125 South 6th Street, Suite 200 Louisville, KY 40202 502.325.0100 kpff.com

April 5, 2021

RE: Crystal Beach Renovation – Addendum #2

Dear Bidders,

This serves to announce that all bidder questions received after Addendum #1 have been answered in **Addendum #2**, now available on the Lynn Imaging website. This is the last addendum expected prior to bidding therefore no more questions will be answered.

Please note due to recent developments in material availability, we are extending the bid deadline to **April 19th** at **10:30am** local time. Thank you for your continued interest in this project.

Sincerely,

Aaron Daley, PE
Associate

CRYSTAL BEACH PRE-BID MEETING QUESTIONS			
DATE: 3/18/2021			
QUESTION NO.	QUESTION	ANSWER	RELATED DISCIPLINE
15	Do you know if they are reusing some of the toilet accessories? (i.e. the grab bars are drawn in but not marked with legend marking there are toilet paper dispensers drawn in all 3 women's locker room stalls, but only marked in 2) So, I am wondering if I am to count as if they need all things or if they are reusing what is not "marked" with legend marking?	All toliet accessories to be new. Items noted in the typical stall are to be provided in all stalls of that type.	*ARCHITECTURAL*
16	The Family Locker Room Showers do NOT have shower rods/curtains/hooks drawn on them? Can you see if those are needed or if they are just not having shower curtains etc in those two showers?	Provide shower rod and curtain across the opening (4'-0" +/-) into the shower area in the Family Restroom.	*ARCHITECTURAL*
17	There are no specific style/model numbers for each toilet accessory? Could you find out if they have specifics? OR I can just quote what I think is best for the project.	Toilet accessories to be as per descriptions noted in the specifications.	*ARCHITECTURAL*
18	On sheet AS100, note 116 mentions providing a continuous privacy screening for the fence. Could you please provide a spec for this?	Privacy screening to be aluminum or PVC vertical slats designed to be installed between and anchored to vertical aluminum pickets. Slats to run continuous from bottom rail to top rail of fencing at areas noted. Slats to be equal to Hoover Fence Company fence slats.	*ARCHITECTURAL*
19	Can you please provide a hardware schedule?	See attachement 087100 - Door Hardware Specification.	*ARCHITECTURAL*
20	Is all of the chain link fence around the perimeter of the site to be replaced?	Entire perimeter fencing to be replaced as noted on AS100.	*ARCHITECTURAL*
21	Sheet AS100 - detail 2, the new fence is shown to be 5' tall but when you scale it, it is only 3'. Do we go with the 5' that is shown on the drawings?	Field verify and match height of existing fencing.	*ARCHITECTURAL*

1	What are the insurance limits? Include Builder's Risk?	See attachement Bond and Insurance.	*BID REQUIREMENTS*
22	On the bid form - section 1.7 Bid Supplements #6 and on the Bid Submittals Sheet - #8, what do we need to submit? I have looked through the specs and I am still unsure what exactly is needed.	Submit hourly rates for all laborers on own form.	*BID REQUIREMENTS*
23	On the bidder's checklist it says we must attach the Allowances, Alternates, and Schedule of Values forms to the Bid Form but I am not seeing those forms in the specifications	See attached for Allowance form.	*BID REQUIREMENTS*
2	There is not a copy of the prime contract that the GC will be required to execute. Can this be provided in the addenda for bidder review? Also, any and all General Conditions, Supplementary Conditions, etc. We do also, as was mentioned at the Prebid, need to know insurance requirements for the project.	Prime contract to be developed with the owner after the bid is awarded.	*CONTRACT REQUIREMENTS*
24	Should the reference be to one of the other E series sheets or to a C drawing instead of U101?	See attachment U101.	*MEP*
3	The pool work is confusing and information lacking. First, there are NO specs on any of that work. Need specs on items like the pool liner, the powered lift, chemical feeders, chemical controllers, flowmeters, main drain covers, etc. etc. Will there be more details provided for the mounting of the powered lift? Does it mount on the pool deck, in the pool wall, etc.?? The civil drawings and pool drawings do not agree on how much of the pool deck is to be replaced. Pool sheets show entire apron being replaced. Civil shows just one side being replaced. Which is correct? Pool drawing refers to drains in the new apron. Where are these required? Specs and details, etc. please. Civil does not address at all. What/where, where they tie in, etc., etc.	See attachments AQ000 and AQ100.	*POOL*
5	What is the water volume of the existing pool?	587,344 gallons including the balance tank.	*POOL*

6	What are the depths of the existing pool?	Varies from 7'-6" to zero-entry.	*POOL*
7	What is the current turnover rate of the pool?	The filtration turnover period for the pool is 360 minutes at 1632 gallons per minuite. There are 2 sand filters with a turnover rate of 14.06 gallons per minute per square foot.	*POOL*
8	Will all associated plumbing for new pool equipment need to be included in the pool scope or will all existing plumbing remain?	See attachments AQ000 and AQ100.	*POOL*
9	What size are existing main drains? What are the make and model?	Will need to be field verified.	*POOL*
10	What is the make and model of secondary pool lift requested?	Match similar type to current battery-powered lift on site.	*POOL*
11	What is the make and model of the PH system requested?	See attachment AQ100.	*POOL*
12	What are the existing pool filter makes and models?	Will need to be field verified.	*POOL*
13	What make and model of flow meter requested?	See attachment AQ100.	*POOL*
14	What make and model of chemical control system requested?	See attachment AQ100.	*POOL*

DOCUMENT 004113 - BID FORM - STIPULATED SUM (SINGLE-PRIME CONTRACT)

1.1 BID INFORMATION

A. Bidder: _____.

B. Project Name: Crystal Beach Pool and Pool House Renovation

C. Project Location: Madison, Indiana

D. Owner: City of Madison, Indiana.

E. Design Project Number: 20.0400

F. Architect: KNBA Architects

1.2 CERTIFICATIONS AND BASE BID

A. Base Bid, Single-Prime (All Trades) Contract: The undersigned Bidder, having carefully examined the Procurement and Contracting Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, as prepared by KPFF Consulting Engineers and their consultants, having visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material, labor, equipment and services, including all scheduled allowances, necessary to complete the construction of the above-named project, according to the requirements of the Procurement and Contracting Documents, for the stipulated sum of:

1. _____ Dollars ($_____).
2. The above amount may be modified by amounts indicated by the Bidder on the attached Document 004322 "Unit Prices Form" and Document 004323 "Alternates Form."

1.3 BID GUARANTEE

A. The undersigned Bidder agrees to execute a contract for this Work in the above amount and to furnish surety as specified within 10 days after a written Notice of Award, if offered within 60 days after receipt of bids, and on failure to do so agrees to forfeit to Owner the attached cash, cashier's check, certified check, U.S. money order, or bid bond, as liquidated damages for such failure, in the following amount constituting five percent (5%) of the Base Bid amount above:

1. _____ Dollars ($_____).

B. In the event Owner does not offer Notice of Award within the time limits stated above, Owner will return to the undersigned the cash, cashier's check, certified check, U.S. money order, or bid bond.

1.4 SUBCONTRACTORS AND SUPPLIERS

A. The following companies shall execute subcontracts for the portions of the Work indicated:

1. Concrete Work: _____.
2. Masonry Work: _____.
3. Roofing Work: _____.
4. Plumbing Work: _____.
5. HVAC Work: _____.
6. Electrical Work: _____.

1.5 TIME OF COMPLETION

A. The undersigned Bidder proposes and agrees hereby to commence the Work of the Contract Documents on a date specified in a written Notice to Proceed to be issued by Architect, and shall fully complete the Work within 393 calendar days.

1.6 ACKNOWLEDGEMENT OF ADDENDA

A. The undersigned Bidder acknowledges receipt of and use of the following Addenda in the preparation of this Bid:

1. Addendum No. 1, dated _____.
2. Addendum No. 2, dated _____.
3. Addendum No. 3, dated _____.
4. Addendum No. 4, dated _____.

