

ADDENDUM NO. 1

20241066 – BL475 – CBAC Pool Updates

Project No. 20241066

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Addendum No. 1, 6 items, 2 pages

Revised Project Manual Sections: 00 41 13 – Bid Form, 08 80 00 – Glazing, 09 01 30.91 – Tile Restoration,
and 09 96 00 – High-Performance Coatings

Revised Drawings: A-001, A-101, A-201, A-202, A-501, I-100, E1-01 and E6-01

Date: February 20, 2026

I hereby certify that this Addendum was prepared by me or under my direct supervision and that I am a duly registered Architect/Engineer under the Laws of the State of Indiana.

FANNING/HOWEY ASSOCIATES, INC.
ARCHITECTS/ENGINEERS/CONSULTANTS



TO: ALL BIDDERS OF RECORD

ADDENDUM NO. 1 to Drawings and Project Manual, dated January 15, 2026, for BL475 – CBAC Pool Updates, for Indiana University Bloomington; as prepared by Fanning/Howey Associates, Inc., Indianapolis, Indiana. This Addendum shall hereby be and become a part of the Contract Documents the same as if originally bound thereto.

The following clarifications, amendments, additions, revisions, changes, and modifications change the original Contract Documents only in the amount and to the extent hereinafter specified in this Addendum.

Each bidder shall acknowledge receipt of this Addendum in his proposal or bid.

NOTE: Bidders are responsible for becoming familiar with every item of this Addendum. (This includes miscellaneous items at the very end of this Addendum.)

RE: ALL BIDDERS

ITEM NO. 1. PROJECT MANUAL, SECTION 00 41 13 – BID FORM

- A. The Bid Form has been revised for this Project. This revised form, dated 2/20/26, is the applicable form to be used by all bidders and is included with and hereby made a part of this Addendum. Revision includes the deletion of Alternate No. 3.

These revisions will be reflected on the Bid Forms provided for the convenience of the bidders.

ITEM NO. 2. REVISED PROJECT MANUAL SECTION

- A. Section 08 80 00 – Glazing, 09 01 30.91 – Tile Restoration, and 09 96 00 – High-Performance Coatings have been revised, dated 2/20/26, and are included with and hereby made a part of this Addendum.

ITEM NO. 3. PROJECT MANUAL, SECTION 01 23 00 - ALTERNATES

- A. Delete 3.1, C. (Alternate No. 3) in its entirety.

(Note: Base bid is no scope of work related to starting blocks)

ITEM NO. 4. PROJECT MANUAL, SECTION 03 01 30.61 – RESURFACING CAST-IN-PLACE CONCRETE

- A. Delete Article 1.2, in its entirety.

ITEM NO. 5. PROJECT MANUAL, SECTION 08 12 13 – HOLLOW METAL FRAMES

- A. Add 2.2, H.,

“H. Metallic Coated Steel Sheets: ASTM A653, commercial steel (CS), Type B, with an A60 zinc-iron-alloy coating; stretcher-leveled standard of flatness.

- 1. Provide metallic coated frames for frames exposed in pool environment.”

- B. Replace 2.3, B., 1., as follows:

“1. 0.067 inch thick (fka 14 gauge) steel, galvanized, A60, steel with factory applied baked-on primer for all doors and borrowed lites.

C. Add 2.8, D., as follows:

- “D. Metallic Coated Steel Surface Preparation: Clean surfaces with nonpetroleum solvent so surfaces are free of oil and other contaminants. After cleaning, apply a conversion coating suited to the organic coating to be applied over it. Clean welds, mechanical connections, and abraded areas, and apply galvanizing repair paint specified below to comply with ASTM A780.
1. Galvanizing Repair Paint: High zinc dust content paint for regalvanizing welds in steel, complying with SSPC Paint 20.

ITEM NO. 6. REVISED DRAWING SHEETS

- A. Drawing Sheets A-001, A-101, A-201, A-202, A-501, I-100, E1-01, and E6-01 have been revised, dated 2/20/26, and are included with and hereby made a part of this Addendum. These Drawings supersede the original documents.

END OF ADDENDUM

BID FORM

for

BL475 – CBAC Pool Updates
Indiana University Bloomington
Bloomington, Indiana
IU 20241066

TO: The Trustees of Indiana University
Bloomington, Indiana

****Submit bid online via www.iuplanroom.com****

FROM:

Bidder's Name _____

Address _____

City, State, Zip Code _____

Phone Number _____ FAX Number _____

CONTACTS:

Bid / Contract Information: Name: _____

Phone: _____ E-mail: _____

Proposed Project Manager: Name: _____

Phone: _____ E-mail: _____

Indicate if your firm is a certified minority-, women-, or veteran-owned business ___ Yes ___ No

If “Yes”, please attach a copy of certification

FOR: **Unified Bid** to include General, Mechanical, and Electrical Construction Work

Bidders:

LUMP SUM BASE BID

The undersigned Bidder, with a complete understanding of existing conditions at the Project Site and a complete understanding of the Bidding Documents, including any Addenda acknowledged hereinafter, for BL475 CBAC Pool Updates on the Indiana University Bloomington campus, as prepared by Fanning Howey Assoc., Inc. hereby proposes to complete the project, in full and complete accordance with the requirements of the Bidding documents, for the LUMP SUM BASE BID PRICE of:

_____ Dollars \$ _____
(written amount) (numerals)

MAJOR SUBCONTRACTORS

Subcontractors and other persons and organizations proposed by the Bidder and accepted by the Owner and the Owner’s Representative must be used on the work for which they were proposed and accepted and shall not be changed except with the written approval of the Owner and the Owner’s Representative.

If requested, the supplemental Subcontractors and Products List will be submitted by email to the Owner, bidtab@iu.edu, and Fanning Howey Assoc. pwriters@fhai.com within 48 hours of the bid opening. The understanding of the Owner and the design team is that these same Major Subcontractors will be the same subcontractors listed below.

ALTERNATE PROPOSALS

1. Alternate proposals are requested under Alternates of the Bidding Documents. (See Specification Index)
2. The alternate proposal shall indicate the amount to be added to or deducted from the Lump Sum Base Bid if the alternate proposal is accepted by the Owner.
3. The alternate proposal shall include all costs necessary for the complete installation of the materials or items indicated for the alternate proposal, including materials, labor, equipment, operations, administration, overhead, profit, and taxes (as applicable).
4. The alternate proposal shall also include all costs for changes in the work (including work of other Separate Contracts) that will be made necessary by acceptance of the alternate proposal.
5. The Bidder shall submit prices for all the alternates listed below in the manner indicated. Cross out (Add) or (Deduct) as applicable. If there is no change in price to the Lump Sum Base Bid, write in "No Change".

Alternate No. 1: Remove existing pool bulkhead and provide new pool bulkhead.

(Add) (Deduct) _____ Dollars \$ _____
(written amount) (numerals)

Alternate No. 2: Renovate pool office space 001k, as indicated.

(Add) (Deduct) _____ Dollars \$ _____
(written amount) (numerals)

Alternate No. 3: ~~Provide (3) starting blocks in the diving well pool.~~ (Deleted in Addendum-01)

~~(Add) (Deduct) _____ Dollars \$ _____
(written amount) (numerals)~~

Alternate No. 4: Repainting of diving platforms and adjacent stairwell spaces.

(Add) (Deduct) _____ Dollars \$ _____
(written amount) (numerals)

TAX EXEMPTIONS

The undersigned Bidder has informed himself and all his prospective sub-contractors and suppliers of the tax exempt status of the Owner, as set forth in the General Conditions, and therefore, has not included these taxes in his Lump Sum Base Bid price.

SUBSTITUTIONS

The undersigned Bidder has based his bid upon the materials, products, articles, equipment, brands, manufacturers and processes described in the Bidding Documents or upon approved equivalents. Proof of equivalency of substitutions is the responsibility of the Bidder, but the Architect/Engineer shall be the sole judge of equivalency. Proposed equivalent substitutions shall be equal in all respects to the requirements of the Bidding Documents, including but not limited to the design, quality, physical size, performance characteristics, strength, previous history of use, and to the method of installation, attachment, or connection to related or adjoining work. Determination of equivalency of proposed substitutions shall be by the Architect/Engineer, before the bid opening date, as described in paragraph entitled "Substitutions" in the Instructions to Bidders.

COMPLETION DATE

The Undersigned Bidder agrees to coordinate and expedite his work and shall take into consideration any lead time and schedule parameters with all contractors, and that this Work will be completed no later than **August 1, 2026**.

ASSIGNMENT OF COORDINATION

The undersigned Bidder agrees to the assignment of Mechanical and Electrical work to the successful General Contractor for the responsibility of complete coordination of the work as stated in the Instructions to Bidders.

PERFORMANCE AND PAYMENT BOND

The undersigned Bidder agrees, if awarded the Contract, to deliver to the Owner a satisfactory Performance Bond, in the full amount (100%) of the total Contract price, not later than the date of execution of the contract. The cost of the Bond shall be included in the Lump Sum Base Bid contained in this Proposal.

SUPPLEMENTAL AND REQUIRED DOCUMENTS

Bid Security; State Form 96 (Revised 2013); Written Drug Testing Program, which must be in full compliance with IC 4-13-18; a completed Minority, Women’s and Veteran’s Business Enterprise Participation Plan; Contractor Asbestos Certification; Asbestos Protocol for Contractors.

ADDENDA

The following Addenda have been received by the undersigned Bidder; and all costs resulting from these Addenda have been included in the preparation of this Bid Form:

- Addendum No. _____ Dated _____
- Addendum No. _____ Dated _____
- Addendum No. _____ Dated _____

SIGNATURES

1. **When a Bidder is an Individual:**

Witness	Bidder
Date: _____	Address: _____ _____

2. **When a Bidder is a Partnership:**

	Name of Partnership
Date: _____	Address: _____ _____
Partner	Partner

3. **When Bidder is a Corporation:**

	Name of Corporation
Date: _____	Address: _____ _____
	By: _____ President
Attest: _____ Secretary	

CORPORATE SEAL

END

****Submit bid online via www.iuplanroom.com****

SECTION 08 80 00 – GLAZING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes glazing for the following products and applications, including those specified in other Sections where glazing requirements are specified by reference to this Section:

- 1. Interior borrowed lites.

- ~~B. Related Sections include the following:~~

- ~~1. Division 08 Section “Aluminum-Framed Storefront” and Glazed Aluminum Curtain Walls for thermal performance requirements.~~

1.3 DEFINITIONS

- A. Manufacturers of Glass Products: Firms that produce primary glass, fabricated glass, or both, as defined in referenced glazing publications.
- B. Glass Thicknesses: Indicated by thickness designations in millimeters (mm) according to ASTM C 1036.
- C. Interspace: Space between lites of an insulating-glass unit that contains dehydrated air or a specified gas.
- D. Solar Heat Gain Coefficient (SHGC): The ratio of the solar heat gain through the glass relative to the incident solar radiation. Solar heat gain includes both direct and indirect gain. The direct gain is the solar energy directly transmitted through the glazing. The indirect gain is the solar energy absorbed by the glazing and subsequently convected and thermally radiated inward.
- E. Low-Emissivity (“Low-E”): Having the demonstrated ability to reduce heat gain or loss by reflecting long-wave infra-red (IR) energy (heat), thereby decreasing the U-value and improving energy efficiency.
 - 1. “Solar-Control” Low-E Glazing: Glazing that has a SHGC equal to or less than 0.40. Solar-control low-e coatings maximize the amount of daylight transmitted through the glass while minimizing both the amount of solar heat transmitted into the building and the amount of heat loss from the long-wave infrared portion of the heat spectrum.
- F. Sealed Insulating Glass Unit Surface Designations:
 - 1. Surface 1 – Exterior surface of the outer glass lite.
 - 2. Surface 2 – Interspace surface of the outer glass lite.
 - 3. Surface 3 – Interspace surface of the inner glass lite.
 - 4. Surface 4 – Interior surface of the inner glass lite.

1.4 COORDINATION

- A. Coordinate glazing channel dimensions to provide necessary bite on glass, minimum edge and face clearances and adequate sealant thicknesses, with reasonable to achieve proper safety margins for glazing retention under each design load case, load case combination, and service condition.

1.5 ACTION SUBMITTALS

- A. Product Data: Submit manufacturer's technical data for each glass type and glazing material required, including installation and maintenance instructions.
 - a. Interior glass and fire rated glazing only required.
 - ~~b. Exterior glazing shall be included in the opening submittals, refer to other Division 08 Sections.~~
 - c. **Do Not** provide exterior glazing product information under this Section.
 - d. **Do Not** provide glass samples unless specifically indicated.

1.6 CLOSEOUT SUBMITTALS

- A. General: Closeout Submittals are to be submitted with O and M Manuals only. Do not submit with other ACTION and INFORMATIONAL Submittals.
 - 1. Warranties: Special warranties specified in this Section.

1.7 QUALITY ASSURANCE

- A. Qualifications
 - 1. Fabricator Qualifications for Insulating-Glass Units: Fabricator must be capable of producing certified sealed insulating-glass products equivalent to "CBA" level. Fabricators must be listed in the IGCC directory or submit evidence of quality-assurance program. The quality-assurance program, as a minimum, must have the following elements:
 - a. A quality manual.
 - b. Operating procedures documenting how insulating-glass units are fabricated.
 - c. A designated person responsible for quality assurance.
 - d. Routine product or component checks.
 - 2. Installer Qualifications: An experienced installer who has completed glazing similar in material design and extent to that indicated for Project and whose work has resulted in construction with a record of successful in-service performance.
 - a. Installer Qualifications: A qualified glazing contractor for this Project who is certified under the North American Contractor Certification Program (NACC) for Architectural Glass and Metal (AG&M) contractors.
 - 3. Glass Testing Agency Qualifications: A qualified independent testing agency accredited according to the NFRC's CAP 1 Certification Agency Program.
 - 4. Sealant Testing Agency Qualifications: An independent testing agency qualified according to ASTM C1021 to conduct the testing indicated.
- ~~B. Insulating Glass Certification Program: Permanently marked either on spacers or on at least one component lite of units with appropriate certification label of Insulating Glass Certification Council (IGCC).~~

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Protect glazing materials according to manufacturer's and fabricators written instructions. Prevent damage to glass and glazing materials from:
 - 1. Condensation.
 - 2. Temperature changes.
 - 3. Direct exposure to sun.
 - 4. Other causes.
 - a. Primary seal protection: Follow manufacturer/fabricator protocols to minimize the risk for damage to, or failure of, the primary IG unit seal caused by shearing stresses during handling and storage.
 - b. Avoid glass-to-glass contact: Guard against latent damage to large IG units caused by glass-to-glass contact when subject to changes in temperature and/or barometric pressure.
 - 5. Protect from contact with corrosive chemicals.
 - 6. Avoid placement of glass edge on concrete, metal, or other hard objects.

