



Concrete Balcony Repairs 2013

DANA POINT
Condominium Association
Arlington Heights, Illinois

PREPARED BY:

POSTL-YORE AND ASSOCIATES INC.
2100 GOLF ROAD, SUITE 230
ROLLING MEADOWS, IL 60008
PH 847.640.1010
#13231.00 JUNE 2013

PROJECT MANUAL

Concrete Balcony Repairs - 2013
Dana Point Condominium Association

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INSTRUCTIONS

PART 1 - GENERAL

1.01 INVITATION TO BID

- A. The Dana Point Condominium Association will receive bid proposals for 2013 Concrete Balcony Repairs, at Dana Point in Arlington Heights, Illinois, in accordance with the Project Manual and Drawings prepared by Postl – Yore and Associates, Inc.
- B. Bids will be due on Wednesday, July 10, 2013 at 4:00pm local time at the offices of the Property Manager:
Dana Point Condominium Association
c/o Lisette Ray- Property Manager
1519 E. Central Road
Arlington Heights, IL 60005
- C. Submit an Email or hard copy to the office of the Architect
Postl-Yore and Associates
Attn: Margaret Pinkous
2100 Golf Road, Suite 230
Rolling Meadows, IL 60008
- D. Submit a copy of the fully executed bid on the Bid Form provided, with all spaces filled in, using ink or typewriter, and signed by an authorized officer, partner, or owner.
- E. No bids may be withdrawn for a period of 60 days after the bid opening date.

1.02 BID DOCUMENTS AND CONTRACT DOCUMENTS

- A. Bid Documents: consist of this Project Manual, Drawings, Bid Form and any addenda that may be issued.
- B. Contract Documents: will include the Bid Documents in addition to the Standard Form of Agreement Between Owner and Contractor, General Conditions, and Owner provided Supplementary Conditions.

- C. The Contract Documents contain the provisions required for the construction of the Project. Modifications to the Contract Documents can be made by written amendment only. Information obtained from any officer, agent, or employee of the Owner, or any other person should not be construed as altering the risks or obligations assumed by the Bidder or relieve the Bidder from fulfilling any condition of the Contract.

1.03 AVAILABILITY OF DOCUMENTS

- A. One Project Manual and one full-size set of Drawings will be furnished free of charge

1.04 INTERPRETATIONS PRIOR TO BIDDING

- A. Address all requests for interpretations as to the meaning of the Drawings or Specifications to the Architect in writing no later than two (2) calendar days prior to the bid due date.
- B. Submit requests on the form provided in Section 00 63 13.
- C. All addenda issued during the bidding period become part of the Contract Documents.

1.05 PRODUCT / SYSTEM OPTIONS

- A. Where the Bid Documents stipulate a particular product, requests for alternates will be considered by the Architect up to 7 calendar days prior to the bid due date.
- B. When a request to substitute a product is made, should a specified product no longer be available, the Architect may approve the substitution and will issue an Addendum to all invited Bidders.
- C. In submission of alternatives to products specified, bidders shall include in their bid any changes required in the Work to accommodate such alternatives. A later claim by the bidder for an addition to the Contract Sum or Time because of changes in the Work necessitated by the use of an approved alternative will not be considered.

1.06 EXAMINATION OF THE SITE

- A. No plea of ignorance of conditions that exist, or difficulties that may be encountered in the execution of the Work, as a result of failure or omission on the part of the bidder will be accepted as a basis for any claim for additional compensation or for extension of time.

1.07 BONDS

- A. No bid bonds or security deposits will be required.
- B. Successful Contractor may, at Owner's option, be required to furnish Performance and Labor and Material Payment Bonds covering 100% of the Contract amount. Submit Bonds on AIA Form A311. Owner will reimburse Contractor for the actual cost of Bonds requested.

1.08 AWARD OR REJECTION OF BIDS

- A. The Owner reserves the right to accept or reject any or all bids.
- B. It is the intent of the Owner to award a Contract within 60 days of the bid due date.
- C. All bidders will be advised of the Owner's decision upon execution of a Contract or within 60 days of the bid due date, whichever occurs first.

1.09 BID SUBMISSION

- A. Bids are to be submitted only on the Bid Form provided, signed by an authorized officer, partner, or owner.

1.10 AGREEMENT FORM

- A. Form of Agreement will be Standard Form of Agreement Between Owner and Contractor, General Conditions, and Owner provided Supplementary Conditions.

END OF SECTION

Section 00 41 13

BID FORM

Date:

Submitted by:

(Name)

(Address)

.....

(Phone) (Fax)

(E-mail)

To: Dana Point Condominium Association
c/o Lisette Ray – Property Manager
1519 E. Central Road
Arlington Heights, IL 60005

and Postl-Yore and Associates
2100 Golf Road, Suite 230
Rolling Meadows, IL 60008
Attn: Margaret Pinkous

Project: **Balcony Repairs - 2013**
Dana Point
Arlington Heights, Illinois

1.01 OFFER

- A. Having examined the place of the Work and all matters referred to in the Instructions to Bidders and the Contract Documents prepared by Postl – Yore and Associates, Inc., for the above referenced project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the amounts as listed on the following page. All applicable federal, state, and local taxes are included.

- B. The intent of the Contract is to have one Contractor do the Work covered in the Project Manual and the Drawings. The Association has determined a specific budget sum to cover these Unit Cost Repairs. Contractor agrees to verify all quantities and amounts with the Architect to determine monthly pay-out and billing.

