their existing position (terminations, control joints, corners, etc.) install peel n' stick tape behind accessories in accordance with these details, specifications, and manufacturer's instructions.
- G. Install self-furring expanded metal lath over specified weather barrier per ASTM C 1063. Contractor shall contact the Engineer to assess the Work prior to the installation of the stucco scratch coat.
- H. Install 7/8" thick stucco in (3) coats to all previously stucco'd walls. Match existing texture. Install per ASTM C 926, these specifications, details, and manufacturer's instructions.
- I. Replace sealants at all dissimilar materials and junctures and remove and replace existing joint sealants here previously omitted.

EXTERIOR PAINTING, SEALANT REPLACEMENT AND STUCCO REPAIR:

- A. Remove and reinstall gutters/downspouts, building signs and other attachments as required to perform the work. Seal fasteners and surface mounted components where applicable.
- B. Pressure wash, mildewcide and prepare all exterior concrete masonry/stucco surfaces in accordance with manufacturer recommendations for surface preparation and remove any and all foreign matter that may affect the adhesion and performance of the direct applied systems. There are areas where there exist heavy deposits of mildew and algae. Unless otherwise noted power wash and with an inline injector apply a mildew solution composed of a five-gallon plastic container with 1 lb. of TSP, (if available), Tide or any other high-quality powder detergent with 1 gallon of pool chlorine mixed in 3 gallons of water. Allow solution to remain on surface for a minimum of 20-30 minutes prior to rinsing. Heavy build-ups shall require this mixed solution by volume in a chemically resistant pump-up sprayer with acid resistant hoses.
- C. Remove staining, mildew, efflorescence, and rust stains as per these specifications and coatings manufacturer's instructions. Special care is to be taken to remove all embedded iron deposits "rust mites" from stucco surfaces.
- D. At start of work for each "drop" or section of the building(s), the Contractor shall perform a pre-condition inspection of the exterior walls of the building(s). This inspection shall incorporate visual observations to identify fractured stucco or mechanical sounding (hammer tap method) to identify areas of unbonded stucco and cracks greater than hairline (1/16"). If areas of stucco unbonded or concrete distress are encountered, spray-mark or identify in the field for evaluation by the Engineer.
- E. If stucco is replaced, new stucco shall be tested for pH levels, recorded, and submitted to the Engineer prior to painting to ensure the new stucco is within the paint manufacturer's

allowable limits. When applying over new stucco surfaces the following timelines shall be followed prior to applying coating system:

1. Stucco repairs must be "fog" cured for minimum of 3 days before applying the specified, "hot" pH tolerant sealer/conditioner to all concrete masonry/stucco surfaces.
 2. Once the surface has been primed the surface must dry a minimum of 4 hours before applying Finish Coating.
- F. Repair all exterior wall breaches including cementitious finish cracks, delamination, and dis-bonding cementitious finish, voids, holes, penetrations, including but not limited to the removal of protruding accessories, rust stains, and blisters in accordance with these specifications, details, and manufactures' instructions. The smoothing of rough areas and sanding of the adjacent coatings is required providing a matching transition between the old and newly repaired and painted areas, (featheredged to blend into the adjacent cementitious finish).
- G. Provide wall crack repairs in accordance with these specifications, including but not limited to section(s) 031330, 079200, details, and manufacturer's instructions. Re-stucco repair area, if necessary, and prep prime, and paint to match existing. The contract amount for the unit cost items will be based upon the actual quantity as accepted by the engineer. The actual quantity may differ from estimated bid quantities on Bid form.
- H. Cut out existing loose, peeling/blistering coatings, and foreign materials, the smoothing of rough areas and sanding of the adjacent coatings is required providing a matching transition between the old and newly repaired and painted areas (featheredged to blend into the adjacent stucco). Apply paint coating in accordance with these specifications, details, and manufacturers' instructions.
- I. Remove all exterior building sealants, clean, prepare surfaces and install new hybrid sealants where removed or previously omitted using approved materials in accordance with these specifications, details, and manufacturers' instructions. (i.e., reglets, junctures, inside all corners, joints, reveals, wall penetrations, control joints, lights, shutters to building interfaces, balustrades and railing to wall interfaces, exposed fasteners, transitions, dissimilar materials interfaces, surface mount components).
- J. Remove and replace ALL window perimeter sealants with new hybrid sealants. Clean, prepare surfaces, solvent wipe metals clean, and prime (if necessary) to obtain proper adhesion and install new sealants and backer rod (if required) in accordance with these specifications, details, and manufacturers' instructions (i.e., metal-to-stucco).
- K. Detail and seal decorative trim, including but not limited to the filling of joints using approved sealants and elastomeric patching compounds in accordance with these specifications, details, and manufacturers' instructions.
- L. Seal all corner, butt joints and control joints using approved materials in accordance with these specifications, details, and manufacturers' instructions.
- M. Seal around scupper penetrations including but not limited to installing sealants using approved materials in accordance with these specifications, details, and manufacturers' instructions.
- N. Prepare, prime, and coat (paint) all pre-painted concrete, masonry and stucco exterior surfaces, decorative foam bands and ancillary components of the property using approved materials in accordance with these specifications, details, and manufacturers' instructions.

- O. Prepare, prime, and coat ALL previously painted miscellaneous PVC, ferrous metal surfaces and non-ferrous metal surfaces including but not limited to: service/common doors, drip edges, gutters, downspouts, conduit, flashings, vents, junction boxes, etc. using approved materials in accordance with these specifications, details, and manufacturers' instructions.

Excluding: Surface-mounted lights.
- P. All windows, walkways, balconies, doors, etc. shall be completely cleaned upon completion of work.
- Q. The project will be "punched-out" by drop or elevation for surface preparation and finish coat stages with the Engineer and Owner's Representative present unless otherwise directed.

TESTING

- A. After coatings and sealant have achieved sufficient cure, the Coatings Manufacturer's Representative shall contract or conduct adhesion tests at a minimum of (2) locations per building elevation or more, if required, prior to the Contractor proceeding with Work. Adhesion testing shall be either conducted in accordance with ASTM D3359-02 "Standard Test Method for Measuring Adhesion by Tape Test" or ASTM D4541-02 "Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers" whichever is recommended by the Manufacturer.
- B. After sealants have achieved sufficient cure pull testing of the sealants shall also be conducted in accordance with the attached "Standard Field Adhesion Test". The Engineer shall be present at all tests with reports delivered to both the Engineer and Contractor.
- C. Conduct flood test at balcony and entryway slabs and install leveling materials as required. Areas shall be flooded with water using a common garden hose. Apply leveling materials to areas which exhibit ponding water (bird Baths) and promote positive drainage. Because there are limitations due to the existing conditions, it is not intent of this specification to include the sloping of the entire deck surfaces rather to reduce areas of bird baths and other low spots in the existing construction. (Based on depth ranging from 0" to ½")

3.0 PERMITS AND FEES

- A. Apply for, obtain, and pay for permits, fees, and utility company back-charges required to perform the Work.
- B. A copy of all required permits, licenses, certificates, and approvals shall be delivered to the Engineers, and a copy shall be posted at the job site in a location acceptable to the Owner.
- C. The Contractor shall give notice of commencement and comply with laws, ordinances, rules and regulations, and orders of public authority bearing on the scope of Work. Should the Contractor notice a discrepancy between the Contract Documents and the aforementioned, he shall notify the Engineer in writing. If the contractor performs any Work knowing it to be contrary to such laws, ordinances, rules and regulations, and orders of public authority laws, and without such notice to the Engineer, the Contractor shall assume full responsibility and shall bear any attributed costs incurred.

4.0 CODES

- A. Comply with applicable codes and regulations of authorities having jurisdiction. Submit copies of inspection reports, notices, and similar communications to Engineer.
- B. Florida Building Code 7th Edition (2020), Florida Existing Building Code 7th Edition (2020)
- C. City of Clearwater and Pinellas County Ordinances

5.0 DIMENSIONS / DRAWINGS

- A. Verify ALL dimensions indicated on drawings with field dimensions before performing repairs and ordering materials. Drawings are not to scale.
- B. The Contractor shall maintain at all times a complete set of drawings and the Project Manual for review on the job site. All deviations and/or modifications from the original Construction Drawings shall be noted, and the Engineer is to be notified.

6.0 EXISTING CONDITIONS

- A. It is the Contractor's responsibility to verify all EXISTING CONDITIONS as they relate to the scope of Work prior to commencement. Review existing conditions with the original construction and restoration drawings contained herein. Notify Engineer of all conditions differing from those indicated in the Project Manual.
- B. Do not remove or alter structural components without prior written approval.
- C. It is the Contractor's responsibility to document existing conditions through photographs, videotape, and/or documentation of the existing conditions of the areas adjacent to the Work.
- D. Coordinate drawings for areas where close tolerances are required between building elements and mechanical and/or electrical work.
- E. Verify location of utilities, electrical, exterior wall framing, and existing conditions.
- F. Verify all existing conditions and scope of Work with Original Construction Drawings.
- G. It is the responsibility of the Contractor to protect areas outside the area of Work prior to commencement.

7.0 INSTALLATION REQUIREMENTS, GENERAL

- A. Inspect substrates and report unsatisfactory conditions in writing to the Engineer.
- B. Do not proceed until **ALL** unsatisfactory conditions have been corrected.
- C. Install materials in exact accordance with Manufacturer's instructions and approved submittals. In cases of discrepancy, Manufacturer's published instructions shall govern over Project Manual specifications for approval by Engineer.
- D. Install materials in proper relation with adjacent construction and with proper appearance.
- E. Refer to additional installation requirements and tolerances specified under individual specification sections.

8.0 SPECIAL REQUIREMENTS

- A. The CONTRACTOR shall provide schedules for sequencing by elevation showing impacts on budget, schedule, and occupancy for each. The building will be partially occupied and fully functional for the duration of the project. All Work required under this Agreement shall be performed from the exterior of the building unless otherwise noted.
- B. The Contractor will be responsible to have all testing which may be required by the governing building authority conducted including but not limited to testing for lead based paints and asbestos.
- C. The surface preparation and the finish coat stages will be punched out by the Engineer and coatings manufacturer on each elevation.
- D. The Contractor's access to the site shall be limited from 8:00 A.M. to 5:00 P.M. Monday through Friday or in accordance with the Building Authority having jurisdiction. Work by the Contractor will not be permitted on Sundays or any holidays unless otherwise directed by the Owner.
- E. The Contractor, Subcontractors, and their employees shall not be permitted inside any of the Owner's buildings, unless directed by and in compliance with all applicable regulations of the Building Authority having jurisdiction and shall be prohibited from using any of the Owner's facilities such as restrooms, swimming pool, tennis courts, etc., and shall be confined to those immediate areas necessary to accomplish their work and as designated by the Owner.
- F. The Contractor shall provide access to ALL work areas as may be reasonably necessary for inspections.
- G. The Contractor shall keep existing driveways and entrances serving premises clear and available to the Owner, the Owner's employees, and guests.
- H. The project schedule shall conform to all of the Owner's requirements for the use of the existing facility with minimum interruption to normal operations. The Contractor shall follow the guidelines for phasing as indicated on the applicable Contract Documents and general standards for safe and efficient construction.
- I. Contractor shall use overtime and weekends with prior Owner approval as needed to complete the Work on time.

9.0 WORK UNDER SINGLE CONTRACT

- A. The "Contract Documents", as defined in the General Conditions, include "the Drawings and Specifications". Although Drawings are grouped and identified by classification of the Work, the Contractor shall be responsible for the Work as specified herein and as indicated in the Drawings.
- B. The Owner and Engineer of Record will not allow assigning or subcontracting the Work, except for the Subcontractor specified in the bid, unless express written permission is granted.

10.0 PERSONNEL CONDUCT AND DRESS

- A. The Contractor shall be responsible to properly supervise Subcontractors and employees as to proper language, conduct, dress codes and noise levels.

- B. Alcohol or drugs on the site is prohibited. Any individual or employee under the influence of these substances will be promptly removed from the Owner's property.
- C. The Engineer, Owner, and Owner's representative shall have the right, with cause, to require the Contractor or Subcontractors to remove any employee from the project site.
- D. The Contractor shall provide the Engineer with a list of all the personnel working at the project site in accordance with the Owner's security policy.

13.0 QUALITY ASSURANCE

- A. At start of project, Contractor shall perform a mock-up of required Work at one area of the building. Mock-up area shall be coordinated with the Owner.
 - 1. At start of project, Contractor shall perform a mock-up of required Work. Mock-up area shall be coordinated with the Project Manager.
 - 2. Mock-up shall be installed in the presence of the Manufacturer's Technical Representatives and the Engineer to assure installation procedures adhere to the contract documents, warranty requirements, and Owner's acceptance.
 - 3. Approved mock-up shall remain in place and establish the guidelines for acceptable installation of Work and acceptable appearance.