- B. For insulating-glass units that might be exposed to substantial altitude changes, comply with insulating-glass fabricator's written recommendations for venting and sealing units to avoid hermetic seal ruptures.
- C. Deliver glass to site in suitable containers that will protect glass from the weather and from breakage. Carefully store material, as directed, in a safe place where breakage can be reduced to a minimum. Deliver sufficient glass to allow for normal breakage. Glazing compounds shall arrive at the project site in labeled containers that have not been opened.
 - 1. Exercise exceptional care to prevent edge damage to glass, and damage/deterioration to coating on glass.

1.9 FIELD CONDITIONS

- A. Environmental Limitations: Do not proceed with glazing when ambient and substrate temperature conditions are outside limits permitted by glazing material manufacturers and when glazing channel substrates are wet from rain, frost, condensation, or other causes.
 - 1. Do not install liquid glazing sealants when ambient and substrate temperature conditions are outside limits permitted by glazing sealant manufacturer or below 40 deg F.

1.10 WARRANTY

- A. General: Warranties specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under requirements of the Contract Documents.
- B. Laminated Glass: Fabricator's standard form in which laminated-glass fabricator agrees to replace laminated-glass units that deteriorate within specified warranty period. Deterioration of laminated glass is defined as defects developed from normal use that are not attributable to glass breakage or to maintaining and cleaning laminated glass contrary to manufacturer's written instructions.
 - 1. Defects include:
 - a. Edge separation.
 - b. Delamination materially obstructing vision through glass.
 - c. Blemishes exceeding those allowed by referenced laminated-glass standard.
 - 2. Warranty Period: Ten years from date of Fabrication.
- ~~C. Insulating Glass: Fabricator's standard form in which insulating-glass fabricator agrees to replace insulating-glass units that deteriorate within specified warranty period. Deterioration of insulating glass is defined as failure of hermetic seal under normal use that is not attributable to glass breakage or to maintaining and cleaning insulating glass contrary to manufacturer's written instructions.
 - 1. Evidence of failure is the obstruction of vision by:
 - a. Dust.
 - b. Moisture.
 - c. Film on interior surfaces of glass.
 - 2. Glass breakage due to thermal stress will be replaced by the Contractor at no additional cost to the Owner during the guarantee period.
 - 3. Warranty Period: Manufacturer's/fabricator's standard but not less than 10 years after date of Fabrication.~~

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers of Non-Fire-Protection-Rated Glass: Subject to compliance with requirements, provide products from the following.
 - 1. AGC Primary Division and AGC Coatings Division, AGC Flat Glass North America, Inc. (fka AFG), Asahi Glass America, Inc., Asahi Glass Co. Ltd.
 - 2. Cardinal IG Co., Cardinal Glass Industries.

3. Guardian/Sunguard Industries Corp.
 4. Pilkington North America Inc. (fka LOF), Nippon Sheet Glass (NSG) Co. Ltd.
 5. Vitro Glass (fka PPG Flat Glass).
- B. Products of other manufacturers will be considered for acceptance provided they equal or exceed the material requirements and functional qualities of the specified product. The "Substitution Request Form" and complete technical data for evaluation must accompany requests for A/E's approval. All materials for evaluation must be received by the Project Manager and Specification Department at least ten days prior to bid due date. Additional approved manufacturers will be issued by Addendum.
- C. Source Limitations for Glass: Obtain from single source from single manufacturer for each glass type.
1. Obtain tinted glass from single sourced from single manufacturer.
- D. Source Limitations for Glazing Accessories: Obtain from single source from single manufacturer for each product and installation method.

2.2 PERFORMANCE REQUIREMENTS

- A. General: Installed glazing systems shall withstand normal thermal movement and wind and impact loads (where applicable) without failure, including loss or glass breakage attributable to the following:
1. Defective manufacture, fabrication, or installation.
 2. Failure of sealants or gaskets to remain watertight and airtight.
 3. Deterioration of glazing materials.
 4. Other defects in construction.
- B. Delegated Glass Design: Glass thickness designations indicated are minimums and are for detailing only. Confirm glass thicknesses by analyzing Project loads and in-service conditions. Provide glass lites in the thickness designations indicated for various size openings, but not less than thicknesses and in strengths (annealed or heat-treated) required to meet or exceed the following criteria:
1. Glass Thicknesses: Select minimum glass thickness to comply with ASTM E 1300, according to the following requirements:
 - a. Design Wind Loads: Determine design wind loads applicable to the Project according to ASCE 7, Minimum Design Loads for Buildings and Other Structures: Section 6.5, Method 2 – Analytical Procedure, based on mean roof heights above grade indicated on drawings.
 - 1) Refer to Structural Drawings for loading information.
 - ~~2. Design Snow Loads: As indicated on Drawings, but not less than snow loads applicable to Project as required by ASCE 7, "Minimum Design Loads for Buildings and other Structures", Section 7.0, "Snow Loads".~~
 3. Probability of Breakage for Vertical Glazing: For glass surfaces sloped 15 degrees or less from vertical, design glass to resist design wind pressure based on glass type factors for short-duration load. Minimum thickness of annealed or heat-treated glass products to be selected so the worst case probability of failure does not exceed 8 breaks per 1,000 for glass under wind action.
 - ~~4. Probability of Breakage for Sloped Glazing: For glass surfaces sloped more than 15 degrees from vertical, design glass for a probability of breakage not greater than 0.004.~~
 5. Maximum Lateral Deflection: For glass supported on all four edges, limit center-of-glass deflection at design wind pressure to not more than 1/50 times the short-side length or 3/4 inch, whichever is less.
 6. Differential Shading: Design glass to resist thermal stresses induced by differential shading within individual glass lites.

- C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes acting on glass framing members and glazing components.
 - 1. Change in Ambient Temperature: 120 degrees Fahrenheit
 - 2. Change in Temperature of Material Surfaces: 180 degrees Fahrenheit

- D. Regulatory Requirements:
 - 1. Safety Glazing: Category II materials complying with testing requirements in 16 CFR 1201 and ANSI Z97.1.
 - a. Subject to compliance with requirements, permanently mark safety glazing with certification label of Safety Glazing Certification Council (SGCC) or another certification agency acceptable to authorities having jurisdiction.
 - 1) Identification on tempered glass shall include the words "Tempered Safety Glass".
 - b. Where glazing units, including Kind-FT (fully tempered) glass and laminated glass, are specified in Part 2 articles for glazing lites more than 9 square feet in exposed surface area of one side, provide glazing products that comply with Category II materials. For lites 9 square feet or less in exposed surface area of one side, provide glazing products that comply with Category I or II materials.
 - 1) Exception for hazardous locations: Where Category II materials are required by 16 CFR 1201 and regulations of authorities having jurisdiction.

- E. Thermal and Optical Performance Properties: Provide glass with performance properties specified and required by Opening Manufacturer to meet requirements, as indicated in manufacturer's published test data, based on procedures indicated below:
 - 1. For monolithic-glass lites, properties are based on units with lites 6mm thick.
 - 2. For laminated-glass lites, properties are based on products of construction indicated.
 - 3. For insulating-glass units, properties are based on units of thickness indicated for overall unit and for each lite.
 - 4. U-Factors: Center-of-glazing values, according to NFRC 100 and based on LBNL's WINDOW 6.3 computer program, expressed as Btu/sq.ft. x h x deg F.
 - 5. Solar Height-Gain Coefficient and Visible Transmittance: Center of glazing values, according to NFRC 200 methodology and based on LBNL's Window 6.3 computer program.
 - a. Solar Heat Gain Coefficient: Shall not be greater than the following:
 - 1) 0.40
 - 6. Visible Reflectance: Center-of-glazing values, according to NFRC 300.

2.3 FABRICATORS

- A. Fabricators of Non-Fire-Protection-Rated Glass: Subject to compliance with requirements, provide products by one of the fabricators listed as certified with IGCC or meeting "Quality Assurance" requirements.

2.4 GLASS PRODUCTS, GENERAL

- A. Glazing Publications: Comply with published recommendations of glass manufacturers, glass product fabricators, and organizations below, unless more stringent requirements are indicated. Refer to these publications for glazing terms not otherwise defined in this Section or in referenced standards.
 - 1. Glass Association of North America (GANA):
 - a. Glazing Manual (2009).
 - b. Sealant Manual (2008).
 - 2. Laminating Division of GANA: Laminated Glass Design Guide (2000).
 - 3. American Architectural Manufacturers Association (AAMA):
 - a. Glass Design for Sloped Glazing (AAMA GDSG-1-87).
 - 4. Insulating Glass Manufacturers Alliance (IGMA):
 - a. SIGMA TM-3000 "Glazing Guidelines for Sealed Insulating Glass Units".
 - b. IGMA Guidelines for Sloped Glazing (IGMA TB-3001-01).

- B. Safety Glazing Labeling: Where safety glazing is indicated, permanently mark glazing with certification label of the SGCC or another certification agency acceptable to authorities having jurisdiction or manufacturer. Label shall indicate manufacturer's name, type of glass, thickness, and safety glazing standard with which glass complies.
- ~~C. Insulating Glass Certification Program: Permanently marked either on spacers or on at least one component lite of units with appropriate certification label of IgCC.~~
- D. Thickness: Where glass thickness is indicated, it is a minimum. Provide glass lites in thicknesses as needed to comply with requirements indicated.
- E. Strength: Where float glass is indicated, provide annealed float glass, Kind-HS heat-treated float glass, or Kind-FT heat-treated float glass as needed to comply with Performance Requirements article. Where heat-strengthened glass is indicated, provide Kind-HS heat-treated float glass or Kind-FT heat-treated float glass as needed to comply with Performance Requirements article. Where fully tempered glass is indicated, provide Kind-FT heat-treated float glass.
 - 1. Insulated Glass
 - a. Unless glass is noted as tempered all clear insulated glass greater than 35 sq.ft. shall be heat-strengthened.

2.5 GLASS PRODUCTS

- A. Fully Tempered Float Glass: ASTM C1048, Kind FT (fully tempered), Condition A (uncoated) unless otherwise indicated, Type I, Class 1 (clear) or Class 2 (tinted) as indicated, Quality-Q3.
 - 1. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed, unless otherwise indicated. Performance requirements:
 - a. Distortion Tolerance: Roll wave peak-to-valley (PV) not to exceed 0.003 center/0.008 edges.
 - b. Millidiopter: 90 percent of surface not to exceed +/- 120 millidiopters.
 - c. Monitoring: Every lite measured with an on-line distortion measurement system.
 - d. Bow/Warp Tolerance: Maximum tolerance for bow/warp is 1/2 of ASTM C 1048.
 - e. All documentation recorded and may be available upon request.
- B. Wired Glass: Not acceptable.

~~2.6 INSULATING GLASS~~

- ~~A. Insulating Glass Units: Factory assembled units consisting of sealed lites of glass separated by a dehydrated interspace, qualified according to ASTM E 2190, and complying with other requirements specified.

 - 1. Provide Kind HS (heat strengthened or fully tempered) float glass in place of annealed glass where needed to resist thermal stresses induced by differential shading of individual glass lites and to comply with glass design requirements specified in Part 1 "Performance Requirements" Article.
 - a. All clear insulated glass greater than 35 sq.ft. shall be heat strengthened or tempered.
 - 2. Provide Kind-FT (fully tempered) glass lites where safety glass is indicated.
 - 3. Overall Unit Thickness and Thickness of Each Lite: Dimensions indicated for insulating glass units are nominal and the overall thicknesses of units are measured perpendicularly from outer surfaces of glass lites at unit's edge.~~
- ~~B. Sealing System: Dual seal, with manufacturer's standard primary and secondary.~~
- ~~C. Spacer: Manufacturer's recommended spacer material and construction, required to meet thermal performance requirements of opening.~~
- ~~D. Desiccant: Molecular sieve or silica gel, or blend of both.~~

2.7 GLASS USAGE

- A. General: Hereinafter are the minimum glazing requirements. Adjust sealed space, spacer, and coating as required to meet opening performance requirements. Glass shall be as required by opening manufacturer to meet thermal requirements as documented in manufacturer's published test data or verified with testing prescribed.
- B. Interior:
 - 1. Glass for Vestibule Doors, Sidelights, and Transoms: 6-mm thick clear tempered safety glass, unless otherwise noted.
 - 2. Glass for Interior Non-Fire-Protection-Rated Doors and Windows: 6-mm thick clear tempered glass.
 - 3. ~~Type 4: Laminated Glazing: Type LT, 5/16 inch thick clear tempered laminated safety glass with 1/8 inch thick inner and outer lites and 0.090 clear plastic interlayer.~~

2.8 GLAZING GASKETS

- A. Dense Compression Gaskets: Molded or extruded gaskets of material indicated below, complying with standards referenced with name of elastomer indicated below, and of profile and hardness required to maintain watertight seal:
 - 1. EPDM, ASTM C 864.
 - 2. Silicone, ASTM C 1115.
 - 3. Thermoplastic polyolefin rubber, ASTM C 1115.
- B. Soft Compression Gaskets:
 - 1. Extruded or molded, closed-cell, integral-skinned gaskets of material indicated below, complying with ASTM C 509, Type II, black, and of profile and hardness required to maintain watertight seal:
 - a. EPDM.
 - b. Silicone.
 - c. Thermoplastic polyolefin rubber.
 - 2. Application: Use where soft compression gaskets will be compressed by inserting dense compression gaskets on opposite side of glazing or pressure applied by means of pressure-glazing stops on opposite side of glazing.
- C. Lock-Strip Gaskets: Neoprene extrusions in size and shape indicated, fabricated into frames with molded corner units and zipper lock-strips, complying with ASTM C 542, black.

2.9 GLAZING SEALANTS

- A. General: Provide products of type indicated, complying with the following requirements:
 - 1. Compatibility: Select glazing sealants that are compatible with one another and with other materials they will contact, including glass products, seals of insulating-glass units, and glazing channel substrates, under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.
 - 2. Suitability: Comply with sealant and glass manufacturers' written instructions for selecting glazing sealants suitable for applications indicated and for conditions existing at time of installation.
 - 3. Colors of Exposed Glazing Sealants: As selected by A/E from manufacturer's full range.
 - 4. Glazing materials brought on site shall contain less than one percent asbestos by content.
- B. Elastomeric Glazing Sealant Standard (Weatherseal): Comply with ASTM C 920 and other requirements indicated for each liquid-applied, chemically curing sealant, including those referencing ASTM C 920 classifications for type, grade, class, and uses.
 - 1. Low-Modulus Neutral-Curing Silicone Glazing Sealant (ASTM C 920, Type S, Grade NS, Class 100/50, Use NT):
 - a. 790 by Dow Corning Corp.
 - b. Bondaflex Sil 290 by May National Associates, Inc.; a subsidiary of Sika Corporation.