1.7 BID SUPPLEMENTS

A. The following supplements are a part of this Bid Form and are attached hereto.

1. Bid Form Supplement - Alternates.
2. Bid Form Supplement - Unit Prices.
3. Bid Form Supplement - Allowances.
4. Bid Form Supplement - Bid Bond Form (AIA Document A310-2010).
5. State of Indiana Contractor’s Bid For Public Work – Form 96.
6. Federal Construction Contract Provisions.

1.8 CONTRACTOR'S LICENSE

A. The undersigned further states that it is a duly licensed contractor, for the type of work proposed, in Madison, Indiana, and that all fees, permits, etc., pursuant to submitting this proposal have been paid in full.

1.9 SUBMISSION OF BID

A. Respectfully submitted this 19th day of April, 2021.

B. Submitted By:_____(Name of bidding firm or corporation).

C. Authorized Signature:_____(Handwritten signature).

D. Signed By:_____(Type or print name).

E. Title:_____(Owner/Partner/President/Vice President).

F. Witnessed By:_____(Handwritten signature).

G. Attest:_____(Handwritten signature).

H. By:_____(Type or print name).

I. Title:_____(Corporate Secretary or Assistant Secretary).

J. Street Address:_____.

K. City, State, Zip:_____.

L. Phone:_____.

M. License No.:_____.

N. Federal ID No.:_____(Affix Corporate Seal Here).

END OF DOCUMENT 004113

SECTION 012100 - ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements governing allowances.

B. Types of allowances include the following:

1. Lump-sum allowances.
2. Unit-cost allowances.

1.3 DEFINITIONS

A. Allowance is a quantity of work or dollar amount established in lieu of additional requirements, used to defer selection of actual materials and equipment to a later date when direction will be provided to Contractor. If necessary, additional requirements will be issued by Change Order.

1.4 SELECTION AND PURCHASE

A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection, or purchase and delivery, of each product or system described by an allowance must be completed by the Owner to avoid delaying the Work.

B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.

C. Purchase products and systems selected by Architect from the designated supplier.

1.5 ACTION SUBMITTALS

A. Submit proposals for purchase of products or systems included in allowances in the form specified for Change Orders.

1.6 INFORMATIONAL SUBMITTALS

A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.

B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.

C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.7 UNIT-COST ALLOWANCES

A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include **taxes**, freight, and delivery to Project site.

B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner or selected by Architect under allowance shall be included as part of the Contract Sum and not part of the allowance.

C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.
   1. If requested by Architect, retain and prepare unused material for storage by Owner. Deliver unused material to Owner’s storage space as directed.

1.8 ADJUSTMENT OF ALLOWANCES

A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.

   1. Include installation costs in purchase amount only where indicated as part of the allowance.
   2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other markups.
      Submit substantiation of a change in scope of Work, if any, claimed in Change Orders related to unit-cost allowances.
   3. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.

B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.

1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of Work has changed from what could have been foreseen from information in the Contract Documents.

2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

A. Allowance No. 1: Lump-Sum Allowance: Include the sum noted below for miscellaneous modifications and repairs to existing roof structures beyond work specifically called out elsewhere in the documents
   1. Existing Roofs: $8,000

B. Allowance No. 2: Lump-Sum Allowance: Include the sum noted below for miscellaneous repairs to existing stone beyond work specifically called out elsewhere in the document.
   1. Stone Repair: $5,000

END OF SECTION 012100

Bond:

Performance Bond and Payment Bond, each in the amount of 100 percent (100%) of the Contract price, with a corporate surety approved by the Owner)

Insurance:

The Contractor shall purchase and maintain such insurance coverage sufficiently broad to insure the Owner, the Engineer, their consultants and each of their officers, agents and employees as additional insured.

CONTRACTOR'S General Public Liability and Property Damage Insurance including vehicle coverage (Bodily Injury - $1,000,000 per person, $1,000,000 per occurrence, property damage - $1,000,000 per occurrence or Combined single limit for bodily injury and property damage $2,000,000 per occurrence) issued to the CONTRACTOR and protecting the CONTRACTOR from all claims for personal injury, including death, and all claims for destruction of or damage to property, arising out of or in connection with any operations under the CONTRACT DOCUMENTS, whether such operations be by the CONTRACTOR or by any SUBCONTRACTOR employed by the CONTRACTOR or anyone directly or indirectly employed by the CONTRACTOR or by a SUBCONTRACTOR employed by the CONTRACTOR. Insurance shall be written for a period of two years following completion of work and final acceptance with a $3,000,000 combined single limit (or separate policy limits of $2,000,000 for bodily injury and $1,000,000 for property damage) per occurrence, and in the aggregate, where applicable.

Contractor shall carry Workers Compensation Insurance not less than $1,000,000 for any one accident.

Contractor shall carry an umbrella policy as necessary.

SECTION 087100 – DOOR HARDWARE & DOOR-SET INDEX

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes the following:

1. Commercial door hardware for the following swinging doors:
   a. Hollow metal.
   b. Wood.

B. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.

1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
2. ICC/IBC - International Building Code.
3. NFPA 70 - National Electrical Code.
4. NFPA 80 - Fire Doors and Windows.
5. NFPA 101 - Life Safety Code.
6. NFPA 105 - Installation of Smoke Door Assemblies.
7. KENTUCKY BUILDING CODE.

1.3 Preinstallation Meetings:

A. Preinstallation Conference: Conduct conference at Project site.

B. Keying Conference: Conduct conference at Project site

1.4 SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Shop Drawings: For electrified door hardware.

1. Include diagrams for power, signal, and control wiring.
2. Include details of interface of electrified door hardware and building safety and security systems.

C. Samples: For each exposed product in each finish specified, in manufacturer's standard size.

1. Tag Samples with full product description to coordinate Samples with door hardware schedule.

D. Samples for Initial Selection: For each type of exposed finish.

E. Samples for Verification: For each type of exposed product, in each finish specified.

F. Door Hardware Schedule: Prepared by or under the supervision of Installer's Architectural Hardware Consultant. Coordinate door hardware schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
1. Content: Include the following information:

a. Identification number, location, hand, fire rating, size, and material of each door and frame.
b. Locations of each door hardware set, cross-referenced to Drawings on floor plans and to door and frame schedule.
c. Complete designations, including name and manufacturer, type, style, function, size, quantity, function, and finish of each door hardware product.
d. Description of electrified door hardware sequences of operation and interfaces with other building control systems.
e. Fastenings and other installation information.
f. Explanation of abbreviations, symbols, and designations contained in door hardware schedule.
g. Mounting locations for door hardware.
h. List of related door devices specified in other Sections for each door and frame.

G. Keying Schedule: Prepared by or under the supervision of Installer's Architectural Hardware Consultant, detailing Owner's final keying instructions for locks. Include schematic keying diagram and index each key set to unique door designations that are coordinated with the Contract Documents.

1.5 QUALITY ASSURANCE

A. Furnish proper hardware types and quantities for door function, hardware mounting and clearances, and to meet applicable codes. Bring discrepancies to the attention of the Architect a minimum of (10) days prior to bid date so that an addendum may be issued. No additional compensation will be allowed after bidding for hardware changes required for proper function, hardware mounting or clearances, or to meet codes.

B. Source Limitations: All items listed in hardware sets are to be furnished by one supplier. Obtain each type and variety of door hardware from a single manufacturer, unless otherwise indicated.

C. Regulatory Requirements: Comply with NFPA 70, NFPA 80, NFPA 101 and ANSI A117.1 requirements and guidelines as directed in the model building code including, but not limited to, the following:
1. Where indicated to comply with accessibility requirements, comply with Americans with Disabilities Act (ADA), "Accessibility Guidelines for Buildings and Facilities (ADAAG)," ANSI A117.1 as follows:
a. Handles, Pulls, Latches, Locks, and other Operating Devices: Shape that is easy to grasp with one hand and does not require tight grasping, tight pinching, or twisting of the wrist.
b. Door Closers: Comply with the following maximum opening-force requirements indicated:

1) Interior Hinged Doors: 5 lbfapplied perpendicular to door.
2) Fire Doors: Minimum opening force allowable by authorities having jurisdiction.

c. Thresholds: Not more than 1/2 inch high. Bevel raised thresholds with a slope of not more than 1:2.