14.0 WARRANTIES

- A. Base Bid: For a period of **Three (3) years** from the date of project's final completion, for LABOR AND MATERIALS are warranted by the Contractor for all work covered under this contract against defects in material and workmanship. A sample of the CONTRACTOR'S warranty shall be included with the bid submittal.
- B. **In addition to the Contractors warranties, additional material manufacturer's warranties shall be issued:**
 - 1. Base Bid: For a period of **Five (5) years** from the date of project's substantial completion, for LABOR AND MATERIALS are warranted for the Concrete Repairs against defects in materials and shall be free of defects and delamination for the life of the warranty. A sample of the MANUFACTURER'S warranty shall be included with the bid submittal.
 - 2. Base Bid: For a period of **Ten (10) years** from the date of project's substantial completion, Work for LABOR AND MATERIALS are warranted for the paint against defects in materials and shall be free of excessive fading, peeling, blistering, flaking, delamination, loss of adhesion, and cracking for the life of the warranty. A sample of the MANUFACTURER'S warranty shall be included with the bid submittal.
 - 3. Base Bid: For a period of **Five (5) years** from the date of project's substantial completion, Work for LABOR AND MATERIALS are warranted for the Urethane Sealants against defects in materials and shall be free of excessive fading, peeling, blistering, flaking, delamination, loss of adhesion, and cracking for the life of the warranty. A sample of the MANUFACTURER'S warranty shall be included with the bid submittal.
 - 4. Base Bid: For a period of **Ten (10) years** from the date of project's substantial completion, Work for LABOR AND MATERIALS are warranted for the Hybrid Sealants against defects in materials and shall be free of excessive fading, peeling, blistering, flaking, delamination, loss of adhesion, and cracking for the life of the

warranty. A sample of the MANUFACTURER'S warranty shall be included with the bid submittal.

5. Base Bid: For a period of **Five (5) years** from the date of project's substantial Completion, a special sole source water-proofing warranty shall be provided for MATERIALS and is warranted for the Waterproof Coatings and Sealants against water-penetration and shall be free of excessive fading, discoloration, peeling, blistering, flaking, delamination, loss of adhesion and cracking for the life of the warranty. A sample of the MANUFACTURER'S warranty shall be included with the bid submittal.
6. Base Bid: For a period of **Five (5) years** from the date of project's substantial Completion, a special sole source weather barrier warranty shall be provided for MATERIALS and is warranted against any defects for the life of the warranty. A sample of the MANUFACTURER'S warranty shall be included with the bid submittal.
7. Base Bid: For a period of **Ten (10) years** from the date of project's substantial completion, for LABOR AND MATERIALS are warranted for the Railing and Screen Enclosure against defects in materials, finishes and workmanship and shall be free of defects including peeling, blistering, corrosion, flaking, delamination and loss of adhesion for the life of the warranty. A sample of the SUPPLIERS warranty shall be included with the bid submittal.
8. Provide warranties as specified; warranties shall not limit length of time for remedy of damages the OWNER may have provided by law. The CONTRACTOR, MANUFACTURER, or INSTALLER is responsible for performance of said warranty and shall sign warranties.

15.0 DEFINITIONS

- A. Provide: Furnish and install, complete with all necessary accessories, ready for intended use. Pay for all related costs.
- B. Approved: Acceptance of item submitted for approval. Not a limitation or release for compliance with the Contract Documents or regulatory requirements. Refer to limitations of 'Approved' in General, all Supplementary Conditions and Addenda.
- C. Match Existing: Match existing as acceptable to the Owner.
- D. Intent: Drawings and specifications are intended to provide the basis for proper completion of the work suitable for the intended use of the Owner. Anything not expressly set forth, but which is reasonably implied or necessary for proper performance of the project shall be included.
- E. Reinstall: To remove and put back existing assemblies in the former position with new connectors.
- F. System: A complete assembly including all accessories and components necessary and incidental to the work for the installed work to perform and function.
- G. Replace/Replacement: To remove and install with new assemblies in the former position. No reuse of exiting assemblies and connectors are allowed.
- H. Writing style: Specifications are written in the imperative mode. Except where specifically intended otherwise, the subject of all imperative statements is the Contractor.

RIMKUS CONSULTING GROUP, INC.
dba Delta Engineering & Inspections

Bordeaux Village Association, No. 2, Inc.
Project Manual No. UR2303-292

For example, 'Provide shingles' or 'Furnish shingles' means Contractor shall provide shingles.'

END OF SECTION

SECTION 013000

ADMINISTRATIVE REQUIREMENTS

PART I - GENERAL

1.0 SUMMARY

- A. Provide administrative requirements for the proper coordination and completion of Work.

1.1 COORDINATION

- A. Coordinate construction operations included in various Sections of the Project Manual to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend upon each other for proper installation, connection and operation.
- B. Schedule construction operations in the sequence required, obtaining the best results where installation of one part of the Work depends on the installation of other components, before or after its own installation.
- C. Coordinate installation of different components with other Contractors to ensure maximum accessibility for required maintenance, service and repair.
- D. Make adequate provisions to accommodate items scheduled for later installation.
- E. Prepare memoranda for distribution to each party involved (i.e. demolition, roofing, rough carpentry) outlining special procedures required for coordination. Include such items as required notices, reports, and list attendees at meetings.
1. Prepare similar memoranda for Owner and separate Subcontractors if coordination of their Work is required.

1.2 ADMINISTRATIVE PROCEDURES

- A. Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other Contractors and subcontractors, to avoid conflicts and ensure orderly progress of Work. Administrative activities include preparation and submittal to the Engineer and Owner of the following:
1. **Contractor's Construction Schedule** (Submit progress schedule, bar-chart type, updated monthly)
 2. **Schedule of Values**
 3. **Installation and removal of temporary facilities and controls**
 4. **Delivery and processing of submittal**
 5. **Preconstruction conference**
 6. **Preinstallation conference**
 7. **Progress meetings (Every 2 weeks)**
 8. **Project closeout activities**
 9. **Site visits (2 per week with Superintendent)**

ADMINISTRATIVE REQUIREMENTS

1.3 PROJECT MEETINGS: GENERAL

- A. All project meetings and conferences will be conducted at the Project Site, unless otherwise specified.
- B. Inform participants and others involved whose presence is required, of date and time of each meeting. Notify Owner and Engineer of scheduled meeting dates and times.
- C. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees. (This duty may be reserved for the Engineer.)
- D. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Engineer within 3 days of adjournment (This duty may be reserved for the Engineer.)

1.4 PRE-INSTALLATION CONFERENCE

- A. The Contractor shall participate in pre-construction conference at the Project Site at the beginning of the project and before each construction activity that requires coordination with other construction.
- B. Attendee: Installers and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration of other materials and installations that have proceeded or will follow, shall attend the meeting. Advise Owner and Engineer of scheduled dates.
- C. Agenda: Review progress of other construction activities and preparations for the particular activities under consideration, including requirements for the following:
 - 1. Deliveries
 - 2. Product Submittals
 - 3. Schedules
 - 4. Weather Limitations
 - 5. Manufacturer's written recommendations
 - 6. Inspections
 - 7. Warranty requirements
- D. Record significant conference discussions, agreements and disagreements. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work, and reconvene the conference at the earliest feasible date.
- E. **All product submittals, sample warranties and schedules are required prior to the Pre-installation Conference.**
- F. Updated schedules are required to be updated and submitted with each payment application.

1.5 PROGRESS MEETINGS

- A. Conduct progress meetings at two (2) week intervals unless otherwise noted. Coordinate dates of meetings with preparation of payment requests.

- B. Attendee: Owner, Engineer, each Contractor, Subcontractor, Supplier and any other entity concerned with the current progress or involved in planning, coordination or performance of future activities. Advise Owner and Engineer of scheduled dates.
- C. Agenda: Review and correct or approve minutes of previous meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
- D. CONTRACTOR'S CONSTRUCTION SCHEDULE:
 - 1. An **updated project schedule** is required with each request for payment application.
 - 2. Review progress since last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction, which is behind schedule, will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
- E. Review present and future needs of each entity present, including the following:
 - 1. Sequence of operations
 - 2. Deliveries
 - 3. Access
 - 4. Temporary facilities and controls
 - 5. Work hours
- F. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present. Include a brief summary, in narrative form, to the progress of the meeting (This duty may be reserved for the Engineer.) Where revisions to the schedule have been made or recognized, issue revised schedule concurrently with the report of each meeting.

END OF SECTION

SECTION 013300

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.0 SUMMARY

- A. Provide types of submittals listed in individual sections and the number of copies required below to the Owner and Engineer.
 - 1. Product data - 3 copies
 - 2. Samples - 2 plus extra samples as required, to indicate range of color, finish and texture to be expected
 - 3. Change orders & substitution requests
 - 4. Inspection and test reports - 3 copies
 - 5. Construction schedule – 3 copies
 - 6. Warranties - 3 copies
 - 7. Closeout submittals - 3 copies

1.1 PRODUCT DATA

- A. The Contractor is to supply copies of the material product data sheets for all products installed, including all fasteners (prior to installation).

1.2 CHANGE ORDERS & SUBSTITUTION REQUESTS

- A. The ENGINEER will consider requests from the Contractor for substitutions up to the date of the Bid Opening. Subsequently, substitutions will be considered when a product becomes unavailable due to no fault of the Contractor.
- B. Submit three (3) copies of the Substitution Request Form.
- C. The Engineer will determine the acceptability of proposed substitution and will notify the Contractor of acceptance or rejection in writing.
- D. Only one request will be entertained per each product.
- E. All products specified must be of the "current model" and of the latest issue. Requests to use products of a later model must be approved by the Engineer for acceptance prior to use.
- F. The Contractor's submittal of (and Engineer's acceptance of) shop drawings, product data or samples which relate to work not complying with requirements of the Contract Documents, does not constitute an acceptable request for substitution, nor approval thereof.

1.3 SAMPLES

- A. The Contractor is to supply samples of all materials for all products installed as required to indicate range of color, finish and texture to be expected (prior to installation).

SUBMITTAL PROCEDURES

013300-1

1.4 INSPECTIONS

- A. The Contractor is to coordinate **inspections by materials suppliers** and as required per these specifications and supplier's warranties. All inspections are to be performed independent of the contractor. Inspections for the purpose of approvals are not to be performed by the Contractor's own forces.
- B. The Owner or Engineer and/or Manufacturer's Representative may make random inspections.
- C. If during the course of work the Contractor is found to be in violation of the written specifications, the Owner or Engineer will bring these items to his/her attention in writing, and after the first written discrepancy occurs and there is one additional warning of the same infraction, or if any three significant infractions and violations of the specifications occurs, the Contractor shall be liable for a penalty of \$500.00 (five hundred dollars) per day for full-time inspections to ensure that the Contract is carried out in accordance with the specifications. The cost of the penalties will be deducted from the payment requests and the Owner will make payment directly to the Engineer for quality assurance inspection(s) out of the Contract Price. The quality assurance will begin at the date of the infraction, and continue for each additional day of the Contract until full Project completion.

1.5 WARRANTIES

- A. The Contractor is to supply warranties as described and samples of all materials for all products installed as required.
- B. The Contractor will provide to the Owner written labor and materials warranties as outlined in the Sections 004100 - Bid Form of the Project Manual.
- C. Provide warranties as specified; warranties shall not limit length of time for remedy of damages the Owner may have as provided by law. The Contractor, supplier, or installer responsible for performance of said warranty shall sign warranties.

END OF SECTION

FIELD CHANGE ORDER # _____

This document is a written request from the Contractor requesting a revision, addition, modification or deletion in the Work. This document will act as an executed Change Order on all parties having authorized this form.

DATE: _____

PROJECT: _____

ISSUED BY: _____

CONTRACTOR: _____

TITLE: _____

1. The CONTRACTOR hereby requests the following change(s) in the Work.

DESCRIPTION OF THE PROPOSED CHANGES(s):

2. Will this change affect the Contract Price? _____

3. Will this change affect the Contract Time? _____

4. The proposed adjustment to the Contract Sum if any is:

_____ Lump Sum Increase (decrease) of \$

_____ Unit Price of \$ _____ per _____

_____ Not to Exceed (Increase/Decrease) of \$ _____

5. The proposed adjustment to the Contract Time if any is an (Increase / Decrease) of _____ days.

Authorization:

OWNER

Date: _____

CONTRACTOR

Date: _____

ENGINEER

Date: _____

SUBMITTAL PROCEDURES

013300-3

SUBSTITUTION REQUEST # _____

This document is a written request from the Contractor requesting a substitution of product.