- c. Silpruf LM SCS2700 by Momentive Performance Materials Inc., Apollo Management, LP (fka GE Sealants and Adhesives).
- d. 890 by Pecora Corp.
- e. PSI-641 by Polymeric Systems, Inc., Whitford Worldwide.
- f. Spectrem 1 by Tremco Sealant/Weatherproofing Division, RPM International Inc.
- 2. Medium-Modulus Neutral-Curing Silicone Glazing Sealant (ASTM C 920, Type S, Grade NS, Class 50, Use NT):
 - a. Omniseal 50 by BASF Building Systems (fka DeGussa, fka ChemRex, fka Sonneborn), BASF Construction Chemicals Americas, BASF Aktiengesellschaft.
 - b. 756-SMS, 791, 795, or 995 by Dow Corning Corp.
 - c. Bondaflex Sil 295 by May National Associates, Inc.
 - d. SilGlaze II SCS2800, Silpruf NB SCS9000, Silpruf SCS2000, or UltraPruf II SCS2900 by Momentive Performance Materials Inc., Apollo Management, LP (fka GE Sealants and Adhesives).
 - e. 864, 895, 895NST, or 898 by Pecora Corp.
 - f. PSI-641 by Polymeric Systems, Inc., Whitford Worldwide.
 - g. SikaSil-C995 by Sika Corp. (USA).
 - h. Spectrem 2 or Spectrem 3 by Tremco Sealant/Weatherproofing Division, RPM International Inc.
- 3. High-Modulus Neutral-Curing Silicone Glazing Sealant (ASTM C 920, Type S, Grade NS, Class 25, Use NT):
 - a. 799 by Dow Corning Corp.
 - b. Bondaflex Sil 200 GPN and Bondaflex Sil 201 FC by May National Associates, Inc.
 - c. UltraGlaze SSG4000 or UltraGlaze SSG4000AC by Momentive Performance Materials Inc., Apollo Management, LP (fka GE Sealants and Adhesives).
 - d. PSI-631 by Polymeric Systems, Inc., Whitford Worldwide.
 - e. PolyGlaze Plus (SM5731) by Schnee-Moorehead (S-M) Division, Illinois Tool Works (ITW) Inc.
 - f. Proglaze SSG or Tremsil 600 by Tremco Sealant/Weatherproofing Division, RPM International Inc.
- 4. High-Modulus Acid-Curing Silicone Glazing Sealant (ASCTM C 920, Type S, Grade NS, Class 25, Use NT):
 - a. OmniPlus by BASF Building Systems (fka DeGussa, fka ChemRex, fka Sonneborn), BASF Construction Chemicals Americas, BASF Aktiengesellschaft.
 - b. Chem-Calk 1200 by Bostik Construction Products Division, Bostik Findley Unit of TotalFinaElf.
 - c. 999-A by Dow Corning Corp.
 - d. Sil 100 GC, Sil 100 GP, or Sil 100 WF by May National Associates, Inc.
 - e. Contractors SCS1000 or SCS1200 by Momentive Performance Materials Inc., Apollo Management, LP (fka GE Sealants and Adhesives).
 - f. 860 by Pecora Corp.
 - g. PSI-601 by Polymeric Systems, Inc., Whitford Worldwide.
 - h. PolyGlaze (SM5732) by Schnee-Moorehead (S-M) Division, Illinois Tool Works (ITW) Inc.
 - i. Proglaze or Tremsil 200 by Tremco Sealant/Weatherproofing Division, RPM International Inc.

2.10 GLAZING TAPES

- A. Back-Bedding Mastic Glazing Tapes: Preformed, butyl-based elastomeric tape with a solids content of 100 percent, non-staining and non-migrating in contact with non-porous surfaces, with or without spacer rod as recommended in writing by tape and glass manufacturers for application indicated, packaged on rolls with a release paper backing, and complying with ASTM C 1281 and AAMA 800 for products indicated below:
 - 1. AAMA 804.3 tape, where indicated.
 - 2. AAMA 806.3 tape, for glazing applications in which tape is subject to continuous pressure.
 - 3. AAMA 807.3 tape, for glazing applications in which tape is not subject to continuous pressure.

- B. Expanded Cellular Glazing Tapes: Closed-cell, polyvinyl-chloride (PVC) foam tapes, factory-coated with adhesive on both surfaces, and complying with AAMA 800 for the following types:
 - 1. AAMA 810.1, Type 1, for glazing applications in which tape acts as the primary sealant.
 - 2. AAMA 810.1, Type 2, for glazing applications in which tape is used in combination with a full bead of liquid sealant.

2.11 MISCELLANEOUS GLAZING MATERIALS

- A. General: Provide products of material, size, and shape complying with referenced glazing standard, requirements of manufacturers of glass and other glazing materials for application indicated, and with a proven record of compatibility with surfaces contacted in installation are approved by testing agencies that listed and labeled fire-resistant glazing products with which products are used for applications and fire-protection ratings indicated.
- B. Cleaners, Primers, and Sealers: Types recommended by sealant or gasket manufacturer.
- C. Setting Blocks: Elastomeric material with a Shore, Type A durometer hardness of 85, plus-or-minus 5.
 - 1. Type recommended by sealant or glass manufacturer.
- D. Spacers: Elastomeric blocks or continuous extrusions with a Shore, Type A durometer hardness required by glass manufacturer to maintain glass lites in place for installation indicated.
- E. Edge Blocks: Elastomeric material of hardness needed to limit glass lateral movement (side walking).
 - 1. Type recommended by sealant or glass manufacturer.
- F. Cylindrical Glazing Sealant Backing: ASTM C 1330, Type O (open-cell material), of size and density to control glazing sealant depth and otherwise optimum glazing sealant performance.

2.12 FABRICATION OF GLAZING UNITS

- A. Fabricate glazing units in sizes required to glaze openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with written instructions of product manufacturer and referenced glazing publications, to comply with system performance requirements.
 - 1. Allow for thermal movements from ambient and surface temperature changes acting on glass framing members and glazing components.
 - a. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.
- B. Clean-cut or flat-grind vertical edges of butt-glazed monolithic lites to produce square edges with slight chamfers at junctions of edges and faces.
- C. Grind smooth and polish exposed glass edges and corners.
- D. Heat-Strengthened/Tempered Glass: Cut float glass materials to indicated sizes and provide cut-outs and holes, if indicated, before heat strengthening.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine glass framing, channels, and stops, with Installer present, for compliance with the following:
 - 1. Manufacturing and installation tolerances, including those for size, squareness, and offsets at corners.
 - 2. Presence and functioning of weep system.

3. Minimum required face and edge clearances.
4. Effective sealing between joints of glass framing members.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION FOR GLAZING

- A. Clean the glazing channel or other framing members to receive glass, immediately before glazing. Remove coatings that are not firmly bonded to the substrate. Remove lacquer from metal surfaces wherever elastomeric sealants are used.
1. Seal porous glazing channels and recesses with primer or sealer compatible with substrate.
- B. Examine glazing units to locate exterior and interior surfaces. Label or mark units as needed so that exterior and interior surfaces are readily identifiable. Do not use materials that will leave visible marks in the completed work.

3.3 GLAZING, GENERAL

- A. Use methods approved by testing agencies that listed and labeled fire-resistant glazing products.
- B. Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.
1. All glazing exposed to exterior shall be wet/wet or wet/dry in accordance with GANA Glazing Manual for window type.
- C. Watertight and airtight installation of each piece of glass is required, except as otherwise shown. Each installation must withstand normal temperature changes, wind loading, impact loading (for operating sash and doors) without failure, including loss or breakage of glass, failure of sealants or gaskets to remain watertight and air tight, deterioration of glazing materials, and other defects in the Work.
- D. Adjust glazing channel dimensions as required by project conditions during installation to provide:
1. Necessary bite on glass.
 2. Minimum edge and face clearances.
 3. Adequate sealant thicknesses, with reasonable tolerances.
- E. The glazier is responsible for correct glass size for each opening within the tolerances and necessary dimensions established.
- F. Protect glass from edge damage at all times during handling, installation, and operation of the building. Remove damaged glass from Project site and legally dispose of off Project site. Damaged glass is glass with edge damage or other imperfections that, when installed, could weaken glass and impair performance and appearance.
1. Inspect each piece of glass immediately before installation and eliminate those that have observable edge damage or face imperfections.
- G. Apply primers or sealers to joint surfaces where required for adhesion of sealants, as determined by preconstruction sealant substrate testing and as recommended by sealant manufacturer.
- H. Install setting blocks in sill rabbets, sized and located to comply with referenced glazing publications, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.
- I. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.

- J. Provide spacers inside and out and of proper size and spacing for glass lites where length plus width is larger than 50 united inches, except where gaskets are used for glazing.
 - 1. Locate spacers directly opposite each other on both inside and outside faces of glass. Install correct size and spacing to preserve required face clearances, unless gaskets and glazing tapes are used that have demonstrated ability to maintain required face clearances and to comply with system performance requirements.
 - 2. Provide 1/8-inch minimum bite of spacers on glass and use thickness equal to sealant width.
 - a. Exception for Glazing Tape: Use thickness slightly less than final compressed thickness of tape.
 - K. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel, as recommended in writing by glass manufacturer and according to requirements in referenced glazing publications.
 - 1. Coordinate glazing with wood door stops so stop is flush with outside of face veneer.
 - L. Voids and Filler Rods: Prevent exudation of sealant or compound by forming voids or installing filler rods in the channel at the heel of jambs and head (do not leave voids in the sill channels) except as otherwise indicated, depending on light size, thickness and type of glass, and complying with manufacturer's recommendations.
 - M. Do not attempt to cut, seam, nip, or abrade glass that is tempered, heat-strengthened, or coated.
 - N. Force sealants into channel to eliminate voids and to ensure complete "wetting" or bond of sealant to glass and channel surfaces.
 - O. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.
 - P. Set glass lites with proper orientation so that coatings face fire side or protected of exterior or interior as specified.
 - Q. Tool exposed surfaces of glazing liquids and compounds to provide a substantial "wash" away from the glass. Install pressurized tapes and gaskets to protrude slightly out of the channel, so as to eliminate dirt and moisture pockets.
 - R. Clean and trim excess glazing materials from the glass and stops or frames promptly after installation and eliminate stains and discoloration.
 - S. Where wedge-shaped gaskets are driven into one side of channel to pressurize sealant or gasket on the opposite side, provide adequate anchorage to ensure that gasket does not "walk" out when subjected to dynamic movement.
 - T. Square-cut wedge-shaped gaskets at corners and install gaskets in a manner recommended by gasket manufacturer to prevent corners from pulling away. Seal corner joints and butt joints with sealant recommended by gasket manufacturer.
 - U. Reinstall sliding window assembly into new frames or wall construction according to manufacturer's installation instructions with concealed fasteners.
- 3.4 TAPE GLAZING
- A. Position tapes on fixed stops so that, when compressed by glass, their exposed edges are flush with or protrude slightly above sightline of stops.
 - B. Install tapes continuously, but not necessarily in one continuous length. Do not stretch tapes to make them fit opening.

- C. Cover vertical framing joints by applying tape to heads and sills first and then to jambs. Cover horizontal framing joints by applying tape to jambs and then to heads and sills.
- D. Place joints in tapes at corners of opening with adjoining lengths butted together, not lapped. Seal joints in tapes with compatible sealant approved by tape manufacturer.
- E. Do not remove release paper from tape until just before each glazing unit is installed.
- F. Apply heel bead of elastomeric sealant.
- G. Center glass lites in openings on setting blocks and press firmly against tape by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings.
- H. Apply cap bead of elastomeric sealant over exposed edge of tape.

3.5 GASKET GLAZING (DRY)

- A. Cut compression gaskets to lengths recommended by gasket manufacturer to fit openings exactly, with allowance for stretch during installation.
- B. Insert soft compression gasket between glass and frame or fixed stop so it is securely in place with joint miter cut and bonded together at corners.
- C. Installation with Drive-In Wedge Gaskets: Center glass lites in openings on setting blocks and press firmly against soft compression gasket by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer.
- D. Installation with Pressure-Glazing Stops: Center glass lites in openings on setting blocks and press firmly against soft compression gasket. Install dense compression gaskets and pressure-glazing stops, applying pressure uniformly to compression gaskets. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer.
- E. Install gaskets so they protrude past face of glazing stops.

3.6 SEALANT GLAZING (WET)

- A. Install continuous spacers, or spacers combined with cylindrical sealant backing, between glass lites and glazing stops to maintain glass face clearances and to prevent sealant from extruding into glass channel and blocking weep systems until sealants cure. Secure spacers or spacers and backings in place and in position to control depth of installed sealant relative to edge clearance for optimum sealant performance.
- B. Force sealants into glazing channels to eliminate voids and to ensure complete wetting or bond of sealant to glass and channel surfaces.
- C. Tool exposed surfaces of sealants to provide a substantial wash away from glass.

3.7 LOCK STRIP GASKET GLAZING

- A. Comply with ASTM C 716 and gasket manufacturer's written instructions. Provide supplementary wet seal and weep system, unless otherwise indicated.

3.8 CURING

- A. Cure glazing sealants and compounds in compliance with manufacturer's instructions and recommendations to obtain high early bond strength, internal cohesive strength, and surface durability.

3.9 PROTECTION, AND CLEANING

- A. Immediately after installation remove nonpermanent labels and clean surfaces.
- B. Protect exterior glass from breakage and other damage immediately upon installation by attaching crossed streamers to framing held away from glass. Do not apply markers to surfaces of glass. Remove non-permanent labels and clean surfaces.
- C. Protect glass from contact with contaminating substances resulting from construction operations. If despite such protection, contaminating substances do come into contact with glass, remove substances immediately as recommended in writing by glass manufacturer.
 - 1. If, despite such protection, contaminating substances do come into contact with glass, remove substances immediately as recommended in writing by glass manufacturer. Remove and replace glass that cannot be cleaned without damage to coatings.
- D. Examine glass surfaces adjacent to or below exterior concrete and masonry surfaces at frequent intervals during construction – but not less than once a month – for buildup of dirt, scum, alkaline deposits, or stains. Remove as recommended in writing by glass manufacturer.
- E. Remove and replace glass that is broken, chipped, cracked, or abraded, or that is otherwise damaged due to natural causes, accidents, or vandalism, during the construction period.
- F. Wash glass on both exposed surfaces in each area of Project not more than four days before date scheduled for inspections that establish date of Substantial Completion. Wash glass according to:
 - 1. Written recommendations of glass manufacturer.
- G. Do not use scrapers or other metal tools to clean glass.