C. Costs of Repairs:

Section	#	Item	Scope	Unit	Unit Cost
03 01 30	A	Concrete Repairs	Shallow concrete repair – up to 1” deep.	Per square foot	
03 01 30	B	Concrete Repairs	Deep concrete repair – More than 1” up to 3” deep.	Per square foot	
03 01 30	C	Concrete Repairs	Full depth balcony slab concrete repair.	Per square foot	
03 30 00	D	Concrete Repairs	Full depth roof slab concrete repair/replacement	Per square foot	
03 01 30 03 30 00	D	Additional Steel Reinforcing Bars	Installing additional re-bar at concrete patch areas - #4 bars	Per lineal foot	
03 01 30 03 30 00	E	Additional Steel Reinforcing Bars	Installing additional re-bar at concrete patch areas - #5 bars	Per lineal foot	
Detail 6/A0.3	F	Repair of Railing Posts	Identification and repair of deteriorated railing posts.	Each railing post	
07 18 00	G	Traffic Coatings	Installation of Sonneborn Sonoguard Pedestrian system to balcony/closet floors. Including all preparation.	Each balcony/closets	
07 90 00 (03 01 30)	H	Joint Sealers (<i>see also Concrete repairs</i>)	Routing and caulking of concrete patch areas and cracks	Per lineal foot	
09 91 00	I	Priming and Painting of concrete surfaces.	Priming and painting of concrete balcony undersides and roof overhang undersides using <i>Glidden Stucco and Masonry Exterior Latex Flat</i> paint/primer	Per square foot.	
09 91 00 ALTERNATE	J	Priming and Painting of concrete surfaces.	Priming and painting of concrete balcony undersides and roof overhang undersides using <i>Sonneborn Parkcoat</i>	Per square foot.	
	K	General Conditions	Mobilization, equipment, protection devices, permit fees, overhead and profit.		

D. **Alternate – Bonds:**

Furnish Performance and Labor and Material Payment bonds to cover \$150,000.00	\$
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1.02 ACCEPTANCE

- A. This offer shall be open to acceptance and is irrevocable for sixty (60) days from the bid due date.
- B. If this bid is accepted by the Owner within the time period stated above, we will:
1. Execute the Agreement within ten days of receipt from Owner.
 2. Furnish any required bonds within ten days of receipt of the Agreement.
 3. Commence work within thirty days after written notification of acceptance of this bid.

1.03 APPENDICES

- A. A list of Subcontractors is appended hereto and identified as “Appendix A”.

1.04 ADDENDA

- A. The following Addenda have been received. The modifications to the Contract Documents noted therein have been considered and all costs thereto are included in the Bid Sum.

Addendum #Dated

Addendum #Dated

1.05 BID FORM SIGNATURE(S)

The Corporate Seal of

.....
(Bidding Company – please print)

was hereunto affixed in the presence of:

.....
Authorized signing officer Title

BID FORM – APPENDIX A

This is the list of Subcontractors referred to in Article 1.03 of the Bid Form submitted by:

(Bidder)

dated and which is an integral part of the Bid Form.

The following work will be performed (or provided) by Subcontractors and coordinated by us:

TYPE OF WORK	SUBCONTRACTOR
.....
.....
.....
.....
.....
.....
.....
.....
.....

END OF SECTION

Section 00 52 00

AGREEMENT FORM

PART 1 - GENERAL

1.01 CONTRACT

- A. Standard Form of Agreement between Owner and Contractor

PAGES TO BE ADDED

Section 00 61 13

PERFORMANCE AND PAYMENT BONDS

Pages to be added

Section 00 62 16

CERTIFICATE OF INSURANCE FORM

Pages to be added

REQUEST FOR INFORMATION FORM

Date: _____

Subject: _____

REQUEST FOR INFORMATION

Section 00 73 00

GENERAL AND SUPPLEMENTARY GENERAL CONDITIONS

PART 1 - GENERAL

1.01 GENERAL CONDITIONS

- A. General Conditions: General Conditions of the Contract for Construction.

1.02 SUPPLEMENTARY GENERAL CONDITIONS

- A. This Paragraph modifies, changes, deletes from or adds to the General Conditions. Where any Article of the General Conditions is modified or deleted by this paragraph the unaltered provisions of that Article shall remain in effect.

- B. Article 11 Insurance.

1. Add to Paragraph 11.1.2:

The minimum amounts of required insurance are:

Liability	\$1,000,000
Auto	\$1,000,000
General Aggregate	\$2,000,000
Workers Compensation	Statutory Limits
Excess Liability	\$2,000,000 (Umbrella Form)

"XCU" coverage shall not be excluded.

The policy's blanket additional insured endorsement is to be on a standard form and is not to be modified.

Contractor's Insurance carrier to be rated A- or better

- C. Add Paragraph 11.1.4:

The Certificate(s) of Insurance shall include as Additional Insured: The Dana Point Condominium Association (Owner), Lieberman Management Services (Managing Agent), and Postl – Yore and Associates, Inc. (Architect).

END OF SECTION

Section 01 30 00

ADMINISTRATIVE PROVISIONS

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Work covered by the Contract Documents.
- B. Contract method.
- C. Work sequence.
- D. Contractor use of premises,
- E. Safety procedures
- F. Owner occupancy
- G. Changes in the Work
- H. Applications for payment.
- I. Guarantees
- J. Coordination and project conditions.
- K. Cutting and patching
- L. Alteration Project Procedures

1.02 WORK COVERED BY THE CONTRACT DOCUMENTS

- A. Work of this Contract is comprised of:
 - 1. The Work contained in the attached sections of Divisions 3, 7, and 9. Work also includes all other related sections in this Project Manual and the attached Drawings.
 - 2. Contractor is to obtain and pay for all required permits and inspections.
 - 3. Provide performance, labor and material payment bonds if requested by owner.

- B. Contractor will design, furnish, install, and maintain platforms, scaffolds, ladders, and barricades to provide access to work areas and protection for the structure, occupants, and visitors.
- C. Clean-up of job sites daily in a timely and orderly fashion

1.03 CONTRACT METHOD

- A. Form of agreement will be Standard Form of Agreement Between Owner and Contractor, General Conditions and Supplementary General Conditions
- B. Unit price bids for the following items:
 - 1. Repair of deteriorated concrete on balconies and roof overhangs
 - 2. Routing and caulking of cracks in balconies and roof overhangs
 - 3. Repair of deteriorated railings.
 - 4. Installation of pedestrian traffic coating to balcony floors.
 - 5. Painting of balcony ceilings
 - 6. Mobilization

1.04 WORK SEQUENCE

- A. Submit an initial construction schedule.
- B. Submit revised schedules with each application for payment.
- C. Designated work hours are 8:00 AM to 5:00 PM on Monday through Friday. These hours will not be extended.
- D. Saturday, Sunday and holiday work hours will not be allowed.