DATE: _____

PROJECT: _____

SUBMITTED BY: _____

CONTRACTOR: _____

TITLE: _____

The CONTRACTOR hereby requests consideration for the following substitution:

Originally Specified Product: _____

DESCRIPTION OF THE PROPOSED SUBSTITUTION(s):

1. What is the reason for the substitution? _____
2. Will this substitution affect the dimensions as shown on the drawing? _____
3. Will this substitution differ in fit, form or function from what was originally specified? If so, how?

4. What trades will this substitution affect? _____ Will it affect scheduling?
5. Will this substitution cause a change in the CONTRACT TIME? _____ Days (+/-) _____
6. What is the cost difference for this substitution vs. what was originally specified? (+/-) \$ _____
7. Will this substitution cause a change in the Contract Price? (+/-) \$ _____
8. Is this product or parts readily available locally? _____ Where? _____

Attach all applicable product specifications, drawings, photographs, performance and test data for the substitution requested.

For use by DELTA ENGINEERING & INSPECTION, INC.

_____ Accepted _____ Accepted as Noted _____ Not Accepted

By: _____

Date: _____

Authorization:

OWNER

Date:

CONTRACTOR

Date:

ENGINEER

Date:

SUBMITTAL PROCEDURES

REQUEST FOR INFORMATION # _____

PROJECT: _____

DATE: _____

CONTRACTOR: _____

PAGE: _____ of _____

TO: _____

FROM: _____

Reference Drawing: _____ Detail: _____ Spec. Section: _____ Page No. _____

Reason for Request: Insufficient Information Conflict in Documents
 Interpretation of Documents Other

Probable Affect "Cost" Increase Decrease No Change

Probable Affect "Schedule" Increase Decrease No Change

Response Required by: _____

Information Needed:

By: _____

Engineering Reply:

Issued By: _____

Date: _____

Authorization By: _____

DELAY REQUEST DUE TO INCLEMENT WEATHER

This document is a written request from the Contractor requesting an extension of the contract days. This document is not but merely a request for extension. If approved by all parties the request will be issued. The Contractor shall submit written notification for weather related delays to the Engineer.

Requests must be submitted to the office of the Engineer on Monday of the following week for which the delay has been requested.

DATE: _____

PROJECT: _____

ISSUED BY: _____

CONTRACTOR: _____

TITLE: _____

The CONTRACTOR hereby requests the following extension (s) in the Work.

1. Complete the table below.

	Mon	Tues	Wed	Thurs	Fri	Sat
Date						
Reason for delay? Weather or other						
Number of days (1/4, 1/2, 3/4, 1 full day)?						
What time did work stop that day?						
Did work continue that day?						
What time did work continue?						

2. Will this change affect the Contract Time? _____

3. The proposed adjustment to the Contract Time if any is an (Increase / Decrease) of ____ days.

Authorization: _____

OWNER _____ Date: _____ CONTRACTOR _____ Date: _____ ENGINEER _____ Date: _____

CONTRACTOR AND SUB-CONTRACTORS AFFIDAVIT

DATE: _____

PERMIT NUMBER: _____

I, _____, Certified to engage in business as a _____
(Individual's Name)

Contractor in _____ County by _____ do hereby certify that all work
(State)

completed for permit number(s) _____

Located at _____ has been
(Street Address)

installed in accordance with the _____ Code and its

amendments in effect at the time the permit was issued.

(Corporate/Business)

(Certified Contractor's Signature)

Sworn to and subscribed before me this _____ day of

_____, 20____

Notary: _____

My commission expires _____

SECTION 014113

CODE SUMMARY

- 1.1 RELATED DOCUMENTS:
A. Project Manual, Repair Drawings, Manufacturer's Specifications, and the Original Construction Drawings apply to this Section.
- 1.2 SUMMARY:
A. This section specifies the Design Loads and Building Codes applicable to this project.
B. It is intended that the design parameters in this Project Manual include Building Repairs and Related Work.
- 1.3 BUILDING CODE:
A. The Work depicted herein has been designed and shall be constructed in accordance with the Florida Building Code 7th Edition (2020) – (FBC).
B. Classification of Work: Alteration Level 1 (FBC – Existing, Chapter 7)
- 1.4 BUILDING DATA:
A. Occupancy Classification:
Residential Occupancy R-2 (FBC – Building, Section 310.4)
B. Construction Type:
Roof Height: 21 feet
- 1.5 DESIGN LOADS:
A. Live Loads (FBC – Building, Section 1607)
i. Private Balconies: 60 psf / Original Design, no change to existing structure
ii. Guardrails: Guardrail system shall be capable of withstanding the followings loads applied as indicated:
1. Concentrated load of 200 lbf applied at any point and in any direction.
2. Uniform load of 50 lbf/ft applied at any direction along the handrail or top rail.
3. Intermediate rails, balusters and panel fillers shall be capable of withstanding a horizontal concentrated load of 50 lbf applied at any point to an area not to exceed 12in. by 12in.
B. Wind Design Data (FBC – Building, Section 1603.1.4)
i. Ultimate Design Wind Speed (V_{ult}): 145 mph, 3 second gust
ii. Nominal Design Wind Speed (V_{asd}): 113 mph
iii. Risk Category: II
iv. Exposure Category: C
v. Enclosure Classification
(Buildings): Partially Enclosed ($GC_{pi} = \pm 0.55$)
vi. Component and Cladding:

Components and Cladding					
Wind Design Pressures based on V_{asd} (ASCE 7-16)					
Effective Area (ft ²)	Roof (psf)			Wall (psf)	
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
10	---	---	---	+42 / -44	+42 / -52

a = 6 ft.

END OF SECTION

SECTION 015000

TEMPORARY FACILITIES AND CONTROLS

1.0 SUMMARY

1.1 This section includes requirements for temporary facilities and controls. Included are temporary utilities, support facilities and security protection. Temporary facilities include, but are not limited to the following:

1. Sanitary facilities including toilets, wash facilities and drinking water facilities
 2. Electric power service
 3. Water service
 4. Vertical transport
- A. The Contractor shall be responsible for off site parking, material storage and warehousing, should the designated area provided by the OWNER not provide adequate space.
- B. The Contractor's staging area will be determined at the Pre-Construction Conference.
- C. The Contractor will provide on-site portable toilet facilities and drinking water in a location acceptable to the Owner.

1.2 ELECTRIC & WATER

- A. The Owner will provide temporary electric service and water at the job site. The Contractor will pay for hook-up, installation and any applicable charges as the result of accessing the Owner's electric and water. The location of the hook-up for electric and water will be determined at the Pre-Construction Conference.

2.0 SITE CONDITIONS & EMPLOYEE EXPECTATIONS

- A. The following conditions apply to the use of temporary facilities by all parties engaged in the Work:
1. Keep temporary facilities clean and neat.
 2. Relocate temporary facilities as required by progress of Work.
- B. The Contractor will clean the site of debris, tools and equipment on a daily basis.
- C. The Contractor will be responsible for enforcing the personal conduct of all individuals under his authority, including Sub-contractors and Sub-subcontractors. The use of the following are prohibited while on the Property of the Owner:
1. Public use of profanity is prohibited on the job site.
 2. The use of radios and tape players, etc.
 3. The use of the Owner's dumpster or resident owners' trashcans.
 4. Proper attire must be worn at all times. Shirts must be worn at all times.
 5. Use of the pool, clubhouse, elevator, or other Association property is prohibited.
 6. All personnel shall follow the rules and policies of the Association at all times.
- D. The Contractor shall provide, at his expense, waste dumpsters and contracts with the local waste management carrier for the removal of construction debris.

- E. Work hours are limited to **8:00 am to 5:00 pm Monday through Friday**. Any deviation of these hours will need prior approval.
- F. The erection of signs and their location will need prior approval by the Owner.

END OF SECTION

SECTION 017700

CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract Documents, including General Conditions, Supplemental Conditions, Addenda and other Division 1 Sections including: Administrative Requirements (Section 013000) and Submittal Procedures (Section 013300) apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to the following:
1. Inspections
 2. Warranties
 3. Payment
 4. Completion
 5. Final cleaning
 6. Project-record drawings

1.3 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion the following must be completed:
1. Prepare a list of items to be completed and corrected (punch list) with Engineer and Owner.
 2. Submit sample copies of warranties, workmanship bonds, maintenance service agreements, final certifications and similar documents.
 3. Obtain and submit releases permitting Owner of unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates and similar releases.
 4. Terminate and remove temporary facilities from Project site, along with mockups, construction tools and similar elements, except as required to complete the project.
 5. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- B. Inspection: **Submit a request for inspection for Substantial Completion.** On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Engineer that must be completed or corrected before certificate will be issued.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 2. Results of completed inspection will form the basis of requirements for Final Completion.

CLOSEOUT PROCEDURES

017700-1

- C. The Contractor shall be given 14 days for final completion to clean up after the approved substantial completion date.

1.4 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
 - 1. Submit a final Application for Payment according to Division I Section "Payment Procedures."
 - 2. Submit a copy of the Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated for each item by Contractor stating that each item has been completed or otherwise resolved for acceptance.
 - 3. Submit project record documents (if required).
 - 4. Submit Contractor's Affidavit.
- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
 - 1. Reinspection: Request reinspection when the Work identified in previous inspections listed as incomplete is completed or corrected.

1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Preparation: Submit three copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
 - 1. Organize list of incomplete items in sequential order.
 - 2. Include the following information at the top of each page:
 - a. Project name
 - b. Date
 - c. Name of Engineer
 - d. Name of Contractor

1.6 WARRANTIES

- A. Provide warranties as specified; warranties shall not limit length of time for remedy of damages the Owner may have as provided by law. The Contactor, supplier, or installer is responsible for performance of said warranty shall sign warranties.

1.7 PROJECT RECORD DRAWINGS- IF REQUESTED (Can be provided during pay applications to verify for concrete quantities and delineate areas of repair).

- A. Update project record drawings on a separate prints set aside especially for this purpose on the job. Drawings shall incorporate changes made in the work of the respective trades during the construction period. Such change shall be indicated at the time they occur.
- B. Maintain at the job site one copy of drawings, specifications, addenda, approved shop drawings, change orders, field orders, other contract modifications and other approved document submitted by Contractor, in compliance with various sections of the

specifications.

- C. Each project record document shall be clearly marked "Project Record Copy", maintained in a good condition, available for observation by Engineer /Owner, and shall not be used for construction purposes. The document shall be marked to reflect:
 - 1. Significant changes and selections made during the construction process.
 - 2. Significant detail not shown in the original Contract Documents including change orders.
 - 3. Location and quantities of concrete repairs.
 - 4. Features of the structures.
 - 5. When elements are placed exactly as shown on drawings, so indicate, otherwise show changed location.
- D. Keep Project Record Documents current. Do not permanently conceal work until the required information has been recorded.
- E. Prior to final payment on the project, submit to Engineer and Owner the Project Record Drawings for changes recorded for the work of Division 1 through Division 9. Drawings to be furnished to Owner shall be in hard copy and digital format.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or may damage finished surfaces.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for each building:
 - a. Clean Project site, yard and grounds in areas disturbed by construction activities, including landscape development areas of rubbish, waste, material, litter and other foreign sub-stances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains and other foreign deposits.
 - c. Remove tools, construction equipment, machinery and surplus material from Project site.
 - d. Touch up and otherwise repair and restore marred, exposed finishes and

surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.

- e. Wash ALL areas in the vicinity of the areas work (i.e. walkways and walls, rails, windows, and sliding glass doors).
2. Areas of work performed in vertical drops will be cleaned prior to removal of access equipment, paint, sealant material, residue, construction dust, and debris deposited by work on the building locations shall be re-cleaned from previously cleaned drops.
- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION

SECTION 024119

SELECTIVE DEMOLITION

PART I - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Summary and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
1. Removal, proper and safe storage and legal disposal of all building materials and components associated with the scope of work described in Section 011100 - Summary and other sections of the Project Manual.
 2. Repair procedures for selective demolition operations.

1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged / reinstalled.
- B. Remove and Reinstall: Detach items from existing construction, prepare them for reuse and reinstall them where indicated.

1.4 MATERIALS OWNERSHIP

- A. All items or materials to be reused, salvaged, reinstalled or otherwise indicated are to remain the Owner's property. Demolished materials shall become the Contractor's property and shall be removed from Project site.

1.5 SUBMITTALS

- A. Qualification Data: Firms and persons specified in the "Quality Assurance" Article are to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses to Owner and all other information specified.
- B. Schedule of Selective Demolition Activities: Indicate the following:
1. Detailed sequence of selective demolition and removal work, include the starting and ending dates for each activity. Insure that Owners and tenants will be notified of any interruptions from on-site operations.
 2. Coordination with Owner's continuing occupancy of existing buildings for Contractor.
- C. Pre-demolition Photographs or Videotape is suggested to be conducted by the Contractor to show existing conditions, including finish surfaces that might be misconstrued as damage caused by selective demolition operations.