END OF SECTION 08 80 00

SECTION 09 01 30.91 - TILE RESTORATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Restorative cleaning and restoration of existing ceramic mosaic or porcelain tile surfaces.
1. ***This Specification describes a cleaning system which is designed to effectively clean and restore existing ceramic mosaic tile surfaces. The system combines the application of restorative cleaners with water rinsing.***
 - a. ***Cleaning of wall and floor tile in pool tank.***
 2. ***Cleaning system is described which will effectively remove grease, soap scum, body oil, mildew stains, algae, synthetic and acrylic waxes and floor finishes. Selection of the specific cleaner and strength to be used shall be dependent on the existing tile floors, their condition, and the results of tests conducted at the jobsite as later described.***
 3. ***Minor regrouting existing tile installations***
 4. Sandblasting and use of unapproved acids, powdered or liquid, will not be permitted.
- B. Related Sections:
1. Division 07 Section "Joint Sealants" for sealing of expansion, contraction, control, and isolation joints in tile surfaces.
 2. Division 09 Section "Tiling" for materials required for replacement of broken or damaged tile and re-grouting of complete tile areas.

1.2 ACTION SUBMITTALS

- A. ***Product Data: For each type of proprietary product proposed to be used.***

1.3 QUALITY ASSURANCE

- A. ***Mock-up: Apply a sample of the cleaner at project site where directed, according to the manufacturer's recommendations. During application sample, note the rate of product use and result. Deliver to Architect a copy of manufacturer's recommendations, together with a report of coverage rate of sample. Sample will be reviewed by the Architect and, if approved, shall become the criteria for acceptance of work.***
1. ***Provide mock-up of minor re-grouting operations, approximately 5 lineal feet for review and approval.***
- B. ***Precleaning Conference: Before beginning tile cleaning conduct a conference at project site to review specific locations, sequencing, cleaning and restoration methods.***

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use. Comply with requirements of ANSI A137.1 for labeling sealed tile packages.
- B. Prevent damage or contamination to materials by water, freezing, foreign matter, and other causes.
- C. Store products tightly capped in original containers in upright position.

1.5 FIELD CONDITIONS

- A. Maintain environmental conditions and protect work during and after installation to comply with referenced standards and manufacturer's printed recommendations.

- B. Maintain temperatures at 50 degrees F. or more in tiled areas during cleaning, unless higher temperatures are required by referenced installation standard or manufacturer's instructions.

PART 2 - PRODUCTS

2.1 MANUFACTURERS/MATERIALS

- A. Tile Cleaner
 - 1. A neutral cleaner capable of removing soil and residue without harming tile and grout surfaces, specifically approved for materials and installations indicated by tile and grout manufacturers.
 - a. Aqua Mix Heavy-Duty Tile & Grout Cleaner; Aqua Mix, Inc.
 - b. Camclean C-411 Tile and Joint Cleaner; Cambridge Tile Mfg. Co.
 - c. TileLab® Grout & Tile Cleaner; Custom Building Products.
 - 2. **Locations: All locations, pool tank floors and walls.**
- B. Grout Repair Products
 - 1. Chemical-Resistant, Water-Cleanable, Epoxy Mortar & Grout. Products of the following grout manufacturers will be acceptable for repairing and regrouting cleaned areas:
 - a. ARDEX Engineered Cements; WA Epoxy Grout and Adhesive
 - b. Boiardi Products; Elastiment 1026
 - c. Custom Building Products; CEG-Lite 100% Solids Commercial Epoxy
 - d. Laticrete Int.; LATICRETE 2000 Industrial Epoxy Grout
 - e. MAPEI; KER400 Series KERAPOXY
 - f. Summitville Tiles; SB5000 Chemical Resistant Epoxy
 - g. ColorFast Industries; 100 percent Solids Epoxy Grout
 - h. DAP; Durabond ARB20/Durabond DBL26
 - i. Southern Grouts & Mortars; Saltillo Grout Mix/Southcrete 20 Acrylic Admix
 - j. Summitville Tiles; SB700/SB775 or SB776
 - 2. Color: To be selected by Architect, to match existing adjacent areas.
 - 3. **Locations: All locations, pool tank floors and walls.**
- C. **Ceramic Mosaic Tile: Match existing size, color and texture.**
- D. Products of other manufacturers will be considered for acceptance provided they equal or exceed the material requirements and functional qualities of the specified product. Requests for Architect/Engineer's approval must be accompanied by the "Substitution Request Form" and complete technical data for evaluation. All materials for evaluation must be received by the Project Manager and Specification Department at least 10 days prior to bid due date. Additional approved manufacturers will be issued by Addendum.
- E. Water: Clean and potable.
- F. Sealants: Provide manufacturer's standard chemically curing elastomeric sealants of base polymer and characteristics indicated that comply with applicable requirements of Division 07 Section "Joint Sealants".

2.2 MIXING GROUT

- A. Mix grouts to comply with referenced standards and mortar and grout manufacturer's written instructions.
- B. Add materials, water, and additives in accurate proportions.
- C. Obtain and use type of mixing equipment, mixer speeds, mixing containers, mixing time, and other procedures to produce mortars and grouts of uniform quality with optimum performance characteristics for installations indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to cleaning tile, inspect floor and wall surfaces which are to be cleaned and restored.. Notify the Architect in writing of defects or conditions that will interfere with or prevent a satisfactory cleaning and restoration operation. Do not proceed with installation until such defects or conditions have been corrected.
- B. The starting of cleaning and restoration work in a room or space shall imply acceptance of the surfaces in that space.

3.2 INSTALLATION, PATCHING

- A. ANSI Tile Installation Standards: Comply with parts of ANSI A108 Series "Specifications for Installation of Ceramic Tile" as applicable to patching require to accommodate new work.
- B. TCNA Installation Guidelines: TCNA's "Handbook for Ceramic Tile Installation": Comply with applicable TCNA installation method applicable for patch as indicated to accommodate new work.

3.3 **PREPARATION**

- A. Sweep or vacuum surface.**
- B. Protect water-sensitive areas.**
- C. Dilute cleaners with water to manufacturer's recommended strength based upon mock-up results described above.**

3.4 FLOOR AND WALL TILE CLEANING

- A. Apply cleaning solution to surface with mop or sponge applicator. Allow to dwell 5 to 10 minutes.
- B. Agitate with synthetic mop, scrub brush or scrub machine.
- C. Mop up dirty solution.
- D. Rinse mop and change cleaning solution at least every 100 sq.ft., or more often as needed.
- E. Rinse thoroughly with clean water.
- F. Wipe up residue with clean, absorbent, white cotton towels or sponge. A wet-dry vacuum may be used.
- G. Repeat as necessary. Removal of thick coatings or residue may need several applications.
- H. Do not allow cleaners to come in contact with any non-recommended surfaces or finishes.
- I. Allow to dry 24 hours before regrouting.

3.5 GROUTING

- A. Rake damaged or missing grout joints full depth back to areas of acceptable existing grout conditions.**

- B. Grouting shall be installed in accordance with ANSI A108.10 and the manufacturer's recommended procedures and precautions during application and cleaning, unless noted otherwise
- C. Where noted, for chemical-resistant epoxy grouts, comply with ANSI A108.6.
- D. Rinse tilework thoroughly with clean water before and after using chemical cleaners.

3.6 CLEANING AND PROTECTING

- A. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure tile and grout are without damage or deterioration at the time of Substantial Completion.
 - 1. When recommended by tile manufacturer, apply a protective coat of neutral protective cleaner to completed tile floors. Protect restored tile work with kraft paper or other heavy covering during construction period to prevent staining, damage, and wear.
 - 2. Prohibit foot and wheel traffic from tiled floors for at least 7 days after grouting is completed.
- B. Before final inspection, remove protective coverings and rinse neutral cleaner from tile surfaces.

END OF SECTION 09 01 30.91

SECTION 09 96 00 - HIGH-PERFORMANCE COATINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes surface preparation and application of high-performance coating systems (HPC) on the following substrates:
 - 1. Interior Substrates:
 - a. Concrete, vertical and horizontal surfaces.
 - b. Concrete masonry units (CMU).
 - c. Steel.
 - d. Galvanized metal.
 - e. Gypsum board.
 - f. Plaster.
 - g. Aluminum Ductwork
- B. Related Sections include the following:
 - 1. Division 05 Sections for shop priming of metal substrates.
 - 2. Division 09 painting Sections for special-use coatings and general field painting.

1.3 DEFINITIONS

- A. Standard coating terms defined in ASTM D 16 apply to this Section.
- B. Gloss ranges used in this Section include the following:
 - 1. Semigloss refers to medium-sheen finish with a gloss range between 30 and 65 when measured at a 60-degree meter. (MPI value similar to G5).
 - 2. High gloss refers to high-sheen finish with a gloss range more than 65 when measured at a 60-degree meter. (MPI values similar to G6 and G7).
- C. Pool Environment: The pool environment for special coatings, materials, and treatments includes the competition pool space, adjacent alcoves and entries and interiors spaces in scope of work.

1.4 **PRECONSTRUCTION TESTING**

- A. **Preconstruction Testing Service: Engage paint manufacturer representative or testing company to confirm existing paint types and adhesion.**
 - 1. **Confirm existing paint types and compatibility with proposed paint systems. Where potential incompatibility exists, notify A/E and review recommendations from paint manufacturer representative to resolve incompatibility.**

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
 - 1. Product List: For each product indicated. Cross-reference products to coating system and locations of application areas. Use same designations indicated on Drawings and in schedules.
- B. Samples for Verification: For each type of coating system and in each color and gloss of finish coat indicated.
 - 1. Submit Samples on rigid backing, 8 inches square.
 - 2. Step coats on Samples to show each coat required for system.

3. Label each coat of each Sample.
4. Label each Sample for location and application area.

1.6 CLOSEOUT SUBMITTALS

- A. General: Closeout Submittals are to be submitted with O and M Manuals only. Do not submit with other ACTION and INFORMATIONAL Submittals:
1. Receipt of extra materials.

1.7 QUALITY ASSURANCE

- A. Master Painters Institute (MPI) Standards:
1. Products: Complying with MPI standards indicated and listed in "MPI Approved Products List."
 2. Preparation and Workmanship: Comply with requirements in "MPI Architectural Painting Specification Manual" for products and coating systems indicated.
- B. Mockups: Apply benchmark samples of each coating system indicated to verify preliminary selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
1. **Surface-Preparation Mockups: On existing surfaces using applicable specified methods of cleaning and other surface preparation, provide mockup sample of at least 100 sq.ft.**
 - a. **Provide surface preparation mockups of different surfaces that require different preparation and finish paint systems to ensure compatibility of all systems.**
 - b. **Provide cleaning and preparation mock-up of existing steel surfaces.**
 2. Paint Manufacturer representative shall review surface-preparation mock-up of existing painted surfaced prior to commencing additional repainting work A/E will select one surface to represent surfaces and conditions for application of each type of coating and substrate.
 - a. CMU Wall and Steel structure Ceiling Surfaces: Provide samples of at least 100 sq. ft.
 - b. Other Items: A/E will designate items or areas required.
 3. Apply benchmark samples after permanent lighting and other environmental services have been activated.
 4. Final approval of color selections will be based on benchmark samples.
 - a. If preliminary color selections are not approved, apply additional benchmark samples of additional colors selected by A/E at no added cost to Owner.
 5. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless A/E specifically approves such deviations in writing.
 6. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
- C. Paint Manufacturer's representative shall make the following quality assurance site visits to observe preparation and painting operations. Cost for Manufacturer's representative's time shall be included in the cost of this Work.
1. Preinstallation Conference.
 2. After preparation of new materials and before new coating is applied.
 3. After delivery of high performance factory primed components
 4. After initial priming operations and before any topcoat is applied.
 5. Periodic review during application of topcoat.
 6. Upon completion of final topcoat to review entire installation.
- D. **Preinstallation Conference: Conduct conference at Project site.**
1. **Review methods and procedures related to painting, including recoating of existing surfaces, but not limited to, the following:**

- a. **Construction Schedule. Verify availability of materials, personnel, equipment, and facilities needed to make progress and avoid delays.**
- b. **Materials, material application, colors, patterns, and sequencing.**

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label with the following information:
 - 1. Name or title of material.
 - 2. Product description (generic classification or binder type).
 - 3. Manufacturer's stock number and date of manufacture.
 - 4. Contents by volume, for pigment and vehicle constituents.
 - 5. Thinning instructions.
 - 6. Application instructions.
 - 7. Color name and number.
 - 8. Handling instructions and precautions.
- B. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F.
 - 1. Maintain containers in clean condition, free of foreign materials and residue.
 - 2. Remove rags and waste from storage areas daily.

1.9 FIELD CONDITIONS

- A. Apply coatings only when temperature of surfaces to be coated and surrounding air temperatures are between 50 and 95 deg F.
- B. Do not apply coatings when relative humidity exceeds 85 percent; at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.
- C. Do not apply exterior coatings in snow, rain, fog, or mist.

1.10 EXTRA MATERIALS

- A. Furnish extra materials described below that are from same production run (batch mix) as materials applied and that are packaged for storage and identified with labels describing contents.
 - 1. Quantity: Furnish an additional 1 gal. of each material and color applied.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers on the current "MPI Approved Product List".
- B. Products of other manufacturers will be considered for acceptance provided they equal or exceed the material requirements and functional qualities of the specified product. The "Substitution Request Form" and complete technical data for evaluation must accompany requests for A/E's approval. All materials for evaluation must be received by the Project Manager and Specification Department at least 10 days prior to bid due date. Additional approved manufacturers will be issued by Addendum.
 - 1. Indicate reason for not being on the MPI "Approved Products List" with submittal.