1.05 CONTRACTOR USE OF PREMISES

- A. Limit use of site for Work to present the least possible inconvenience to Owner and so as to avoid conflicts.
- B. Limit storage of materials to smallest practical amounts that will not inhibit orderly, continuous performance of the Work while not unduly inconveniencing the Owner.
- C. Coordinate use of the premises with the Owner. Store materials only in Owner designated areas.
- D. Maintain ingress and egress to buildings through main entrances for Owner at all times.

1.06 SAFETY PROCEDURES

- A. Contractor is solely responsible for safety practices and procedures on this Project.
- B. Comply with all pertinent OSHA requirements relating to the methods and means used to execute the work.
- C. Furnish, install, and maintain barricades, ramps, ladders, scaffolds, shoring, and platforms as necessary to access work and to provide protection for the structure, occupants, and visitors.

1.07 OWNER OCCUPANCY

- A. Owner will be occupying the buildings during the entire course of work.
- B. Coordinate schedules, staging, and storage so as not to interfere with Owner's use of the buildings.

1.08 CHANGES IN THE WORK

- A. Changes in the Work after execution of the Contract may be accomplished without invalidation of the Contract by Change Order as defined by the General Conditions

1.09 APPLICATIONS FOR PAYMENT

- A. Submit three (3) copies of application for payment.
- B. Submit three (3) copies of Waivers of Lien covering amount of Application and Waivers of Lien from all sub-contractors and material and equipment suppliers.
- C. Submit an updated construction progress schedule with each Application.
- D. Payment period: One Calendar month. The first Application date will be the last day of the month in which construction commences.
- D. Payment Terms: Payment will be made for 90% of the value of Work in place on the date of Application. Payment for materials stored but not installed will not be made.

1.10 GUARANTEES (WARRANTIES)

- A. In addition to specific guarantees (warranties) listed in the individual specification Sections, contractor will guaranty Work, labor and material, to be free from defects for a period of two (2) calendar years from the date of Substantial Completion.

- B. Contractor will repair or replace defective work during the guarantee period at no additional cost to the Owner.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 COORDINATION AND PROJECT CONDITIONS

- A. Coordinate scheduling, submittals, and Work to ensure efficient and orderly sequence of operations.
- B. Assign a full time Project Superintendent or Working Foreman acceptable to Architect. Superintendent or Foreman must be on the job site at all times while the work is in progress. Superintendent or Foreman must be able to clearly communicate with Architect, Owner and Owner's maintenance staff.
- C. Maintain sufficient experienced manpower and equipment to expeditiously complete the Work and to maintain approved schedule.
- D. Coordinate completion and clean-up of Work for Owner's daily use and in preparation for Substantial Completion.

3.02 CUTTING AND PATCHING

- A. Employ skilled and experienced tradesmen to perform cutting and patching.
- B. Submit written request in advance of cutting or altering existing structural elements and finish elements which are not specifically covered on the Drawings or in this Project Manual.
- C. Execute work by methods to avoid damage to other Work and which will provide proper surfaces to receive patching and finish materials.
- D. Cut masonry and concrete materials using masonry saw or core drill.
- E. Restore work with new products in accordance with the requirements of the Drawings and Project Manual and to match existing finishes.
- F. Fit Work tight to pipes, sleeves, ducts, conduit, and other penetrations.
- G. Maintain integrity of structure, wall, ceiling, and floor construction. Completely seal voids.

- H. Identify potentially hazardous substances or conditions exposed during the Work to the Architect for decision or remedy.

3.03 ALTERATION PROJECT PROCEDURES

- A. Close openings in exterior surfaces to protect existing work from weather and extremes of temperature and humidity.
- B. Remove, cut and patch Work in a manner to minimize damage and to provide means of restoring products and finishes to original or specified condition.
- C. Where new Work abuts or aligns with existing, provide a smooth and even transition. Patch Work to match existing adjacent work in texture and appearance.
- D. When finished surfaces are cut so that a smooth transition with new Work is not possible, terminate existing surfaces along a straight line at a natural line of division and submit recommendations to Architect for review.
- E. Where a change of plane of 1/8 inch or more occurs submit recommendations to Architect for review or request instructions from Architect.
- F. Patch or replace portions of existing surfaces which are damaged, lifted, discolored, or showing other imperfections resulting from the Work of this Contract.
- G. Finish surfaces as specified on the Drawings or in this Project Manual.

END OF SECTION

Section 01 33 00

SUBMITTAL PROCEDURES

PART 1 – GENERAL

1.01 GENERAL

- A. Transmit each submittal with AIA Form G810 or other identifying cover sheet.
- B. Sequentially number transmittal forms. Revise submittals with original number and a sequential alphabetic suffix.
- C. Identify Project, Contractor, Subcontractor, or supplier, pertinent drawing and detail number, and specification section number as appropriate.
- D. Apply Contractor's stamp, signed or initialed, certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and the Contract documents.
 - 1. Contractor is to ensure that submittals meet the requirements of the Contract Documents before submitting to the Architect.
 - 2. Contractor will be allowed an initial submittal and one re-submittal of each shop drawing, sample, and/or product data sheet.
 - 3. Contractor will be charged for the Architect's time in reviewing any subsequent re-submittals at the Architect's standard hourly billing rates.
- E. Schedule submittals to expedite the Project. Coordinate submission of related items.
- F. Identify variations from Contract Documents and Product or system limitations, which may be detrimental to successful performance of the Work.
- G. When revised for resubmission, identify all changes made since previous submission.
- H. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.

1.02 PRODUCT DATA

- A. Submit the number of copies which the Contractor requires plus two copies to be retained by the Architect. Submittals by Email will be accepted if provided in .pdf format.

- B. Mark each copy to identify applicable products, models, and options, and to coordinate with identifying key on Contract Drawings. Supplement manufacturers' standard data to provide information specific to this project.
- C. After review, distribute in accordance with general requirements above and retain copies for record documents at Contract Closeout.