2. NFPA 101: Comply with the following for means of egress doors:
   a. Latches, Locks, and Exit Devices: Not more than 15 lbfto release the latch. Locks shall not require the use of a key, tool, or special knowledge for operation.
   b. Thresholds: Not more than 1/2 inchhigh.
3. Fire-Rated Door Assemblies: Provide door hardware for assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to NFPA 252 (neutral pressure at 40" above sill) or UL-10C.
   a. Test Pressure: Positive pressure labeling.

D. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria:

1. Owner's desired keyway.
2. Schedule for delivery of un-combinated cores.
3. Installation of construction and permanent cores.
4. Address and requirements for delivery of cores.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up for door hardware delivered to Project site.

B. Tag each item or package separately with identification related to the final door hardware sets, and include basic installation instructions, templates, and necessary fasteners with each item or package.

C. Deliver un-combinated key cylinder cores to Owner's Lockshop Foreman. Obtain Owner's contact name and address from Architect.

1.7 COORDINATION

A. Templates: Distribute door hardware templates for doors, frames, and other work specified to be factory prepared for installing door hardware. Distribute templates in a timely manner so as not to delay suppliers. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

B. Electrical System Roughing-in: Coordinate layout and installation of electrified door hardware with connections to power supplies, fire alarm system and detection devices, access control system, and security system.

1.8 WARRANTY

A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:

1. Structural failures including excessive deflection, cracking, or breakage.
2. Faulty operation of the hardware.
3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
4. Electrical component defects and failures within the systems operation.

C. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.

D. Special Warranty Periods:

1. Seven years for heavy duty cylindrical (bored) locks and latches.
2. Five years for exit hardware.
3. Ten years for manual door closers.
4. Two years for electromechanical access control door hardware.

1.9 MAINTENANCE SERVICE

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

B. Maintenance Service: Beginning at Substantial Completion, provide (6) months' full maintenance by skilled employees of door hardware Installer. Include quarterly preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper door hardware operation. Provide parts and supplies same as those used in the manufacture and installation of original products.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

A. General: Provide door hardware for each door to comply with requirements in this and door hardware sets indicated in Part 3 "Door Hardware Sets" Article.

1. Door Hardware Sets: Provide quantity, item, size, finish or color indicated, and named manufacturers' products.

B. Designations: Requirements for design, grade, function, material, finish, size and other distinctive qualities of each type of door hardware are indicated in Part 3 "Door Hardware Schedule" Article. Products are identified by using door hardware designations, as follows:

1. Named Manufacturers' Products: Manufacturer and product designation are listed for each door hardware type required for the purpose of establishing minimum requirements. Manufacturers' names are abbreviated in Part 3 "Door Hardware Schedule" Article.
2. References to BHMA Standards: In addition to other requirements in this section, provide products complying with or exceeding these standards and requirements for description, quality, and function.

C. Substitutions: Requests for substitution and product approval for inclusive mechanical and electrified access control door hardware, in compliance with specifications, must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01 "Substitution Procedures". Approval of requests is at the discretion of the architect, owner, and their designated consultants.

D. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include manufacturers specified.

2.2 BUTT HINGES, GENERAL

A. Quantity: Provide the following, unless otherwise indicated:

1. Two Hinges: For doors with heights up to 60 inches.
2. Three Hinges: For doors with heights 61 to 90 inches.
3. Four Hinges: For doors with heights 91 to 120 inches.
4. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.

B. Template Requirements: Except for hinges and pivots to be installed entirely (both leaves) into wood doors and frames, provide only template-produced units.

C. Hinge Height, Width, and Weight: Unless otherwise indicated, provide the following:

1. Doors with Exit Devices or 3’6” or more in width: 5” high, heavy-weight hinges.
2. Doors less than 3’6” in width: 4-1/2” high, standard-weight hinges.
3. Width: 4-1/2” heavy-weight, 4-1/2" standard-weight, unless proper clearance requires a different width.
4. Doors with Closers: Ball-bearing hinges.

D. Hinge Base Metal: Unless otherwise indicated, provide the following:

1. Exterior and in-swinging restroom door hinges: Stainless steel, with stainless-steel pin.
2. Balance of hinges: Steel, with steel pin.

E. Hinge Options: Provide the following:

1. Nonremovable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for reverse bevel lockable doors.
2. Corners: Square.
3. Number of knuckles: Five.

F. Fasteners: Comply with the following:

1. Machine Screws: For metal doors and frames. Install into drilled and tapped holes.
2. Wood Screws: For wood doors and frames.
3. Threaded-to-the-Head Wood Screws: For fire-rated wood doors.
4. Screws: Phillips flat-head. Finish screw heads to match surface of hinges.

G. Template Hinge Dimensions: BHMA A156.7.

H. Available Manufacturers:

1. Bommer Industries, Inc. (BI).
2. Hager Companies (HAG).
3. McKinney Products Company; an ASSA ABLOY Group company (MCK).
4. Stanley Commercial Hardware; Div. of The Stanley Works (STH).
5. PBB, Inc. (PBB)

2.3 LOCKS AND LATCHES, GENERAL

A. Accessibility Requirements: Where indicated to comply with accessibility requirements, comply with the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG)."

1. Provide operating devices that do not require tight grasping, pinching, or twisting of the wrist and that operate with a force of not more than 5 lbf.

B. Latches and Locks for Means of Egress Doors: Comply with NFPA 101. Latches shall not require more than 15 lbf to release the latch. Locks shall not require use of a key, tool, or special knowledge for operation.

C. Lock Trim:

1. Levers: Cast.
   a. Best 15 model with full angled return.

D. Lock Throw: Comply with testing requirements for length of bolts required for labeled fire doors, and as follows:

1. Bored Locks: Minimum 1/2-inch latchbolt throw.

E. Backset: 2-3/4 inches, unless otherwise indicated.

F. Strikes: Manufacturer's standard strike with strike box for each latchbolt or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, and as follows:

1. Strikes for Bored Locks and Latches: BHMA A156.2.

2.4 MECHANICAL LOCKS AND LATCHES

A. Lock Functions: Function numbers and descriptions indicated in door hardware sets comply with the following:

1. Bored Locks: BHMA A156.2.

B. Bored Locks: BHMA A156.2 Grade 1.

1. Available Manufacturers:

   a. Best Access Systems (BES).

b. SARGENT Manufacturing Company; an ASSA ABLOY Group company (SGT).
c. Schlage Commercial Lock Division; an Allegion Company (SCH).

2.5 KEY CYLINDERS

A. Standard Lock Cylinders: BHMA A156.5, Grade 1.

B. Cylinders: Provide cylinders for all devices requiring key cylinders to properly function: constructed from brass or bronze, stainless steel, or nickel silver, and complying with the following:

1. Number of Pins: Seven.
2. Keyway: Patented or non-patented as directed by Owner.
3. Mortise Type: Threaded cylinders with rings and straight- or clover-type cam.
4. Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
5. Bored-Lock Type: Cylinders with tailpieces to suit locks.

C. Permanent Cores: Manufacturer's standard; finish face to match lockset; complying with the following:

1. Small-format Interchangeable Cores: Core insert, removable by use of a special key; usable with other manufacturers' cylinders.

D. Construction Keying: Comply with the following:

1. Construction Cores: Provide keyed brass construction cores that are replaceable by permanent cores for all locking devices. Provide 6 construction master keys.

a. Furnish permanent cores to Owner for installation.

E. Supplemental Items: Provide cylinder spacers, collars, and correct cams as needed for proper function of locking devices.

F. Available Manufacturers:

1. Best Access Systems; Div. of The Stanley Works (BES).
2. SARGENT Manufacturing Company; an ASSA ABLOY Group company (SGT).
3. Schlage Commercial Lock Division; an Allegion Company (SCH).
4. Falcon (FAL).

2.6 KEYING

A. Keying System: Factory registered, complying with guidelines in BHMA A156.28, appendix. Provide one extra key blank for each lock. **Incorporate decisions made in keying conference.**

1. Master Key System: Change keys and a master key operate cylinders.

a. Provide three cylinder change keys and five master keys.