2.2 CLEANING MATERIALS

- A. **Detergent Solution: Solution prepared by mixing 2 cups of tetrasodium polyphosphate, 1/2 cup of laundry detergent that contains no ammonia, 5 quarts of 5 percent sodium hypochlorite bleach, and 15 quarts of warm water for each 5 gallon of solution required.**

- B. Mildewcide: Commercial proprietary mildewcide or a job-mixed solution prepared by mixing 1/3 cup of household detergent that contains no ammonia, 1 quart of 5 percent sodium hypochlorite bleach, and 3 quarts of warm water.**
- C. Abrasives for Ferrous Metal Cleaning: Aluminum oxide paper, emery paper, fire steel wool, steel scrapers, and steel-wire brushes of various sizes.**
- D. Rust Remover: Manufacturer's standard phosphoric acid-based gel formulation, also called "naval jelly" for removing corrosion from iron and steel.**

2.3 HIGH-PERFORMANCE COATINGS, GENERAL (HPC)

- A. MPI Standards: Provide products that comply with MPI standards indicated and are listed in "MPI Approved Products List."**
- B. Material Compatibility:**
 - 1. Provide materials for use within each coating system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
 - 2. For each coat in a coating system, provide products recommended in writing by manufacturers of topcoat for use in coating system and on substrate indicated.
 - 3. Provide products of same manufacturer for each coat in a coating system.
- C. Colors: Refer to "List of Finishes".**

2.4 PATCHING MATERIALS

- A. Metal Patching Compound: Two-part, polyester-resin metal patching compound; knife-grade formulation as recommended by manufacturer for type of metal repair indicated, tool time required for detail of work, and site conditions. Compound shall be produced for filling metal that has deteriorated due to corrosion. Filler shall be capable of filling deep holes and spreading to feather edge.**
- B. Cementitious Patching Compounds: Cementitious patching compounds and repair materials specifically manufactured for surface preparation and sanding of cementitious substrates prior to painting; formulation as recommended by manufacturer for type of cementitious substrate indicated, exposure to weather and traffic, detail of work, and site conditions.**

2.5 MIXING AND TINTING

- A. Unless otherwise specified or pre-approved, all paints shall be ready-mixed and pre-tinted. Re-mix all paint in containers prior to and during application to ensure break-up of lumps, complete dispersion of settled pigment, and color and gloss uniformity.**
- B. Paste, powder or catalyzed paint mixes shall be mixed in strict accordance with manufacturer's written instructions.**
- C. Where thinner is used, addition shall not exceed paint manufacturer's recommendations.**
- D. If required, thin paint for spraying in strict accordance with paint manufacturer's instructions. If directions are not on container, obtain instructions in writing from manufacturer and provide copy of instructions to A/E.**

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of work.
 - 1. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
 - a. Concrete: 12 percent.
 - b. Masonry (Clay and CMU): 12 percent.
 - c. Gypsum Board: 12 percent.
- B. Gypsum Board Substrates: Verify that finishing compound is sanded smooth.
- C. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
- D. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.
 - 1. Coating application indicates acceptance of surfaces and conditions.
- E. Coordination of Work: Review other Sections in which primers or other coatings are provided to ensure compatibility of total systems for various substrates. On request, furnish information on characteristics of specified finish materials to ensure compatible primers.
 - 1. If a potential incompatibility of primers applied by others exists, obtain the following from the primer Applicator before proceeding:
 - a. Confirmation of primer's suitability for expected service conditions.
 - b. Confirmation of primer's ability to be top coated with materials specified.
 - 2. Notify A/E about anticipated problems before using the coatings specified over substrates primed by others.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates indicated.
- B. Remove plates, machined surfaces, and similar items already in place that are not to be coated. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and coating.
 - 1. After completing coating operations, reinstall items that were removed; use workers skilled in the trades involved.
- C. Clean substrates of substances that could impair bond of coatings, including dirt, oil, grease, and incompatible paints and encapsulants.
 - 1. Schedule cleaning and coating application so dust and other contaminants from cleaning process will not fall on wet, newly coated surfaces.
 - 2. Remove incompatible primers and reprime substrate with compatible primers as required to produce coating systems indicated.
- D. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces to be coated exceeds that permitted in manufacturer's written instructions.
 - 1. Abrasive blast clean surfaces to comply with SSPC-SP 7/NACE No. 4, "Brush-Off Blast Cleaning."
 - 2. Determine alkalinity and moisture content of surfaces by performing appropriate tests. If surfaces are sufficiently alkaline to cause the finish paint to blister and burn, correct this condition before application. Do not coat surfaces if moisture content exceeds that permitted in manufacturer's written instructions.

- E. CMU Substrates: Remove efflorescence and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces to be coated exceeds that permitted in manufacturer's written instructions.
- F. Steel Substrates: Remove rust and loose mill scale.
 - 1. Clean using methods recommended in writing by coating manufacturer, but not less than the following:
 - a. SSPC-SP6/NACE No. 3, "Commercial Blast Cleaning."
 - 2. Other types of preparation as noted in the Coating Schedule.
- G. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop priming to comply with SSPC-PA1 for touching up shop-primed surfaces.
- H. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal fabricated from coil stock by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied coatings.
 - 1. Other types of preparation as noted in the Coating Schedule.
 - 2. Surface preparation should start with SSPC SP-1 Solvent Cleaning to remove oil/grease contamination. If galvanized surface is shinney, surface must be de-glossed and roughened in one of two ways:
 - a. In mild building environments, wash with a chemical etching solution such as MPI #25.
 - b. In aggressive environments (Natatoriums), where practical, brush-off abrasive blasting (SSPC-SP7b). Blasting at lower pressures (50 psi) and/or with softer abrasives (sponge, corncobs, walnut shells, etc) can produce a suitable surface profile while minimizing damage to underlying zinc.
 - 3. Galvanized metals are very smooth and have virtually no profile for coating to adhere to. It is important to abrade surface of galvanized metal through Brush of Blast (SSPC SP7), or an etching primer before coatings application, as recommended by paint manufacturer.
 - 4. Galvanized surfaces must use a primer before applying a topcoat. Topcoats will not adhere to zinc layer of galvanized surface and requires a primer to form a bond between two. Manufacturer's water-based bonding primers as an alternative to previously used cementitious primers. An epoxy primer may also be used, however, it should be noted that epoxy primers typically require an abrasive blast-cleaned surface.
- I. Existing Painted Surfaces:
 - 1. In accordance with good painting practice, all surface and absorbed contaminants (i.e., dirt, dust, grease, oil, mildew, moisture, chemical fall-out, etc.) shall be removed prior to applying any new coat of paint, since performance and adhesion of the new coat is directly proportional to the cleanliness of the substrate.
 - 2. Abrade existing painted surfaces to achieve surface texture for adhesion of primers and new painting systems.
 - a. Refer to Surface-Preparation Schedule herein for additional information.
 - b. Determine abrasion technique and materials based on existing substrates and existing paint types.
 - 3. Removal of old painting system prior to the application of a new coat of paint shall not be required unless adhesion problems between the existing coating and new proposed coating cannot be eliminated.
 - a. New coating shall be compatible with existing coating based on previous testing of coating products for adhesion by manufacturer and on installer's field experience.
 - b. A test patch shall be used when previous testing does not exist or is unacceptable to A/E.
 - c. The preparation of substrates does not apply to previously coated surfaces that contain lead. These surfaces require special preparation. Contractor shall refer to recommendations of paint manufacturer for preparation requirements.
 - 4. Extra preparation work will be required (regardless of condition) on existing semi-gloss, alky enamel surfaces.

5. Existing metal surfaces with alkyd enamel (hollow metal doors, frames and other ferrous metals): Abrade and sand all surfaces of existing alkyd paint to achieve rough texture profile ready for new paint adhesion. New primer must be utilized on existing metal surfaces.
6. **Clean existing structural steel components, prepare existing painted surfaces as required for adhesion of new coating system. Spot prime/treat all areas of existing rust or surface blemishes as part of preparation steps and provide new paint system as specified herein.**

3.3 CLEANING OF EXISTING COATINGS

- A. **General: Use only the gentlest, appropriate method necessary to clean surfaces in preparation for painting. Clean all surfaces, corners, contours, and interstices.**
- B. **Detergent Cleaning: Wash surfaces by hand using clean rags, sponges, and bristle brushes. Scrub surface with detergent solution and bristle brush until soil is thoroughly dislodged and can be removed by rinsing. Use small brushes to remove soil from joints and crevices. Dip brush in solution often to ensure that adequate fresh detergent is used and that surface remains wet. Rinse with water applied by clean rags or sponges.**
- C. **Solvent Cleaning: Use solvent cleaning to remove oil, grease, smoke, tar, and asphalt from painted or unpainted surfaces before other preparation work. Wipe surfaces with solvent using clean rags and sponges. If necessary, spot-solvent cleaning may be employed just prior to commencement of paint application, provided enough time is allowed for complete evaporation. Use clean solvent and clean rags for the final wash to ensure that all foreign materials have been removed. Do not use solvents, including primer thinner and turpentine, that leave residue.**
- D. **Mildew: Clean off existing mildew, algae, moss, plant material, loose paint, grease, dirt, and other debris by scrubbing with bristle brush or sponge and detergent solution. Scrub mildewed areas with mildewcide. Rinse with water applied by clean rags or sponges.**
 1. **Prime immediately to prevent rust. Do not touch cleaned metal surface until primed.**

3.4 SUBSTRATE REPAIR

- A. **General: Repair substrate surface defects that are inconsistent with the surface appearance of adjacent materials and finishes.**
- B. **Cementitious Material Substrate:**
 1. **General: Repair defects including dents and chips more than 1/4 inch in size and all holes and cracks by filling with cementitious patching compound and sanding smooth. Remove protruding fasteners.**
 2. **New and Bare Plaster: Neutralize surface of plaster with mild acid solution as recommended by paint manufacturer. In lieu of acid neutralization, follow manufacturer's written instruction for primer or transition coat over alkaline plaster surfaces.**
 3. **Concrete, Cement Plaster, and Other Cementitious Products: Remove efflorescence, chalk, dust, dirt, grease, oils, and release agents. If surfaces are too alkaline to paint, correct this condition before painting.**

3.5 APPLICATION

- A. Apply high-performance coatings according to manufacturer's written instructions.
 1. Use applicators and techniques suited for coating and substrate indicated.
 2. Coat surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, coat surfaces behind permanently fixed equipment or furniture with prime coat only.

3. Coat back sides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
 4. Do not apply coatings over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
- B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of the same material are to be applied. Tint undercoats to match color of finish coat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.
- C. If undercoats or other conditions show through final coat, apply additional coats until cured film has a uniform coating finish, color, and appearance.
- D. Apply coatings to produce surface films without cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections. Produce sharp glass lines and color breaks.

3.6 FIELD QUALITY CONTROL

- A. Owner reserves the right to invoke the following procedure at any time and as often as Owner deems necessary during the period when coatings are being applied:
1. Owner will engage the services of a qualified testing agency to sample coating material being used. Samples of material delivered to Project site will be taken, identified, sealed, and certified in presence of Contractor.
 2. Testing agency will perform tests for compliance with specified requirements.
 3. Owner may direct Contractor to stop applying coatings if test results show materials being used do not comply with specified requirements. Contractor shall remove noncomplying coating materials from Project site, pay for testing, and recoat surfaces coated with rejected materials. Contractor will be required to remove rejected materials from previously coated surfaces if, on recoating with complying materials, the two coatings are incompatible.
- B. Dry Film Thickness Testing: Owner reserves the right to engage the services of a qualified testing and inspecting agency to inspect and test coatings for dry film thickness.
1. Contractor shall touch up and restore coated surfaces damaged by testing.
 2. If test results show that dry film thickness of applied coating does not comply with coating manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with coating manufacturer's written recommendations.

3.7 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing coating application, clean spattered surfaces. Remove spattered coatings by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from coating operation. Correct damage by cleaning, repairing, replacing, and recoating, as approved by A/E, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced coated surfaces.

3.8 INTERIOR HIGH-PERFORMANCE COATING SCHEDULE

- A. Refer to Definitions within this Section for extent of "pool environment" spaces.

- B. Concrete Substrates, Vertical Surfaces:
1. Water-Based HDP Acrylic Polymer (Code 3.114)
 - a. Prime Coat: Waterborne Cementitious Acrylic.
 - 1) Fill all voids and provide a smooth pin hole free surface
 - 2) Tnemec Series 130, Envirofill
 - b. Intermediate Coat: Water-based HDP pure acrylic polymer applied to DFT 2.0-3.0 mils.
 - 1) Tnemec Series 1029, Enduratone
 - c. Topcoat: Water-based HDP pure acrylic polymer applied to DFT 2.0-3.0 mils.
 - 1) Tnemec Series 1029, Enduratone
 - d. Application: New vertical and horizontal concrete surfaces in pool environment areas.
 - 1) Concrete and exposed vertical concrete.
 - 2) Exposed portions of concrete seating riser assembly.
 - e. Acceptable additional Manufacturer's:
 - 1) Carboline
 - 2) PPG Protective and Marine Coatings
 - 3) Sherwin Williams Protective and Marine Coatings
- C. CMU Substrates:
1. ~~Epoxy Coating System: (Code #4.222).~~
 - a. ~~Prime Coat: Epoxy block filler.~~
 - 1) ~~Sherwin Williams; Cement-Plex 875 Acrylic Block Filler or DuraPlate 2300~~
 - 2) ~~PPG; Amerlock 400BF~~
 - b. ~~Intermediate Coat: Epoxy, gloss.~~
 - c. ~~Topcoat: Epoxy, gloss.~~
 - 1) ~~Sherwin Williams; Pro Industrial Hi Performance Epoxy~~
 - 2) ~~PPG; Amerlock 2 VOG~~
 - d. ~~Application includes, but is not limited to:~~
 - 1) ~~Wet environments where additional abrasion resistance is required, e.g. showers.~~
 2. Water-Based Epoxy Coating System: (Code #4.224).
 - a. Prime Coat: Interior/exterior latex block filler.
 - 1) Sherwin Williams; Pro Industrial Heavy Duty Block Filler
 - 2) PPG; 6-15XI Speedhide Hi-Fill Block Filler
 - b. Intermediate Coat: Water-based epoxy (interior), semi-gloss.
 - c. Topcoat: Water-based epoxy (interior), semi-gloss.
 - 1) Sherwin Williams; Pro Industrial Pre-Catalyzed Epoxy
 - 2) PPG; 16-510 Pitt-Glaze WB1 Pre-Catalyzed Epoxy
 - d. Application includes, but is not limited to:
 - 1) Dry environments additional abrasion-resistance is required (for example, toilet rooms, locker rooms).
 3. Water-Based HDP Acrylic Polymer (Code 4.225)
 - a. Prime Coat: Waterborne Cementitious Acrylic.
 - 1) Fill all voids and provide a smooth pin hole free surface
 - 2) Tnemec Series 130, Envirofill
 - b. Intermediate Coat: Water-based HDP pure acrylic polymer applied to DFT 2.0-3.0 mils.
 - 1) Tnemec Series 1029, Enduratone
 - c. Topcoat: Water-based HDP pure acrylic polymer applied to DFT 2.0-3.0 mils.
 - 1) Tnemec Series 1029, Enduratone
 - d. Applications: CMU substrates in pool environment areas.
 - e. Acceptable additional Manufacturer's:
 - 1) Carboline
 - 2) PPG Protective and Marine Coatings
 - 3) Sherwin Williams Protective and Marine Coatings