1.03 SHOP DRAWINGS

- A. Submit minimum of two copies for Architect's use. Architect will return one copy.
- B. Electronic submittals may be e-mailed either in .pdf or AutoCad format. Clearly identify Project name in subject line of e-mail transmissions.
- C. Fully define on shop drawings all dimensions, clearances required, connection points and methods, finishes, and colors.

1.04 SAMPLES

- A. Submit the number of samples Contractor requires to be returned plus two samples to be retained by Owner and Architect.
- B. Include identification on each sample with full Project information.
- C. Submit samples large enough to fully illustrate functional and aesthetic characteristics, with integral parts and attachment devices.
- D. Contractor will be allowed an initial submittal and one re-submittal of each shop drawing, sample, and/or product data sheet.
- E. Contractor will be charged for the Architect's time in reviewing any subsequent re-submittals at the Architect's standard hourly billing rates.

1.05 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual specification sections, or requested by Architect, submit minimum of two copies to be retained by Architect of manufacturers' printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing.
- B. Indicate special procedures, precautions, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

- C. Manufacturers' instructions will not be returned. Retain necessary copies for Field and Contractor's office. Instructions regarding the regular Maintenance, care and cleaning of products used shall be provided to the Owner for their use.

1.06 MATERIAL SAFETY DATA SHEETS

- A. Submit two copies of material data safety sheets for all products, supplies, lubricants, and cleaning agents to be used on the job site. Retain one full set of material safety data sheets at the construction site office. Submitted copies will not be returned.

END OF SECTION

Section 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.01 SUMMARY

- A. Temporary Utilities: Electricity, telephone service, and sanitary facilities.
- B. Temporary Controls: Barriers, enclosures, and protection of the Work.
- C. Construction Facilities: Parking, progress cleaning, and project signage.

1.02 TEMPORARY ELECTRICITY

- A. Furnish and pay for the cost of temporary electric service or temporary portable generators as necessary to complete the Work.
- B. Owner's electrical service is not to be used.
- C. Provide temporary electric feeder(s) as required.
- D. Verify service characteristics before making connections.
- E. Provide power outlets for construction operations, with branch wiring and distribution boxes located as required. Provide flexible power cords as required.

1.03 TELEPHONE SERVICE

- A. Provide, maintain, and pay for telephone service for construction use as required.
- B. Owner's telephone service is not to be used.

1.04 TEMPORARY WATER SERVICE

- A. The Owner will provide water service for construction purposes.
- B. Contractor is to provide and maintain tight-fitting durable hoses.
- C. Contractor is to provide drinking water and suitable cups as necessary for workmen on the site.

1.05 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain, in a sanitary condition, a suitable temporary convenience and enclosure for the use of the workers on the Project. Locate as directed by the Owner / Management onsite. Remove at the completion of the project and as directed by the Owner.

1.06 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas, to allow for Owner's use of site, and to protect existing facilities, occupants, visitors, landscaping, and vehicles from damage due to construction operations.
- B. Protect non-owned vehicular traffic, adjacent structures, stored materials, and site from damage.
- C. Provide protection for landscaping and pavement. Replace damaged landscaping. Replace damaged pavement.

1.07 SECURITY

- A. Provide security and facilities to protect Work, stored materials, and tools from unauthorized entry, vandalism, or theft.
- B. Contractor's employees are to be prohibited from entering the building beyond designated access and work areas.
- C. Contractor's employees violating security provisions will be removed from the property and prohibited from returning.

1.08 PARKING

- A. Coordinate use of parking facilities with Owner.
- B. Do not use public streets for construction vehicle parking or for material storage.

1.09 PROGRESS CLEANING AND WASTE REMOVAL

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

B. Collect and remove waste materials, debris, and rubbish from site daily and dispose of off-site. Dumpsters will be allowed in locations designated by management.

C. Do Not use Owner's dumpsters for disposal of debris.

1.10 PROJECT IDENTIFICATION

A. No signs, except those required by law, are allowed without Owner's permission.

1.11 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

A. Remove temporary utilities, equipment, facilities, and materials, prior to final inspection.

B. Clean and repair damage caused by installation or use of temporary work, including landscaping.

C. Restore existing and new facilities used during construction to original condition.

END OF SECTION

MAINTENANCE OF CAST-IN-PLACE CONCRETE

PART 1 – GENERAL

1.01 WORK INCLUDED

- A. Surface preparation
- B. Identification and Removal of spalled, delaminated, and cracked portions of exposed exterior concrete on balcony top surfaces, edges and undersides.
- C. Preparation of repair areas and installation of new repair material.
- D. Routing and caulking of cracks.
- E. Remove and Reset existing railing system as necessary for concrete balcony repairs
- F. Protection of adjacent areas.
- G. Clean-up.

1.02 RELATED SECTIONS

- A. Section 01 30 00 – Administrative Provisions.
- B. Section 01 33 00 – Submittal Procedures.
- C. Section 03 30 00 – Cast-In-Place Concrete
- D. Section 07 18 00 – Traffic Coatings
- E. Section 07 90 00 – Sealants.
- F. Section 09 91 00 – Exterior Painting.

1.03 REFERENCE STANDARDS

- A. ICRI Technical Guideline No. 03730
- B. ICRI Technical Guideline No. 03732
- C. ASTM C191 – Standard Test Method for Time of Setting of Hydraulic Cement
- D. ASTM C109 – Standard Test Method for Compressive Strength of Hydraulic Cement Mortars
- E. ASTM C882 – Standard Test Method for Bond Strength of Epoxy-Resin Systems Used with Concrete by Slant Shear
- F. ASTM C469 – Standard Test Method for Static Modulus of Elasticity and Poisson's Ratio of Concrete in Compression

- G. ASTM C157 – Standard Test Method for Length Change of Hardened Hydraulic-Cement Mortar and Concrete
- H. ASTM C348 – Standard Test Method for Flexural Strength of Hydraulic-Cement Mortars
- I. ASTM C666 – Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing.
- J. ASTM A615 – Grade 60 Billet Stock Reinforcing Bar
- K. ACI 301 – Specifications for Structural Concrete
- L. ACI 315 –Detailing of Reinforced Concrete Structures
- M. ACI 318 – Building Code Requirements for Structural Concrete

1.04 QUALITY ASSURANCE

- A. Product Manufacturer: company specializing in type of materials specified, with not less than ten years documented experience.
- B. Applicator: acceptable to product manufacturer with not less than five years experience under the current company name.