SELECTIVE DEMOLITION

024119-1

1.6 QUALITY ASSURANCE

- A. Pre-Construction Conference: Conduct conference at Project site to comply with requirements in Division I. Review methods and procedures related to selective demolition including, but not limited to, the following:
1. Inspect and discuss the condition of construction to be selectively demolished.
 2. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment and facilities needed to avoid delays.
 3. Review requirements of Work performed by other trades that rely on substrates exposed by selective demolition operations.
 4. Review methods and procedures for material handling.

1.7 PROJECT CONDITIONS

- A. Owner will occupy building during selective demolition area.
- B. Heavy equipment will be permitted on the paved parking areas only (see Section 024119). Heavy equipment will not be permitted on grass or landscaped areas of the property at any time. The cost to repair damages as a result of heavy equipment shall be at the Contractor's expense and deducted from the Contract Price.
- C. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
- D. Do not close or obstruct walkways, corridors or other occupied or used facilities.
- E. Owner assumes no responsibility for the condition of areas to be selectively demolished.
- F. Conditions existing at time of inspection for bidding purpose will be maintained by the Owner as far as practical.
- G. **Hazardous Materials:** It is not expected that hazardous materials will be encountered in the Work; however, it will be the responsibility of the Contractor to abide by local and federal regulations regarding demolition testing.
1. Prior to the commencement of Work, the Contractor's test sample the composition of suspected materials to determine whether ACRM's are present. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Engineer and Owner. Hazardous materials will be removed and abated by the Owner under a separate contract. (Fee paid by the Owner).
 2. Prior to the commencement of Work, the Contractor's shall test sample the composition of suspected materials to determine whether Lead Based Paints are present. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Engineer and Owner. Hazardous materials will be removed and abated by the Owner under a separate contract. (Fee paid by the Owner).
 3. At the request and authorization of the owner, the contractor shall test sample the composition of suspected materials to determine whether mold is present. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Engineer and Owner. Hazardous materials will be removed and abated by the Owner under a separate contract. (Fee paid by the Owner).

- H. Utility Service: Maintain existing utilities indicated to remain in service, and protect them against damage during selective demolition operations.

- I. Vertical Transport: (if applicable). The Contractor shall NOT have use of the Owner's elevator(s) without prior approval from the Owner. The cost to repair any damages resulting from Contractor's use shall be at the Contractor's expense and deducted from the Contract price. Contractor shall submit an inspection report documenting the existing condition of the elevator prior to Contractor use. Contractor may only use protected elevator (padded and carpeted) and must install and change (weekly) floor protection.

PART 2 - PRODUCTS

2.1 REPAIR MATERIALS

- A. Use repair materials identical to existing materials, unless otherwise noted on the drawings and related specifications.
 - 1. If identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
 - 2. Use materials with installed performance that is equal to or surpasses existing materials.
- B. Comply with material and installation requirements specified in individual Specification Sections.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- B. When unanticipated, mechanical, electrical or structural elements conflicting with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to the Engineer.
- C. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 UTILITY SERVICES

- A. Existing Utilities: Maintain services indicated to remain, and protect them against damage during the selective demolition operations.
- B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to insure minimum interference with roads, streets, walks, walkways and other adjacent occupied and used facilities.
 - 1. Protect existing site improvements and landscaping.
- C. Temporary Facilities: Provide temporary barricades and other protection as required, to prevent injury to people, as well as to prevent damage to adjacent buildings and facilities that are to remain.
 - 1. Provide protection to insure the safe passage of people around the selective demolition area and to and from occupied portions of building.

SELECTIVE DEMOLITION

2. Provide temporary weather protection, during intervals between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.

3.3 POLLUTION CONTROLS

- A. Disposal: Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
 1. Remove debris from elevated portions of building by chute, hoist or other device that will convey debris to grade level in a controlled descent.
- B. Cleaning: Clean adjacent structures and improvements of dust, dirt and debris caused by selective demolition operations. Return adjacent areas to the condition existing before the selective demolition operations began.

3.4 SELECTIVE DEMOLITION

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 1. Remove decayed, vermin-infested or otherwise dangerous or unsuitable materials and promptly dispose of them off-site.
 2. Dispose of demolished items and materials promptly.
 3. Return elements of construction and surfaces that are to remain to the condition existing before selective demolition operations began.
- B. Removed and Reinstalled Items: Comply with the following:
 1. Clean and repair items to functional condition adequate for intended reuse.
 2. Protect items from damage during transport and storage.
 3. Reinstall items in locations indicated. Comply with installation requirements. Provide connections, supports and miscellaneous materials necessary to make item functional for use indicated.

3.5 PATCHING AND REPAIRS

- A. General: Promptly repair damage to adjacent construction caused by selective demolition operations.
- B. Repairs: Where repairs to existing surfaces are required, patch to produce surfaces suitable for new materials.
- C. Finishes: Restore exposed finishes of patched areas and extend restoration into adjoining construction in a manner that eliminates evidence of patching and refinishing.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

END OF SECTION

SELECTIVE DEMOLITION

SECTION 031330

CONCRETE REHABILITATION

PART 1 – GENERAL

1.01 SUMMARY

- A. The scope of work to be performed under the terms of this contract shall include: furnishing of all materials, labor, services, utilities, permit fees, supervision, tools and equipment, required or incidental to the demolition, replacement and repair of concrete in the areas noted on the construction drawings and as indicated by the Engineer.

1.02 SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Mix Designs: Submit for approval mix design proposed for use to Engineer for review prior to start of Work.

1.03 REFERENCE STANDARDS

- A. ICRI Concrete Repair Manual 4th Edition
- B. ICRI Technical Guideline No. 320.1R, "Guide for Selecting Application Methods for the Repair of Concrete Surfaces"
- C. ICRI Technical Guideline No. 310.2R, "Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings and Polymer Overlays"
- D. ICRI Technical Guideline 310.1R, "Guide for Surface Preparation for the Repair of Deteriorated Concrete Resulting from Reinforcing Steel Corrosion"
- E. ICRI Technical Guideline No. 130.1R, "Guide for Methods of Measurement and Contract Types for Concrete Repair Work"
- F. ACI 117, "Standard Tolerances for Concrete Construction and Materials"
- G. ACI 301, "Specifications for Structural Concrete for Buildings"
- H. ACI 302, "Guide for Concrete Floor and Slab Construction"
- I. ACI 304 "Guide for Measuring, Mixing, Transporting and Placing Concrete"
- J. ACI 305, "Hot Weather Concreting"
- K. ACI 306, "Standard Specification for Cold Weather Concreting"
- L. ACI 318, "Building Code Requirements for Structural Concrete"
- M. ACI 503.4, "Standard Specification for Repairing Concrete with Epoxy Mortars"
- N. ACI 504, "Guide to Sealing Joints in Concrete Structures"

CONCRETE REHABILITATION

- O. ACI 562, "Code Requirements for Evaluation, Repair, and Rehabilitation of Concrete Buildings"
- P. ACI 546R, "Concrete Repair Guide"
- Q. ACI C10-90, "Repair and Rehabilitation of Concrete Structures"
- R. ACI SP-2, "Manual of Concrete Inspection"
- S. ACI 311.4R00, "Guide for Concrete Inspection"
- T. ASTM A615, "Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement"

1.04 QUALITY ASSURANCE

- A. Contractor's qualifications: Company specializing in the repair of concrete with a minimum five (5) years of documented experience acceptable to the Owner. Use experienced installers. Deliver, handle and store materials in accordance with manufacturer's instructions.
- B. Comply with manufacturer's instructions relating to mixing, application and placement of materials.
- C. Protection of Work: Protect installed work and prohibit traffic or storage upon uncured, waterproofed or coated surfaces.
- D. The Contractor must provide a manufacturer's approved applicator certificate or letter of approval.
- E. Manufacturer of repair materials must meet with contractor on site to review the mixing and installation procedures with the contractors repair crew.
- F. **MOCK-UP**
 - 1. At start of project, Contractor shall perform a mock-up of required work at one area. Mock-up area shall be coordinated with Engineer.
 - 2. Mock-up shall be installed in the presence of the manufacturer's technical representative and the Engineer to assure installation procedures adhere to warranty requirements.
 - 3. Optional: After sealant has achieved sufficient cure as coordinated with manufacturer's representative, conduct adhesion pull-test for sealant-filled non-structural cracks. Adhesion test shall be confirmed as acceptable by the Engineer and manufacturer prior to proceeding with work.
 - 4. Approved mock-up shall remain in place and establish the guidelines for acceptable installation of work and acceptable appearance.

1.05 SUBMITTALS

- A. Submittals shall be provided in accordance with Section 013300 – Submittal Procedures.
- B. The Contractor shall submit (3) three Contractor-signed copies of product data and concrete mix designs to the Engineer for review and acceptance.

CONCRETE REHABILITATION

- C. Manufacturer's product information and manufacturer's installation instructions for all materials specified shall be submitted to the ENGINEER for approval.

1.06 ALTERNATE MATERIALS

- A. No alternate products or materials may be used without prior written approval by the Engineer.
- B. Single source Responsibility: All repair materials shall be provided by a single manufacturer for mortars, anti-corrosion, anodes, and bonding agents.

1.07 DISSIMILAR MATERIALS

- A. All dissimilar metal materials shall be adequately isolated and prevent the effects of electrolysis and galvanic corrosion. The Engineer shall be notified of any condition where proper isolation cannot be achieved.

1.08 SITE OBSERVATIONS

- A. Verify that utility services are available and identify their locations throughout the structure.
- B. Surface preparation of all repair areas shall be observed and accepted by the Engineer prior to placement of the repair materials.
- C. The Engineer shall be notified a minimum of twenty-four (24) hours prior to site observations.

PART 2 - PRODUCTS

2.01 REINFORCING MATERIALS

- A. Reinforcing steel bar: ASTM A615, Grade 60, deformed.
- B. Supports for reinforcements: Bolsters, chairs, and spacers for spacing, supporting and fastening reinforcing steel bars in place. Use wire-bar-type supports complying with CRSI MSP-1
- C. Stirrup steel: Conforming to ASTM A615, Grade 60 deformed

2.02 CONCRETE MIX DESIGN

- A. The Contractor shall perform the necessary tests and verify that the mix is formulated to be compatible for use with the existing conditions. The mix shall then be submitted to the ENGINEER prior to procurement for mix verification.
- B. MATERIALS
 1. Cement: ASTM C150, Type II - Normal
 2. Fine and Coarse Aggregates: ASTM C33. Provide aggregates from a single source throughout the project. Aggregates shall be clean and suitable for concrete and free of chlorides. Aggregate shall be tested prior to use.
 3. Water: Clean, potable water only will be allowed.
- C. ADMIXTURES
 1. Air Entrainment: ASTM C260; 4 to 6 percent.

2. Chemical: Admixtures shall comply with ASTM C49. Admixtures shall not include added chlorides.
 - a. Type A - Water Reducing
 - b. Type D - Water Reducing Retarding Admixture.
 - c. Type F or G - High Range Water Reducing Admixture.
- D. Prepare concrete mix designs in accordance with ACI 301.
- E. Criteria for concrete slabs shall **include** the following:
 1. Compressive Strength (28 days): 4,000 psi. unless noted otherwise on drawings
 2. Slump: 4 to 6 inches maximum
 3. Water/Cement Ratio will not exceed 0.40 by weight.
 4. Minimum coarse aggregate size shall be #89 for pump mixes.
 5. All pump concrete shall contain the specified high range water-reducing admixtures.
 6. Pump concrete shall contain 4 to 6 percent air entrainment.
 7. Recommended amount of corrosion inhibitor per approved manufacturer's recommendations.

2.03 CONCRETE REPAIR MATERIALS

- A. ACCEPTABLE MANUFACTURERS: Single source Responsibility: All repair materials shall be provided by a single manufacturer for mortars, anti-corrosion, anodes and bonding agents, unless otherwise approved by a written letter from the repair product's manufacturers stating that all combinations of repair materials to be used for any given repair constitute a compatible system that is fully warranted by the product manufacturer.

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| 1. Sika Corporation:
201 Polito Ave. Lyndhurst, NJ 07071
Phone: (201) 933-8800
Local Rep: Thomas Garguilo (561) 531-8629 | 2. Sto Corporation
3800 Camp Creek Parkway, Bldg. 1400, #120
Atlanta, GA 30331
Phone: Toll-Free: (800) 221-2397 |
| 3. Master Builders Solutions
889 Valley Park Drive
Shakopee, MN 55379
Phone: Toll-Free: (800) 870-1100 | 4. Mapei Corporation
1144 E. Newport Center Drive
Deerfield Beach, FL 334422
Phone: (954) 246-8840 |

B. REINFORCING STEEL PRIMER COATING

1. PRODUCTS:

- Sika Armatec 110 EpoCem by Sika
- Sto Bonding and Anti-Corrosion Agent by Sto Corp.
- Master Emaco P 124 by BASF
- Planibond 3C by Mapei

2. USES:

- Application of primer to reinforcing steel to protect against rust and corrosion.