D. Steel Substrates:

1. ~~W.B. Light Industrial Coating System; (Code #5.222).~~
 - a. ~~Prime Coat:~~
 - 1) ~~Sherwin Williams; Pro-Cryl Universal Primer~~
 - 2) ~~PPG; 90-712 Pitt Tech DTM Primer~~
 - b. ~~Intermediate Coat: W.B. Light Industrial Coating, semi-gloss.~~
 - c. ~~Topcoat: W.B. Light Industrial Coating, semi-gloss.~~
 - 1) ~~Sherwin Williams; Pro Industrial Pre-Catalyzed Epoxy~~
 - 2) ~~PPG; 16-510 Pitt Glaze WB1 Pre-Catalyzed Epoxy~~
 - d. ~~Application includes, but is not limited to:~~
 - 1) ~~Columns, beams, joist, etc.~~
2. ~~W.B. Light Industrial Coating System: (Code #5.223).~~
 - a. ~~Prime Coat:~~
 - 1) ~~Sherwin Williams; Pro-Cryl Universal Primer~~
 - 2) ~~PPG; 90-712 Pitt Tech DTM Primer~~
 - b. ~~Intermediate Coat: W.B. Light Industrial Coating, gloss.~~
 - c. ~~Topcoat: W.B. Light Industrial Coating, gloss.~~
 - 1) ~~Sherwin Williams; Pro Industrial WB Urethane Alykd.~~
 - 2) ~~PPG; Aquacron 200 HR~~
 - d. ~~Application includes, but is not limited to:~~
 - 1) ~~Stair stringers and exposed steel portions of stair assemblies.~~
3. ~~High-Build Coating System: (Code #5.224).~~
 - a. ~~Prime Coat: Epoxy zinc primer, Tnemec Series 90-97 by Structural Steel Fabricator~~
 - b. ~~Intermediate Coat: Hydrophobic Acrylic; 3.0 to 4.0 mils DFT.~~
 - 1) ~~Tnemec Series 115~~
 - c. ~~Topcoat: Hydrophobic Acrylic; 3.0 to 4.0 mils DFT.~~
 - 1) ~~Tnemec Series 115~~
 - d. ~~Application includes, but is not limited to:~~
 - 1) ~~New metal and steel surfaces, steel joists, beams, columns, exposed metal framing within pool environment areas.~~
 - e. ~~Acceptable additional Manufacturer's:~~
 - 1) ~~Carboline~~
 - 2) ~~PPG Protective and Marine Coatings~~
 - 3) ~~Sherwin Williams Protective and Marine Coatings~~
4. High-Build Coating System: (Code #5.225).
 - a. Preparation: SSPC-SP3 – Power Tool Cleaning.
 - b. Prime Coat: Modified Polyamidoamine Epoxy applied to 4.0 to 6.0 mils DFT.
 - 1) Tnemec Series 135.
 - c. Intermediate Coat: Hydrophobic Acrylic; 3.0 to 4.0 mils DFT.
 - 1) Tnemec Series 115
 - d. Topcoat: Hydrophobic Acrylic; 3.0 to 4.0 mils DFT.
 - 1) Tnemec Series 115
 - e. Application includes, but is not limited to:
 - 1) Miscellaneous steel framing members, connections or supports not factory primed located within the pool environment areas. This includes but is not limited to connection angles, clips, exposed ductwork, hangers, supports and other ferrous metal items exposed in spaces.
 - f. Acceptable additional Manufacturer's:
 - 1) Carboline
 - 2) PPG Protective and Marine Coatings
 - 3) Sherwin Williams Protective and Marine Coatings
5. High-Build Coating System: (Code #5.227).
 - a. Preparation: SSPC-SP3 – Power Tool Cleaning.
 - b. Spot Prime Coat: Modified Polyamidoamine Epoxy applied to 4.0 to 6.0 mils DFT.
 - 1) Tnemec Series 135.
 - 2) Any areas of rust or surface blemishes.
 - c. Intermediate Coat: Hydrophobic Acrylic; 3.0 to 4.0 mils DFT.
 - 1) Tnemec Series 115

- d. Topcoat: Hydrophobic Acrylic; 3.0 to 4.0 mils DFT.
 - 1) Tnemec Series 115
 - e. Application includes, but is not limited to:
 - 1) Existing painted structural steel and steel deck in existing pool area.
 - 2) Existing painted miscellaneous steel in existing pool area.
 - f. Acceptable additional Manufacturer's:
 - 1) Carboline
 - 2) PPG Protective and Marine Coatings
 - 3) Sherwin Williams Protective and Marine Coatings
- E. Galvanized-Metal Substrates:
- 1. ~~W.B. Light Industrial Coating System: (Code #5.322)~~
 - a. ~~Prime Coat: primer.~~
 - 1) ~~Note: Primer maybe omitted on recommendations by manufacturer.~~
 - 2) ~~Sherwin Williams; Pro-Cryl Universal Primer~~
 - 3) ~~PPG; 90-712 Pitt-Tech DTM Primer~~
 - b. ~~Intermediate Coat: W.B. Light Industrial Coating, semi-gloss.~~
 - c. ~~Topcoat: W.B. Light Industrial Coating, semi-gloss.~~
 - 1) ~~Sherwin Williams: Pro Industrial Waterborne Urethane~~
 - 2) ~~PPG: Aquacron 200 HR~~
 - d. ~~Application includes, but is not limited to:~~
 - 1) ~~High contact traffic areas (doors, frames, pipes, etc.).~~
 - 2) ~~Low contact/low traffic areas (overhead decking, pipes, ducts, etc.).~~
 - 2. W.B. Light Industrial Coating System: (Code #5.323)
 - a. Prime Coat: primer.
 - 1) Sherwin Williams; Pro-Cryl Universal Primer
 - 2) PPG; 4020 Pitt-Tech Plus DTM Primer
 - b. Intermediate Coat: W.B. Light Industrial Coating, semi-gloss.
 - c. Topcoat: W.B. Light Industrial Coating, semi-gloss.
 - 1) Sherwin Williams: Equal
 - 2) PPG: PSX One, single component acrylic polysiloxane.
 - d. Application.
 - 1) Railings and guardrails.
 - 3. High-Build Coating System: (Code #5.321).
 - a. Prime Coat: Polyamide epoxy applied at deck fabricator, Tnemec Series 161.
 - b. Intermediate Coat: Hydrophobic Acrylic; 3.0 to 4.0 mils DFT.
 - 1) Tnemec Series 115
 - c. Topcoat: Hydrophobic Acrylic; 3.0 to 4.0 mils DFT.
 - 1) Tnemec Series 115
 - d. Application includes, but is not limited to:
 - 1) Galvanized metal deck within pool environment areas.
 - 2) Galvanized metal surfaces within swimming pool environment.
 - 3) **New galvanized metal door/window frames.**
 - e. Acceptable additional Manufacturer's:
 - 1) Carboline
 - 2) PPG Protective and Marine Coatings
 - 3) Sherwin Williams Protective and Marine Coatings
- F. Aluminum Ductwork:
- 1. Water based epoxy coating system (Code 10.12)
 - a. Preparation: The surface shall be sanded or chemically treated prior to any coating application and solvent wiped.
 - b. Prime Coat: Polyamidoamine epoxy applied to 3.0 – 4.0 DFT
 - 1) Tnemec Series N69
 - c. Intermediate Coat: Hydrophobic Acrylic; 3.0 to 4.0 mils DFT.
 - 1) Tnemec Series 115
 - d. Topcoat: Hydrophobic Acrylic; 3.0 to 4.0 mils DFT.
 - 1) Tnemec Series 115

- e. Application: Aluminum ductwork and hangers within pool environment.
- f. Acceptable additional Manufacturer's:
 - 1) Carboline
 - 2) PPG Protective and Marine Coatings
 - 3) Sherwin Williams Protective and Marine Coatings

END OF SECTION 09 96 00

ROOM LEGEND		
ROOM NO.	ROOM NAME	AREA (SF)
001	NATATORIUM	32,188 SF
001A	STORAGE	553 SF
001B	CUSTODIAL CLOSET	79 SF
001C	COACH	287 SF
001D	ATHLETIC OFFICE	211 SF
001E	ATHLETIC OFFICE	211 SF
001F	RS OFFICE	187 SF
001G	RS OFFICE	246 SF
001H	ATHLETIC OFFICE	265 SF
001J	OFFICE	220 SF
001K	OFFICE	216 SF
001P	OFFICE	180 SF
001Q	STORAGE	368 SF
001X	CORRIDOR	114 SF
001Y	CORRIDOR	65 SF
001Z	STORAGE	46 SF
003	AUDIO	47 SF
004	WOMENS WP LOCKERS	304 SF
004A	WOMENS WP TOILET	198 SF
004B	WOMENS WP DRYING	77 SF
004C	WOMENS WP SHOWER	120 SF
005	OFFICE	565 SF
005A	OFFICE	215 SF
010	CORRIDOR	539 SF
010A	MENS VISITORS LOCKERS	413 SF
010B	MENS VISITOR TOILET	207 SF
010C	MENS VISITOR DRYING	100 SF
010D	MENS VISITOR SHOWER	137 SF
010E	MENS LOCKER/DRESSING	244 SF
010F	MENS TOILET	395 SF
010G	MENS SHOWER	318 SF
010H	MENS DRYING	166 SF
010J	CORRIDOR	70 SF
010K	MENS LOCKERS	2,232 SF
010L	CORRIDOR	209 SF
015	CORRIDOR	540 SF
015A	WOMENS VISITOR LOCKERS	428 SF
015B	WOMENS VISITORS DRYING	82 SF
015C	WOMENS VISITOR SHOWERS	127 SF
015D	WOMENS VISITORS TOILET	194 SF
015E	WOMENS DRYING	171 SF
015F	WOMENS SHOWER	342 SF
015G	WOMENS TOILET	413 SF
015H	WOMENS LOCKER/DRESSING	382 SF
015J	WOMENS LOCKERS	2,018 SF
015K	CORRIDOR	97 SF
099C	CORRIDOR	274 SF
099P	CORRIDOR	46 SF
099Q	CORRIDOR	55 SF
099R	STAIR NO. 5	46 SF

ARCHITECTURAL PLAN GENERAL NOTES

- A. PAINTING CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TARPS, BANNERS, VINYL, AND ARTWORK AND TURN OVER TO OWNER.
- B. REFER TO INTERIOR ELEVATIONS FOR SCOPE OF PAINTING WORK.
- C. SEALANT TO BE INSTALLED AT ALL LOCATIONS WHERE DISSIMILAR MATERIALS JOIN. ALL EXISTING SEALANTS SHALL BE STRIPPED, SURFACES CLEANED / PREPPED AND NEW SEALANTS APPLIED, WITHIN ALL SCOPE AREAS.
- D.

BL475 - CBAC POOL UPDATES

1601 LAW LANE,
BLOOMINGTON, IN 47408

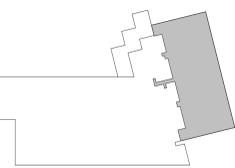
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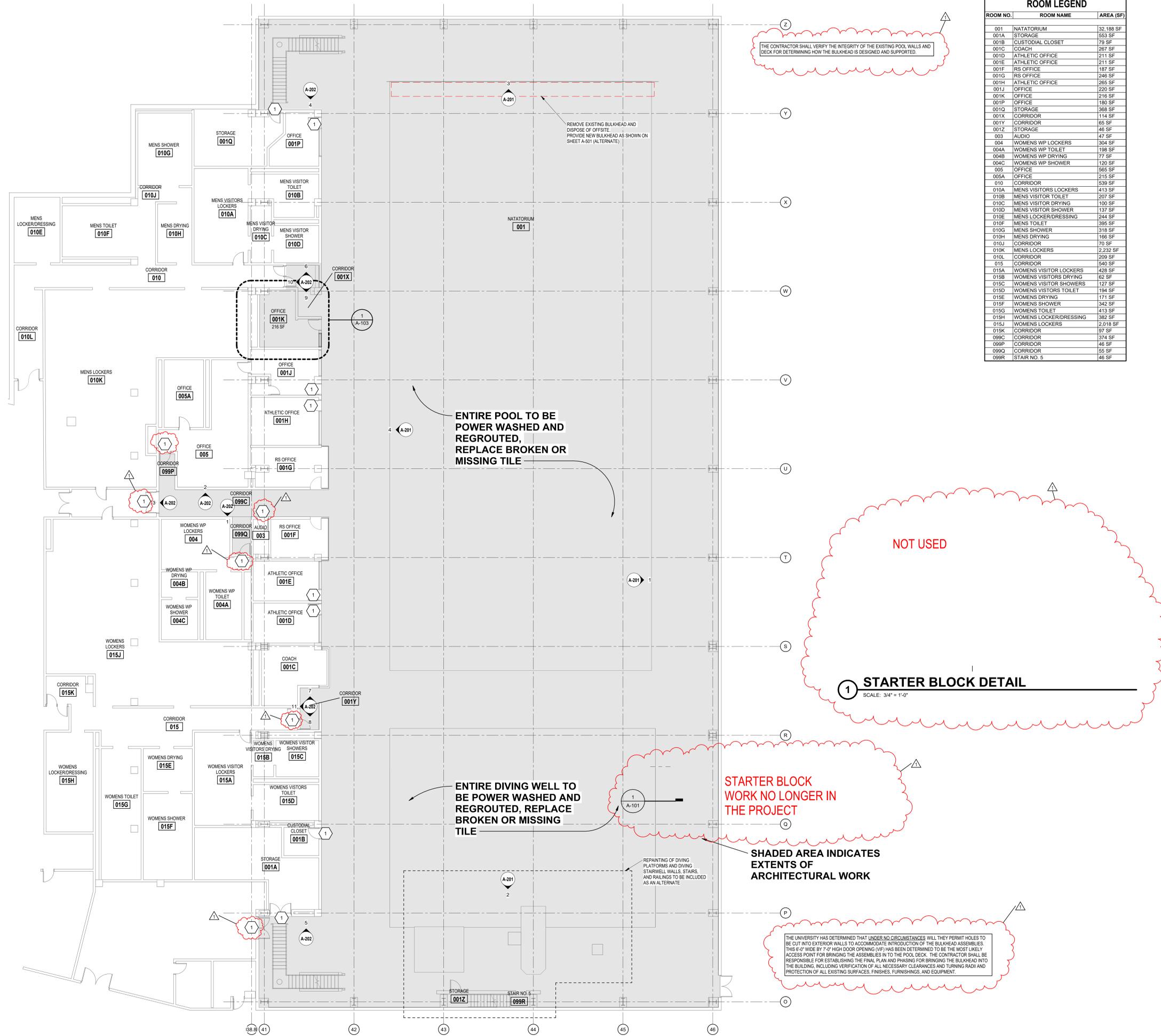
PROJECT MANAGER: H.E.
DRAWN BY: TPV
PROJECT NUMBER: 20241066 / 225196.00
PROJECT ISSUE DATE: 02/04/2026

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	2-19-2026

VERIFICATION NOTE
CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.
SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

LOWER LEVEL ARCHITECTURE PLAN - POOL

A-101



LOWER LEVEL ARCHITECTURAL PLAN - POOL

SCALE: 3/32" = 1'-0"