1.05 SUBMITTALS

- A. Submit product data sheets, installation instructions, and material safety data sheets for all products, solvents, and chemicals intended for use on this project.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Deliver products to site in manufacturer's original sealed containers.
- B. Comply with manufacturer's written instructions for storage, shelf-life, and handling.

1.08 PROTECTION

- A. Refer to Section 01 30 00 for general requirements.
- B. Erect and maintain protection for pedestrians and vehicles during repair work.
- C. Erect and maintain protection for adjacent building surfaces, glass, and aluminum framing during repair work.
- D. Comply with OSHA requirements for rigging and operation of electric swing stage scaffolding.
- E. Maintain additional safety line for Architect's use during the course of the work.

PART 2 – PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Dayton Superior
- B. W.R. Meadows, Inc.
- C. BASF Construction Chemicals
- D. Manufacturers of equal quality products will be reviewed for acceptance under Section 01 33 00.

2.02 MATERIALS

- A. Patch Material
 - 1. Perma Patch FP as manufactured by Dayton Superior
 - 2. Meadow-Crete FNP as manufactured by W.R. Meadows
- B. Water: clean and potable.
- C. Epoxy coating: Emaco P24 as Manufactured by BASF Construction Chemicals
- D. Reinforcing Bars: Deformed Billet Steel bars, ASTM 615, 60 ksi yield strength
- E. Supplemental stainless steel bolts and pins as directed by the Architect in the field. Minimum size 1/4 inch diameter x 2 1/2 inches long.
- F. Sealants – see section 07 90 00

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Identify areas to be repaired by sounding with a hammer or other appropriate tool and verify extent of repair areas with Architect – payment will be made on a unit cost basis and areas of repair MUST be verified with Architect.
- B. Notify Architect of any deteriorated posts or deficiencies in the existing rail system and remove existing railing, setting aside for re-installation, if necessary for access to work area.

3.02 PREPARATION

- A. Prepare surface in accordance with ICRI Technical Guide No. 03730

- B. Mechanically abrade existing substrate and ensure substrate is structurally sound and free of any contaminants and dust free. Provide a sufficient profile to ensure adequate mechanical lock
- C. Sawcut perimeter of repair zone area(s) to a depth of ½". Remove spalled and delaminated concrete using light weight chipping hammers. Do not cut any of the existing reinforcing steel during removal of the concrete slab.
- D. Completely expose any reinforcing steel present in repair area, ensuring a minimum clearance of ¾" behind reinforcing steel.
- E. Sand blast area and exposed reinforcing steel to remove dust, laitance, and rust. Clean by blowing with clean and dry compressed air at 90 psi.
- F. Notify the Architect if existing reinforcing steel differs from that shown on the drawings and if condition of existing steel is severely deteriorated. Install supplemental reinforcing only where directed by Architect in the field.
- G. Rout out all crack lines in concrete to a depth of sound concrete.

3.02 APPLICATION

- A. Form replacement area.
- B. Ensure forms are tightly closed and adequately braced.
- C. Pre-soak repair zone prior to application of repair mortar to a saturated, surface dry (SSD) condition and free of standing water.
- D. Ensure all reinforcing steel and embedded items are in place and secured. Coat exposed concrete and exposed reinforcing with epoxy coating.
- E. Apply scrub coat of patching material to prepared surfaces. Work in well and remove excess material.
- F. Mix and apply patch materials in accordance with manufacturer's written directions. Mix only as much material as can be applied in ten minutes. Do not retemper.
- G. Keep patches moist during curing period. Protect from sun, wind, and rain. Do not remove forms until patch has adequately set.
- H. Grind patches to blend with adjacent surfaces. Rout perimeter of patches and fill with sealant.

- I. Follow patch material manufacturer's written directions for hot and cold weather applications.
- J. Fill routed cracks with sealant. Tool flush.

3.03 CLEAN-UP

- A. Promptly as work proceeds and upon completion of each day's work remove excess materials, smears, and droppings – use cleaning products as recommended by individual manufacturers
- B. Clean adjacent and adjoining surfaces of marks arising out of the execution of the work of this Section.

END OF SECTION

Section 03 30 00

CAST-IN-PLACE CONCRETE

PART 1 – GENERAL

1.01 WORK INCLUDED

- A. Furnish, rig, man, and operate scaffolding, safety lines and cables, ladders, and platforms for rehabilitation of concrete roof slab overhangs at the 4th floor balconies.
- B. Formwork, complete with required shoring, bracing, and anchorages.
- C. Sawcut perimeter of slab and remove unsound concrete.
- D. Do not cut any of the existing reinforcing steel during removal of the concrete slab without approval of the Architect.
- E. Existing Reinforcing steel shall be thoroughly cleaned by sandblasting to remove all rust and unsound concrete. Reinforcing bars that are damaged or that have lost more than 20 percent of their original cross-sectional area at any point shall be brought to the attention of the Architect for inspection.
- F. Coat all exposed reinforcing bars and exposed existing concrete with Epoxy
- G. Pouring of new concrete balcony slab.
- H. Protection of adjacent areas.
- I. Clean-up.

1.02 RELATED SECTIONS

- A. Section 01 30 00 – Administrative Provisions.
- B. Section 01 33 00 – Submittal Procedures.
- C. Section 03 01 30 – Maintenance of Cast-In-Place Concrete
- C. Section 07 18 00 – Traffic Coatings
- D. Section 07 90 00 – Sealants.
- E. Section 09 91 00 – Exterior Painting.