2.7 SURFACE CLOSERS

A. Accessibility Requirements: Where handles, pulls, latches, locks, and other operating devices are indicated to comply with accessibility requirements, comply with the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG)."

1. Comply with the following maximum opening-force requirements:

a. Interior, Non-Fire-Rated Hinged Doors: 5 lbf applied perpendicular to door.
b. Fire Doors: Minimum opening force allowable by authorities having jurisdiction.

B. Door Closers for Means of Egress Doors: Comply with NFPA 101. Door closers shall not require more than 30 lbf to set door in motion and not more than 15 lbf to open door to minimum required width.

C. Fasteners: Manufacturer’s standard for arms, shoes and brackets. Sex bolts for fastening closers to doors.

D. Mounting Accessories: Provide shoes, brackets, drop plates, spacers, etc., as needed for proper mounting of closers and arms to door and frame.

E. Spring Size of Units: Provide field-sizable closers, adjustable for spring sizes 1-6, plus 50% extra spring power at spring size 6, to meet field conditions and requirements for opening force.

F. Cylinders: 1-1/2" minimum diameter; cast iron or high-silicon alloy aluminum.

G. Mounting Configuration: Unless otherwise indicated by model number in the hardware sets:

1. Do not furnish closers capable of being mounted on the corridor side of doors.
2. Do not furnish regular arm closers in areas accessible to students.
3. If tri-pack closers are furnished for regular arm applications, remove parallel arm shoe from closer box before delivering to job.
4. Parallel Arm closers are to be manufacturer's double forged rigid models.

H. Available Manufacturers and Series for Rack and Pinion Surface Closers:

1. LCN Closers; an Allegion Company (LCN): 4040XP series.
2. SARGENT Manufacturing Company; an ASSA ABLOY Group company (SGT): 281 series.
3. Stanley Commercial Hardware; Div. of The Stanley Works (STH): D4550 series.

2.8 PROTECTIVE TRIM UNITS

A. Size:
1. Width
a. Singles, and pairs with removable mullions or surface applied astragals: 2 inches less than door width on push side and 1 inch less than door width on pull side
b. Other pairs: 1 inch less than door width
2. Height: as specified in door hardware sets; or, if constrained by door bottom rail height, 1" less bottom rail height.

B. Fasteners: Manufacturer's machine or self-tapping countersunk screws.

C. Metal Protective Trim Units: BHMA A156.6; beveled 4 sides; fabricated from 0.050-inch- thick stainless steel.

D. Available Manufacturers:

1. Hager Companies (HAG).
2. IVES Hardware; an Allegion Company (IVS).
3. Hiawatha (HIW).
4. Burns (BRN).
5. Rockwood Manufacturing Company (RM).
6. Trimco (TRI).

2.9 MECHANICAL WALL STOPS

A. Stops and Bumpers: BHMA A156.16, Grade 1.

1. Provide wall stops for doors unless floor, overhead, or other type stops are scheduled or indicated. Do not mount floor stops where they will impede traffic. Provide floor stops (and spacers if needed) of proper height and configuration to accommodate floor condition. Where floor or wall stops are not appropriate, provide overhead holders.
2. Properties. Cast construction with fastener suitable for wall or floor condition.
3. Available Manufacturers:
   a. Hager Companies (HAG).
   b. IVES Hardware; an Allegion Company (IVS).
   c. Hiawatha (HIW).
   d. Burns (BRN).
   e. Rockwood Manufacturing Company (RM).
   f. Trimco (TRI).

2.10 OVERHEAD STOPS AND HOLDERS

A. BHMA A156.8, Grade 1. Template for maximum degree of opening before encountering obstruction.

B. Available Manufacturers:

1. Architectural Builders Hardware Mfg., Inc. (ABH).
2. Glynn-Johnson; an Allegion Company (GLY).
3. Hager (HAG).
4. Rixson Specialty Door Controls; an ASSA ABLOY Group company (RIX).
5. SARGENT Manufacturing Company; an ASSA ABLOY Group company (SGT).

2.11 SILENCERS

A. Provide silencers for Metal Door Frames: BHMA A156.16, Grade 1; neoprene or rubber, minimum diameter 1/2 inch; fabricated for drilled-in application to frame.

B. Available Manufacturers:

1. Glynn-Johnson; an Allegion Company (GLY).
2. Hager Companies (HAG).

3. IVES Hardware; an Allegion Company (IVS).
4. McKinney Products Company; an ASSA ABLOY Group company (MCK).
5. Rockwood Manufacturing Company (RM).
6. Trimco (TRI).

2.12 DOOR GASKETING

A. General: Provide continuous weather-strip gasketing on exterior hollow metal doors and provide smoke, light, or sound gasketing on interior doors where indicated or scheduled. Provide noncorrosive fasteners as indicated by models in hardware sets.

1. Mullion Gasketing: Fasten to mullions, forming seal when doors are closed.
2. Seals integral to threshold at out-swinging exterior hollow metal doors.

B. Air Leakage: Not to exceed 0.50 cfm per foot of crack length for gasketing other than for smoke control, as tested according to ASTM E 283.

C. Mullion Gasketing: Sealing up to 1/4" gaps, 4 vanes, adhesive backed, collapsible to 1/32", black. Basis of Design: DHSI (DHS) Model MS-SA/75 x BK.

D. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.

E. Jamb Gasketing Materials:
1. Adhesive Seals. As specified in hardware sets or approved equal.
2. Panic type thresholds. Neoprene.

F. Available Manufacturers for Jamb Gaskets (provided they provide items with neoprene inserts):

1. Hager Companies (HAG).
2. National Guard Products (NGP).
3. Pemko Manufacturing Co. (PEM).
4. Reese Enterprises (REE).
5. Zero International (ZER).

2.13 THRESHOLDS

A. Standard: BHMA A156.21

B. Accessibility Requirements: Where thresholds are indicated to comply with accessibility requirements, comply with the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG)."

1. Bevel raised thresholds with a slope of not more than 1:2. Provide thresholds not more than 1/2 inch high.

C. Thresholds for Means of Egress Doors: Comply with NFPA 101. Maximum 1/2 inch high.

D. Fasteners: ¼-20 machine screws and expansion anchors.

E. Gasketing material: At panic-type thresholds: neoprene.

F. Available Manufacturers (provided they provide items with neoprene inserts):

1. Hager Companies (HAG).
2. National Guard Products (NGP).
3. Pemko Manufacturing Co. (PEM).
4. Reese Enterprises (RE).
5. Zero International (ZRO).

2.14 FABRICATION

A. Manufacturer's Nameplate: Do not provide products that have manufacturer's name or trade name displayed in a visible location except in conjunction with required fire-rated labels and as otherwise approved by Architect.

1. Manufacturer's identification is permitted on rim of lock cylinders only.

B. Base Metals: Produce door hardware units of base metal, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18. Do not furnish manufacturer's standard materials or forming methods if different from specified standard.

C. Fasteners: Manufacturer’s standard, except as noted in product sections of this specification.

2.15 FINISHES

A. Standard: BHMA A156.18, as indicated in door hardware sets.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.

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

3.2 PREPARATION

A. Steel Doors and Frames: Comply with DHI A115 Series.

1. Surface-Applied Door Hardware: Drill and tap doors and frames according to ANSI A250.6.

B. Wood Doors: Comply with DHI A115-W Series.

3.3 INSTALLATION

A. Mounting Heights: Mount door hardware units at heights indicated as follows unless otherwise indicated or required to comply with governing regulations.

1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."

B. Mounting Locations:

1. Wall Stops: Locate so that lockset spindle and wall stop share horizontal and vertical centerlines.
2. Closers and Overhead Stop/Holders: Template and mount closers and overhead stops for maximum degree of opening before door encounters obstruction or so as to interface with specified wall stops and holders. When used with closers, template and locate overhead stops so that closer arm does not fully extend and bottom out. These functionality requirements override any degree of opening information in the specifications or submittals.

C. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 09 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.

1. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.

D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants." Position for complete seal with bottom of doors with no penetration of air or daylight.