3. SURFACE PREPARATION:

- Reinforcing Steel: Rust, mill, scale, and foreign materials should be removed from the steel substrate by sand or water blasting to bring the steel to a "bright"

CONCRETE REHABILITATION

surface. Prepare surface to receive primer as per the manufacturer's written instructions.

4. APPLICATION:

- The Contractor shall apply material per manufacturer's written instructions and recommendations.

C. BONDING AGENT

1. PRODUCTS:

- Sika Armatec 110 EpoCem by Sika
- Sto Bonding Agent & Admixture by Sto Corp.
- MasterEmaco A 660 by BASF
- Planibond 3C by Mapei

2. USES:

- The Contractor shall apply bonding agent to bond new concrete and/or repair mortar to the existing concrete substrate as required.

3. SURFACE PREPARATION:

- Concrete surface: The contractor shall remove loose and deteriorated materials by shot or sandblasting to obtain a fractured aggregate surface. Surfaces shall be sound, clean, and free of all bond-inhibiting materials (oils, dust, dirt, laitance, and standing water). Surface preparation and profile shall conform to the product manufacturer's written instructions.

4. MIXING:

- The individual components of the product shall conform to the manufacturer's written instructions and recommendations prior to the contractor mixing the products to proper ratios.

5. APPLICATION:

- The contractor shall place the products per the manufacturer's written instructions. Minimum ambient, surface, and material temperature should be 45 to 50 degrees Fahrenheit and rising.

D. CONCRETE REPAIR MORTAR

Partial Depth Horizontal Surface Repairs From ¼" to ½"

1. PRODUCTS:

(Polymer-Modified Non-Anode Application)

- SikaTop 122 by Sika (*Trowel Application*)
- Sto Skim-Coat Mortar by Sto Corp. (*Trowel Application*)
- MasterEmaco T 1061 DR by BASF (*Trowel Application*)

CONCRETE REHABILITATION

- Mapecem 102 by Mapei (*Trowel Application*)

(Non-Polymer-Modified For Anode Application)

- SikaQuick 1000 by Sika (*Trowel Application*)
- AquaFin Mortar LN by Sto Corp / AquaFin. (*Trowel Application*)
- MasterEmaco T 1061 DR by BASF (*Trowel Application*)
- Planitop 18 ES by Mapei (*Trowel Application*)

2. USES:

- Horizontal, Full Depth & Partial Depth, Polymer Modified; Surface repair, topping, sloping, ramps, parking garages floor repairs. One Component. (*Trowel Application*)

3. SURFACE PREPARATION:

- Concrete surface: The contractor shall remove loose and deteriorated materials by shot or sandblasting to obtain a fractured aggregate surface. Surfaces shall be sound, clean, and free of all bond-inhibiting materials (oils, dust, dirt, laitance, and standing water). Surface preparation and profile shall conform to the product manufacturer's written instructions.

4. MIXING AND APPLICATION:

- Mix and install as per manufacturer's written instructions.

5. CURING:

- Eliminate direct sun or wind which may cause unwanted rapid surface drying. Use a water-based curing compound that meets ASTM C-309 standards or continuous light water fogging for 48 hours. Solvent-based curing compounds are not allowed. Curing shall conform to the manufacturer's written instructions.

Partial Depth Horizontal Surface Repairs Greater Than ½"

1. PRODUCTS:

(Polymer-Modified Non-Anode Application)

- Sikacrete 211 SCC Plus by Sika (*Form & Pour Application*)
- Sto Flowable Mortar by Sto Corp. (*Form & Pour Application*)
- MasterEmaco T 310 CI by BASF (*Form & Pour Application*)
- Planitop 15 by Mapei (*Form & Pour Application*)

(Non-Polymer-Modified For Anode Application)

- Sikacrete 211 by Sika (*Form & Pour Application*)
- Sikacrete 100 CI
- Sikacrete 421 CI Rapid
- Sto Patch Repair Mortar by Sto Corp. (*Form & Pour Application*)
- MasterEmaco S 466 by BASF (*Form & Pour Application*)
- Planitop 11 by Mapei (*Form & Pour Application*)

CONCRETE REHABILITATION

2. USES:

- Horizontal / Vertical & Overhead, Full Depth & Partial Depth, Structural Repair in Slabs, Slab Edges, Columns, & Beams. Pre-Extended, Flowable Repair Mortar. (Form & Pour Application)
- Polymer-modified cement based low shrinkage mortar for structurally repairing or overlaying deteriorated concrete surfaces. For applications at depths greater than 1" the material may require extending by adding up to 40 lbs. of uniformly graded, clean aggregate (refer to the product manufacturers' written instructions).

3. SURFACE PREPARATION:

- Concrete surface: The contractor shall remove loose and deteriorated materials by shot or sandblasting to obtain a fractured aggregate surface. Surfaces shall be sound, clean, and free of all bond-inhibiting materials (oils, dust, dirt, laitance, and standing water). Surface preparation and profile shall conform to the product manufacturer's written instructions.

4. MIXING AND APPLICATION:

- Mix and install as per manufacturer's written instructions.

5. CURING:

- Eliminate direct sun or wind which may cause unwanted rapid surface drying. Use a water-based curing compound that meets ASTM C-309 standards or continuous light water fogging for 48 hours. Solvent-based curing compounds are not allowed. Curing shall conform to the manufacturer's written instructions.

Full Depth Horizontal Repairs

1. PRODUCTS:

(Polymer-Modified Non-Anode Application and Column repairs)

- SikaQuick FNP by Sika (*Form & Pour Application*)
- Sto Extended Full Depth Repair Mortar CI by Sto Corp. (*Form & Pour Application*)
- MasterEmaco T 310 CI by BASF (*Form & Pour Application*)
- Planitop 15 by Mapei (*Form & Pour Application*)

(Non-Polymer-Modified For Anode Application)

- Sikacrete 211 by Sika (*Form & Pour Application*)
- StoPatch Extended Full Depth Repair Mortar by Sto Corp. (*Form & Pour Application*)
- MasterEmaco T 1061 EX by BASF (*Form & Pour Application*)
- Planitop 11 by Mapei (*Form & Pour Application*)

2. USES:

- Horizontal / Vertical & Overhead, Full Depth & Partial Depth, Structural Repair in columns, beams, and edges. Pre-Extended, Flowable Repair Mortar. (Form &

- Pour Application)
- Polymer-modified cement based low shrinkage mortar for full depth structural repairs of structural concrete

3. SURFACE PREPARATION:

- Concrete surface: The contractor shall remove loose and deteriorated materials by shot or sandblasting to obtain a fractured aggregate surface. Surfaces shall be sound, clean, and free of all bond-inhibiting materials (oils, dust, dirt, laitance, and standing water). Surface preparation and profile shall conform to the product manufacturer's written instructions.

4. MIXING AND APPLICATION:

- Mix and install as per manufacturer's written instructions.

5. CURING:

- Eliminate direct sun or wind which may cause unwanted rapid surface drying. Curing shall conform to the manufacturer's written instructions.

Vertical / Overhead Application

1. PRODUCTS:

(Polymer-Modified Non-Anode Application)

- SikaTop 123 Plus by Sika (*Trowel Application*)
- Sto Overhead Mortar with CI by Sto Corp. (*Trowel Application*)
- MasterEmaco N 425 by BASF – Max 2-inch Lifts (*Trowel Application*)
- Planitop XS by Mapei (*Trowel Application*)

(Non-Polymer-Modified For Anode Application)

- SikaRepair 223 by Sika (*Trowel Application*)
- MasterEmaco N 424 by BASF (*Trowel Application*)

2. USES:

- Vertical/ Overhead, Structural Repair in columns, beams, underside of concrete slabs. One Component, Fast-Setting, Extended Working Time Repair Mortar. (*Trowel Application*).
- For repairing surface defects and structurally repairing deteriorated concrete in vertical and overhead application. Products shall be capable of hanging from above without sagging.

3. SURFACE PREPARATION:

- Concrete surface: The contractor shall remove loose and deteriorated materials by shot or sandblasting to obtain a fractured aggregate surface. Surfaces shall be sound, clean, and free of all bond-inhibiting materials (oils, dust, dirt, laitance, and standing water). Surface preparation and profile shall conform to the product manufacturer's written instructions.

4. MIXING AND APPLICATION:

- Mix and install as per manufacturer's written instructions.

5. CURING:

- Eliminate direct sun or wind which may cause unwanted rapid surface drying. Curing shall conform to the manufacturer's written instructions.

Anchoring / Grouting

1. PRODUCTS:

(Epoxy)

- Sikadur 32 hi-Mod by Sika (*Form & Pour Application*)
- MasterFlow 648 by BASF (*Trowel Application*)

(Non-Shrink Grout)

- Sikagrout 212 by Sika (*Form & Pour Application*)
- Planigrout 712 by Mapei (*Form & Pour Application*)
- MasterFlow 100 by BASF (*Form & Pour Application*)

2. USES:

- Epoxy- To bond fresh concrete to hardened concrete and steel. Horizontal cracks in structural concrete. Multi Component, Fast-Setting, Bonding/Grouting Adhesive. (*Form & Pour Application*).
- Non-Shrink Grout – Nonmetallic, Anchoring, Structural grout for columns and base plates, High Performance. (*Form & Pour Application*)

3. SURFACE PREPARATION:

- Concrete surface: The contractor shall remove loose and deteriorated materials by shot or sandblasting to obtain a fractured aggregate surface. Surfaces shall be sound, clean, and free of all bond-inhibiting materials (oils, dust, dirt, laitance, and standing water). Surface preparation and profile shall conform to the product manufacturer's written instructions.

4. MIXING AND APPLICATION:

- Mix and install as per manufacturer's written instructions.

5. CURING:

- Eliminate direct sun or wind which may cause unwanted rapid surface drying. Curing shall conform to the manufacturer's written instructions.

Overlay / Topping Slab & Sloping

1. PRODUCTS:

(Epoxy)

- Sikadur 21 or Sikadur 22 Lo-Mod LV < ¼" by Sika (*Trowel Application*)
- Planiseal Traffic Coat (Epoxy) by Mapei (*Trowel Application*)

(Sloping)

- SikaQuick 1000 by Sika for ¼" to 1" (*Trowel Application*)
- MasterEmaco T 1061 DR > ½" by BASF (*Trowel Application*)

2. USES:

- (Epoxy) – Use as a binder for epoxy mortar patching and overlays. (*Trowel Application*).
- For repairing surface defects, resurfacing, and resloping horizontal concrete surfaces. (*Trowel Application*).

3. SURFACE PREPARATION:

- Concrete surface: The contractor shall remove loose and deteriorated materials by shot or sandblasting to obtain a fractured aggregate surface. Surfaces shall be sound, clean, and free of all bond-inhibiting materials (oils, dust, dirt, laitance, and standing water). Surface preparation and profile shall conform to the product manufacturer's written instructions.

4. MIXING AND APPLICATION:

- Mix and install as per manufacturer's written instructions.

5. CURING:

- Eliminate direct sun or wind which may cause unwanted rapid surface drying. Curing shall conform to the manufacturer's written instructions.
Repair Mortars: (polymer modified)

Anchoring and Reinforcement

1. PRODUCTS:

(Epoxy)

- Simpson Strong-Tie Set XP
- HILTI HIT-HY 150 Max-SD
- Sikadur AnchorFix 3001

2. USES:

- (Epoxy) – Use as an anchoring adhesive for anchoring and doweling in cracked and un-cracked concrete and masonry applications.

3. SURFACE PREPARATION:

- **Drill** - Drill hole to specified diameter and depth.
- **Blow** - Remove dust from hole with oil-free compressed air for a minimum of 4 seconds, compressed air nozzle must reach the bottom of the hole.
- **Brush** – Clean with a nylon brush for a minimum of 4 cycles. Brush should provide resistance to insertion. If no resistance is felt, the brush is worn and must be replaced.
- **Blow** – Remove dust from hole with oil-free compressed air for a minimum of 4 seconds, compressed air nozzle must reach the bottom of the hole.

4. MIXING AND APPLICATION:

- Mix and install as per manufacturer's written instructions.

PART 3 - EXECUTION

3.01 GENERAL

- A. Mix, place, consolidate, finish and cure concrete in accordance with the referenced standards.

3.02 COATING OF REINFORCING BARS

- A. Coat all rebar that becomes exposed upon removal of deteriorated concrete with specified rebar coating.
- B. Where minimum concrete cover cannot be obtained, notify Engineer.