1.03 REFERENCE STANDARDS

- A. ASTM C33 – Specifications for Concrete Aggregates.
- B. ASTM C39 – Compressive Strength Testing
- C. ASTM C150 – Portland Cement.

- D. ASTM C260 – Air Entraining Admixtures
- E. ASTM C494 – Chemical Admixtures
- F. ASTM A615 – Grade 60 Billet Stock Reinforcing Bar
- G. ACI 301 – Specifications for Structural Concrete
- H. ACI 315 –Detailing of Reinforced Concrete Structures
- I. ACI 318 – Building Code Requirements for Structural Concrete

1.04 QUALITY ASSURANCE

- A. Product Manufacturer: company specializing in type of materials specified, with not less than ten years documented experience.
- B. Applicator: acceptable to product manufacturer with not less than five years experience under the current company name.

1.05 SUBMITTALS

- A. Submit product data sheets, installation instructions, and material safety data sheets for all products, solvents, and chemicals intended for use on this project.
- B. All Cast-in-place concrete shall be tested during placement.

1.06 TESTING AGENCY

- A. Engage and pay for services of a testing agency subject to approval of the Architect.
- B. Provide full access for and cooperate with the testing agency.
- C. Notify testing agency 72 hours in advance of the start of each phase of this work.
- D. Submit proposed concrete mix design to Architect and testing agency for review prior to commencement of work.
- E. Cylinder samples taken for compressive strength testing per ASTM C39
- F. Take minimum of one (1) slump test for each set of test cylinders taken.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Deliver products to site in manufacturer's original sealed containers.
- B. Comply with manufacturer's written instructions for storage, shelf-life, and handling.

1.08 PROTECTION

- A. Refer to Section 01 30 00 for general requirements.
- B. Erect and maintain protection for pedestrians and vehicles during repair work.
- C. Erect and maintain protection for adjacent building surfaces, glass, and aluminum framing during repair work.
- D. Comply with OSHA requirements for rigging and operation of electric swing stage scaffolding.
- E. Maintain additional safety line for Architect's use during the course of the work.

PART 2 – PRODUCTS

2.01 CONCRETE

- A. Strength: 4,500 psi minimum at 28 days, normal weight, air entrained.
- B. Slump: 3" : 1" without exceeding a water-cement ratio of 0.45
- C. Air Content: 6% : 1

2.02 MATERIALS

- A. Type I Portland Cement
- B. Water: clean and potable.
- C. Aggregates: to meet ASTM C33
- D. Air-entraining admixtures: ASTM C260
- E. Chemical admixtures: ASTM C494
- F. Epoxy coating: Emaco P24 as Manufactured by BASF Construction Chemicals
- G. Reinforcing Bars: Deformed Billet Steel bars, ASTM 615, 60 ksi yield strength
- H. Supplemental stainless steel bolts and pins as directed by the Architect in the field. Minimum size 1/4 inch diameter x 2 1/2 inches long.

PART 3 – EXECUTION

3.01 PREPARATION

- A. Verify extent of repair areas with Architect.
- B. Sawcut perimeter around roof slab. Remove spalled and delaminated concrete using light weight chipping hammers. Do not cut any of the existing reinforcing steel during removal of the concrete slab.
- C. Sand blast area and exposed reinforcing steel to remove dust, laitance, and rust. Clean by blowing with clean and dry compressed air at 90 psi.
- D. Notify the Architect if existing reinforcing steel differs from that shown on the drawings and if condition of existing steel is severely deteriorated. Install supplemental reinforcing only where directed by Architect in the field.

3.02 APPLICATION

- A. Form large replacement area.
- B. Ensure forms are tightly closed and adequately braced.
- C. Ensure all reinforcing steel and embedded items are in place and secured. Coat exposed concrete and exposed reinforcing with epoxy coating.
- D. Deposit concrete in continuous manner between defined construction joints so that concrete being integrated with fresh concrete is still plastic. Do not place concrete over concrete that has hardened sufficiently so as to form "cold joints".
- E. Place concrete into formwork in such a manner as to avoid segregation of paste and aggregates.
- F. Blend with adjacent surfaces. Rout perimeter of new pour and fill with sealant.

3.03 CLEAN-UP

- A. Promptly as work proceeds and upon completion of each day's work remove excess materials, smears, and droppings.
- B. Clean adjacent and adjoining surfaces of marks arising out of the execution of the work of this Section.

END OF SECTION

Section 07 18 00

TRAFFIC COATINGS

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Preparation and application of fluid applied traffic bearing waterproofing membrane.
- B. Installation of sealants incidental to installation of traffic bearing membrane

1.02 QUALITY ASSURANCE

- A. Installer to be a licensed applicator of the membrane manufacturer – preferred minimum of 5 years experience in application of specified products and system.
- B. Manufacturer's representative or designated representative will review technical aspects; surface preparation, application, and workmanship.
- C. Do not apply in rain or when rain is expected within 24 hours. Do not apply above 90 degrees F or below 40 degrees F or when rain is forecast within 24 hours. Do not apply materials unless surface to receive coating is clean and dry.

1.03 SUBMITTALS

- A. Submit currently dated licensed applicator certification from manufacturer.
- B. Submit product data sheets, color samples, installation instructions, and material safety data sheets.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in manufacturer's original, unopened containers clearly marked with identification labels.
- B. Store products out of direct sunlight, in temperature controlled environment.
- C. Comply with all manufacturer precautions regarding safe product handling, particularly those relating to fire safety precautions.

1.05 WARRANTY

- A. Furnish 5+5 year joint manufacturer/installer warranty. Renewal at end of first five years to be done with manufacturing review.

PART 2 - PRODUCTS

2.01 APPROVED MANUFACTURER

- A. Sonneborn, Division of BASF Construction Chemicals
- B. Other manufacturers of equal quality products will be accepted subject to review and written approval of Architect prior to bid due date.