3.4 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

B. Overhead Stops/Holders: Set adjustable stops for maximum degree of opening before door encounters obstruction. Adjust friction to control door.

C. Door Closers:

1. Unless otherwise required by authorities having jurisdiction, adjust sweep period so that, from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches from the latch, measured to the leading edge of the door.
2. Adjust latch period so that door does not slam nor injure fingers.
3. Adjust spring power for minimum force required so that door properly and reliably latches. It is recommended that all closers be adjusted to a Spring Size 1 (either at the factory or at the facility of the Contract Hardware Supplier) prior to delivery to job; they can then be adjusted up to meet requirements. ADA maximum force to open a non-rated interior doors is 5 lbf; 8.5lbf for an exterior non-rated door. Installer is required to adjust spring power on every closer during installation using a door force gage. If ADA requirements cannot be met due to door-frame-hardware clearance issues of HVAC issues, bring to Contractors attention to resolve problem.
4. Adjust backcheck to slow door down before hitting stop point so as to prevent damage to closer, arm, door, frame, and fasteners.

D. Occupancy Adjustment: Approximately six months after date of Substantial Completion, Installer shall examine and readjust, including adjusting operating forces, each item of door hardware as necessary to ensure function of doors, door hardware, and electrified door hardware.

3.5 CLEANING AND PROTECTION

A. Clean adjacent surfaces soiled by door hardware installation.

B. Clean operating items as necessary to restore proper function and finish.

C. Provide final protection and maintain conditions that ensure that door hardware is without damage or deterioration at time of Substantial Completion.

3.6 DOOR HARDWARE SCHEDULE (followed by Door-Set Numbering Index)

Hardware Set 01

(3)	Butt Hinges	BB1279 4.5 X 4.5	652	HAG
(1)	Classroom Security Lock	93K7IN-15D-S3	626	BES
(2)	Permanent Key Cylinder Core	SFIC 7-pin	626	BES
(1)	Closer, Regular Arm	4040XP Reg	689	LCN
(1)	Kick Plate	KO050 8 x 2LDW x CS x B4E	630	TRI
(1)	Wall Stop, Convex	1270CX	626	TRI

Hardware Set 02

(1)	Continuous Hinge	SL24HD	628	SEL
(1)	Panic Device, Rim, 03	LD-25-R-NL-512NL	630	FAL
(1)	Mortise Cylinder		626	BES
(1)	Closer, w/Spring Stop/HO	4040XP SHCUSH	689	LCN
(1)	Kick Plate	KO050 20 x 2LDW x CS x B4E	630	TRI
(1)	Overhead Rain Drip	16A	628	NGP
(1)	Cat H Jamb Seal Set	135NA	628	NGP
(1)	HD Panic Threshold	896HD-N x RCE	628	NGP

Note 1: Undercut door 3/8” for proper mating with seal integral to threshold.

Hardware Set 03

(3)	Butt Hinges	BB1279 4.5 X 4.5	652	HAG
(1)	Storeroom Lock	93K7D-15D-S3	626	BES
(1)	Permanent Key Cylinder Core	SFIC 7-pin	626	BES
(1)	Overhead Stop, MD, Surface	450S	630	GLY

Hardware Set 04

(3)	Butt Hinges	BB1279 4.5 X 4.5	652	HAG
(1)	Classroom Lock	93K7R-15D-S3	626	BES
(1)	Permanent Key Cylinder Core	SFIC 7-pin	626	BES
(1)	Kick Plate	KO050 10 x 2LDW x CS x B4E	630	TRI
(1)	Wall Stop, Convex	1270CX	626	TRI

Hardware Set 05

(3)	Butt Hinges	BB1279 4.5 X 4.5	652	HAG
(1)	Dormitory Lock	93K7T-15D-S3	626	BES
(1)	Permanent Key Cylinder Core	SFIC 7-pin	626	BES
(1)	Kick Plate	KO050 10 x 2LDW x CS x B4E	630	TRI
(1)	Overhead Stop, HD, Surface	900S	630	GLY

Hardware Set 06 (@ Set 06a modify as required for single door)

Non-electrified Items:

(1)	Key Removable Mullion	KR-822 x ST989 x MCS822	689	PHI
(1)	Rim Cylinder		626	BES
(1)	Mortise Cylinder		626	BES
(2)	Closer, w/Spring Stop	4040XP SCUSH	689	LCN
(2)	Kick Plate	KO050 8 x 2LDW x CS x B4E	630	TRI
(1)	Cat H Adhesive Mullion Seal/Mute	MS-SA/75	Black	DHSI
(1)	Cat H Jamb Seal Set	135NA	628	NGP
(1)	Panic Threshold	896N x RCE	628	NGP

Note 1: Undercut door 3/8” for proper mating with seal integral to threshold.

Electrified Items:

(2)	Continuous Hinge	SL24HD x EPT Prep	628	SEL
(2)	Jamb-to-Door Power Transfer	EPT-10		VON
(1)	Panic Device, Rim, 03	RX-MEL-25-R-NL-512NL (RHRB)	630	FAL
(1)	Panic Device, Rim, 02	RX-MEL-25-R-DT-512DT	630	FAL
(2)	Door Contact, Pop-in, DPDT	MSS100-4Y	White	FLR
(1)	Power Supply (see electrical specifications)			

3.7 DOOR TO HARDWARE SET INDEX, Note: Doors not listed in the index below receive set 04

Door#	Set#
101A	06
102A	04
103A	04
103B	02
104A	01
104B	02
106A	03
107A	03
108A	03
109A	03
110A	04
111A	03
112A	05
113A	04
114A	04
114B	02
115A	06a
201A	02
201B	02
202A	03
203A	03
204A	Cased Opening
205A	01

206A	01
207A	01
207B	01
208A	Cased Opening
208B	Cased Opening
209A	Cased Opening

END OF 087100

ADDENDUM #2

Date: 03/30/2021
Project Name: Crystal Beach Pool House
Project No.: 20058

GENERAL Drawings

Item 1: Refer to attached drawing, Sheet U101:

A. Include Site Utilities Sheet U101 in MEP bid set.

HVAC Drawings

Item 1: Refer to Sheet M601:

A. Refer to Split System Schedule.

1. Remark 6 shall read, "UNIT SHOWN ON SHEET U101. LOCATED AT EXTERIOR OF CONCESSION STAND (CS) ON CONCRETE PAD. REFER TO CONCRETE PAD DETAIL. CONFRIM LOCATION WITH ARCHITECT AND ENGINEER PRIOR TO INSTALLATION."

2. Remark 10 shall read, "UNIT SHOWN ON SHEET U101. UNIT LOCATED AS HIGH AS POSSIBLE ON INTERIOR OF SOUTHEAST WALL OF CONCESSION STAND (CS). AVOID INTERFERENCE WITH ALL EXISTING AND NEW EQUIPMENT. CONFIRM LOCATION WITH ARCHITECT AND ENGINEER PRIOR TO INSTALLATION."