3.03 TEST FOR CONCRETE (For Ready Mix only)

- A. Testing Laboratory: The Contractor shall retain an engineering testing laboratory acceptable to the Engineer to perform all concrete testing (compressive strength). The laboratory shall be inspected and accredited by the Concrete and Materials Engineering Council, Inc.
- B. Extent of Tests: Testing laboratory shall take samples and make tests, not less than one set for each day's concreting.
- C. Ready Mix, Transit Mixes
1. Compression and Strength Tests: ASTM C-39. Each test shall consist of four (4) standard 3" by 12" cylinders; one (1) cylinder to be tested at the age of 7 days and two (2) cylinders at the age of 28 days. One (1) cylinder is to be held in reserve. Samples from which compression test specimens are molded shall be secured in accordance with ASTM C 172. Specimens made to check adequacy of design for strength of concrete, or as a basis for acceptance of concrete, shall be made and laboratory-cured in accordance with ASTM C 31. Strength tests shall be made in accordance with ASTM C 39
 2. Slump Tests: Tests for slump shall be made at place of deposit and in accordance with ASTM C 143. Slump shall be reported on test reports to Engineer.
 3. Air-Entrainment Tests: At least two tests will be made at place of deposit for each day's placing and as often as required when a change related Work in consistency

of concrete mix is noted. Tests shall be made in accordance with ASTM C 138 or C 173 and reported on test reports.

4. Unit Weight Test: Perform a unit weight test on all concrete taken for test purposes. This test shall be performed in accordance with ASTM C138. Test results shall be reported on test reports to Engineer.
- D. Test Reports: Except as otherwise directed, a minimum of four copies of test reports shall be sent directly to Owner, Engineer, Ready-mix Producer and the Contractor by laboratory.

3.04 SHORING

- A. The Contractor shall provide shoring, bracing or support for all existing structural elements to remain until all structural modifications have been completed and accepted for their intended use.
- B. The Contractor shall be responsible for the design and erection of all shoring. The Contractor's shoring plan shall be signed and sealed by a Professional Engineer retained by the Contractor.

3.05 CONCRETE SPALL REPAIR

- A. Repairs shall be performed in accordance with the ICRI Guideline No. 310.1R "Guide for Surface Preparation for the Repair of Deteriorated Concrete Resulting from Reinforcing Steel Corrosion" ICRI Guideline No. 320.1R" Guide for Selecting Application Methods for Repair of Concrete Surfaces".
- B. Prior to the commencement of the Work, the Contractor shall verify the Scope of Work for the repair.
- C. Repair mortars shall be used in lieu of ready-mix concrete for individual repair areas of less than one (1) cubic yard of material (unless noted otherwise) and as accepted by the Engineer.
- D. Apply specified evaporation retarders where required to reduce premature drying.
- E. Remove all spalled, loose and unsound concrete in the area of the deterioration. Removal shall be performed with small pointed tools to prevent micro cracking. Remove deteriorated concrete using a maximum 15-pound chipping hammer.
- F. The area of concrete to be removed shall extend along the length of the reinforcing steel until there is not further delamination, cracking, or significant corrosion and the reinforcing steel is well bonded to the surrounding concrete unless otherwise noted.
- G. Should a repair require more than 20 percent of the cross-sectional area of the column, beam or should large areas of concrete have to be removed, the Contractor shall contact the Engineer prior to the commencement of the Work.
- H. Concrete spall repairs shall be used for those areas identified with spalling and cracking of the concrete with a deterioration of the reinforcing of not more than 20 percent of the original reinforcing steel bar diameter. In areas greater than 20 percent, contact Engineer.

- I. Concrete shall be removed completely around the reinforcing steel, providing a minimum clearance of 3/4 inch between the reinforcing and the concrete to remain, where possible. Ensure a uniform depth of repair.
- J. Provide a minimum 1/2-inch depth using straight edge regular shaped patterns, saw-cut 90 degree to the plane of the repair at the limits of the repair to prevent feathering of the patch material. Do not cut any reinforcing, except as accepted by the Engineer.
- K. Application of repair concrete shall not be less than 1/2" inch in depth unless noted otherwise.
- L. Prepare all concrete surfaces to receive the repair material, including the saw-cut, to achieve a surface profile depth of 1/8-inch minimum with a new fractured aggregate surface to anchor the patch material adequately. A surface profile exposed equivalent to CSP-5 or greater (ICRI Surface Prep Guideline) should be achieved.
- M. Remove all rust and scaling of the reinforcing thoroughly by mechanical means or sand blasting. Sand shall be compliant for atmospheric conditions or dictated by the local authority having jurisdiction. For limited areas, mechanical means of cleaning by wire brush may be utilized only by advance acceptance of the Engineer. Where reinforcing steel with active corrosion is encountered, sandblast the steel to a white metal finish to remove all contaminants and rust. Where corrosion has occurred due to the presence of chlorides, the steel shall be high pressure washed after mechanical cleaning. Prime steel with 2 coats of approved corrosion inhibitor as directed by manufacturer. (See Spec Component SC-201-0699)
- N. Treat cleaned rebar with two coats an approved bonding agent and anticorrosion inhibitor with a stiff bristle in strict accordance with the manufacture's specifications to cover all exposed steel.
- O. Thoroughly clean the exposed concrete surface in accordance with the manufacturer's instructions and recommendations to receive the patch of all traces of dirt, grease and other contaminants that may prevent proper bonding of the repair materials. All exposed rebar shall be rinsed thoroughly to remove any accumulated salts just prior to application of the rebar coating and just prior to the installation of the repair mortar.
- P. The prepared concrete surface shall be saturated surface dry (SSD) and in accordance with the manufacturer's instructions and recommendations but should remain free of standing water.
- Q. Apply a scrub coat to repair area, filling all pores and voids. While the scrub coat is still wet, apply approved repair mortars in accordance with Manufacturer's recommendations and specifications.
- R. Place concrete in accordance with ACI 301 in a continuous pour.
- S. All repair areas shall be wet-cured for a minimum of 3 days or receive an application of approved curing compound after finishing in accordance with the manufacturer's instructions and recommendations. Moisture cure with wet burlap and polyethylene, a fine mist of water or a water-based* compatible curing compound. Moist curing should commence immediately after finishing and continue for 48 hours. Protect newly applied material from rai, sun, and wind until compressive strength is 70% of the 28-day compressive strength. To prevent from freezing, cover with insulating material. Setting time is dependent on temperature and humidity.

CONCRETE REHABILITATION

*Pretesting of curing compound is recommended.

- T. Formwork shall remain in place until concrete has obtained adequate strength (Minimum 3 days).
- U. Adhere to all procedures, limitations, and cautions for the polymer-modified Portland cement mortar in the manufacturer's current printed technical data sheet and literature.
- V. The uncured polymer-modified Portland cement mortar can be cleaned from tools with water. The cured polymer-modified Portland cement mortar can only be removed mechanically.
- W. Leave finished work and work area in a neat, clean condition without evidence of spillovers into adjacent areas.

3.06 REINFORCING REPLACEMENT

- A. All reinforcing with deterioration of more than 20 percent of the original bar diameter, **or** as determined by the Engineer, shall be replaced or spliced in accordance with ACI requirements.
- B. Prior to the repair, the Contractor shall shore, brace, and otherwise support the area to be repaired, until the reinforcing has been replaced and the repair is completed.
- C. The concrete removal shall be sufficient to achieve a minimum clearance of 3/4" around the existing reinforcing, and the new reinforcement shall be placed beside the existing.
- D. To permit lapping of the new reinforcing steel, the concrete shall be removed along the length of the reinforcing, a minimum of 12" beyond the deterioration into sound concrete to permit splicing of the reinforcing. Splicing of reinforcing shall be in accordance with ACI tension and compression reinforcing steel splice requirements.
- E. Lap splicing shall be in accordance with ACI 318.
- F. After the reinforcing has been prepared, lap the new reinforcing beside the entire length of the exposed reinforcing, secure in place with the wires.
- G. Following all other procedures for the concrete repair as indicated.
- H. Where the removal of concrete to achieve the required lap length is not practical as determined by the Engineer, bar development can be achieved by embedding the reinforcing into existing sound concrete a minimum of 9" with Sikadur AnchorFix 3, a high strength epoxy or Engineer-approved equivalent.
- I. Reinforcing steel shall be ASTM A615 grade 60 minimum, deformed.

3.07 SLAB SLOPING REPAIR

- A. For leveling low areas or areas with an incorrect slope or replacing existing topping that has debonded from existing substrate surface by using an overlay which is acceptable to membrane manufacturer.
- B. The concrete surface profile (CSP) shall be CSP 4 to CSP 6 prior to the installation of the sloping materials. Sloping material shall be applied as required to properly receive traffic

coating, ensure positive drainage, correct irregularities and provide positive drainage free of birdbaths, surface defects and irregularities.

- C. For repairs to existing sloping materials, saw-cut a minimum of 1/4-inch depth and remove approximately 1/4 inch from the surface of the concrete.
- D. Roughen area to provide exposed aggregate surface profile, dampen and apply scrub coat prior to placement.
- E. Surface preparation and edge treatment shall be in accordance with Manufacturer's instructions and recommendations.

3.08 CRACK REPAIR

- A. Crack repairs will be performed in areas identified by the CONTRACTOR and verified by the ENGINEER as moving or static prior to repairs.
- B. Remove all loose and unsound concrete within and adjacent to the crack.
- C. For non-structural surface cracks with a width less than 1/16 inch, refer to Section 079200 Joint Sealants, and see the approved manufacturer's recommendations and instructions and related sections and details.
- D. For non-structural surface cracks that are greater than 1/16" but less than 1/4" wide, V-notch the surface of the crack with a mechanical router or hand chipping tool to a maximum width of 1/4 inch. Remove loose debris. The substrate must be dry prior to sealant application.
 - a. For best performance sealant should be gunned into crack to a minimum of a 1/4" in depth. Place the nozzle of the gun, either hand, air or electric powered, into the bottom of the crack, and fill entire crack. Keep the tip of the nozzle in the sealant. Continue with a steady flow of sealant preceding the nozzle to avoid air entrapment. Avoid overlapping the sealant to eliminate the entrapment of air. Tool as required to properly fill the crack.
 - b. Adhere to all limitations and cautions for the polyurethane sealant as stated in the manufacturer's printed literature.
 - c. Remove excess to provide a flush surface following crack repairs.
- E. Refer to Section 079200 – Joint Sealants and manufacturer's instructions for additional information on non-structural crack repairs with sealants.
- F. For structural cracks and cracks that are greater than 1/4" wide are to be evaluated by the Engineer.

3.09 SURFACE FINISHING WITH CONCRETE REPAIRS

- A. In areas where new concrete has been placed and areas adjacent to such areas, install skim coat mortar or stucco, as required, to fill voids and match surface and texture of surrounding areas.

- B. Unless otherwise stated in the contract, all vertical and overhead repaired areas must be touch-up painted, as best as possible, to match color and texture of surrounding areas.
- C. Finished concrete surfaces shall be uniform with a positive slope for drainage at exterior areas.

3.10 CLEANING

- A. General: Keep area clean during repair operation. Remove and clean promptly, mortar or epoxy spills with appropriate tools and solvents without damaging concrete. Collect and maintain the site in a clean and orderly condition. Remove debris daily from the site.
- B. Final Cleaning: Remove all mortar splatters, epoxy spills from the repair area and adjacent structures acceptable to the Engineer.

3.11 FIELD QUALITY CONTROL

- A. Manufacturer field service (Field service, Final inspection, Warranty request) by Manufacturer's Representative.
 - 1. Inspect finished surfaces preparation, application and finished repairs and require further preparation if necessary to achieve appropriate results.
 - 2. In no case shall the manufacturer's representative approve repairs or finishes.
 - 3. Written certification of finished work and periodical inspection reports shall be forwarded to the Owner and Engineer.

END OF SECTION

Limitations:

In the event of a conflict between these specifications and the manufacturer's instructions, recommendations and or warranty, the text of the manufacturer shall govern. The specifier shall be notified in writing of any conflicts therein prior to construction and reserves the right to clarify and modify these specifications.