2.02 MATERIALS

- A. Membrane System: Sonoshield Sonoguard - Pedestrian Traffic Coatings, for balcony/closet decks. Color Gray
 - 1. Primer: Concrete and metal primers as required by Sonneborn
 - 2. Base Coat: Sonoguard Base Coat. One-component, moisture-curing polyurethane
 - 3. Top Coat: Sonoguard Top Coat. One component, aliphatic, moisture-curing polyurethane
 - 4. Aggregate: Sonoguard Aggregate (16-30 mesh rounded silica sand)
Horizontal deck joints: Sonolastic NP-1, polyurethane sealant
Vertical and cove joints: Sonolastic NP-2 – two component polyurethane sealant.
Perimeter joints: Sonolastic SL-2-two component self-leveling polyurethane sealant
Colors for all sealant to match membrane system
- B. Accessories: Miscellaneous materials such as cleaning agents, adhesives, backer rod, deck drains, etc. shall be a composite part of the deck system and shall be compatible with the specified light duty pedestrian traffic coatings.
- C. Properties of Cured Membranes shall be as noted and recommended by the Manufacturer.

PART 3 - EXECUTION

3.01 EXAMINATION AND SURFACE PREPARATION

- A. Ensure substrates are sound and free of dust, dirt, laitance, paints, oils, grease, curing compounds or any other contaminants. Notify Management of mechanical closets with personal items stored inside. Removal of decorative coverings and personal items are the responsibility of the unit owner.
- B. Inspect surfaces and ensure that any new concrete has sufficiently cured.
- C. Mechanically prepare substrate to remove previous coatings, laitance, and miscellaneous surface contamination. Shotblast surface to profile equal to International Concrete Repair Institutes CSP 3.
 - 1. Roughen or brush blast extremely smooth surfaces to ensure good adhesion.
 - 2. Patch holes and cracks before installation.
- D. Mixing: Mix materials in accordance with manufacturer's instructions

3.02 INSTALLATION - GENERAL

- A. Apply materials in accordance with manufacturer's instructions. Do not apply to damp, wet or contaminated substrates.
- B. For nonmoving joints and cracks less than 1/16" wide, apply primer 770 or 772, followed by 25 wet mils pre-striping of Base Coat. Apply Base Coat to fill and overlap the joint or crack 3" on each side. Feather edges.
- C. For dynamic cracks and joints 1/16" and greater wide must be routed to a minimum of 1/4" by 1/4" and cleaned. Install bond breaker tape to prevent adhesion of sealants to the bottom of joint. Fill joints deeper than 1/4" with appropriate backer-rod and SL-2 sealant. Sealant should be flush with the adjacent concrete surface.
- D. At junction of all horizontal and vertical surfaces, prime with Primer 733 and apply a 1/2" to 1" wide bead joint sealant. Tool to form a 45° cant.
- E. Metal Surfaces: Remove dust, debris, and other contaminants from post penetrations; clean surfaces and prime with sealant primer, provide cant with deep joint sealant to eliminate 90-degree angles. Detail cant with primer and base coat in accordance with manufacturer's instructions before application of deck coating system.

3.03 APPLICATION – PEDESTRIAN SYSTEM

- A. Be certain the substrate is clean, dry, stable, and properly profiled. Sealants and pre-striping should be properly cured – Review with Manufacturer's representative before installation of primers or base coats.

- B. Thoroughly vacuum surface and apply Primer 772 or Primer 770 to all the properly prepared deck surfaces at the rate of 200-250 sq.ft. per gallon. Force primer into pores and voids to eliminate pin holes. Do not apply over pre-striping.
- C. Allow primer to dry tack free. Base coat must be applied the same working day.
- D. Apply 25 wet mils Base Coat same day as primer application at 60 sq.ft. per gallon to entire deck surface, overcoating the properly prepared cracks, joints, and flashings. Immediately backroll to level Base Coat. Allow to cure overnight (16 hour minimum).
- E. Apply 25 wet mils Top Coat at 60 sq.ft. per gallon. Immediately backroll to level Top Coat. While coating is still wet, broadcast Aggregate (10-15 lbs per 100 sq.ft.) and backroll into the coating to fully encapsulate. Allow to cure 48 hours.
- F. Review completed membrane in the presence of the Architect and Manufacturer's representative. Make repairs as necessary.

3.04 CLEANING

- A. Clean up and properly dispose of debris remaining on project site.
- B. Remove any temporary coverings and protections from adjacent Work areas.

END OF SECTION

Section 07 90 00

SEALANTS

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Preparation of surfaces.
- B. Installation of new sealants as required for balcony concrete patch and crack repairs, installation of new waterproof membrane and re-installation of existing railing system, if needed.

1.02 SUBMITTALS

- A. Submit product data in conformance with Section 01 33 00

1.03 DELIVERY AND STORAGE

- 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 products in a location protected from freezing, damage, construction activity, precipitation, and direct sunlight per manufacturer's recommendations.
- C. Condition products to approximately 60 degrees F (16 degrees C) to 70 degrees F (21 degrees C) for use per manufacturer's recommendations.
- D. Handle products with appropriate precautions and care as stated on Material Safety Data Sheet.

1.04 PRODUCT CONDITIONS

- A. Do not use products under conditions of precipitation, or in inclement or freezing weather. Verify that substrates are clean, dry, and frost-free. Use appropriate measures for protection and supplementary heating to ensure proper curing conditions per manufacturer's recommendations if application during inclement weather occurs.

1.05 WARRANTY

- A. Provide Manufacturer's 5-Year standard material warranty.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURER'S

- A. Sonneborn Division, BASF Building Systems, Shakopee, MN, 800-433-9517, www.BASFbuildingsystems.com
- B. Manufacturers of equal quality products will be reviewed for acceptance under Section 01 33 00.