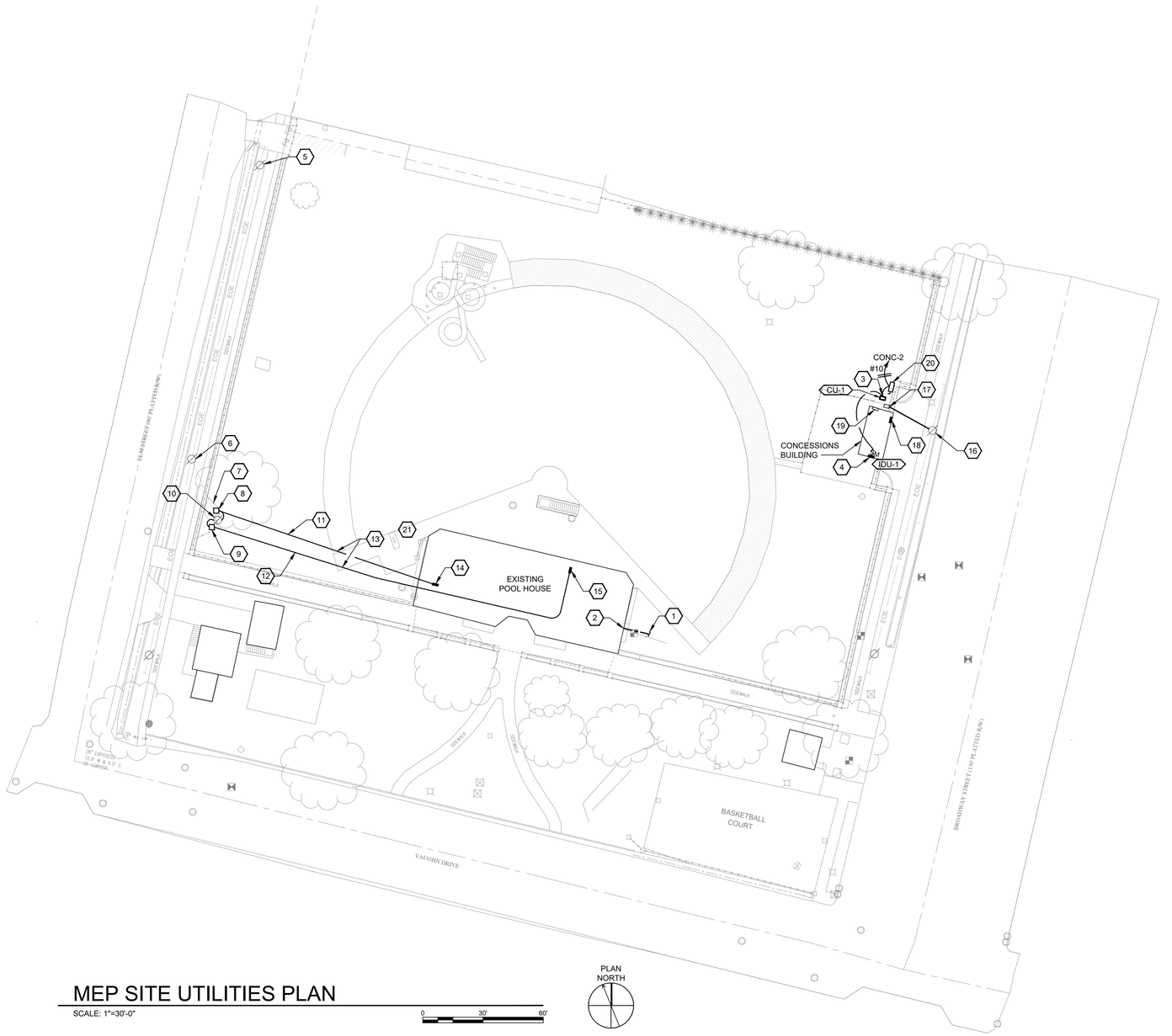
ELECTRICAL Drawings

Item 1: Refer to Sheet E501:

A. Clarification on which panels are new and which are existing to remain. There are several existing panels that are to be demolished, as shown and noted on electrical demolition sheets.

1. Existing-To-Remain Panel: Panel B
2. New Panels:
   a. Distribution Panel DP
   b. Distribution Panel DP2
   c. Loadcenter in Concessions Building
   d. Panel A
   e. Panel C

Attached Drawings: U101



MEP SITE UTILITIES PLAN

SCALE: 1"=30'-0"

0 30' 60'

PLAN NORTH

GENERAL NOTES:

1. REFER TO SHEET M001, P001 AND E002 FOR GENERAL NOTES.

SHEET KEYNOTES:

1. NEW 2-1/2" CW. REFER TO CIVIL SITE UTILITY PLAN FOR CONTINUATION.
2. 2-1/2" CW. REFER TO P200 FOR CONTINUATION.
3. CONDENSING UNIT (CS) CU-1 LOCATED ON GRADE ON CONCRETE PAD. REFER TO SCHEDULE ON SHEET M601. CONFIRM FINAL LOCATION WITH ALL OTHER TRADES, OWNER, AND ENGINEER PRIOR TO INSTALLATION.
4. INDOOR WALL MOUNT UNIT (CS) IDU-1 LOCATED ON INTERIOR SOUTHEAST WALL OF CONCESSION STAND. REFER TO SCHEDULE ON SHEET M601.
5. EXISTING 3-PHASE TRANSFORMER POLE, WHICH FEEDS THE BUILDING'S 3-PHASE SERVICE. POLE TO BE USED FOR NEW 3-PHASE SERVICE, WITH POLE-MOUNTED TRANSFORMERS UPSIZED BY DUKE ENERGY.
6. EXISTING 1-PHASE TRANSFORMER POLE, WHICH FEEDS THE BUILDING'S 1-PHASE ELECTRIC SERVICE. POLE TO BE USED FOR NEW 1-PHASE SERVICE, WITH POLE-MOUNTED TRANSFORMERS UPSIZED BY DUKE ENERGY.
7. EXISTING, FENCED IN ELECTRIC SERVICE ENTRANCE "YARD" WITH MAIN BUILDING DISCONNECTS FOR BOTH THE 3-PHASE AND SINGLE-PHASE ELECTRIC SERVICES. EXISTING UNISTRUT RACK TO BE EXTENDED AS REQUIRED TO ADD THE (2) NEW CT CABINETS AND LARGER SERVICE DISCONNECTS. ALSO REFER TO SHEET NOTES #8 AND #9, AND TO THE ONE-LINE POWER DIAGRAMS ON SHEET E501.
8. EXISTING 3-PHASE SERVICE DISCONNECT AT THIS LOCATION TO BE REMOVED, TURNED OVER TO OWNER, AND REPLACED WITH A NEW, LARGER SERVICE DISCONNECT. REFER TO SHEET NOTE #7 ABOVE. REFER TO ONE-LINE 3-PHASE POWER DIAGRAM, SHEET E501, FOR ADDITIONAL INFORMATION.
9. EXISTING 1-PHASE SERVICE PANEL WITH MAIN DISCONNECT AT THIS LOCATION TO BE REMOVED, TURNED OVER TO OWNER, AND REPLACED WITH A NEW 1-PHASE SERVICE ENTRANCE PANEL, DP2, WITH LARGER MAIN DISCONNECT. REFER TO SHEET NOTE #7 ABOVE. REFER TO ONE-LINE 1-PHASE POWER DIAGRAM, SHEET E501, FOR ADDITIONAL INFORMATION.
10. EXISTING RISER POLE, WITH BOTH THE 3-PHASE AND THE 1-PHASE SERVICE DROPS, TO BE REUSED FOR THE TWO NEW SERVICES. REMOVE EXISTING WEATHERHEADS AND RISER CONDUITS, AND REPLACE WITH NEW , AS PER DUKE ENERGY REQUIREMENTS.
11. NEW 3-PHASE CONDUCTORS, FROM MAIN 3-PHASE SERVICE DISCONNECT TO NEW 3-PHASE DISTRIBUTION PANEL DP IN POOL HOUSE. REFER TO POWER ONE-LINE DIAGRAM, SHEET E501, FOR WIRE/CONDUIT SIZES. CONDUIT TO BE SCHEDULE 40 PVC, 30" MINIMUM BURY.
12. NEW 1-PHASE CONDUCTORS, FROM MAIN 1-PHASE SERVICE PANEL/DISCONNECT TO NEW 1-PHASE PANEL A IN POOL HOUSE. REFER TO POWER ONE-LINE DIAGRAM, SHEET E501, FOR WIRE/CONDUIT SIZES. CONDUIT TO BE SCHEDULE 40 PVC, 30" MINIMUM BURY.
13. THE EXISTING 1-PHASE AND 3-PHASE UNDERGROUND WIRE/CONDUITS FOR THE EXISTING SERVICES THAT ARE BEING DEMOLISHED ARE ALSO TO BE DEMOLISHED. THE EXISTING TRENCH AND THE EXISTING PENETRATIONS THROUGH THE EXTERIOR WALL INTO THE BASEMENT CAN BE REUSED FOR THE NEW SERVICES.
14. NEW 3-PHASE DISTRIBUTION PANEL DP. REFER TO SHEET E202 FOR EXACT LOCATION.
15. NEW 1-PHASE PANEL A. REFER TO SHEET E201 FOR EXACT LOCATION.
16. EXISTING 240V, 1-PHASE TRANSFORMER POLE TO REMAIN.
17. EXISTING METER BASE, WEATHERHEAD AND RELATED CONDUIT TO BE REMOVED AN REPLACED WITH NEW AS PER DUKE ENERGY REQUIREMENTS, FOR NEW, LARGER CONCESSIONS BUILDING ELECTRIC SERVICE. REFER TO POWER ONE-LINE DIAGRAM, SHEET E501.
18. NEW LOAD CENTER CONC. REFER TO SHEET E501.
19. EXISTING CONCESSIONS BUILDING LOADCENTER TO BE DEMOLISHED. INSTALL SPLICE BOX ON WALL AT EXISTING LOCATION, AND EXTEND ALL EXISTING CIRCUITS TO NEW LOADCENTER CONC. REFER TO PANEL SCHEDULE, SHEET E601.
20. PROVIDE 240V, 1-PHASE, 30 AMP, NON-FUSED, NEMA 3R DISCONNECT SWITCH.
21. ELECTRICAL CONTRACTOR TO PROVIDE GROUNDING AS PER MANUFACTURERS RECOMMENDATIONS FOR NEW HANDICAP POOL CHAIR LIFT. CHAIR LIFT FURNISHED AND INSTALLED BY OTHERS.