CONFORMANCE SUBMITTAL
Section 031330 – Concrete Rehabilitation

_____ of

(City, State)

General Contractor: _____
(Company Name)

(Address, Phone Number)

Sub-Contractor: _____
(Company Name)

(Address, Phone Number)

The following product has been selected (check one box) for use in this project from the list of acceptable products specified:

Repair Mortars (Polymer-Modified):

- Sika Corporation (USA)
SikaRepair 222 (It's not polymer modified)*
Sikacrete 211 SCC Plus
SikaQuick FNP
SikaTop 123 Plus
SikaQuick VOH
- Sto Corp
Sto Skim-Coat Mortar
Sto Flowable Mortar
Sto Extended Full Depth Repair Mortar with CI
Sto Overhead Repair Mortar CI
- Masters Builders Systems
MasterEmaco T 1061 DR (Pedestrian Applications Only)
MasterEmaco T 310 CI
MasterEmaco N 425
- Mapei Corporation
Mapecem 102
Planitop 15
Planitop XS

Repair Mortars (Non-Polymer-Modified for Use with Anode Application):

- Sika Corporation (USA)
SikaQuick 1000
Sikacrete 211
SikaRepair 222
Sika Repair 223

- Sto Corp
 - AquaFin Mortar LN
 - StoPatch Repair Mortar
 - StoPatch Extended Full Depth Repair Mortar
- Master Builders Solutions
 - MasterEmaco T 1061
 - MasterEmaco S 466 CI
 - MasterEmaco T 1061 EX
 - MasterEmaco N 424
- Mapei Corporation
 - Planitop 18 ES
 - Planitop 11

Anti-Corrosion Agent:

- SIKA Corporation (USA)
 - Sika Armatec 110 EpoCem
- Sto Corp
 - Sto Bonding & Anti-Corrosion Agent
- Master Builders Solutions
 - MasterEmaco P 124
- Mapei Corporation
 - Planibond 3C

Bonding Agent:

- SIKA Corporation (USA)
 - Sika Armatec 110 EpoCem
- Sto Corp
 - Sto Bonding Agent & Admixture
- Master Builders Solutions
 - MasterEmaco A 660
- Mapei Corporation
 - Planibond 3C

Anchoring/Grouting:

- SIKA Corporation (USA)
 - Sikadur 32, Hi-Mod
- Master Builders Solutions
 - MasterFlow 648

Anchoring and Reinforcement:

- SIKA Corporation (USA)
Sikadur AnchorFix 3001

HILTI HIT-HY 150 Max-SD
- Simpson Strong-Tie Set XP
Simpson Strong-Tie Set XP

Sloping Materials:

- SIKA Corporation (USA)
Sikadur 21 or Sikadur 22 Lo-Mod LV
SikaQuick 1000
- Master Builders Solutions
MasterEmaco T 1061 DR
MasterSeal 350

I represent to the Owner that the product selected will be installed in compliance with the applicable codes for the authorities having jurisdiction and in accordance with the project specification. If noncompliance is discovered the General Contractor shall make or cause to be made all necessary corrections to meet the applicable codes and specifications. Immediately or as directed by Owner the work shall be completed without additional cost.

General Contractor: _____
(Signature of the Authorized Agent of the General Contractor)

(Print Name of the Authorized Agent of the General Contractor)

I represent to the Owner that the product selected will be installed in compliance with the applicable codes for the authorities having jurisdiction and in accordance with the project specification. If noncompliance is discovered, the General Contractor shall make or cause to be made all necessary corrections to meet the applicable codes and specifications. Immediately or as directed by the Owner the Work shall be completed without additional cost.

Sub-Contractor: _____
(Signature of the Authorized Agent of the Sub-Contractor)

(Print Name of the Authorized Agent of the General Contractor)

SECTION 055816

FORMED METAL ENCLOSURE (SCREEN ENCLOSURE)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including general and supplementary conditions and Division 1 specification sections, apply to this Section.
- B. Concrete Rehabilitation – Section 031330
- C. Waterproof Deck Coating – Section 071801
- D. Joint Sealants – Section 079200

1.2 PERFORMANCE REQUIREMENTS

- A. Assemblies and their connection including connection between the supporting structures shall be designed to meet the minimum design requirements of the Florida Building Code 7th Edition (2020) – (FBC), the current edition of the ASCE 7 "Minimum design loads for buildings and other structures", and the current edition of the Life Safety Code.
- B. The enclosure shall meet the configurations requirements as set forth by the Florida Building Code 7th Edition (2020) – (FBC) Section 2002.3, and meet the loading requirements of Section 1607.8.1 and Section 2002.4 unless in HVHZ.
- C. Structural performance of screen enclosure capable of withstanding the following structural loads without exceeding allowable design working stress of materials for handrails, railing anchors, and connections.
 - 1. Resist wind load pressures in accordance with ASCE 7 and design pressures specified by the Engineer of Record and per Florida Building Code 7th Edition (2020) – (FBC) Section 2002.4.
 - 2. Top rail of guards: capable of withstanding the following loads applied as indicated:
 - a. Concentrated load of 200 lbf. applied at any point and in any direction.
 - b. Uniform load of 50 lbs/ft. applied at any part and in any direction
 - c. Concentrated and uniform loads above need not be assumed to act concurrently.
 - 3. Infill areas of guards: capable of withstanding a horizontal concentrated load of 50 lbs. applied to 1 Sq.Ft. at any point in the system, including panels, intermediate rails, balusters, or other elements composing infill area. Load above need not be assumed to act concurrently with loads on top rails in determining stress on guard.
 - 4. Concentrated Loads Non-Current with Wind Loads:
 - a. Primary Members – 300 lbs vertical
 - b. Purlins – 200 lbs vertical
- D. Control of corrosion: prevent galvanic action and other forms of corrosion by insulating metal and other materials from direct contact with incompatible materials.

FORMED METAL ENCLOSURE (SCREEN ENCLOSURE)

1.3 SUBMITTALS

- A. Product data: for manufacturer's product lines assembled from standard components:
 - 1. Include product data for grout, anchoring, cements, and paint products.
 - 2. Provide warranty for specified coating system.
 - 3. Provide certification from fabrication shop that finish complies with specified coating system.

- B. Shop drawings: show fabrication and installation of enclosures and railings. Include plans, elevations, sections, details, and attachments to other work. Shop drawing shall be submitted to ENGINEER and OWNER for record prior to start of fabrication. indicating system conformance to the current edition of the Florida Building Code, ASCE 7, and Life Safety Code signed and sealed by a Professional Engineer registered in the State of Florida
 - 1. Indicate unit size profiles, dimensions, assembly technique and connection devices, picket spacing, hardware, accessories and finishes.
 - 2. Indicate diameter of anchors, embedment, spacing, edge distance, and minimum concrete strength the design is based upon.
 - 3. If requested, include design calculations indicating system conformance to the current edition of the Florida Building Code, ASCE 7, and Life Safety Code signed and sealed by a Professional Engineer registered in the State of Florida.
 - 4. It is the responsibility of the CONTRACTOR to submit shop drawing to local building authority for permitting.
 - 5. Owner to approve color, configuration, and screen material prior to fabrication.

- C. Samples for initial selection: Short sections of railings or flat sheet metal samples showing available finishes. Samples for verification for each type of exposed finish required, prepared on components indicated below and of the same thickness and metal indicated for the work. If finishes involve normal color and texture variations, include sample sets showing the full range of variations expected.

- D. Qualification data: for firms and persons specified in "Quality assurance" article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

1.4 QUALITY ASSURANCE

- A. Manufacturing qualifications: The fabricator of the specified product shall have in existence a recognized ongoing quality assurance program independently audited on a regular basis.

- B. CONTRACTOR qualifications: CONTRACTOR shall be qualified in the field of aluminum railing system installation with a successful track record of 5 years or more of documented experience. CONTRACTOR shall maintain qualified personnel who have experience in assembly installation.

- C. Metal Fabrications: Conform to AAMA Standards as applicable.

- D. CONTRACTOR shall be responsible for maintaining a clean working environment.

- E. CONTRACTOR will correct any damage to adjacent surfaces caused during performance of Work of this Section, with no charge to the OWNER. The OWNER may, at their discretion, have any damaged area repaired and charged to the CONTRACTOR for such work.

1.5 STORAGE

- A. Store enclosures and railings in a dry, well ventilated, weather-tight place.

1.6 PROJECT CONDITIONS

- A. Field measurements: verify enclosures and railing dimensions by field measurements before fabrication, and indicate measurements on shop drawings. Coordinate fabrication schedule with construction progress to avoid delaying work.
 - 1. Establish dimensions: where field measurements cannot be made without delaying work, establish dimensions and proceed with fabricating handrails and railings without field measurements. Coordinate construction to ensure that actual dimensions correspond to established dimensions.

1.7 COORDINATION

- A. Coordinate installation of anchorages for screen enclosure and railings. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, and anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to project site in time for installation.

PART 2 - PRODUCTS

2.1 SCREEN WALL MATERIALS Unless otherwise specified on shop drawings

- A. SMS post (NTD size may vary)
- B. OB frame (NTD size may vary)
- C. SMS self-mating snap chair rail min 42–inch high (NTD size may vary)
- D. picket, pickets shall be spaced such that a 4" sphere cannot pass (NTD size may vary)
- E. 18-14 charcoal fiberglass screening (Owner to approve sample)
- F. Black flat vinyl spline
- G. One-part urethane sealant
- H. All internal and external screws will be stainless steel
- I. Perimeter fastener attaching enclosure to masonry will be stainless steel tapcons with neoprene washers treated with one-part urethane to maintain watertight integrity.
- J. Drainage system: Enclosure will be elevated 1/4" above floor with filter fabric material.

2.2 METALS

- A. General: provide metal free from pitting, seam marks, roller marks, stains, discolorations, and other imperfections where exposed to view on finished units.
- B. Aluminum: alloy and temper recommend by aluminum producer and finisher for type of use and finish indicated, with not less than strength and durability properties of alloy and temper designed below for each aluminum form required:
- C. Minimum wall thickness shall be a minimum of 0.055" unless otherwise noted in accordance with the minimum requirements of FBC Section 2002.3 and meets or exceed the requirements of FBC 1607.8 Unless otherwise noted or approved materials shall be:
 - 1. Extruded bar and tube: ASTM B 221 (ASTM B 221 M), alloy 6063-T6
 - 2. Extruded structural pipe and tube: ASTM B 429, alloy 6063-T6
 - 3. Drawn seamless tube: ASTM B 210 (ASTM B 210 M), alloy 6063-T6
 - 4. Plate and sheet: ASTM B 209 (ASTM B 209 M), alloy 6061-T6
 - 5. Die and hang forgings: ASTM B 247 (ASTM B 247 M), alloy 6061-T6
 - 6. Castings: ASTM B 26 / B26 M, alloy A 356-T6

2.3 FASTENERS

- A. Fasteners for anchoring enclosures to other construction: select fasteners of type, grade, and class required to produce connections suitable for anchoring handrails and railings to other types of construction indicated and capable of withstanding design loads.
- B. Fasteners for interconnecting components: use fasteners fabricated from the same basic metal; unless otherwise indicated. Do not use metals that are corrosive or incompatible with materials joined.
 - 1. Provide concealed fasteners for interconnecting railings, components, and for attaching them to other work. Unless exposed fasteners are unavoidable, provide standard fastening method for handrail and railings indicated.
 - 2. Exposed fasteners shall be sealed or have sealed washers on the exterior side of the covering to waterproof the fastener penetration.
 - 3. Washers and all other fastening material shall be compatible with the screw head and substrate; gasket portion of fasteners or washers shall be neoprene or other equally durable elastomeric material.

2.4 FABRICATION

- A. Assemble enclosures and railings in shop to greatest extent possible to minimize field placing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation. Use connections that maintain structural value of joined pieces.
- B. Mechanical connections: fabricate enclosures and railings by connecting members with railing manufacturer's standard concealed mechanical fasteners and fittings, unless otherwise indicated. Fabricate members and fittings to produce flush, smooth, rigid, hairline joints.

- C. Brackets, flanges, fittings, and anchors: provide manufacturer's standard wall brackets, flanges, miscellaneous fittings, and anchors to connect handrail and railing members to other construction.
- D. Shear and punch metals cleanly and accurately. Remove burrs from exposed cut edges.
- E. Cut reinforced drill components as indicated to remove finish hardware, screws, and similar items.
- F. Close exposed ends of railing members with prefabricated end fittings.
- G. All internal structural strengthening shall be of similar materials. Do not use metals that are corrosive or incompatible with materials joined. If engineer approved, non-similar must be provided with isolation and appropriate corrosion protection.

2.6 ALUMINUM FINISHES

- A. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with manufacturer's written instructions and meeting minimum AAMA standard specified.
 - 1. Kynar 500 or Hylar 5000 70% Trinar (2 coats) or equivalent meeting minimum AAMA-2605 (10 year finish).
 - a. Color and gloss: as selected by Owner from manufacturer's full range of color and gloss, including custom colors. Selections might include up to four different selections of color.
 - 2. Anodized meeting minimum AAMA 612A. (10 year Finish)
 - a. Color and gloss: as selected by Owner from manufacturer's full range of color and gloss, including custom colors. Selection will be one standardized color.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, where reinforced to receive anchors, to verify that locations of concealed reinforcements have been clearly marked for installer. Locate reinforcements and mark locations, if not already done.
- B. Take field measurements of areas to be screened prior to preparation of shop drawings.
- C. Shop assemble rails in continuous lengths, field cut components to size required. Remove abrasions and touch up edges where finish is abraded or where unfinished aluminum is exposed.
- D. Fit field cut components straight, square, flush with adjoining members and tight to each component to form a hairline joint between components.