2.02 MATERIALS AND SCHEDULE

- A. Sonolastic NP1 – one-component, high-performance, nonpriming, gun-grade, elastomeric polyurethane sealant
 - 1. Depth of sealant to be 1/2 width of joint.
 - 2. Maximum Depth: 1/2 inch (13 mm).
 - 3. Minimum Depth: 1/4 inch (6 mm).
 - 4. Maximum recommended width: 1-1/2 inches (38 mm).
 - 5. Submit standard color charts for selection of color by owner.
- B. Sonolastic NP2 – multi-component high-performance polyurethane joint sealant
 - 1. Depth of sealant to be 1/2 width of joint.
 - 2. Maximum Depth: 1/2 inch (13 mm).
 - 3. Minimum Depth: 1/4 inch (6 mm).
 - 4. Maximum recommended width: 2 inches (51 mm).
 - 5. Submit standard color charts for selection of color by owner.
- C. Sonolastic SL2 – multi-component self-leveling trafficable polyurethane joint sealant for horizontal applications.
 - 1. Depth of sealant to be 1/2 width of joint.
 - 2. Maximum Depth: 1/2 inch (13 mm).
 - 3. Minimum Depth: 1/4 inch (6 mm).
 - 4. Maximum recommended width: 2-1/2 inches (64 mm).
 - 5. Submit standard color charts for selection of color by owner.
- D. Schedule:
 - 1. Caulk sealant at top and bottom surface of cold-joint between new concrete patches and existing concrete surfaces.
 - 2. Caulk sealant around base plates of railing shoe brackets and anchorage points of wall plates as needed for reinstallation or as related to membrane application.
 - 3. Caulk sealant at thresholds of all doors and at vertical wall planes as recommended by waterproof membrane manufacturer

4. Rout and caulk any cracks over 1/16" in concrete surfaces not replaced by new concrete.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Inspect areas involved in work zone to establish extent of Work, access and need for protection of surrounding construction.
- B. Examine joints for defects that would adversely affect quality of installation.
- C. Provide additional joint preparation as required by sealant manufacturer

3.02 PREPARATION

- A. Ensure surfaces are clean, dry, and free of contamination.
- B. Consult sealant manufacturer for specific recommendations for removal of surface contamination.

3.03 INSTALLATION

- A. Verify primer requirements with joint sealer manufacturer.
- B. Mix sealant and color per manufacturer's instructions
- C. Install appropriate size backer rods or adhesive-backed polyethylene bond-breaker tape along joint as recommended by manufacturer.
- D. Verify that temperature and moisture conditions are within manufacturer's acceptable limits.
- E. Using fresh sealant and equipment that is in proper working order, completely fill joint with sealant, filling from bottom up to avoid entrapping air.
- F. Using clean, dry tool with rounded edge and of appropriate width for each joint, tool freshly installed sealant to provide preferred concave profile, unless noted otherwise, to ensure intimate contact between sealant and substrate, and to provide neat appearance. Where surface aggregate does not permit proper tooling, install sealant and backer rod so that face of joint is recessed behind exposed aggregate, and sealant is bonded to firm, even surface.
- G. Do not use tooling agents that have not been approved by the sealant manufacturer.

- H. Curing of joint sealants varies with temperature, humidity and size of joint. Assume an initial cure within 24 hours and a minimum of 1 full week for a full cure.

3.04 CLEAN-UP

- A. Remove excess materials and smears.
- B. Remove debris from site.

END OF SECTION

Section 09 91 00

EXTERIOR PAINTING

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Preparation of surfaces that are to receive finish.
- B. Priming and Painting of balcony undersides

1.02 SUBMITTALS

- A. Submit currently dated licensed applicator certification from manufacturer.
- B. Submit manufacturer's technical data sheets, LEED product information, color samples and MSDS sheets

1.03 QUALITY ASSURANCE

- A. Company with minimum of 5 years experience in application on projects of similar size and scope.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Deliver paint materials in original sealed containers, bearing manufacturer's name, type of paint, brand name, color designation and instructions for mixing and/or reducing.
- B. Maintain adequate storage facilities. Store paint materials in well ventilated area, off the ground and away from moisture, direct sunlight, or extreme heat
- C. Do not store below 35 degrees F

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Paint: Stucco & Masonry Exterior latex flat as manufactured by Glidden.

1. Color: *Stowe White*
 2. Primer: GLIDDEN GRIPPER GL3210 acrylic primer
- B. *ALTERNATE BID* – Parkcoat as manufactured by Sonneborn division of BASF
1. A one-coat water-based, VOC-compliant acrylic coating with an 88% light reflectance rating.
 2. Primer – as recommended by Manufacturer

PART 3 - EXECUTION

3.01 INSPECTION

- A. Thoroughly examine all surfaces scheduled to be painted prior to commencement of work. Report in writing to Architect, any condition that may potentially affect proper application. Do not commence until such defects have been corrected.
- B. New concrete must be fully cured at least 30 days, structurally sound, clean and dry. pH must be 10.0 or lower.
- C. Ensure all new sealants have properly cured.

3.02 PROTECTION

- A. Adequately protect other surfaces from paint and damage. Repair damage as a result of inadequate or unsuitable protection.
- B. Furnish sufficient drop cloths, shields, protective equipment to prevent spray or droppings from fouling surfaces not being painted and, in particular, surfaces within storage and preparation area.
- C. Place cotton waste, cloths, and material that could constitute a fire hazard in closed metal containers and remove daily from site.

3.03 PREPARATION

- A. Remove dirt, loose mortar, scale, powder, flaking paint and other foreign matter from concrete surfaces which are to be painted. Pressure clean concrete surfaces in accordance with Manufacturer's recommendations. Allow surface to dry a minimum of 24 hours before proceeding.
- B. Prime surfaces as recommended by paint manufacturer.

- C. Start of work means acceptance of site conditions.

3.04 APPLICATION

- A. Apply products in strict conformance with manufacturer's written instructions.
- B. Apply concrete coating with roller. Do not overroll.
- C. Apply each coat at proper consistency – 1 coat primer, 2 coats paint.
- D. Drying time is 1 hours at 77-degrees and 50% relative humidity. Re-Coating time in 4 hours.
- E. *Alternate* – Drying time is 2-4 hours at 70-degrees and 50% relative humidity

3.05 CLEANING

- A. As work proceeds and upon completion, promptly remove paint where spilled, splashed, or spattered.
- B. During progress of work keep premises free from any unnecessary accumulation of tools, equipment, surplus materials, and debris.
- C. Upon completion of work leave premises neat and clean, to the satisfaction of the Owner.

END OF SECTION