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KEY PLAN

BID DOCUMENTS

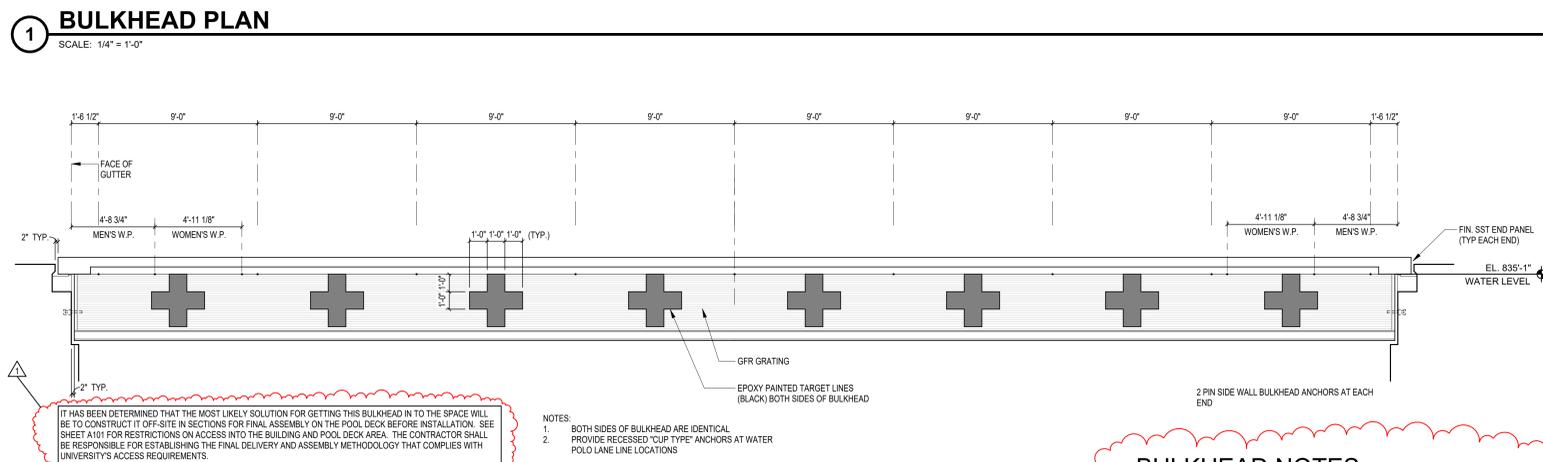
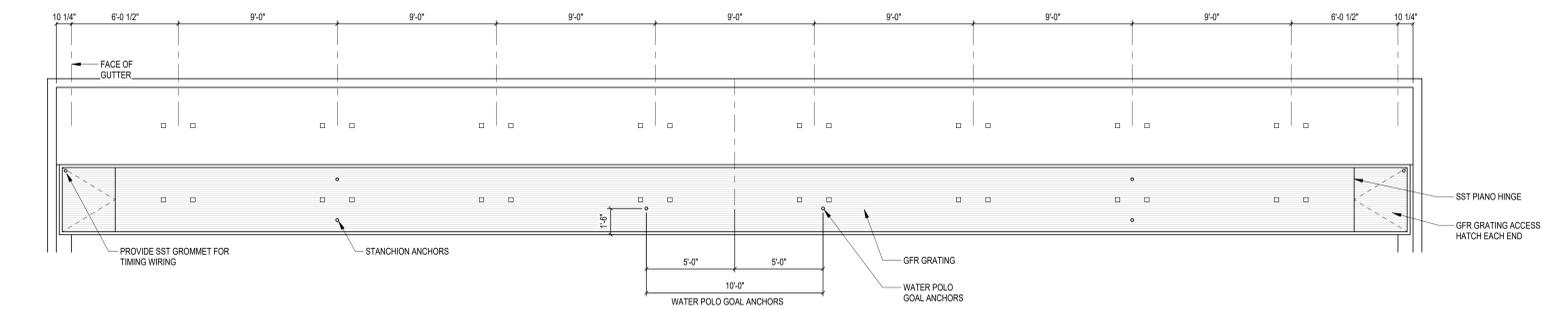
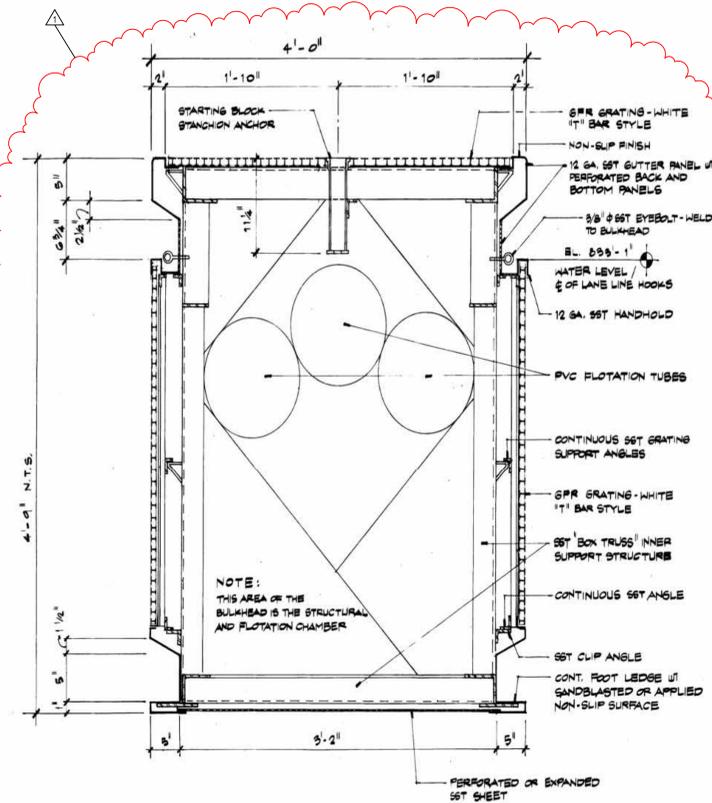


PROJECT MANAGER: H.E.
DRAWN BY: TPV
PROJECT NUMBER: 20241066 / 225196.00
PROJECT ISSUE DATE: 02/04/2026

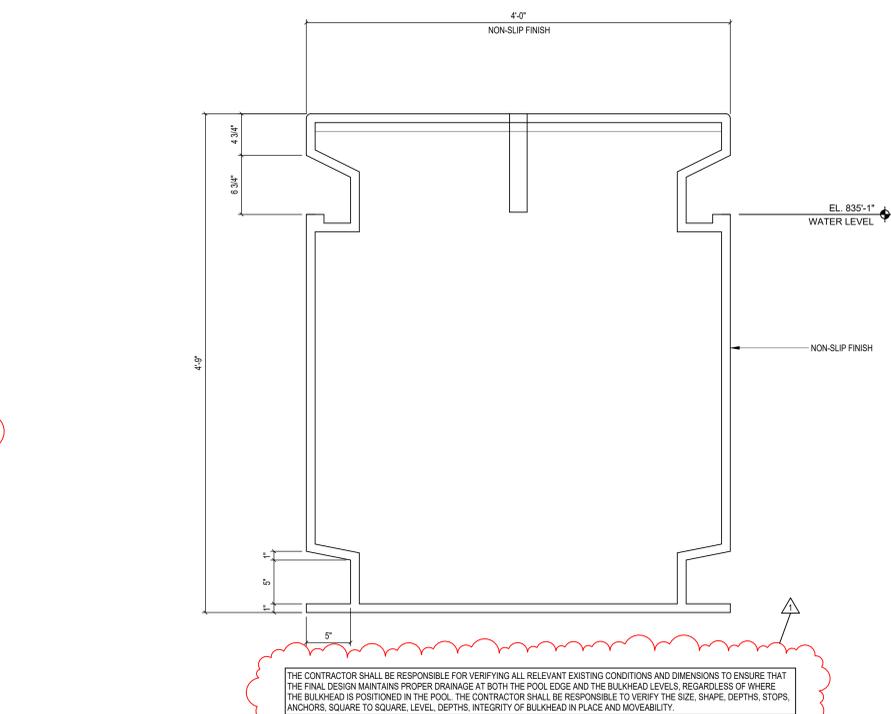
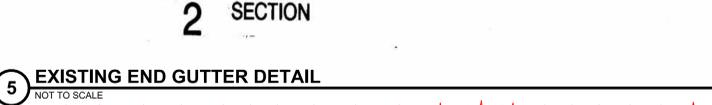
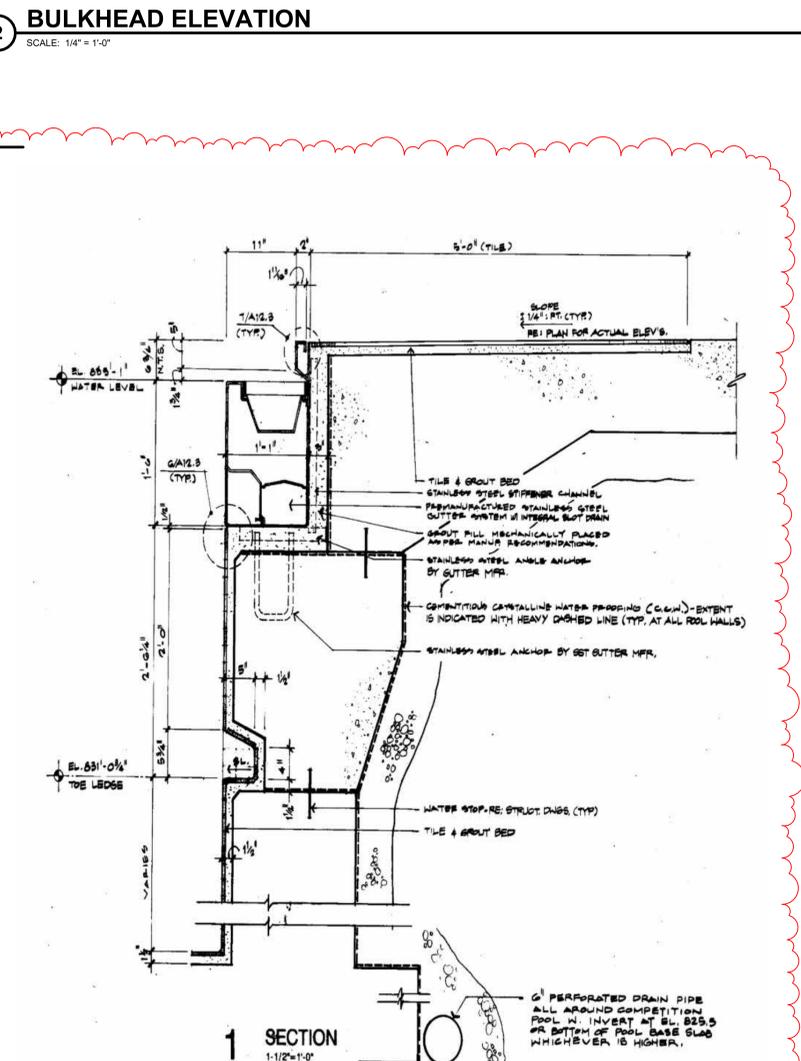
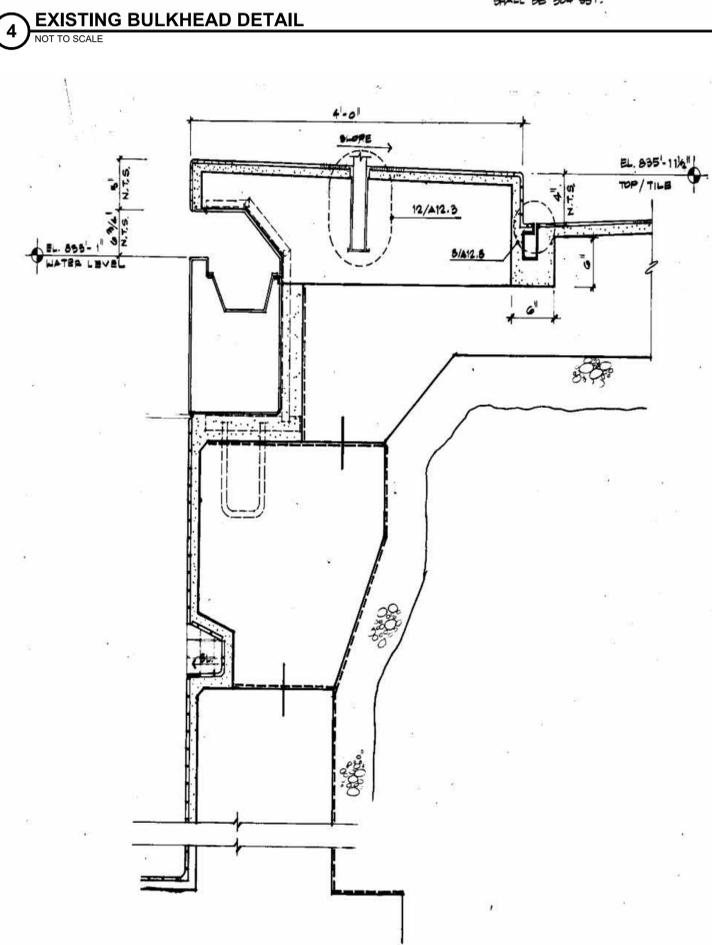
REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	2-19-2026

BULKHEAD DETAILS (ALTERNATE)

A-501



- ### BULKHEAD NOTES
1. BASIS OF DESIGN: STAINLESS STEEL BULKHEAD BY PADDOCK POOL EQUIPMENT.
 2. PROVIDE STAINLESS STEEL LANE LINE ANCHORS WELDED INTO BULKHEAD AT EACH LANE LINE LOCATION. ELEVATION OF ANCHORS SHALL MATCH ANCHOR LEVEL IN THE POOL WALL.
 3. BULKHEAD SHALL BE DESIGNED TO MOVE EASILY ON SOLID PVC ROLLERS, WITH ANCHOR ASSEMBLY AT EACH EXISTING COURSE LOCATION POINT.
 4. FACE OF BULKHEAD AT AND ABOVE WATER LINE SHALL FORM A FULLY RECESSED OPENING WITH HANDHOLD IN EACH LANE CREATING A CONTOUR SIMILAR TO WALLS OF SWIMMING POOL. OPENINGS SHALL BE FITTED WITH EXTRUDED PVC GRATING.
 5. UNDER EACH STARTING PLATFORM LOCATION, PROVIDE PVC TRIM BOX INSTALLED FLUSH WITH BULKHEAD GRATING. EACH BOX SHALL BE INTERCONNECTED WITH RIGID PVC CONDUIT TERMINATING IN APPROXIMATELY 12X12X8 DEEP BOX WITH PVC HINGED DOOR WITH GASKET SET FLUSH WITH BULKHEAD GRATING FOR CONNECTION TO TIMING SYSTEM.
 6. TARGETS ON FACE OF BULKHEAD SHALL BE BLACK NON-SKID.
 7. FACE OF BULKHEAD SHALL BE WHITE, NON-SKID.
 8. ALL EXPOSED SURFACES OF BULKHEAD TO BE FABRICATED FROM LOW CARBON TYPE 316L ST. ST. WITH #2-B FINISH. INTERNAL FRAME SHALL BE OF LOW CARBON TYPE 316L ST. ST. WITH 2B FINISH.
 9. BULKHEAD IS EQUIPPED WITH BUOYANCY FLOATS AND A VARIABLE ST. ST. BUOYANCY CHAMBER, DESIGNED TO REDUCE THE BULKHEAD'S WEIGHT IN WATER TO 0#.
 10. ALL FASTENERS SHALL BE TYPE 316 STAINLESS STEEL.
 11. BULKHEAD IS CONSTRUCTED WITH A 1" CAMBER AT CENTER TO OFFSET BULKHEAD'S DEAD WEIGHT.
 12. BULKHEAD IS DESIGNED FOR A VERTICAL LIVE LOAD OF 50 LBS/SQ. FT. WITH A MAXIMUM DEFLECTION OF 1" IN THE WATER.
 13. AIR COMPRESSOR IS EXCELL #3871, 5 HP, 120 V, 60 HZ.
 14. 5 CFM @ 90 PSI WITH 20 GALLON TANK.
 15. 7. THE BULKHEAD'S DEAD WEIGHT = ±10,200# BULKHEAD'S WEIGHT IN WATER = ±1,200# BULKHEAD'S WEIGHT PER WHEEL ± 150#.
 16. 8. BULKHEAD TO HAVE A 5 YEAR LIMITED WARRANTY.