kpff
125 South 6th Street,
Suite 200
Louisville, KY 40202
O: (502)325-0100
www.kpff.com

SHROUT TATE WILSON MECHANICAL AND ELECTRICAL ENGINEERS
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www.stweng.com

NICHOLAS C. WOOLDRIDGE
REGISTERED
No. PE10007183
STATE OF
INDIANA
PROFESSIONAL ENGINEER
03/30/2021

WESLEY C. CASEY
REGISTERED
No. PE11005207
STATE OF
INDIANA
PROFESSIONAL ENGINEER

CRYSTAL BEACH POOL HOUSE

400 W VAUGHN DR.
MADISON, IN 47250

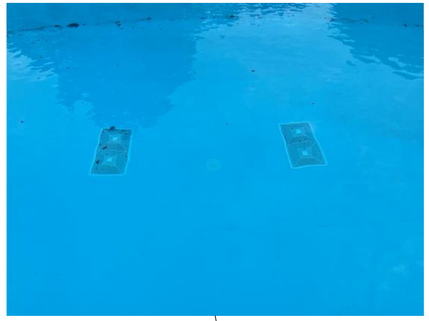
CRYSTAL BEACH POOL

Doc. Rel. #	Date	Description

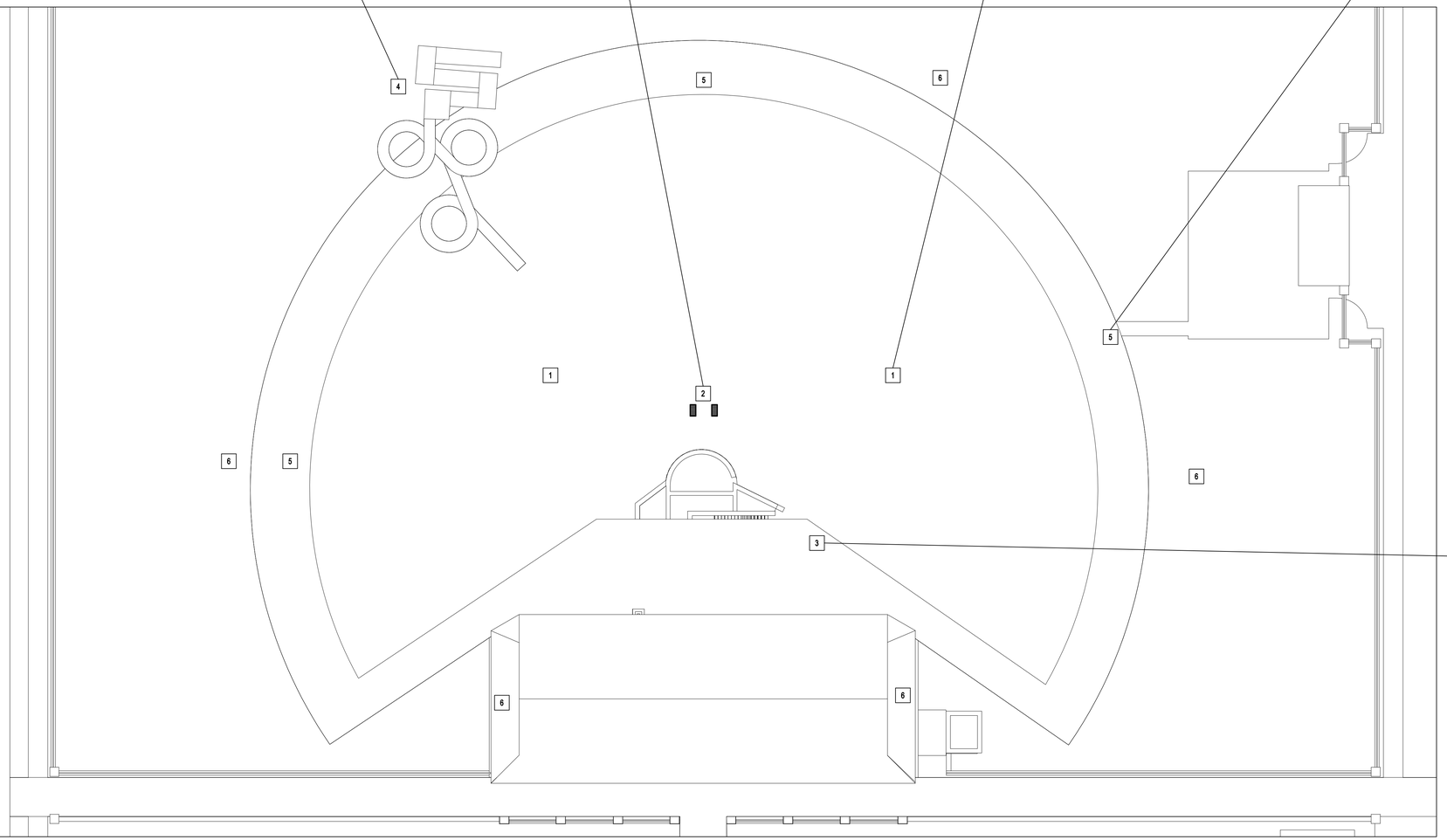
Drawn By: JF/BG/MA
Designed By: WC/NM
Project No: MAD_004
Date: 01 DEC 2020

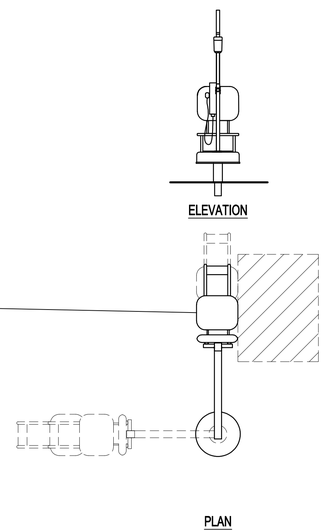
ELECTRICAL AND PLUMBING SITE UTILITIES

U101



POOL WORK	
1	REPLACE CURRENT POOL LINER. NATARE CORP. 317-290-8828
2	INSTALL NEW VGB COMPLIANT MAIN DRAIN COVERS. NEPTUNE BENSON (800) 832-8002
3	INSTALL A SECOND BATTERY POWERED POOL LIFT. AQUA CREEK - SCOUT LIFT
4	CLEAN PLATFORM CORROSION AND TOUCH-UP WITH ZINC RICH PRIMER AND EXTERIOR STEEL PAINT AT OWNER'S COLOR CHOICE.
5	REPLACE ORIGINAL POOL DECK AS REQUIRED BY ARCHITECT AND/OR CIVIL DRAWINGS. ADD CODE REQUIRED DECK DRAINAGE. REFER TO CIVIL DRAWINGS. REMOVE FORMER PLANTER BASES (BUMP-OUTS) AT POOL EDGE DURING DECK DEMO PHASE, REPLACE WITH SMOOTH EDGE.
6	PRESSURE TEST ALL BELOW-GRADE POOL PIPING.