3.2 SCREEN WALL REMOVAL PROCEDURE

- A. All existing aluminum will be removed and hauled away by CONTRACTOR, after measuring post locations and noting alignments.
- B. Remove and dispose of all existing assembly including but not limited to all fasteners and embedded anchors in the concrete slab. Original fasteners will be pulled from the walls and ceiling only. If the fasteners break off, the remainder will be ground into the masonry one half inch.
- C. Old caulking will be scraped off. Removal of old caulk is not intended to suffice as preparation of surfaces for new paint.
- D. The CONTRACTOR will be responsible for repairing damaged concrete, filling holes or cut marks resulting from the removal of the assemblies.
- E. The work area will be left broom clean.
- F. The CONTRACTOR shall be responsible for the installing safety barriers acceptable to OSHA and the local governing authority once screen enclosures are removed.
- G. In the event that shutters, glass or other fixed objects are located next to or fastened to the screen walls at balcony edge and are not to be removed, the following will be required. Due care will be taken in removing existing screen wall to avoid damage to valences. The screen frame must be taken to the ground, essentially in one piece. The valences are then removed, labeled and stored. New screen walls will have to be test set in the openings, then taken to the ground, pre- screened, and valences attached. The screen wall is installed from the outside. This scope of work, if necessary, will be an additional charge depending on conditions, and shall be determined prior to commencement of work. The CONTRACTOR will be responsible for repairing damaged concrete, filling holes or cut marks resulting from the removal of the assemblies.

3.3 GENERAL INSTALLATION PROCEDURES

- A. Existing balcony area will be measured and enclosure will be built in the shop to minimize field splicing.
- B. Cut floor tile back to install screen enclosure on concrete substrate unless otherwise indicated. Minimum 1-inch distance between tile and edge bottom shall be provided unless otherwise indicated. Area under bottom rail shall and provide drainage.
- C. Evaluate substrates for distress cracks and spalling. Contact Engineer for repair prior to installation.
- D. If water-proofing membrane is present, install compatible liquid applied water-proofing. Install new liquid applied water-proofing to substrate if indicated on drawings
- E. Fit exposed connections together to form tight, hairline joints.
- F. Cutting, fitting, and placement: perform cutting, drilling, and fitting required for installing handrails and railings.

- G. Set enclosures and railings accurately in location, alignment, and elevation, measured from established lines and levels and free from rack.
- H. Concrete fasteners shall be placed with a minimum distance from the slab edge as indicated on drawings.
- I. Do not weld, cut, or abrade surfaces of railing components that have been coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
- J. One-part urethane sealant will be applied to each fastener before it is installed.
- K. Stainless steel tapcons are used to attach enclosure. Exposed fasteners shall be sealed or have sealed washers on the exterior side of the covering to waterproof the fastener penetration.
- L. Washers and all other fastening material shall be compatible with the screw head and substrate; gasket portion of fasteners or washers shall be neoprene or other equally durable elastomeric material.
- M. Corrosion protection: coat concealed surfaces of aluminum that will be in contact with grout, concrete, masonry, wood, or dissimilar materials, with a heavy coat of bituminous paint.
- N. Adjust railings before anchoring to ensure alignment at abutting joint's space posts "T" interval indicated, but not less than that required by structural loads.
- O. Fastening to in-place construction: use anchorage devices and fasteners where necessary for securing screen enclosure, handrails and railings and for properly transferring load to in-place construction.
- P. Enclosures are wiped down and touched up before screening.
- Q. Enclosures are screened with 18-14 fiberglass screening.
- R. Perimeter is caulked with one-part urethane caulking on the inside and out of walls and ceiling.
- S. Bottom enclosure frame shall be cleaned of debris to ensure drainage.
- T. Installation of a swing door will be required at locations where previous conditions existed.

3.4 CLEANING

- A. Touchup painting: immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and appoint exposed areas with same material. All frames shall be cleaned after sealants have been applied and cured.
- B. Marred finishes shall be "touched up" with material furnished by the manufacturer or fabricator. Replace damaged, stained or soiled screening prior to final payment submittal.
- C. Clean existing adjacent surfaces when completed.

FORMED METAL ENCLOSURE (SCREEN ENCLOSURE)

- D. Decks are swept clean. Any damage to deck coating shall be repaired at the Contractor's expense.

3.5 WARRANTIES

- A. The CONTRACTOR is to supply warranties for all labor, materials and products as per contract.
- B. Provide warranties as specified; warranties shall not limit length of time for remedy of damages the OWNER may have as provided by law. The CONTRACTOR, supplier or installer responsible for performance of said warranty shall sign warranties.

Limitations:

In the event of a conflict between these specifications and the manufacturer's instructions, recommendations and or warranty, the text of the manufacturer shall govern. The specifier shall be notified in writing of any conflicts therein prior to construction and reserves the right to clarify and modify these specifications.

END OF SECTION

SECTION 071801

**WATERPROOF DECK COATING
(BALCONIES AND ENTRYWAYS)**

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Provisions of general, supplementary conditions, and Division 1 apply to all work in this Section.
- B. Furnish all labor, materials, tools and equipment to perform application of liquid, cold-applied, elastomeric protective Waterproof Deck Coating System to the concrete balconies decks and entryways with stairwells with base coat, mid-coat with aggregate to refusal, followed with top coat. The balconies will receive a gemstone finish in accordance with these specifications, details and manufacturer's instructions. The exterior stairwells will have this system as the finished product.
- C. In the event of a conflict between the text in this specification and the approved manufacture's published instructions, the text of the approved manufacturer's published instructions shall govern.

1.02 RELATED SECTIONS

- A. Section 031330 CONCRETE REPAIR
- B. Section 079200 JOINT SEALANTS

1.03 SUBMITTALS

- A. Comply with Division I, Section 013300 - Submittal Procedures.
- B. Submit intent to warranty document from manufacturer of elastomeric Traffic Deck Coating System with performance guarantee against water penetration for five (5) years, with any necessary replacement material and labor supplied at no cost to Owner.
- C. Submit statement from Manufacturer attesting to applicators prequalified status.
- D. Submit laboratory tests or data that validate product compliance with performance criteria specified.
- E. Submit a sample of the Approved Manufacturer's minimum five (5) year materials warranty.

1.04 QUALITY ASSURANCE

- A. Manufacturer qualifications: Company regularly engaged in manufacturing and marketing of products specified in this section.
- B. Contractor qualifications: Qualified to perform work specified by reason of experience or training provided by product manufacturer.

- C. Mockup: Provide mockup of at least 100 square feet to include surface profile, sealant joint, cracks, flashing, and juncture details and allow for evaluation of slip resistance of Waterproof Deck Coating System.
 - 1. Install mockup with specified coating types and with other components noted.
 - 2. Locate where directed by the Owner.
 - 3. Mockup may remain as part of Work if acceptable to Owner.
- D. Notify manufacturer's authorized representative at least two weeks before start of work. Schedule minimum of 3 job site inspections by manufacturer's authorized representative, first scheduled before application of product. Application of elastomeric Waterproof Deck Coating System without prior notice will not constitute acceptance by manufacturer of five-year waterproofing inspection and guarantee procedure.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products in original factory packaging bearing identification of product, manufacturer, and batch number. Provide Material Safety Data Sheets for each product.
- B. Store product in location protected from freezing, damage, construction activity, precipitation, and direct sunlight, in strict accordance with manufacturer's recommendations.
- C. Condition products to approximately 60 to 70 degrees F for use in accordance with manufacturer's recommendations.
- D. Handle all products with appropriate precautions and care as stated on Material Safety Data Sheet.

1.06 PROJECT CONDITIONS

- A. Do not use products under conditions of precipitation or freezing weather or when such conditions are imminent. Use appropriate measures for protection and supplementary heating to ensure proper drying and curing conditions in accordance with manufacturer's recommendations if application during inclement weather occurs.
- B. Ensure substrate is dry in accordance with manufacturer's instructions.
- C. Protect all adjacent work from contamination due to mixing, handling, and application of preparation and repair products and elastomeric Waterproof Deck Coating System.

PART 2 - PRODUCTS

2.01 APPROVED MANUFACTURERS

- A. Master Builders Solutions
889 Valley Park Drive
Shakopee, MN 55379 USA
Customer Service: 800-433-9517
Technical Service: 800-243-6739
Direct Phone: 952-496-6000
Website: www.master-builders-solutions.com/en-us

- B. GemStone Concrete Coating
10640 47th St. N
Clearwater, FL 33762
Customer Service: 727-541-3194
Website: www.gemstoneinc.net

2.02 PERFORMANCE CRITERIA

- A. Liquid-applied polyurethane waterproofing coating system See Approved Manufacturer's Data Sheet Compliance: ASTM C957

2.03 MATERIALS: (Systems)

- A. Liquid-applied polyurethane waterproofing coating system
 - 1. MASTER BUILDERS SOLUTIONS: Sonoguard Base Coat (MasterSeal M200) / Sonoguard Top Coat (MasterSeal TC 225) / Sonoguard Top Coat (MasterSeal TC 225)
- B. Gemstone System
 - 1. Gemstone Base Flex: Polymer-modified acrylic-cementitious colored bond coat used to increase bonding adhesion for Gemstone Diamond Deck
 - 2. Gemstone Diamond Deck: Colored-quartz filled cementitious decorative finish system applied over bond coat, Gemstone Base Flex.
 - 3. **Joints and cant beads, to be sealed with Sonneborn Ultra Sealant.**
 - 4. Provided other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor and approved by the coating system manufacturer as compatible, subject to the approval of the Owner/Engineer.
 - 5. Colors and Patterns: **Colors and patterns shall be determined by Owner.**
- C. Substrate Priming Materials:
 - 1. Concrete: As required by manufacturer.
 - 2. Metal: As required by manufacturer.
- D. Joint backing:
 - 1. Closed-cell, polyethylene rod as recommended by membrane manufacturer.
- D. Repair and Detailing Materials
 - 1. See Section 079200 - Joint Sealants and Section 031330 – Concrete Rehabilitation.
- E. Aggregate: silica aggregate approved by manufacturer.
- F. All applications recommended by manufacturer pertaining to this work to provide Owner with single source system and warranty.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Inspect all areas involved in work to establish extent of work, access, and need for protection of surrounding construction.
- B. Protect all surroundings from Primers, Patching Repair Compounds and Finish products and to include, but not be limited to, windows, roofs, walkways, drives, automobiles, and landscaping.

3.02 SITE VERIFICATIONS OF CONDITIONS

- A. Conduct all preapplication inspections of site verification with authorized Manufacturer's Representative.
- B. Inspect all expansion joints to ensure there is no deteriorated sealant, adhesion loss or non-elastomeric caulks installed in joints. Repair all deficient sealant or caulk with single part polyurethane sealant.
- C. Inspect all through deck penetrations, including electrical, lighting, signage, plumbing, HVAC, fire sprinkler piping for watertight seal. Repair all deficiencies with single part polyurethane sealant.

3.03 SURFACE PREPARATION: CONCRETE

- A. Complete removal and disposal of the existing adhesives and floor finishes located at the balconies and stairwells chipping hammers, scarifying, pressure washing, water blasting, shop blasting, grinding or combinations thereof. Any defects in the surfaces caused by surface preparation shall be repaired at no additional expense to the OWNER. The CONTRACTOR shall provide the proper preparation of the walkway surface to achieve a Concrete Surface Profile of CSP 3 to a maximum of CSP 4.
- B. Remove all dust, dirt, and contaminants from surfaces that require detail work by vacuuming. Prime 3 inches beyond crack and joint details using short-nap roller with Manufacturer-Approved Primer.
- C. All surface spalls and imperfections greater than ¼ inch in depth are to be repaired with the appropriate repair mortar in accordance with these specifications, details, and manufacturer's instructions.
- D. Apply wet mil prestripe of base coat for nonmoving joints and cracks less than 1/16 inch wide as specified by the manufacturer. Fill and overlap joint or crack 3 inches on each side. Feather edges.
- E. Rout cracks and joints over 1/16 inch wide to minimum of 1/4 inch by 1/4 inch and clean. Install bond breaker tape to prevent adhesion to bottom of joint. Prime joint faces only with Manufacturer-Approved Primer. Seal with two-part Manufacturer approved sealant. Allow sealant to cure.
- F. Prime deck 3 inches on either side of sealant with Manufacturer Approved Primer. Do not apply primer to sealant bead itself. Allow primer to dry. Apply 25 wet mil prestripping of base coat over joint and adjacent 3 inches of pre-primed deck on either side. Feather edges.