BL475 - CBAC POOL UPDATES

1601 LAW LANE,
BLOOMINGTON, IN 47408

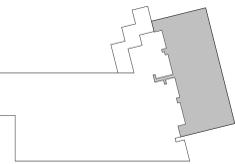
INDIANA UNIVERSITY



ARCHITECT

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KEY PLAN

100% CD SET



PROJECT MANAGER: MLM
DRAWN BY: SJB
PROJECT NUMBER: 20241066 / 225196.00
PROJECT ISSUE DATE: 01/29/2026

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM 1	02/20/2026

LOCKER ROOM ELECTRICAL PLANS

E1-01

GENERAL NOTES

- A REFER TO SHEET E000 FOR GENERAL ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS.
- B REFER TO E500 SERIES SHEETS FOR LIGHT FIXTURE SCHEDULES. REFER TO E510 AND E620 FOR PANEL SCHEDULES AND CIRCUITING.
- C ALL EXPOSED RACEWAYS TO BE PAINTED TO MATCH WALL OR CEILING.
- D ALL BRANCH CIRCUITS BELOW 9'-0" TO BE ROUTED IN SURFACE MOUNTED RACEWAY. CONVERT TO EXIT CONDUIT ABOVE.
- E LABEL ALL RELAYS AND POWER SUPPLIES (ON THE DEVICE OR BOX THEY ARE CONNECTED TO) WITH THE AREA THE DEVICE SERVES.
- F MOUNT EXIT SIGNS ON WALL NOT OVER DOOR +7'-6" AFF. EXIT SIGNS OVER DOOR TO BE +1'-6" ABOVE TOP EDGE OF DOOR FRAME.
- G COORDINATE INSTALLATION OF LIGHTING FIXTURES WITH ARCHITECTURAL REFLECTED CEILING PLANS, ARCHITECTURAL ELEVATIONS, MECHANICAL EQUIPMENT, DIFFUSERS, SUPPORTS, PIPING, DUCTWORK AND STRUCTURAL PLANS PRIOR TO ROUGH-IN AND INSTALLATION OF LIGHTS.
- H LOCATE CEILING MOUNTED OCCUPANCY SENSORS TO PROVIDE COMPLETE COVERAGE OF THE SPACE THEY ARE INSTALLED IN. ADDITIONAL SENSORS REQUIRED DUE TO LACK OF COVERAGE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND THE MANUFACTURER. SENSORS SHALL INCLUDE ALL POWER SUPPLIES AND RELAYS NECESSARY FOR PROPER OPERATION.
- I ALL MOUNTING HEIGHTS NOTED ON THE PLANS ARE TO THE BOTTOM OF THE FIXTURES UNLESS NOTED OTHERWISE.
- J THE EC IS RESPONSIBLE FOR VERIFYING (FIELD VERIFICATION IF NECESSARY) ALL LINEAR PRODUCT LENGTHS INCLUDING ANY DOWNLIGHTS, WALL SLOTS, PENDANTS, OR ACCENT LIGHTS.
- K WHERE MULTIPLE SWITCHES ARE SHOWN ADJACENT TO EACH OTHER, GANG TOGETHER IN SINGLE FACEPLACE WITH MULTIPLE SWITCH OUTLET.
- L CONTRACTOR IS RESPONSIBLE FOR VERIFYING COMPATIBILITY OF LIGHT FIXTURES WITH CEILING MATERIALS, ADJACENT FINISHES AND CONSTRUCTION MATERIALS. NOTIFY ARCHITECT OF ANY CONFLICTS PRIOR TO INSTALLATION OF FIXTURE.

SHEET KEYNOTES

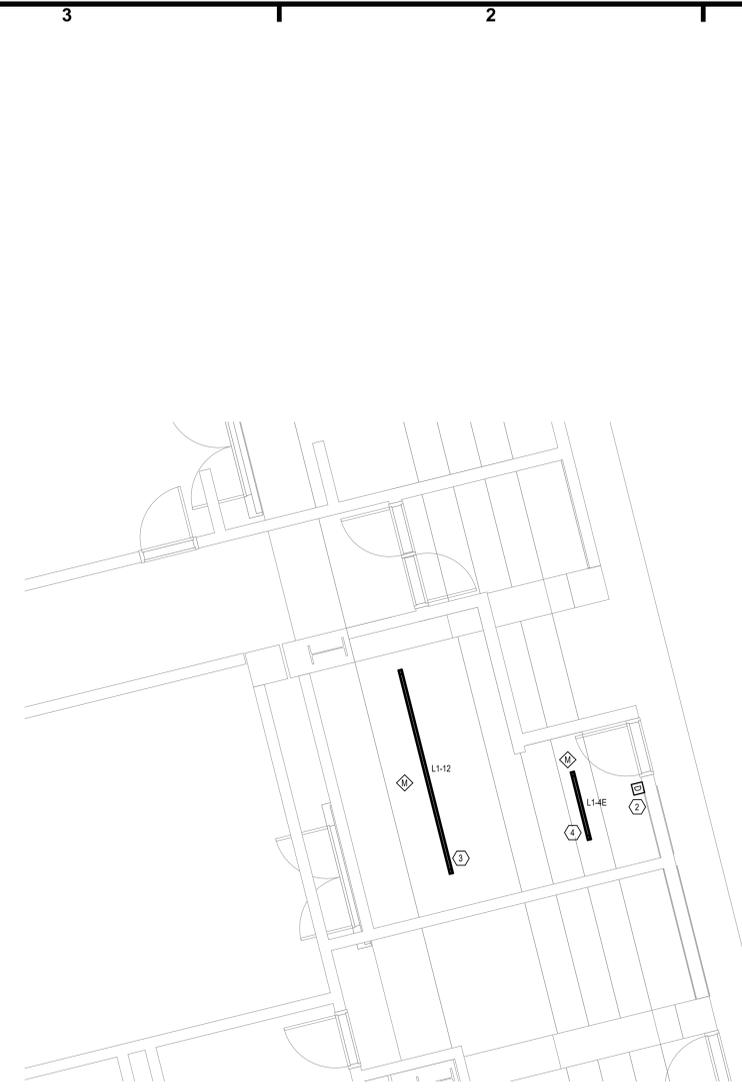
- 1 RE-USE EXISTING CIRCUIT WITHIN ROOM. CIRCUIT NUMBER BASED EXISTING DRAWINGS. CONTRACTOR TO CONFIRM.
- 2 RE-USE EXISTING LIGHTING CIRCUIT IN ROOM ORIGINATING FROM PANEL 'LA' APPROXIMATELY 8'.
- 3 MATCH MOUNTING HEIGHT OF EXISTING FIXTURES BEING REPLACED.
- 4 MATCH MOUNTING HEIGHT OF EXISTING FIXTURES BEING REPLACED APPROXIMATELY 8'. PROVIDE GENERATOR TRANSFER DEVICE AND CONNECT TO EMERGENCY LIGHTING CIRCUIT IN AREA.

GENERAL DEMO NOTES

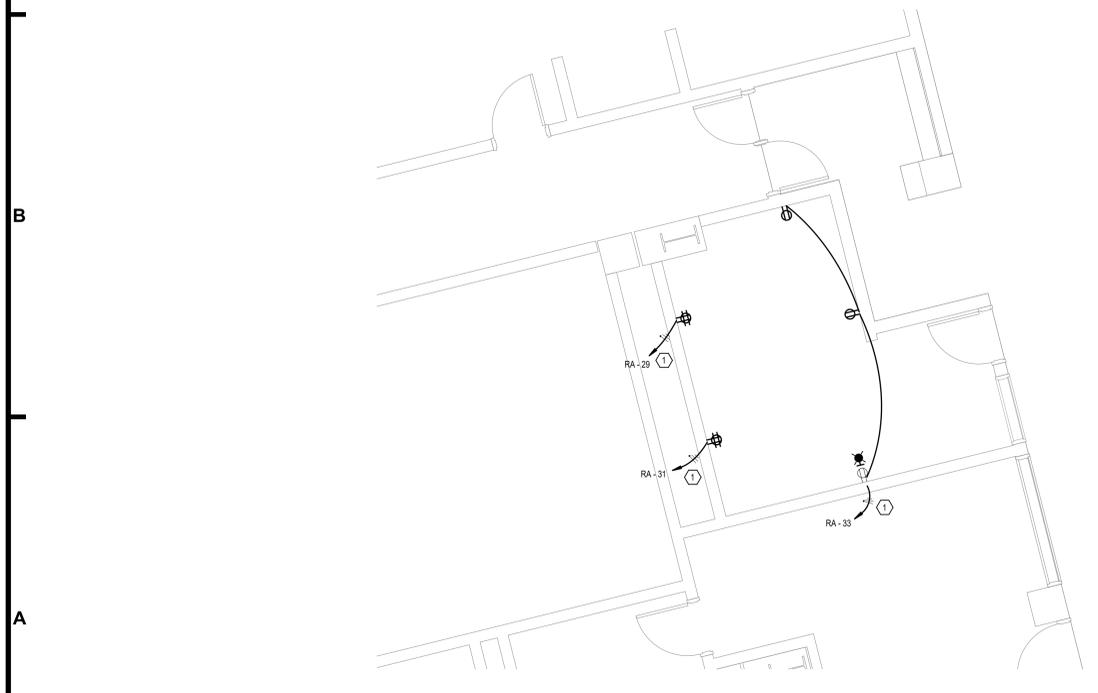
- A REFER TO SHEET E000 FOR GENERAL ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS.
- B NOT ALL ITEMS TO BE DEMOLISHED ARE SHOWN. DISCONNECT AND REMOVE ALL EXISTING ELECTRICAL EQUIPMENT, DEVICES, ASSOCIATED RACEWAYS, SUPPORTING HARDWARE, AND WIRING, WHICH HAVE BEEN MADE OBSOLETE BY THE NEW WORK, UNLESS OTHERWISE NOTED. VISIBLY EXAMINE ALL AREAS, WALLS AND CEILINGS SCHEDULED FOR REMOVAL TO DETERMINE EXACT QUANTITIES REQUIRED TO BE REMOVED.
- C MAINTAIN CIRCUIT CONTINUITY TO ALL EXISTING FIXTURES, EQUIPMENT, OUTLETS, ETC. TO REMAIN IN USE WHETHER NOTED ON THE PLANS OR NOT. FIELD VERIFY EXISTING ITEMS TO REMAIN IN USE. RECONNECT RACEWAYS AND WIRING FOR EXISTING CIRCUITS WHICH MUST BE RE-ROUTED OR WHICH ARE PARTIALLY ABANDONED TO POWER THE REMAINING OUTLETS ON THE CIRCUIT.
- D PATCH AND FINISH ALL DISTURBED SURFACES AS REQUIRED TO MATCH THE EXISTING, USING WORKERS QUALIFIED IN THE APPROPRIATE TRADE.
- E CUT AND GRIND ALL ABANDONED CONDUITS OFF FLUSH WITH FLOOR SLAB OR MASONRY WALL AND FILL WITH NON-SHRINK WATERPROOF GROUT FILL.
- F COORDINATE ALL DEMOLITION WORK WITH ALL OTHER TRADES.
- G WHERE ELECTRICAL DEVICE IS BEING REMOVED A WALL TO REMAIN, PROVIDE A BLANK COVER. MATCH THE COLOR AND MATERIAL TO NEW PROJECT STANDARDS.
- H LEGALLY DISPOSE OF HAZARDOUS MATERIALS. COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS.
- I REPLACE EXISTING PANEL DIRECTORIES FOR PANELBOARDS WHICH HAVE HAD CIRCUIT ALTERATIONS. TYPE: DO NOT HAND LETTER NEW PANELBOARD DIRECTORIES.



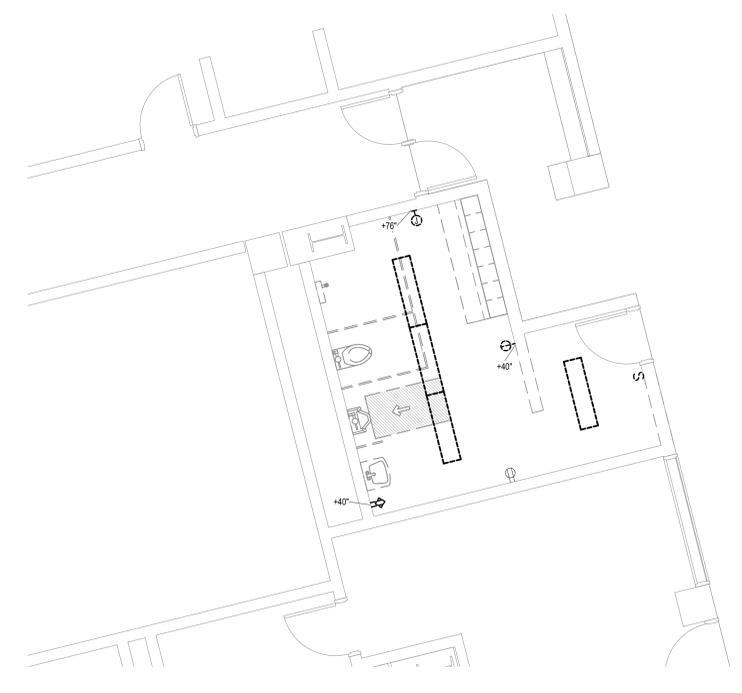
4 LOWER LEVEL ELECTRICAL PANEL LOCATIONS
1/16" = 1'-0"



2 LOCKER ROOM LIGHTING PLAN
1/4" = 1'-0"



3 LOCKER ROOM ELECTRICAL PLAN
1/4" = 1'-0"



1 LOCKER ROOM ELECTRICAL DEMOLITION PLAN
1/4" = 1'-0"