1 AQ000 POOL REFERENCE PLAN
1/16" = 1'-0"

PROJECT NORTH

TRUE NORTH

kpff
125 South 6th Street,
Suite 200
Louisville, KY 40202
O: (502)325-0100
www.kpff.com

COUNSILMAN•HUNSAKER
AQUATICS FOR LIFE
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CRYSTAL BEACH POOL HOUSE

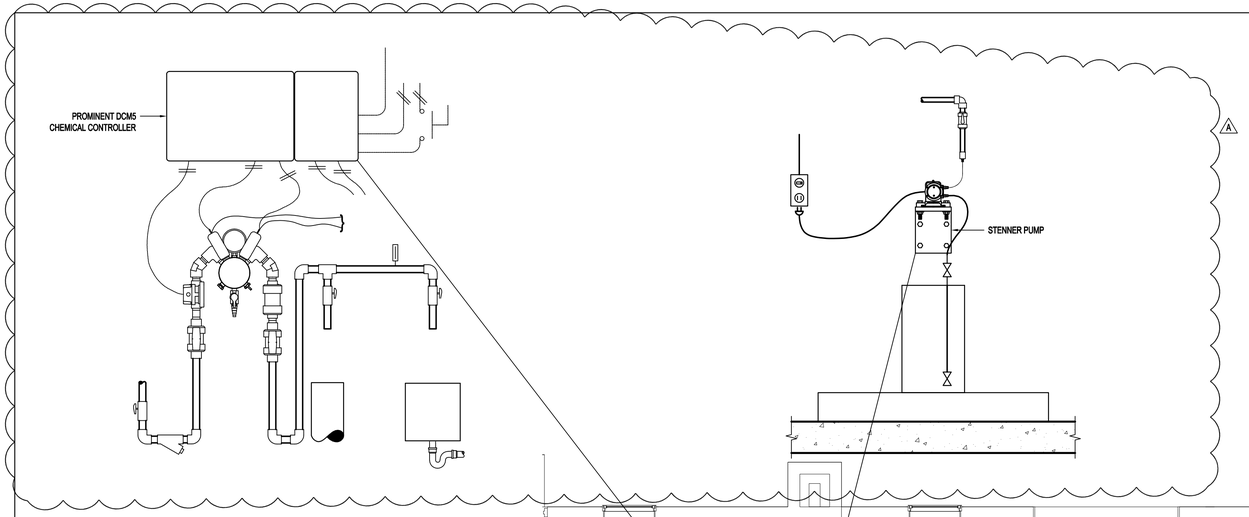
400 W VAUGHN DR.
MADISON, IN 47250
CRYSTAL BEACH POOL

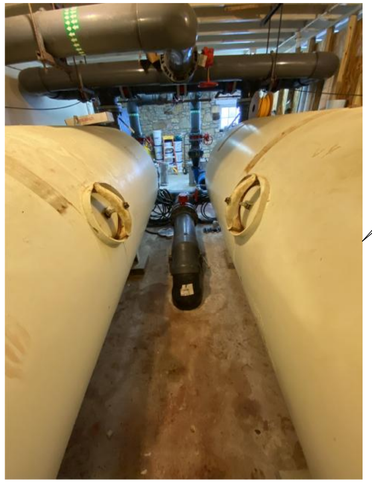
Doc. Rel.#	Date	Description
A	04-01-21	Added Product Descriptions

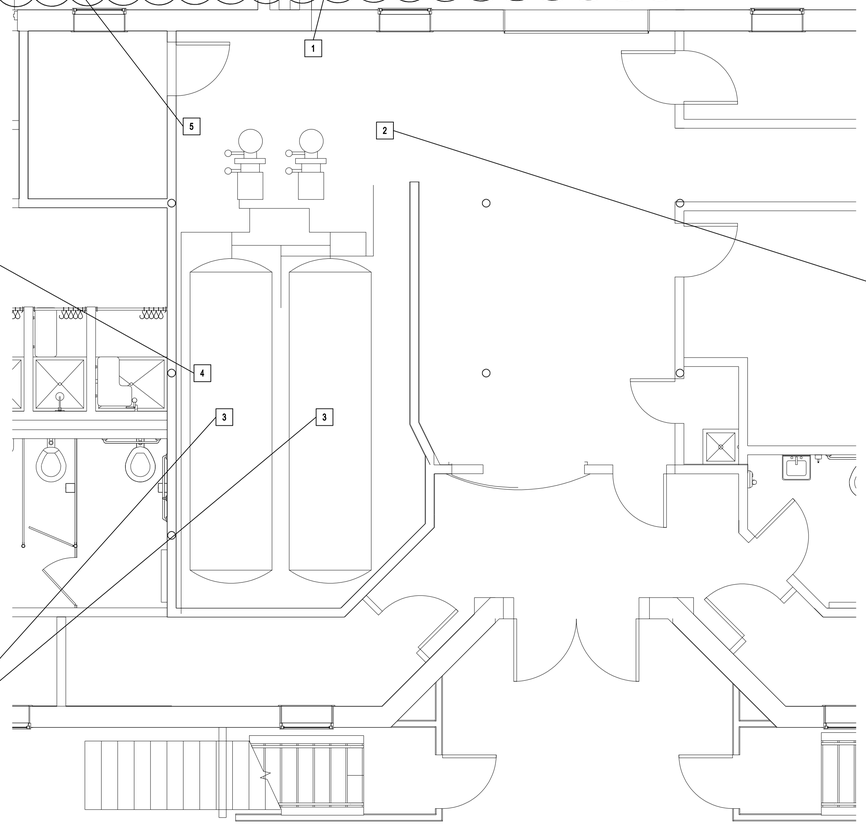
Drawn By: CMB
Designed By: CAD
Project No: 20.0400
Date: 14 OCT 2020

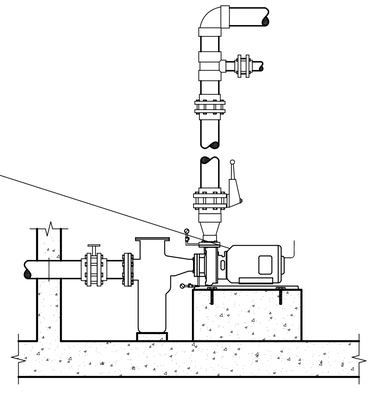
POOL REFERENCE PLAN

AQ000









A

POOL MECHANICAL ROOM WORK	
1	INSTALL NEW PH FEED SYSTEM. PROVIDE NEW 1/2" PVC CHEMICAL FEED LINES. TWO (2) STENNER 85M5 PUMPS - TWO (2) 15 GAL CARBOYS.
2	(1) INSTALL CONCRETE PUMP VOLUTE HOUSING SUPPORT. (2) EPOXY COAT OR REPLACE THE CONCENTRIC REDUCERS ON THE DISCHARGE FLANGE OF EACH PUMP.
3	(1) REMOVE FILTER EXISTING SAND AND INSTALL NEW FILTER SAND. (2) INSTALL NEW MANWAY GASKETS AND RECOAT MANWAY PRESSURE CLAMPS.
4	INSTALL NEW IMPACT FLOWMETER ON BACKWASH HEADER. BLUE WHITE F-300
5	(1) INSTALL NEW AUTOMATIC CHEMICAL CONTROLLER WITH FLOW CELL. (2) INSTALL NEW PH FEED SYSTEM. (3) PROVIDE NEW 1/2" SCH. 80 PVC CHEMICAL FEED LINES.

1 AQ100 UPPER LEVEL POOL MECHANICAL ROOM PLAN

1/4" = 1'-0"

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CRYSTAL BEACH POOL HOUSE

400 W VAUGHN DR.
MADISON, IN 47250
CRYSTAL BEACH POOL

Doc. Rel.#	Date	Description
A	04-01-21	Added Product Descriptions

Drawn By: CMB
Designed By: CAD
Project No: 20.0400
Date: 14 OCT 2020

POOL MECHANICAL ROOM PLANS

AQ100